Anglo Platinum is the world’s largest PGE producer and is currently exploring in several countries on various continents. Current exploration ranges from grassroots to near-mine expansions. Anglo Platinum uses an integrated exploration approach. Conventional geological exploration methods such as mapping and drilling are routinely supplemented with sophisticated geophysical and remote sensing data.

Geophysical wireline logging is a fundamental tool for determining the physical properties of the target and country rock. Knowledge of the physical properties is used to determine the optimum geophysical technique for subsequent exploration and ore body definition. The wireline logging is complemented by geotechnical borehole logging to provide data aiding rock stability assessments for future underground development or slope stability assessments for open pits.

A variety of airborne surveys have been flown over Anglo Platinum’s concessions, amongst them high-resolution magnetics, EM surveys and gravity gradiometry. The magnetic surveys are the most significant for identifying disturbances. Consequently Anglo Platinum is a major participant in the Anglo Group Low-Temperature SQUID development project. Prior to shaft sinking, risk reduction is undertaken using 3D seismic surveys. Survey design varies depending on the local geology and depth of the economic horizons. Surveys to date have vastly increased geological confidence.

Detailed satellite imagery is used for field-mapping. The availability of high resolution Quickbird and Ikonos imagery has assisted exploration in defining geological features. After comprehensive data acquisition and verification all geological and geophysical datasets are integrated to produce a detailed 3D ore body model for mine planning.

**Technical Area:** Case Histories Rest of the World

ROMPEL Andreas, has been with Anglo American since 1988 where he worked on mines and exploration for several commodities world-wide. Andy currently holds the position of Manager Geology & Geophysics in the Anglo Technical Division in Johannesburg, South Africa. He has been extensively involved in the integration and interpretation of geophysical and remote sensing data for Anglo Platinum. He has a Ph.D. in structural geology on the “Tectonic History of the Welkom Goldfield” in South Africa.