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# EL 23579 – WEST MOUNT FITCH

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

# **Annual Report**

# From 30th December 2014 to 29th December 2015

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

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### CONTENTS

Introduction	Page 3
Tenement Details	Page 3
Access	Page 3
Geological Setting	Page 4
Previous Exploration	Page 4
Work Completed 2015	Page 7
Plans for 2016	Page 7
Conclusions and Recommendations	Page 7
References and Previous Reports	Page 7

Figure 1: Location Map

Page 9

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## INTRODUCTION

EL25379 was incorporated into the large regional modelling exercise undertaken during the year. All recent geophysical surveys, EM, IP and Gravity are currently being integrated and targets are being generated.

Proposed drill planning is completed.

Ground IP surveys are recently completed.

This tenement will look to be incorporated into a larger tenement amalgamation exercise for 2016.

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

## TENEMENT DETAILS

An application for parts of 2 blocks (3.68 square kilometres) was made on 23 April, 2002. It was subsequently granted as EL 23579, effective 30 December, 2003 for a period of six years. Ownership is Compass Resources NL 90% and Guardian Resources Pty. Ltd. 10%, with Compass being the operator.

The tenement is located on the Darwin 1:250,000 map sheet, Tumbling Waters 1:100,000 map sheet (5072), and Collett Creek 1:20,000 topographic map (5072-22).

## ACCESS

The area is located about 2km immediately west of the Mt Fitch Trig station, and is south the Finness River. Access is from the south, by travelling north from the western side of the West Finniss River crossing on the Batchelor to Litchfield National Park road. The access track is not well defined, and no access is possible during the wet season.

### **GEOLOGICAL SETTING**

This tenement covers a section of Lower Proterozoic sediments, mostly of shale composition, generally believed to belong to the South Alligator Group and the underlying Mount Partridge Group. Further to the west these sediments are overlain by younger deeper water sediments of the Burrell Creek Formation. Regional strike is north-south with an overall westerly dip. Reconnaissance drilling has located shale and siltstones as the main rock types.

The most recent published data of this area is that of Lally et al 2002 (Rum Jungle 1:100,000 Mineral Field Map).

### PREVIOUS EXPLORATION

During the early 1950s, a major portion of the exploration in this Rum Jungle area was conducted by the BMR as part of a regional programme aimed at locating uranium deposits. Following the discovery of the Rum Jungle Creek uranium deposit, Territory Enterprises Pty Ltd (TEP) was responsible for much of the exploration from that time on. TEP drilled a large number of auger holes, mostly as fences across the underlying sediments in areas of no outcrop. In the period 1979 to 1984, Uranerz undertook a large exploration programme in the Batchelor area, including EL1562 over most of the tenement.

Portions of the grid used by Uranerz still exits in some areas. Aircore drilling of 51 holes by Uranerz in the tenement has helped define the sedimentary sequence as being of a shaley nature.

Starting in 1986, the Central Electricity Generating Board Exploration (Australia) Pty Limited (CEGBEA) commenced exploration of EL4879 which covered this area. In the first year they completed an interpretation of the 1982 aeromagnetic and radiometric survey flown by Austirex Pty Ltd for the Northern Territory Geological survey over the area. They do not appear to have undertaken any field work within the area of the current tenement. During the first three years, work involved the acquiring of and familiarisation with the existing recorded exploration results. The locations and depths of the previous diamond and air core drilling within the tenement have been compiled as part of a review of the uranium and base metal potential for the whole Batchelor district. There has been significant work done with regards to the compilation of available exploration data. This data has been used in the development of the GIS system which will be used for the planning of future exploration campaigns.

Further drill evaluation of the Mt Fitch South base metal prospect (on the northern boundary of the tenement) indicates it has potential to extend into this tenement at depth, however several of the recent drill holes failed to penetrate to target depth due to poor ground conditions requiring redrilling.

In 2007 the tenement was covered by new digital aerial photography.

During the reporting period ending 29 December 2009, the compilation of historical data continued with the focus of building an entirely comprehensive GIS allowing for the assessment of future drilling targets. This data compilation also provided essential information for the continuing development of a regional geological model to be used in combination with the GIS for further future drill hole evaluation. This is part of the holistic regional approach being applied by JV partners to exploration within the Rum Jungle area

Evaluation of previous drilling continued with the utilisation of the developing GIS and regional geological models, though it was clear as has been identified prior, that a significant number of recent drill holes failed to reach target depth and require redrilling before any future targets may be deemed feasible.

The tenement was partially covered by a surface geological mapping campaign and this has been integrated into the GIS.

In September 2009, the whole area was also covered by new high density digital aerial photography.

During 2010 the development of both the regional 3D geological model as well as the GIS was continued during the year as more historical data was compiled and validated.

This area was covered by a broader geophysical survey in late 2010. This consisted of airborne electromagnetic/magnetic surveying along with some more localised helicopter assisted ground gravity surveying. This data was currently being processed at time of reporting and was slightly behind schedule at the moment due to erroneous altimeter data that was received. This was to be rectified soon and the corrected data to be included in the next annual report.

Thorough 3D geophysical modelling was carried out during 2011 generating a number of first, second and third order basement targets. Gravity station data was merged with existing regional data to infill and give better resolution to regional gravity anomalies.

Database and GIS work continued incorporating the newly acquired datasets. Corrected data for the gravity and electromagnetic surveying was submitted to the department.

An airborne gravity survey (FALCON) was underway at the end of December 2012 and was not completed in time for the report. Along with the gravity data the survey will also acquire highly accurate elevation data (LIDAR) at the same time. This will be reported on in next years' report.

The data for the airborne FALCON gravity survey carried out during the writing of last years' report was received and passed on to the department. The data has been modelled and processed and is being incorporated into a large regional data modelling package. The modelling will incorporate all of the previous EM, IP, MAG and gravity data into one complete package.

A total of 20.2 line km were flown on this tenement for the FALCON gravity survey.

Geophysical modelling was undertaken to generate drill ready targets and to plan for infill IP surveys to compliment and fill gaps in existing datasets.

## WORK COMPLETED THIS YEAR

An infill ground IP survey was completed in 2015. The datasets are currently being added to the broader regional model. Total line km and associated data will be available for next year's report

## PLANS FOR NEXT YEAR

We are currently incorporating all of the geophysical survey data into a broad regional data set to model suitable targets for exploration drilling. There may be an opportunity to drill some of the targets generated from this exercise early in the 2016 field season. Further IP infill surveying will be considered based on results from the recently completed survey.

## CONCLUSIONS AND RECOMMENDATIONS

Preliminary data from the recently completed infill ground IP surveys shows potential for new target areas in previously untargeted areas. As the data becomes available we will look to incorporate these new areas into our broader model. Some of the areas exhibit similar responses to the gold showings south of the Batchelor township

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Figure1. Tenement Location