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**ELR125, MCN984, MLN 1157, MLN 1158,  
MLN1159, MLN 1161**

**Mount Fitch**

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

**Annual Report**

**From 23rd August 2013 to 22nd August 2014**

Darwin 1: 250 000  
Bynoe 1: 100 000

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Date: 19/10/2014  
Target: Cu, Pb, Co, Ni, Ag, Zn

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## **INTRODUCTION**

ELR125 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.

The airborne FALCON gravity survey was received and passed to the department.

This tenement will look to be incorporated into a larger tenement amalgamation exercise for 2014.

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

## **TENEMENT DETAILS**

ELR 125 was initially granted to Cameco Australia Pty. Ltd. on 23 August 1993 for five years. The ELR, known as Mount Fitch was joint-ventured with Billiton Australia Gold Pty. Ltd. (later Acacia Resources Limited) on 4 August 1993. On 8 September 1993 ELR 125 was transferred from Cameco Australia Pty. Ltd. to Compass Resources NL. Acacia Resources managed the Joint Venture until Compass resumed management on 16 June 1997. Until mid 2006, Compass Resources held 90% equity and managed the tenement, with Guardian Resources NL having 10% equity. Compass Resources NL now has 100% equity in the tenement.

In 2003 ELR 125 was renewed for a further period of 5 years, to 22 August 2008. It has been further renewed until 22 August 2013. A third renewal was granted in 2013 for a further 5 years, to 22 August 2018.

MCN 984, was originally held by Donald Hanna Mount-Burton. Compass Resources signed an Option Agreement over this tenement with the Public Trustee of the Northern Territory on the 24th April 1992. The claim was renewed for a further ten years on 17 November 2005.

In 2006 the tenement was purchased and transferred to Compass Resources NL (90%)

and Guardian Resources Pty Ltd (10%). On acquisition of Guardian by Compass the tenement is now 100% owned by Compass Resources NL (now Compass Resources Limited).

ML's N1157 and N1158 were granted on 9 October 2006 to Compass Resources Limited (90%) and Guardian Resources Pty Ltd (10%). The leases were granted for periods until 8 October 2031.

MLN1159 was granted on 21 December 2006 to Compass Resources Limited (90%) and Guardian Resources Pty Ltd (10%). The lease was granted for a period until 20 December 2031.

MLN1161 was granted on 14 November 2006 to Compass Resources Limited (90%) and Guardian Resources Pty Ltd (10%). The lease was granted for a period until 13 November 2031.

## **ACCESS**

The central portion of ELR 125 is 10 km north-west of Batchelor, and 65 km south of Darwin (Figure 1). MCN 984 occurs in the northern portion of the tenement covering the Mt. Fitch uranium deposit and part of the Mt. Fitch copper prospect.

Access from Darwin is via the Stuart Highway, and local sealed roads to Batchelor and then Rum Jungle, and thence by unsealed roads along the abandoned North Australia Railway. Access within the tenement is good, with a number of four wheel drive tracks remaining from previous exploration in the area. Access is also possible during the dry season by travelling south along the old railway line from the Darwin River Dam area.

## **GEOLOGICAL SETTING**

(Summarized from the 1:100,000 Interpreted Geology Special of the Rum Jungle Mineral Field and the Simplified 1:250,000 maps published by Geoscience Australia and Northern Territory Geological Survey).

The Rum Jungle Mineral Field is located on the western limb of the intracratonic-basin

forming Pine Creek Geosyncline. The Paleoproterozoic sedimentary rocks of the Rum Jungle Mineral Field flank two ovoid-shaped, north-south aligned inliers of the granitoid Achaean Rum Jungle Complex which in turn host several sub-10 square km rafts of basement Stanley Metamorphics. The two inliers cover approximately 200 square kilometres. The Manton Group or more often Mount Partridge Group (MPG) unconformably overlay the Rum Jungle Complex and are in turn unconformably overlain by the South Alligator Group and Finniss River Group.

