HALE ENERGY LIMITED

EL24827

Final - Surrender Report

25 January 2006 – 24 August 2009

ILLOGWA 1:250,000 MAP SHEET

Distribution:  - NT Department of Resources, NT Geological Survey, Darwin
              - Hale Energy Limited (GEACC Office, Wembley)
CONTENTS

Summary 3
1.0 Introduction 4
2.0 Location and Access 4
3.0 Native Title and Site Clearance 4
4.0 Harts Range Geology 5
5.0 Prospect Geology 6
6.0 Previous Exploration 6
7.0 Exploration Completed by Hale Energy Limited 7

FIGURES

1.0 EL24827 on topographical base showing surrendered area 4
2.0 Harts Range geology and project area 5
3.0 EL24827 regional geology map 6

APPENDICES

1 EL24827_ROCKCHIP_GEOCHEM_SURRENDER_2009.txt
**SUMMARY**
This report covers all exploration activities completed by Hale Energy Limited on EL24827 for the period 25 January 2006 to 24 August 2009.

Hale Energy Limited a wholly owned subsidiary of Thor Mining PLC was the 100% holder of six granted tenements including EL24827 in the Harts Range area on the Illogwa 1:250,000 map sheet SF53-15 in the Northern Territory (figure 1).

Six samples (HR1-HR6) were collected by Hale Energy Limited during late 2006 in the Eagle Beak Area on EL24827 (Appendix 1).

A total of 58 open file reports were acquired and compiled covering all or part of the Harts Range tenements including EL24827.

A decision was made to surrender the tenement in 2009 due its small size and limited prospectivity.
1.0  INTRODUCTION

This report covers the Year 3 annual exploration activities completed by Hale Energy Limited on the Harts Range Tenements including; EL24734, EL24735, EL24736, EL24765, A24766 and EL24827 for the period 25 February 2008 to 24 February 2009.

2.0  LOCATION AND ACCESS

EL24827 is situated approximately 260 km north east of Alice Springs. Access can be gained from the Stuart Highway and via the Plenty Highway (Figure 1).

3.0  NATIVE TITLE AND SITE CLEARANCE

The Native Title Agreement for the Harts Range Project including EL24827 is based on the premise that Hale Energy Ltd is;

- Not to file and register a Native Title Application nor lodge objections in the National Native Title Tribunal to the use of the “expected procedures” in the grant of the six exploration licences; and;

- at the completion of any airborne and handheld radiometric surveys to seek your agreement that you will notify the Central Lands Council (CLC) of the specific areas where you intend to undertake onground disturbing exploration activities such as drilling, so that we can organise clearances of any cultural and heritage sites. This will ultimately provide you with the scared site clearances you will require under the Northern Territory Aboriginal Sacred Site Act.
The proposal effectively divided the exploration program into two phases. The first phase of work did not involve ground disturbing activities and did not involve native title holders and did not interfere with their legal rights. Exploration work involving ground disturbing activities on the tenement was not completed.

4.0 HARTS RANGE GEOLOGY

The project area covers high grade metamorphic rocks of the Proterozoic Harts Range Complex, which are situated in the south-eastern zone of the central Australian Arunta block, in the Entia Domal Structure (Figure 2). The Entia Gneiss (Harts Range Group) forms the core of the Entia Dome, consisting of acid muscovite biotite gneiss overlain by tonalitic quartz/feldspathic gneiss. Granite intrusions form smaller domes within the central structure. Metamorphosed gabbroic and ultramafic bodies are also present within the gneisses. The stratigraphy has been dislocated by numerous faults and shear zones.

![Geological Map of Harts Range Project](image)

**Figure 2:** Harts Range project, showing the tenements and the distinct styles of uranium mineralisation outlined by PNC Exploration.
5.0 PROSPECT GEOLOGY

Tenement EL24827 lies on the north western margin of the Entia Domal Structure (Figure 3). The Entia Gneiss (Harts Range Group) forms the core of the Entia Dome, consisting of acid muscovite biotite gneiss overlain by tonalitic quartz/feldspathic gneiss. The Bruna Gneiss (porphyoblastic feldspar gneiss), and Irindina Gneiss (quartzfeldspathic gneiss) form the core of the Exploration Licence area, which is orientated in a NE direction wrapping around the Entia Dome.

![Figure 3: EL24827 Regional Geology Map showing more recent Hale Energy Limited sample locations included in Appendix 1.](image)

6.0 PREVIOUS EXPLORATION

The tenement area has been covered by modern radiometric and magnetic airborne surveys. The first, in 1993, was over the southern portions of the area. It was flown for PNC Exploration (Australia) Pty Ltd (PNC) at a 200m line-spacing. The second, in 1997, was over the remaining northern portion. It was flown for the NTGS at a 400m line-spacing. The surveys identified three clusters of radiometric anomalies within the tenements. The largest clusters were located within the Entia Gneiss, in the southwest and south of the Entia Dome. The third cluster, marginal to the dome, is spatially associated with a zone of northwest orientated shears.

Exploration for uranium was conducted over the area between 1992 and 1995 by PNC, which carried out regional reconnaissance sampling and discovered occurrences of uranium mineralisation in a number of locations, which were followed-up by prospect scale mapping and sampling. Although some of the occurrences contained high-grade mineralisation, none were of sufficient size to warrant drill-testing. PNC reported four separate types of uranium mineralisation, based on mineralogy:
• Uraninite-type: Uraninite occurring as mm to cm sized crystals, crystalline aggregates, or nodules. The mineralisation is associated with felsic phases in amphibolite and gneiss. At the Yambla Prospect the mineralisation is within quartz veining in an altered fault zone. At the Ryoma Prospect it is associated with haematite-altered fractures within gneiss. Grab samples from this prospect gave analyses of up to 8.5% U.

• Pegmatite Type: Uranium bearing rare earth oxide minerals within or immediately adjacent to a suite of pegmatites. At the SNAF Prospect, and the latest rock chip sample site for Mt Mary, on EL24734, grab samples from the contact zone between pegmatite and gneiss produced analyses to 0.26% U. At the Kelly Prospect parts of the contact between a 3km long pegmatite and surrounding altered amphibolite is anomalous in uranium.

• Epidosite Type: Sub-microscopic uraninite and uriniferous allanite grains occur in veinlets and vugs, on epidote grains, and in quartz-apatite-sulphide pockets. The mineralisation is associated with epidote and epidote-garnet metasomatic alteration in shear and fault zones.

• Retrogressed Type: Finely disseminated uranium mineralisation associated with clay-silica alteration along faults.

7.0 EXPLORATION COMPLETED BY HALE ENERGY LIMITED

Six samples (HR1-HR6) were collected by Hale Energy Limited during late 2006 in the Eagle Beak Area on EL24827 (Appendix 1). Strong epidote alteration was noted relating to shearing of altered felsic rocks. Although no significant uranium values were received, samples were elevated in strontium, and HR2 returned a value in excess of 0.5% Zn.

Exploration Expenditures on EL24827 for Year 4 up until 24 August 2009 are included in the attached standard NT DOR form.

A total of 58 open file reports were acquired and compiled covering all or part of the Harts Range tenements including EL24827.

Later exploration in Year 3 and Year 4 included additional compilation of all known open file reports and further review of all open file data. Location of several open file prospects in the field has proved difficult and in some cases errors in excess of 200m have been noted.

A decision was made to surrender the tenement in 2009 due its small size and limited prospectivity.