EL 27338

Aileron Project Annual Report

24 December 2009 to 23 December 2010

Google Earth Image illustrating the regional location of EL 27338

Compiled: Melville Paul M
Tenure Holder: Crossland Nickel Pty Ltd
Submitter of Report: Crossland Uranium Mines Pty Ltd
Date of Report: 10 March 2011

Table of Contents

Figures in Text

Appendices

Summary

The Aileron tenement, EL 27338, is located approximately 108 km north of Alice Springs along the Stuart Highway and 25 km south of the Aileron Roadhouse. EL27338 was granted to Crossland Nickel Pty Ltd on 24 December 2009 for a period of 6 years Crossland Uranium Mines Limited is the project operator.

Preliminary work consisted of data compilation and interpretation and assessment of available historical mineral exploration, geological and geophysical data.

The tenement lies within the 1860 – 1700 Ma Aileron Province of the Arunta Region. The regional geology comprises the Lander Rock Formation (LRF), a widespread package of variously metamorphosed clastic sediments. Granitic rocks intrude the LRF. The Ngalia basin lies immediately to the west. The Nolans Bore REE deposit is located in the Reynold Range immediately northwest of the Aileron roadhouse.

Apart from the Nolans Bore discovery, previous exploration in the region has focused mainly on gold and uranium with a lesser emphasis on base metals. Crossland's principal commodity interest in the region is uranium and rare earths.

Expenditure for the 12 month period was $76,517.67.

1 Introduction

Crossland first commenced on-ground exploration activities in the Alice Springs region in 2006, initially assessing the nickel potential of the Mount Hay complex, just south of the Tanami Highway on Amburla Station, west northwest of Alice Springs. This location was one of several chosen for exploration by utilising confidential concepts of target identification developed by Paradigm Geoscience. Since that time Crossland has considerably expanded its property holding in this region with an emphasis placed firstly on uranium exploration followed more recently by the discovery of widespread rare earth occurrences. The Aileron licence is also considered prospective for uranium-rare earths given the discovery of Nolans Bore REE deposit just northwest of the Aileron roadhouse.

Activities over the period included literature research and data acquisition and interpretation. An airborne survey and some preliminary field work were planned for the year but the constant delays and access problems affecting Crossland's other projects in the region, which were caused by the continual wet weather, meant that the planned work had to be postponed.

2 Location, Description and Access

The Aileron tenement, EL 27338, is located approximately 108 km north of Alice Springs along the Stuart Highway and 25 km south of the Aileron Roadhouse. It is located wholly within Aileron Station, NT Portion 703.

The Burt Plain is the principal physiographic feature. The Hann Range in the extreme north represents the easternmost extension of the Ngalia Basin. The highest point of the Hann Range is Mount Ewart (802 m) just to the east of the Stuart Highway

The Stuart Highway traverses the tenement and access is gained via various station tracks.

3 Tenure

EL 27338 was granted for a six-year term on 24 December 2010 (expiring 23 December 2016). The title covers an area of 162 sub-blocks (511.42km^2). No reductions have taken place. The EL is owned by Crossland Nickel Pty Ltd and the project operator is Crossland Uranium Mines Limited (Figure 1)

4 Previous Exploration

Recorded exploration activities date back to the 1970s with much of the activity taking place within the metamorphic terrane of the Reynolds Range, located approximately 50 km to the north of Crossland's tenement. Exploration had concentrated mainly on gold and uranium with a lesser emphasis on base metals and diamonds.

In 1979 Otter exploration followed up a radiometric anomaly within its EL just to the north of Pine Hills homestead. Uranium-REE bearing monazite within a garnet gneiss phase was located on-ground and subsequently assessed. PNC discovered several significant radiometric anomalies during its regional airborne survey of the area in 1994. Follow-up ground investigations discovered the important REE-bearing apatite deposits of Nolans Bore. Other work by several companies assessed the nearby Ngalia Basin for calcrete-bearing uranium deposits given that there are suitable U-source rocks within the nearby metamorphic-granitic terrane.

