Operator: Crossland Strategic Metals Ltd

Charley Creek – Cloughs Dam

Arunta Region

Annual Technical Report for EL 25657 for the period 30 August 2016 to 29 August 2017

Tenement Holders: Crossland Nickel Pty Ltd; Essential Mining Resources Pty Ltd.; Western Desert Base Metals Resources Pty Ltd

Paul Melville
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Summary

EL 25657 was granted to Alistair Mackie on 30th August 2007. The licence was transferred to Western Desert Resources Base Metals Pty Ltd, (WDRBM) a wholly owned subsidiary of Western Desert Resources Ltd (in Liquidation) on the 17th June 2008. In July 2010, Crossland Nickel Pty Ltd entered into a Farm-In arrangement with WDRBM to Joint Venture the licence. Crossland Nickel is a wholly owned subsidiary of Crossland Strategic Metals Limited (Crossland), who is the Operator of the licence. In late 2015, the new Joint Venture of Crossland Nickel Pty Ltd and Essential Mining Resources Pty Ltd purchased an 80% share in the licence.

EL 25657 comprises part of Crossland's Charley Creek project. The project area is considered prospective for Rare Earths, Uranium and other metals, although the focus is now exclusively centred on Rare Earths. No on-ground exploration activities were undertaken in the reporting period within the subject licence.

Bibliographic Data

Report Title	Annual Technical Report for EL 25657 for the period 30 August 2016 to 29 August 2017
Author	Paul Melville
Project Name	Charley Creek
Tenement Number	EL 25657
Tenement Holder	Crossland Nickel Pty Ltd (45.024%); Essential Mining Resources Pty Ltd (34.976%); Western Desert Base Metals Resources Pty Ltd (20%)
Operator	Crossland Strategic Metals Limited
Commodities	Rare Earth Elements (REE)
Tectonic Unit	Arunta Region
1:250 000 MapSheet	Hermannsburg (SF53-13) Alice Springs (SF53-14)
1:100 000 MapSheet	Anburla 5551 Burt 5651
Keywords	Arunta Region, Charley Creek, Rare Earths

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1 Introduction

Crossland commenced exploration activities on EL 25657 in 2010 following signing of a Heads of Agreement with WDRBM Pty Ltd. REE mineralisation is the main exploration target following the successful discoveries by Crossland on its adjacent Charley Creek licences. Prior to Crossland's involvement, three years of exploration activities were conducted by WDRBM.

Crossland entered the region in 2005, initially to explore for nickel within the Mount Hay Complex. Increased geological knowledge of the region necessitated a change in emphasis with uranium exploration commencing in 2007. Potential uranium targets were buried Tertiary channels and the Teapot Granite. The granite has a high radiometric background due primarily to its uranium content and was therefore considered a worthwhile target for large low grade uranium deposits. Additionally uranium leached from the granite could form sedimentary-hosted deposits in channels to the north of the ranges.

The presence of anomalous REE in the in the alluvium-covered plains was determined by the re-assaying samples from a 2008 aircore programme, which was targeting sedimentary uranium. Both the alluvial/colluvial overburden and bedrock gave anomalous results. The significance of this find led to the commencement of a concentrated exploration effort. The presence of monazite accumulations in drainage sediment was also discovered in the Teapot Granite terrane.

Stream sediment sampling within the subject licence determined the presence of REE mineralisation both in the alluvial material in the outwash fans and in the hard rock environment. An important discovery was that of the yttrium phosphate Xenotime, identified during the sample processing. Xenotime is an important source of heavy Lanthanide REE such as Dysprosium.

2 Location

EL 25657 is located in the Alice Springs region, and centred approximately 50 km WNW of the city. By road it is approximately 67 km (see Figure 1). The licence is situated on PPL1145 Hamilton Downs and PPL960 Bond Springs pastoral leases. Much of the licence area covers the rugged country of the Chewings Range while the extreme northern section extends out into alluvium-covered plains. Access can be gained via the Tanami Highway, which dissects the far northeastern corner of the licence and then runs parallel with the northern boundary. Various station tracks provide access within the tenement.

