OVERVIEW OF DEPOSIT

The Mount Wright gold deposit (Total Resource = 1 Mt @ 3.2 g/t) is located within an approximately 390 km² mafic-ultramafic complex, located in northeastern Queensland, Australia. The deposit is characterized by a series of overprinting, structurally-tied alteration zones, and hydrothermal brecciation, hosted within the Cretaceous McGeeonov Limestone (Flinders, 1968). Mineralization of the complex (15 Mt) occurred subsequent to, but essentially concomitant with the final hydrothermal brecciation stage (Pettke and Kennedy, 1994), and is characterized by pyrite-graphite-gold (McIntyre et al., 2001). The pyrite mineralization occurs in veins, breccias, and lenses that are characterized by alteration mineralogy that is distinct from that of the known Mt Wright deposits. The deposit itself is weakly enriched at surface (exposed 0.5-0.6 g/t), but grades increase with depth and average around 4 g/t between 500-600 m below the surface. Development of the Mount Wright gold deposit is underway in 2005, with the first iron ore concentrate is expected to be produced in 2007.

METHODOLOGY

The multispectral data appears to indicate that there is some variation in the alteration mineralogy and width and length to the deposit is particularly.

1. The upper portion of the hydrothermal breccia pipe is dominated by short wavelength (430 nm) and micron-scale alteration, whereas the lower part is characterized by brecciation and mafic alteration. The upper portion of the deposit contains a mineral assemblage formed around the hydrothermal breccia pipe and is a large proportion of the deposit.

2. Micro-scale alteration is demonstrated beyond the breccia-like alteration zone, in the surrounding aureole. The wavelength variation around 2000 nm is controlled by the substitution of Fe and Mg for Al in the silicate minerals (Mason et al., 2001). Microcrystalline Fe-Mg silicate absorption occurs at 2500 nm, whereas phlogopite (Na-Mg) display absorption at 2300 nm. Therefore, the wavelength variation of the alteration feature is a function of Fe-Mg micas formed from Fe micas and Mg micas.

As such, the variation in the wavelength of the 2500 nm feature essentially maps a phyllosilicate mineral at a depth. However, the phyllosilicate may have some relationship to granitic (e.g., precipitation in varying intensity)

The alteration of the breccia-like zone is yet to be determined. It appears to be associated with surface alteration and may be susceptible. Although its presence up to 700 m below the present levels, could indicate the final breccia-like hydrothermal alteration

RECENT WORK

Although Mt Wright is a topographic high, the small and low-grade sub-surface expression of the deposit makes exploring for analogous difficult, particularly where extensive alteration occurs. As such, characterizing the alteration and geochemical signatures is important so that surface and drill samples in areas of interest can be compared to those below. The data available for evaluation. To achieve this, a combined Short Wavelength Infrared (SWIR) spectral analysis and multi-element (ME) study was conducted. The results of this investigation are already being applied to regional exploration.

METHODS

An ASD (Analytical Spectral Devices) Terraspec was used to collect SWIR spectra from a combination of R/G/Blue chip and pixelated core. For each sample, spectral data were processed in the Spectral Geology software (SGS) to remove any minor mineralogical features and to produce a final ME signature. The data were then submitted for ME analysis. The ME data were then submitted for ME analysis. The ME data were then submitted for ME analysis. The ME data were then submitted for ME analysis.

ALTERATION MINERALOGY WITHIN & ADJACENT TO MT WRIGHT

- **Southern cross-section of the Mt Wright deposit**
- **Examples of alteration characterization styles within the main pipe**
- **Collection of drill samples with SWIR Terraspec**
- **Representative samples from the "Mineral" alteration mineral zone at Mt Wright**
- **Pits of selected element concentrations for a representative drill hole that demonstrates the Mt Wright gold deposit at depth. Individual data points are plotted for the alteration mineral zone identified with SWIR.**

IMPLICATIONS FOR EXPLORATION

- **Drill hole located at 4 km alteration mineral zone**
- **Drill holes located within spectral wavelength variation (assumed mineral group only).**

Overview of Deposit

The Multielement and SWIR data for a representative drill hole through the deposit, it appears that most of the enrichment of alteration elements is constrained within the pipe and surrounding alteration halo (similar to the halo of Fe-Mg micas as shown by the SWIR data). In addition, the ore body is also characterized by alteration mineralogy and enrichment of alteration elements.

RECENT WORK

- **Multielement data**
- **Enhanced within the ore body.**

HISTORY

- **Map of north Queensland, showing approx.**

RECENT WORK

- **By combining the ME and SWIR data for a representative drill hole through the deposit, it appears that most of the enrichment of alteration elements is constrained within the pipe and surrounding alteration halo (i.e., similar to the halo of Fe-Mg micas as shown by the SWIR data). In addition, the ore body is also characterized by alteration mineralogy and enrichment of alteration elements.**

IMPLICATIONS FOR EXPLORATION

- **Multielement geology from known deposits can be used in two ways. First, to compare samples that have a similar style of mineralization to the core or drill core analyzed, it would be possible to identify areas of interest.**

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