The Rum Jungle Mineral Field is structurally complex having undergone no less than three ductile and five brittle deformation events by the end of the Proterozoic. Structurally the area is dominated by the north-east bounding Giants Reef Fault that separates the Rum Jungle Complex inliers. The structure is interpreted as a post-Early Proterozoic expression of the Western Fault Zone which extends over 200 kilometres and is part of the laterally extensive faults of the Halls Creek and Fitzmaurice Mobile Zones (Ahmad et al., 1993). Movement along the fault and associated splays and secondary faults is predominantly episodic dextral strike-slip with lesser dip-slip movement.

Base metal mineralization within the Rum Jungle Mineral Field is interpreted as initially strataform with the mineralization occurring during diagenesis; i.e., post-sedimentation and pre-lithification (Ahmad et al., 1996). The Browns deposit is the largest of these. Remobilization of sulphides has resulted in some structurally hosted economic mineralization such as Woodcutters. Uranium mineralisation is interpreted as structurally controlled and younger than the base metal mineralisation.

The Mount Fitch tenement ELR 125 straddles the early Paleoproterozoic MPG. This group hosts the regionally polymetallic-prospective contact between the pyritic argillites of the Whites Formation and the underlying Coomalie Dolostone. A quartz sandstone unit has been mapped within the Whites Formation between Mount Fitch and the Dolerite Ridge Prospect. The rudaceous to arenaceous Crater Formation forms the basal unit of the group.

Within the tenement The MPG tends to dip moderately south-west to the north of the Dolerite Ridge Prospect. The orientation of the MPG is more complex in the vicinity of the Area55 prospect with isoclinal upright folding of the Nimbuwah Event and dextral faulting

associated with north-east trending splays of the Giants' Reef Fault.

Sills of Paleoproterozoic Zamu Dolerite intrude the Whites Formation between Mount Fitch and the Dolerite Ridge prospect. The western extremity of the tenement is mapped as undifferentiated formations of the Middle Proterozoic South Alligator Group, which is partially overlain by Cainozoic sediments.

## **PREVIOUS EXPLORATION**

(The following description of exploration is, in most part summarised from the ELR125 2007 and 2009 Annual Report)

### **Mount Fitch Zone**

Note: In 2008 a decision was made to bring all the Mount Fitch prospects under the single prospect name of Mount Fitch Zone (MFZ). This allows the MFZ to be analysed as a single entity as the mineralization is generally connected. Following is a summary of work completed within the Mount Fitch zone.

Copper was initially discovered in 1913 by E. T. Tamblyn, a Mine Manager from Pine Creek, resulting in the sinking of the small Tamblyn Shaft located within MCN 984 (Boots, 1990). In 1950 workers for the Bureau of Mineral Resources (BMR) discovered secondary uranium mineralisation nearby. Mapping and radiometric surveys soon followed together with the sinking of two shallow shafts and the drilling of 3 shallow core holes. In 1952 low level airborne scintillometer surveys identified several anomalies. Territory Enterprises Pty. Ltd. (TEP) drilled 4 core holes and numerous rotary, churn and wagon holes in 1953 and commenced a major costeaning programme resulting in the identification of a copper anomaly extending along the Whites Formation – Coomalie Dolomite contact.

In 1954 a low level airborne scintillometer survey confirmed the radiometric anomalies however it was not until 1958 that a follow-up geochemical survey outlined a large copper anomaly near BMR No. 2 shaft (Haldane and Debnam, 1958) with analogous zonation to the Browns –Rum Jungle mineralization. During the late 1950s and the 1960s many core, rotary and auger holes were drilled predominantly testing for uranium mineralisation. A major structural study of the area was also conducted by Williams of

TEP.

In 1969 TEP conducted a major drill campaign to evaluate the Mt. Fitch uranium-copper prospect. These evaluations lead to the trial mining of 920 tonnes of dolomite ore and 5 tonnes of shale ore. A resource of 3.5 million tonnes at 0.042% U<sub>3</sub>O<sub>8</sub> (and 290,000 tonnes at 0.6% copper) was calculated for this prospect.