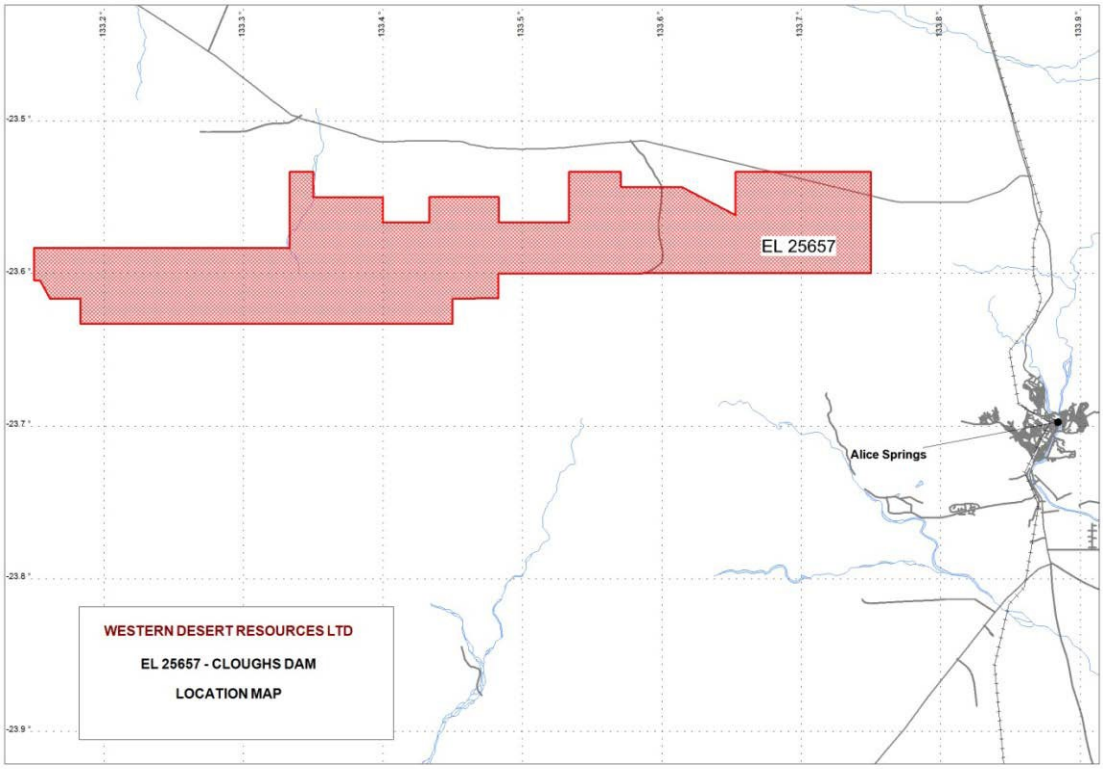

Figure 1. Regional location of EL 25657 (*from* WDRBM Annual Report 2009)

3 Tenure Details

EL 25657 was granted to Alistair Mackie on 30th August 2007. The licence was then transferred to WDRBM, a wholly owned subsidiary of Western Desert Resources Ltd on 17th June 2008. The original area granted was 240 blocks (742.09 km^2), which was subsequently reduced to 130 blocks (396.68 km^2) after Year 2 (see Figure 1).

On July 1 2010, a Heads of Agreement relating to Crossland's Farm-In on the licence was signed between Crossland Nickel and WDRBM.

On 14 August 2013 the first renewal application was lodged with the DPIR Mines and Energy. In February 2014, DPIR approved that renewal for two (2) years, expiring on the 29 August 2015. A further two year period of tenure was applied for in 2015 and was subsequently granted.

The current situation with EL 25657 is that a Renewal for a further 2 years to 29 August 2019, has been lodged with DPIR. Additionally Crossland has submitted to the department a notification of reduction in the size of the licence, from 130 to 58 sub-blocks (see Figure 2). This reduction was confirmed by DPIR on 12 September 2017.

