

## **HNC (AUSTRALIA) RESOURCES PTY LTD**

### **EL 27005**

**Title Holder: Compass Resources**  
**Operator: HNC Australia Resources**

### **Annual Report**

**From 7<sup>th</sup> October 2012 to 6<sup>th</sup> October 2013**

Bynoe 1:100 000  
Noonamah 1: 100 000  
Darwin 1: 250 000

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Date: 1/11/2013

Target: Cu,Pb,Co,Ni,Ag,Zn

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## COPYRIGHT

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## **INTRODUCTION**

During 2012 EL 27005 was part of a regional geophysical survey using the airborne gravity system called FALCON. LIDAR elevation data was also acquired during this survey.

This data is currently being divided up into individual tenements and being geophysically modelled.

This tenement is planned to be incorporated into a larger tenement amalgamation proposal for 2014.

The area is considered prospective for uranium, copper, lead, zinc, cobalt and nickel mineralisation.

## **LOCATION AND ACCESS**

The tenement is located approximately 70 kilometres south of Darwin and nearby the original mine sites of the Whites and Intermediate (Rum Jungle) Deposits.

Access from Darwin is via sealed roads to Batchelor and thence northward to the tenements via the start of the Litchfield Road. Access is also possible during the dry season by following the old railway line south from Darwin River, then along local dirt roads.

## **TENEMENT DETAILS**

EL27005 was granted on the 7th September 2009 for a period of 4 years. Ownership is Compass Resources NL 100% and HAR are operators as part of the JV agreement.

The tenement is located on the Darwin 1:250,000 map sheet, and consists only of 3 sub blocks (2.048 sq km)

## **GEOLOGICAL SETTING**

The Browns deposit lies in the Rum Jungle Mineral Field. The basement geology is dominated by the Archaean Rum Jungle Complex comprising two inliers (the Rum Jungle and Waterhouse domes) of S- and I-type granitoids. These are unconformably overlain by Palaeoproterozoic sedimentary strata forming the base of the Pine Creek Orogen. This sedimentary strata hosts significant deposits of stratiform base metal mineralization and structurally controlled uranium mineralisation.

The Browns Oxide deposit is hosted in weathered Proterozoic Coomalie dolomite and Whites Formation. Beneath the base of oxidation both units dip steeply to the southeast and a large body of stratiform base metal mineralization occurs in the basal shales close to the boundary with the dolomite.

The Proterozoic Zamu Dolerite intrudes both the Whites Formation and base metal mineralization but the majority of the dolerite is to the south of the Oxide Pit.

Close to the base of oxidation the bedding is folded suddenly and becomes almost flat lying. Though some tectonic folding may be involved the majority of this change in bedding dip is in response to preferential weathering and dissolution of dolomite (acid generated from breakdown of sulphides) causing slumping of the shale/dolomite contact and associated base metal gossan.

Erosion in the Tertiary created an uneven topographic surface that has filled with fluvial deposits of Tertiary clays, sands and gravels. These deposits are part of an extensive area of Tertiary valley fill that forms low ridges immediately to the north of the mining leases.

Identification of rock units within the weathered horizon can be problematic. Major element geochemistry often provides a better indication of rock type than geological logging of drill holes and was the primary source of data when developing the geological model.

The Browns-Browns East stratabound base metal sulphide resource occurs at the base of the Whites Formation. Mineralisation extends for 2.5 km along strike essentially from the eastern edge of the historical Whites open cut pit, to the west. Mineralisation occurs on the contact with the Coomalie Dolomite, or through apparent facies change, and away from the contact up to 70 metres within the Whites formation.

(from the former Compass Annual Reports)

### **PREVIOUS EXPLORATION**

During the 2011 reporting period 25 line km of heliborne electromagnetic and magnetic surveys (XTEM) were carried out over EL27005. A gravity survey was also carried out consisting of 9 stations in total. The gravity was designed to infill existing surveys and the XTEM was flown at 100m line spacings to give a very high resolution survey. This data has already been submitted on disc to the department as there were some significant data acquisition problems to overcome.

Preliminary geophysical modelling has been carried out on this EL and we are hoping to continue with this to generate anomalies worthy of follow up during the next reporting period.

During 2011-2012, EL 27005 was incorporated into the large data reprocessing and geophysical remodelling that took place due to the erroneous data that was previously received. All errors were removed from this data set and the data was effectively remodelled.

Some follow up targets were generated for additional geophysics and potential drilling.

Ground reconnaissance for a potential IP survey was completed.

## **WORK COMPLETED DURING 2012-2013**

During 2012 this tenement was subjected to a regional airborne FALCON gravity survey. This survey included not only gravity but also acquired magnetics and LIDAR high resolution elevation data.