During the 1980's Uranerz and CEGBEA conducted several exploration programmes focused on uranium discovery. Their work concentrated on the Mt. Fitch copper-uranium prospect, where a total of twenty-two drill holes were completed (12 by Uranerz and 10 by CEGBEA). Re-sampling of the core by Acacia Resources returned encouraging base metal values.

Two reverse circulation percussion (RCP) drill holes were completed at the Mt. Fitch South prospect in late 2001; these intersected very encouraging base metal values.

EM surveying was proposed for 2003 but was not undertaken as modelling of ground EM data suggested that the power of the airborne system was insufficient. Two RCP holes were completed at the Mt Fitch South prospect in 2003, both intersecting significant base metal mineralisation. In late 2004, a series of 8 inclined RCP holes was completed at the Mount Fitch Copper prospect. These holes were drilled to acquire oxide copper-cobalt-nickel material for metallurgical test work. In early 2005, five lines of Sirotem EM surveying were completed at the Mount Fitch South prospect in an attempt to more fully define the conductivity character of the area.

From 2005 to the beginning of this reporting period several major drilling campaigns have been conducted; drill statistics are summarised below:

	Mt Fitch Copper	Mt Fitch Uranium	Mt Fitch South
2005	24 RC	2 RC	18 RC
2006	69 RC	44 RC	6 RC and 3 DDH
2007	24 RC	24 RC, 2 DDH (for metallurgy)	0
2008	26 RC	0	0

<b>TOTAL</b>	<b>143 RC</b>	<b>70 RC, 2 DDH</b>	<b>24 RC, 3 DDH</b>
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During 2006-2007 all drilling was by the Adelaide-based drill contractors Underdale Drillers Pty Ltd. RCP drilling was undertaken using Investigator Mk10 drilling rigs with 900/350 onboard air. A booster compressor was used to provide dryer samples where possible (ERL125 2007 Annual Report)

Drilling at the Mount Fitch prospects is difficult as a result of the combination of a high water table and very broken, porous ground within the oxidized rock. Sample return is often compromised within the oxide material resulting in underweight, and often wet to liquid samples.

When dry, samples were split, otherwise samples for assay were taken from the bulk bags by hand. Samples were assayed by ALS Chemex using the following technique:

- \* Samples were pulverised to 85% passing 75 microns or better.
- \* A four acid “near-total” digest was used followed by ICP-AES (OG62) analysis for Cu, Pb, Zn, Co, Ni, Ag, Mn, Fe, S, Mg, Ca, and U.
- \* Samples with higher uranium values (>150ppm U) were re-analysed by XRF for U and Ti.
- \* Radioactivity was measured for each sample with a GR 110 scintillometer or a SPP2 scintillometer on site.

All of the hole-collars were surveyed using a DGPS instrument. The majority of the holes were probed for radioactivity with an Auslog slimline natural gamma probe within the drill rods.

This drilling since 2005 along the Mt Fitch South, Copper and Uranium prospects was to fill gaps within the drill database over a strike of approximately 1000m and to quantify the extent of known low grade copper-cobalt-nickel mineralisation in the lateritised oxide zone overlying the Coomalie Dolomite.

During 2008-2009 drilling was conducted by the Adelaide-based drill contractors Underdale Drillers Pty Ltd and Darwin-based drill contractor H2O Pty Ltd. RC drilling was undertaken using Investigator Mk10 drilling rigs with 900/350 onboard air.



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- \* Samples with higher uranium values (>150ppm U) were re-analysed by XRF for U and Ti.
- \* Radioactivity was measured for each sample with a GR 110 scintillometer or a SPP2 scintillometer on site.

All of the hole-collars were surveyed using a DGPS instrument.

Drilling completed within the Mt Fitch Zone consisted of 26 RC holes with total depth of 2575m, and 3 DDH holes with 218.50m.

Up to date resource modelling was the only activity undertaken in the MFZ in 2010.

