HALE ENERGY LIMITED

Harts Range Group Report

Year 2 Annual Report


ILLOGWA 1:250K MAP SHEET

EL 24734, EL 24735, EL 24736, EL 24765, A 24766 & EL 24827

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SUMMARY
Hale Energy Limited a wholly owned subsidiary of Thor Mining PLC is the holder of six granted exploration licenses, EL24734, EL24735, EL24736, EL24765, A24766 and EL24827 in the Harts Range area on the Illogwa 1:250,00 map sheet SF53-15 in the Northern Territory (figure 1).

Regional uranium exploration was conducted over the Harts Range uranium tenements in 1992 and 1995 by PNC Exploration (Australia) Pty Ltd. The implementation of regional reconnaissance sampling of the area by PNC, lead to the discovery of significant uranium mineralisation, which was later followed up by an extensive regional assessment program.

Harfort Nominees Pty Ltd a wholly owned subsidiary of Batavia Mining Limited acquired the Harts Range tenements in 2005. In January 25th 2006 Harfort Nominees Pty Ltd was transferred to Hale Energy Ltd and holds a 100% interest in all 6 tenements mentioned above.

Exploration activities during Year 2 included detailed rock chip sampling, mapping and soil sampling at the Daicos, Haddock and Indiana prospects. All three prospects exhibit highly anomalous Uranium assays. The Daicos prospect also returned highly anomalous REE assays from pegmatites in the area.

Figure 1: Hale Energy Tenements including the Harts Range Project lower centre.
1.0 INTRODUCTION

This report covers the Year 2 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 2007 to 24 February 2008.

2.0 LOCATION AND ACCESS

The Harts Range tenements are located in the Harts Range area 150km east-northeast of Alice Springs and 50km east of the Harts Range settlement (Figure 1). The tenement group consists of six tenements with a total area of 362 km². Access is gained by 4WD vehicles from either north along the Plenty Highway via station tracks or south along the Ross Highway via the Arltunga Tourist Drive (figure 2).

![Figure 2: Harts Range Tenements, Topographical map.](image)

3.0 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 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. 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.
4.0 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.

A total of 58 open file reports have been acquired and compiled covering all or part of the Harts Range tenements.

5.0 NATIVE TITLE AND SITE CLEARANCE

The Native Title Agreement for all tenements 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 divides the exploration program into two phases. The first phase of work does not involve ground disturbing activities and does not involve native title holders and does not interfere with their legal rights. Further exploration work involving ground disturbing activities on the tenements will involve the Native Title holders seeking to protect their cultural interests in the relevant area. In this event The CLC will provide a simple agreement covering the work program clearance.

6.0 YEAR 2 EXPLORATION EXPENDITURE

Harts Range Tenement Exploration Expenditures Year 2 (2007) and proposed expenditure for Year 3 (2008) are included in the attached standard forms.
EL 24734

7.0 LOCATION AND ACCESS

Exploration Licence 24734 includes 18 square graticular blocks (SBKS) with a total area of 56.12km². It's situated 257km north east of Alice Springs, with access available by road via the Stuart Highway, and then the Plenty Highway (Figure 1).

8.0 GEOLOGY

Exploration License 24734 lies on the north-eastern margin of the Entia Domal Structure (Figure 4). 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 the Brandy Gneiss (calc-silicate rock) form the core of the exploration licence area which is orientated in a NW direction, wrapping around the Entia Dome.

Figure 4: ELA24734 Geology Map showing anomalous uranium rock chip sampled by PNC, and recent Sampling by Hale Energy.

9.0 PREVIOUS EXPLORATION

Previous exploration of EL24734 has identified a number of prospects, such as SNAF, which is located in the northern proportion of the tenement, and the Kelly prospect in the northwestern section (Figure 4). The SNAF prospect is hosted between biotite-garnet bearing pegmatite and well banded gneiss. The contact zones consist of high radiometric background in the range of 300-500cps, with ‘hot spots’ of up to 10,000cps. The Kelly prospect southeast of SNAF, occurs in the Harts Range pegmatite (felsic granitoid), with ‘hotspots’ ranging from 500-5000cps.
Recent exploration by Hale Energy in Dec 2006 has lead to the discovery of an anomalous zone in a meandering gully, northeast of Mt Mary (Figure 4) named the Indiana Prospect. The exposed section is a sheared contact zone between the Harts Range granite and the Brandy Biotite Gneiss filled with pegmatite veining, with a background radiometric level of 500-600cps. Rock chip sampling of the contact zone was conducted; with the highest uranium value sampled returning a result of 107.5ppm for sample number HR25.