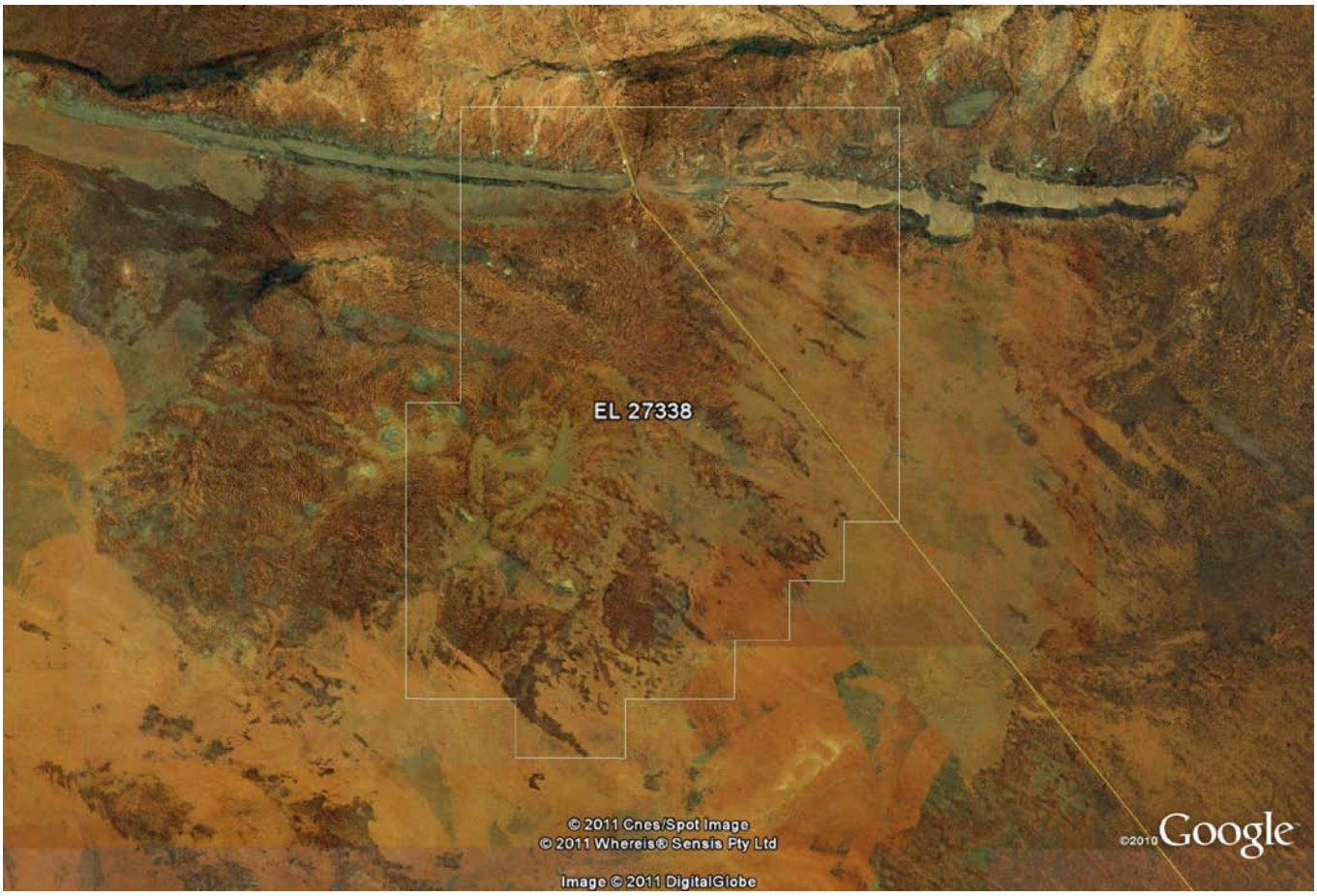

Figure 1 EL 27388 on Google Earth Image

5. Geology and Structure

The Aileron EL is located in the southeast corner of the NTGS 1:250,000 Geological Map Series Napperby sheet SF 53-9. Geologically and structurally, the licence is located within the Aileron Province (1860-1700 Ma), which consists of a sequence of variably metamorphosed clastic sediments of the Lander Rock Formation (LRF) dated at 1860 to 1830 Ma. These are overlain in places by younger rocks of the Ngalia Basin sequence. The Reynolds Range to the north is mapped as the Aileron Metamorphics, which consist of calc-silicates, orthogneiss and mafic granulite. These rocks have been equated with the LRF. Younger granites intrude the metamorphics.

Much of the licence is covered by sand and soil. The most prominent geological feature is the Hann Range, a thin fault-controlled sliver of basement and younger sediments, which traverses east to west across the extreme northern part of the tenement. The metamorphic basement here comprises the Mount Bleechmore Granulite (gneiss, calcareous pelitic gneiss, calc-silicate, migmatite, mafic granulite); it is overlain by the 'Vaughan Springs Quartzite'(conglomerate, glauconitic sandstone and evaporite), which is the basal part of the Ngalia Basin. Outcropping basement is also indicated in the literature to occur south of the Hann Range.

6 Exploration Activities

Literature research, data compilation and interpretation were carried out prior to the planning of exploration activities. No on-ground exploration was possible during the 2010 season for the reason stated above (see Chapter 1). The programme of a proposed airborne survey in comjunction with reconnaissance, radiometric prospecting and rock sampling will be carried out in 2011.

7 Expenditure

The principal activities included office studies (data acquisition, compilation and interpretation), report compilation, geophysical surveys (implementation, data acquisition and interpretation) and field work. Over the period of tenure a total of $185,175.24 was expended. See attached expenditure statement Appendix 1.

8 References

Beyer EE et al (2010) : Regional Geology and Prospectivity of the Aileron Province in the Alcoota 1:250,000 Mapsheet Area *in* AGES 2010, Annual Geoscience Exploration Seminar, Record of Abstracts, NTGS, Darwin 2010.

Evans TG., (1972) : Explanatory Notes on the Napperby Geological Sheet. 1:250,000 Geological Series. Bureau of Mineral Resources, Canberra.