### **Blueys Magnesite Prospect**

In 1998/1999 follow-up drilling consisting of 8 RC holes at Blueys Magnesite Prospect (located between Browns and Mt. Burton), was undertaken. This prospect is located at or near the stratigraphic top of the Coomalie Dolomite. In late 2001, six RC drill holes were completed at this prospect to establish extensions to the high quality magnesite previously located. These were located to the east of the previous holes and failed to locate any magnesite.

## Area 55

During 2008-2009 drilling was conducted by the Adelaide-based drill contractors Underdale Drillers Pty Ltd and Darwin-based drill contractor H2O Pty Ltd. RC drilling was undertaken using Investigator Mk10 drilling rigs with 900/350 onboard air.

Drilling at the Area 55 is difficult as a result of the combination of a high water table and very broken, porous ground within the oxidized rock. Sample return is often compromised within the oxide material resulting in underweight, and often wet to liquid samples.

When dry, samples were split, otherwise samples for assay were taken from the bulk bags by hand. Samples were assayed by ALS Chemex using the following technique:

- \* Samples were pulverised to 85% passing 75 microns or better.
- \* A four acid “near-total” digest was used followed by ICP-AES (OG62) analysis for Cu, Pb, Zn, Co, Ni, Ag, Mn, Fe, S, Mg, Ca, and U.
- \* Samples with higher uranium values (>150ppm U) were re-analysed by XRF for U and Ti.
- \* Radioactivity was measured for each sample with a GR 110 scintillometer or a SPP2 scintillometer on site.

All of the hole-collars were surveyed using a DGPS instrument.

Drilling completed on the Area 55 Project consisted of 8 RC holes totalling 372m. At the time of reporting mineralisation remains open to the north and north-west and resources definition drilling is planned in 2009/2010.

A lot of work was initiated at the Area 55 prospect in 2010 as the company had planned to restart the oxide project at Browns. Due to certain circumstances the company has decided to place the oxide project under care and maintenance leaving the work that had been started on hold. Even though the work had not been completed for reporting purposes there is still hope that the oxide project may be restarted in the near future. A summary of the work initiated is below and costs to date are summarised in the expenditure report for 2010.

Ground water modelling

Tailings dam design

Community consultation

Acid mine drainage testwork (this will remain ongoing as a minimum 12 month period is recommended for the leach trials)

Further metallurgical testing

Updated resource modelling

Weed control

Radon modelling

EIS submission

## **HAR**

During the 2011-12 reporting period, ELR 125 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.

## **Territory Iron**

Geological mapping within the Yarram Project Area of ELR 125 was carried out over the period 23rd to 26th January 2012 by an independent geological consultant. The intention of the mapping was to assist in the interpretation of previous results that have been obtained in earlier drilling programs, and to recommend further exploration targets. The mapping indicated that mineralisation occurs in a series of brecciated siltstone, shale and dolostone horizons in the Coomalie Dolostone Formation. The breccias are composed mainly of goethite/limonite and are frequently cored with lenses of hematite. The mineralised zones appear to be associated with faults trending approximately southwest.

The mapping was done by collecting geological data on walking traverses in the field followed by photo-interpretation of the available orthophoto.

## **HAR**

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 has been processed and divided into individual tenements. The data for these surveys has been submitted to the department. Approximately 77 line km of data acquisition fell on this tenement.

## **Territory Iron**

During 2012-13 Territory Iron carried out reconnaissance work along with collecting 22 rock chip samples. Amendments to the current MMP were also submitted in regards to a planned drill program for 2013-14.

## **WORK COMPLETED THIS YEAR**

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 at the time of writing this report. The modelling will incorporate all of the previous EM, IP, MAG and gravity data into one complete package. Approximately 6 line km of IP ground survey was also acquired. This data has been submitted to the department.

## **RECOMMENDATIONS AND CONCLUSIONS**

Initial modelling of the geophysical data has shown some encouraging targets and is showing a much higher degree of resolution detail. The gravity processing has generated some very high resolution preliminary images. We will be looking to generate some quality anomaly targets for follow up with infill geophysical surveying and drill hole targeting in the coming year.