10.0 YEAR 2 EXPLORATION

Additional reconnaissance sampling has confirmed that anomalous uranium mineralisation associated with outcropping pegmatite in a shear zone extends in excess of 600 metres in strike length. Work during year 2 included detailed prospect scale mapping and sampling. A total of 55 rock chip samples were collected during the reporting period including sample numbers MM001-012, NT001, SL001 &002, A105681-716 and A105751-754. Numerous anomalous rock chip assays were returned up to a maximum 781.3 ppm U. See Appendix 1 for the tabulated results.

Further exploration at the Indiana prospect will need to involve reconnaissance drilling to ascertain any economic potential the mineralised pegmatites may have.

EL24735

11.0 LOCATION AND ACCESS

Exploration Licence 24735 includes 48 SBKS blocks with a total area of 151.4km². The EL is located 299km north east of Alice Springs, with access via Stuart highway and the Plenty highway (Figure 1).

12.0 GEOLOGY

The project lies to the south of the Entia Dome, with the Bruna Gneiss (Harts Range Group) being the dominant lithological unit within the area. The rock type consists of porphyroblastic feldspar gneiss (+/- biotite gneiss), mylonitic and biotite rich in part. The Riddock Amphibolite Member and the Entire Gneiss form the basics of the western margin of the EL area. On the central portion of the EL area, there is metamorphosed to partly metamorphosed norite and gabbro, containing relict igneous textures.
Figure 5: EL24735 tenement map showing anomalous uranium prospects identified by PNC and more recent Hale Energy reconnaissance sampling.

13.0 PREVIOUS EXPLORATION

The anomalies found by PNC on tenement EL24735 include Ryoma, in the south western portion, and Casper, which is 600m northwest of Ryoma (Figure 5). Both prospects are within Irindina Gneiss. Within this zone there is numerous WNW trending fractures zones exhibiting weak hematitic alteration of feldspar along the margins. Weak hotspots in the range of 75-130 cps are present along the fractures with clusters of several hotspots, ranging between 400-3,000 cps. The strongly radioactive 3,000 cps anomaly is associated with centimeter size fragments of yellow stained uraninite mineralisation.

Geological mapping has delineated localised zones of re-crystallized shearing. The origin of this zone is obscure but it is likely that it has occurred during the development of several parallel orientated mylonite zones, one of which occurs about 10-15 m above the uraninite mineralisation. A one meter trench was excavated into a highly fractured system and associated hotspots.

Traces of uraninite mineralisation which occur as small (cm sized) crystals embedded in biotitic amphibolite were identified within the trench. The uraninite is spatially associated with the hematite altered fractures which range from 0-10 cm. Rock chip samples taken across altered fractures showed thin alteration halo of chlorite, which is typical of unconformity style uranium mineralisation.
Previous assays of uraninite mineralised grab samples gave 3.2% – 8.5% U, 900-3,100 ppm Y, 600-1,000 ppm P and approximately 0.4% Ti. The zone of altered fractures at Ryoma can be traced over an area of 250 x 100 m at various intensities.

To the NW of Ryoma lies the Casper prospect where PNC found small brown-black cubic uraninite crystals with strong radioactivity (4,000 cps) within a fractured zone. The assay results returned 5,090 ppm U and 480 ppm Th and resulted in the excavation of a shallow pit (1m deep).

Spotty uraninite-xenotime mineralisation was found within a vein-textured quartz-plagioclase pod, hosted in an east west shear zone. A sample of strong radioactive mineralisation was collected from the bottom of the pit, which assayed 2.6% U, 0.3% Th, 0.8% Y and 0.5% Ti.

A detailed ground spectrometer survey (5 x 5 m) was completed over infill areas at both Ryoma and Casper by Batavia, to try to identify a halo around the known mineralised sites. The survey did not show any recognisable low grade uranium halo. The ground magnetics showed weak WNW-ESE trends parallel to the structural grain as evidenced by a series of photo lineation’s that cut across the area of the two grids.

Five samples were taken at Ryoma and Casper prospects by Tim Monks (Hale Energy) in October 2006, with results from 121 ppm to 31.6 %, confirming the known elevated uranium potential of the area. Results were also elevated in rare earth elements (REE) such as Yttrium and Zirconium. HR8 also returned up to 1.62% Pb.

The results above include a single product of 31.6% U, containing a significant portion of visible uraninite; however this is not a representative of the complete zone of shearing noted in mafic amphibolites, rather a hand picked sample. The sampling confirms the association with associated strong REE values, which are often associated with late stage intrusives, and a number of large pegmatite bodies. The result of 0.61% U from Casper confirms this with the sample also anomalous in Nb, Ta and Cs.

14.0 YEAR 2 EXPLORATION

The year 2 exploration included compilation of all known open file reports and field checking of data.

EL24736

15.0 LOCATION AND ACCESS

Exploration License 24736 includes 19 SBKS blocks with a total area of 59.17 km$^2$. It is situated approximately 270 km north east of Alice Springs, with access gained from the Stuart Highway and via the Plenty Highway (figure 1).