In late 2014, Western Desert Resources Pty Ltd was placed in receivership. Crossland has been corresponding with the Receivers since that time in matters relating to the licence. Transfer documents were lodged with NTDME in 2015; the transfer was eventually accepted and the current licence holders are as follows: Crossland Nickel Pty Ltd 45.024%, EMR Pty Ltd 34.976% and WDRBM 20%. Crossland has continued to approach the Receivers with the proposition to purchase the remaining 20%, without any success to date.

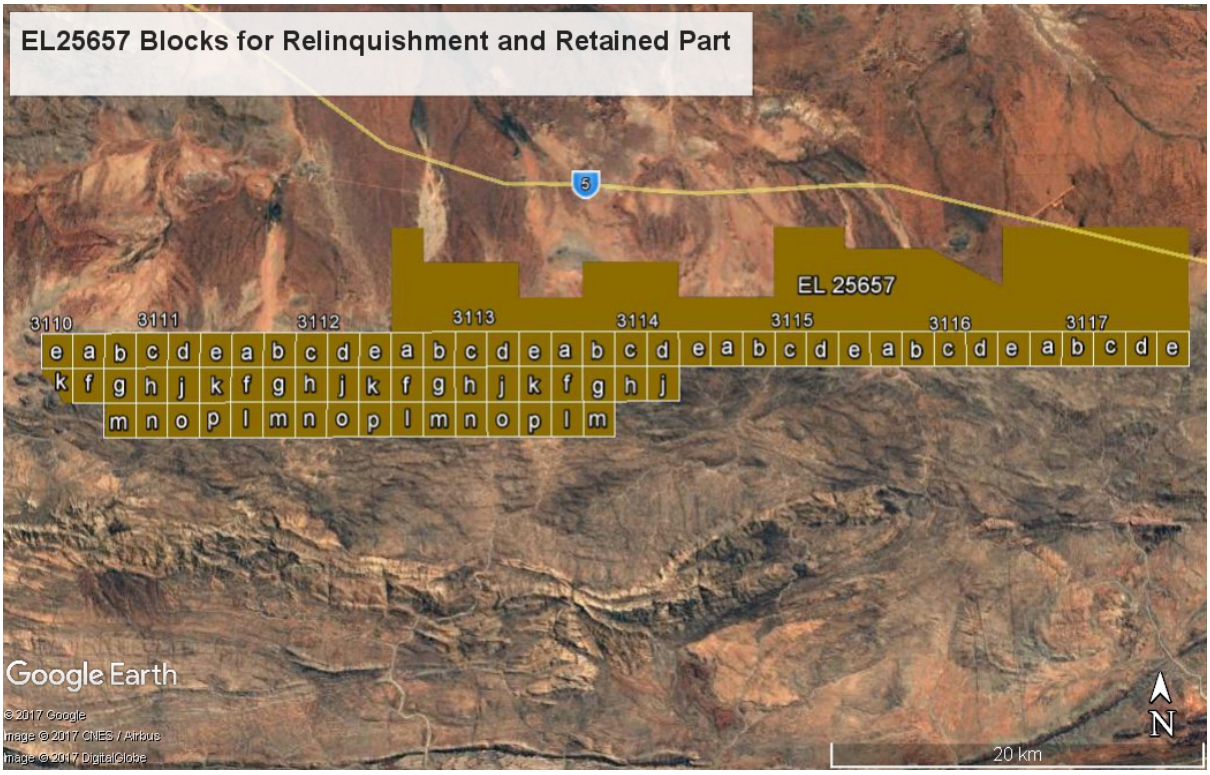

Figure 2. EL 25657 showing sub-blocks for Relinquishment

4 Geology

The project area straddles the contact between the Aileron Province and the Warumpi Province of the Palaeoproterozoic Arunta Block. The Aileron Province forms part of the North Australia Craton and is aged between 1865-1740 Ma. The Warumpi Province is aged between 1690-1600 Ma and is thought to have accreted onto the craton at 1640 Ma.