The line spacing was approximately 200m and is currently being processed and divided into individual tenements. Once completed the entire survey and individually split out tenement data will be submitted to the department. Approximately 11.7 line km of data acquisition fell on this tenement.

## **RECOMMENDATIONS AND CONCLUSIONS**

At the time of writing this report the recent FALCON gravity survey has been processed and is undergoing varying modelling and GIS integration procedures. It is still recommended that EL27005 be incorporated into a proposed tenement amalgamation exercise if at all possible.

## **PLANS FOR 2012-2013**

During 2013 EL27005 will be part of a large regional data modelling exercise. The company is undertaking data integration of all recent and historical geophysical surveys, drill data and geochemistry into a GIS package that will create a very comprehensive 2D and 3D dataset. This dataset will be utilised for the current scoping study underway at the nearby Brown's open pit as well as for regional additional resource drill targeting.

It is anticipated expenditure will exceed \$13,000.

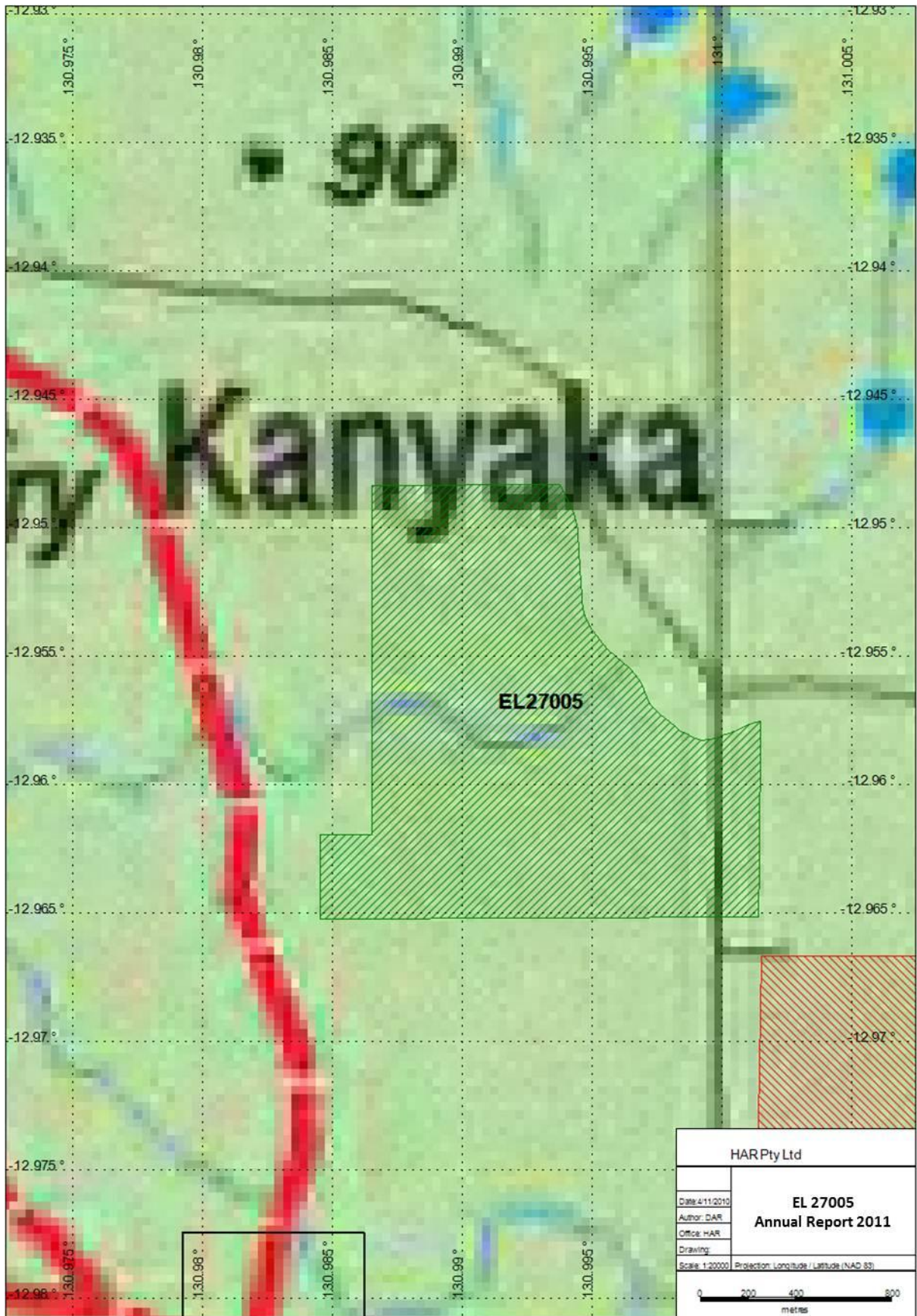


Figure 1: EL27005 Location Map