## **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 later in the year.

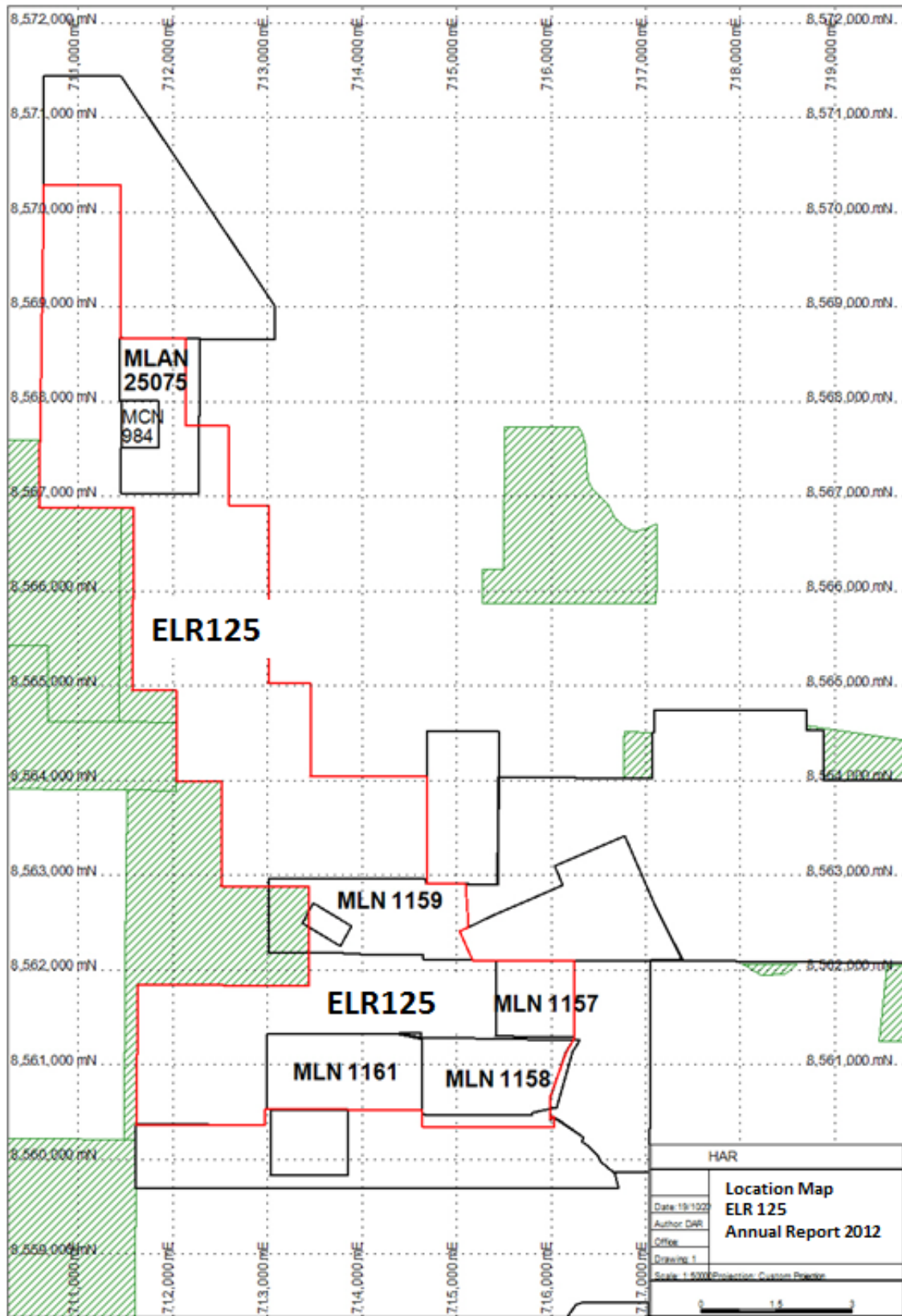


Figure1. Tenement Locations