Geology of the tenement and surrounds is shown in Figure 3. The Aileron Province is represented by the Illyabba Metamorphics, consisting of biotite gneiss, amphibolite and granitic gneiss, and the Strangways Metamorphic Complex, consisting of granitic and basic gneisses. It is separated from the granitic gneiss and quartzite of the Warumpi Province to the south by the Charles River Thrust/Fault zone. The Warumpi Province is made up of the Iwupataka Metamorphic Complex, the Teapot Granite Complex and the Madderns Yard Metamorphic Complex. The Redbank Thrust Zone, which crosses the northern part of the licence consists of mylonitic rocks and forms a prominent scarp. Tertiary sediments occur north of the thrust with some isolated outliers of Arunta age rocks.

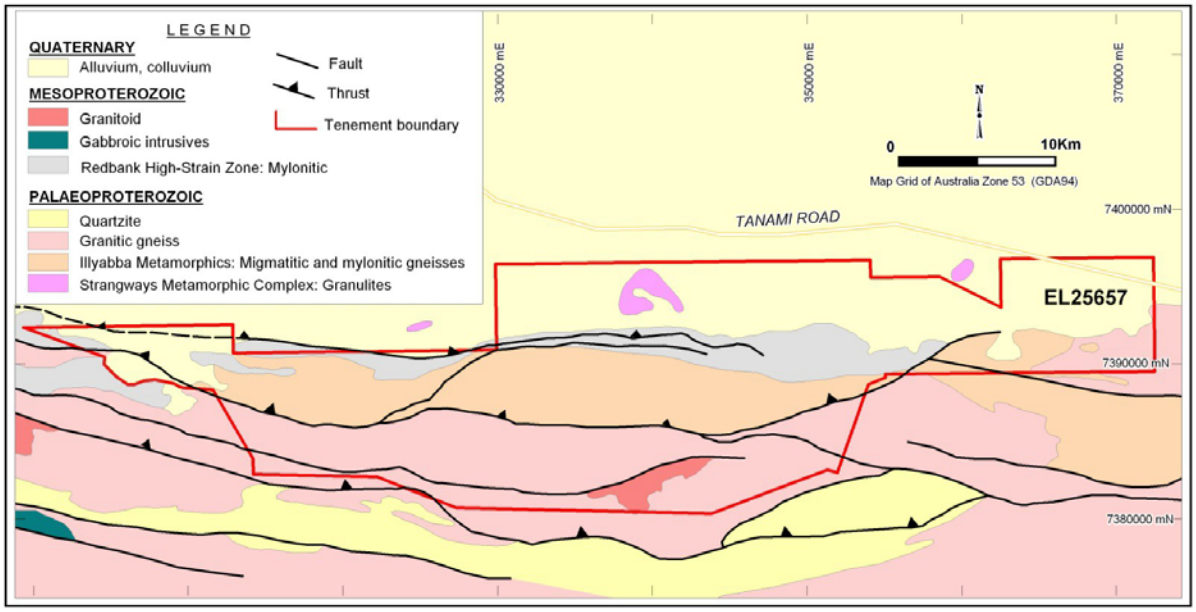

Figure 3. EL 25657 Tenement Geology (*from* WDRBM Annual Report 2009)

5 Previous Exploration Activities

Other Companies

CRA Exploration (1971-72)

CRA Exploration explored the northern and western parts of the project area for uranium and base metals. A stream sediment survey was completed and station bores were water sampled. Vehicle-borne scintillometer traverses were completed during the collection of the station bore samples. No anomalous base metal or uranium values were reported from the stream sediment survey. Anomalous uranium and radon values were found in water samples from the Bulldust and New Well bores, both located within the current EL.

CRA Exploration (1981-82)

The company explored EL 3100 during 1982 for sedimentary-hosted uranium deposits. This tenement was situated immediately north of EL25657. Two holes were drilled south of Hamilton Downs homestead; neither intersected any uranium mineralisation.

Western Desert Resources Base Metals Pty Ltd

2007-2008 Year 1

- 134 stream sediment samples collected. BLEG sampling for Au; multi-element analysis by ICP-MS. ALS Chemex Laboratories.
- 3 water bores sampled.
- Results – no Au. Minor base metal response. Anomalous Ce, La, U and Th.
- Expenditure $40,480

2008-2009 Year 2

- TEMPEST EM by Fugro covered the northern and eastern parts of the licence at 1 km line spacing with lines oriented east-west.
- GA/NTGS regional gravity survey on a 4 x 4 km grid.
- Reduction of EL.
- Expenditure $42,991

2009-2010 Year 3

- Minimal work completed. Anomaly follow-up.
- Eligible expenditure $11,321

Crossland

2010-2011 Year 4

- Stream sediment sampling.
- On-site sample processing.
- Multi-element analysis including REE
- Eligible expenditure $83,705.26

2011-2012 Year 5

- Stream sediment sampling.
- Off-site metallurgical Test Work.
- Eligible expenditure $89,015.21

2012-2013 Year 6

- Airborne Mag-Rad Survey
- Pre-feasibilty and Scoping Studies
- Eligible expenditure $161,748.11

2013-2014 Year 7

- Aircore drilling, 38 holes for 386 metres. Analysis of samples.
- 25 stream sediment samples for concentrate testing
- Apportionment of costs related to the project wide Scoping Study and preliminary Environmental studies for EIS.
- Eligible expenditure $98,399.22

2014-2015 Year 8

- No on-ground activities for the period due to Panconoz takeover and on-going JV negotiations.
- Apportionment of project related costs.
- Eligible expenditure $13,235.80

2015-2016 Year 9

- No on-ground activities for the period due to Panconoz takeover and on-going JV negotiations.
- Apportionment of project related costs.
- Eligible expenditure $8,237.84

6 2016-2017 (Year 10)

There were no on-ground activities for the period. The only activity involving the licence was the submission of three duplicate aircore samples for additional metallurgical testing and geochemical analysis. These were part of a larger batch that were collected from stored Aircore sample; the aircore holes were drilled late 2013 / early 2014.

Samples representing fourtyeen (14) sites on the project were selected from stored Aircore drillhole sample material. The holes were drilled in late 2013, early 2014. Individual samples were set aside for geochemical analysis; the remaining material bulked to provide a sample for Pilot Plant separation processes. A sand-size fraction was produced and this was passed through a spiral separator to produce a TREO concentrate. Metallurgical studies would show the upgraded concentration process to be more efficient for recovery of the product.

The analytical geochemical work was done by Genalysis in Perth. Twenty six (26) elements were determined by method FB6 -- Lithium Borate Fusion with an MS finish; eleven 'oxides' by Lithium Borate Fusion with an OES finish and one element , Vanadium by OES.

See Appendix 1 for the geochemical data.

The 2016 re-sampling was instigated following a review of the resource database by management. There were some technical issues recognised in the database surrounding past sampling procedures and pilot plant testing. These issues needed to be addressed, so a re-sampling program was commenced utilising the existing stored sample material. The testwork results were very favourable with the potential to positively impact the economics of the project.

7 Proposed Program For 2017-2018 (Year 11)

Following the restructure of the joint venture and the change of management in over the 2015-2016 period, the company altered it's strategy and suspended work on processing data and conducting further drilling until sufficient funds are available for a complete resource update program. Due to fiscal constraints, Crossland's strategy will now focus on

optimizing and detailing the mining and processing operation to re-establish a viable business model. Crossland is confident of consistent low-grade resources, so at this stage, the company is more concerned with establishing an economic low-grade ore extraction concept than continuing to grow a resource base. Currently, the operational plan is to increase the mine capacity from 10.5Mtpa to 22.5Mtpa. As the project matures, Crossland will to change it's focus to exploration and resource development after the operational study/model justification is complete.

EL 25657 is an integral part of the project and the current updating of the scoping studies are inclusive of the subject tenement's potential. The relinquishment of the southern part of the licence was decided upon as it consisted principally of "hard rock" country, which had no economic potential. The reduction was part of the complete reassessment of the company's land holdings in the region with a corresponding reduction in costs.

8 References

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