16.0 GEOLOGY

The project area lies on the southern margin of the Entia Dome (Figure 3). The Entia Gneiss (Harts Range Group) forms the core of the Entia Dome which is located on the central western part of the Exploration License area. These rocks consist of acid muscovite biotite gneiss overlain by tonalitic quartzfeldspathic gneiss. Other rocks include rare kyanite bearing schist, calc-silicate rocks and marble.
The NW trending Bruna Gneiss and the Brady Gneiss forms the west part of the Exploration License area which is originated in a NW direction (Figure 6). The Bruna Gneiss is classified as porphyroblastic feldspar gneiss, mylonitic and biotite rich in part. The Brady Gneiss comprises calc-silicate rock containing clinozoisite, epidote, hornblende, clinopyroxene, quartz and feldspar with minor garnet-biotite-muscovite schist.

In the central zone meta-hornblendite and meta-ultramafic rocks are orientated in an east-west direction, dipping 25 degrees to the SW.

Figure 6: EL24736 tenement map showing PNC prospects and more recent rock chip sampling conducted by Hale Energy Limited.

17.0 PREVIOUS EXPLORATION

The Haddock prospect is located in the central portion of EL24736 (Figure 6). PNC Exploration has classified the prospect as a strata bound, sheet like, metasomatic uranium occurrence hosted by the Entia Dome basement rocks. The prospect coincides with a high amplitude uranium airborne anomaly and with semi continuous anomalism over a 20 x 200 m area within epidote altered banded gneiss.

Systematic assessment of Haddock comprised 1:1,000 scale mapping (500 x 200 m), ground spectrometer and magnetic surveys and four trenches; three of which were channel sampled.

Locally the Haddock geologic succession comprises a basal felsic and mafic paragneiss intruded by a sill-like felsic orthogneiss. This sequence dips southward at moderate angles. The uranium is contained within a sheet-like moderately folded metasomatic layer. This layer is best described as a hybrid epidosite pegmatoid rock, with lateral and basal contacts against felsic gneiss.
Four backhoe trenches were excavated and mapped, radiometrically profiled and three of these trenches were channel sampled. Channel sampling of trenches produced consistent low to moderate uranium values. The best result was 2 m at 460 ppm uranium and 230 ppm yttrium. A total of 57 channel samples were taken over composite lengths of 0.5 to 1 m. The anomalous host rock was exposed in trenches 1, 3 and 4, consisting of very hard and compact hybrid mixes of epidosite and pegmatoid described above and is two meters thick.

Ground magnetic traversing revealed no significant signature associated with the uraniferous layer, but did show the footwall granitic orthogneiss layer to have a moderate magnetic signature.

Over the Starlight prospect several uranium dominated hotspots (500-2,000 cps) were located in long (several hundreds meters) but narrow (varying from 1-3 meters) pegmatite veins cross-cutting a calc-silicate/felsic gneiss sequence of the Entia Gneiss, close to the contact of the Entia with Bruna Gneiss. The pegmatites are close to and some parallel to the Horse Fault. Assays range between 830-1,860 ppm U, 230-1,280 ppm Nb, and 180-220 ppm Th from the pegmatite chips and soil.

Hale Energy sampled a horizon at the edge of a pegmatite outcrop at the Daicos prospect in Nov 2006. Some of the samples contained visible columbite crystals found near surface along the contact margin of the granitic pegmatite and the Entia Gneiss country rock. Rock chip sample HR13 returned a high U value of 8.87%, 15.2% Nb, 0.22% Sm, 19.20% Ta and 3.2% Y, again showing the relationship with REE’s in late stage intrusives in the area (Table 4).

18.0 YEAR 2 EXPLORATION

A total of 81 rock chip samples were collected from EL 24736 during year 2 exploration. One sample A105657 was collected from the Luke prospect.

Haddock prospect
Detailed mapping and sampling was conducted over the Haddock prospect during year 2. A total of 47 rock chip samples were collected from the Haddock prospect in year 2 including sample numbers HK001-013 & A105717-750. Numerous anomalous rock chip sample assays were returned from two phases of reconnaissance sampling over the base of the hill in epidote altered metamorphosed sediments. A best result of 1658.37 ppm U was returned from the sampling (see Appendix for tabulated assay results).

Further exploration at the Haddock prospect will need to involve reconnaissance drilling covering the epidosite mineralisation at the base of the hill to ascertain any economic uranium mineralisation that may be present.

Daicos
Detailed mapping and sampling was conducted over the Daicos prospect during year 2. A total of 33 rock chip samples were collected from the Daicos prospect in year 2 including sample numbers DR001-011, A105658-678 and A105755.

Initial reconnaissance sampling returned extraordinarily high uranium and REE assays from very radioactive samples. The best initial assay was returned from DR007 on a pegmatite contact with books of muscovite and visible columbite. The sample returned assays of 19.37% U, 26.52% Nb, 6.25% Ta and 2.68% Y and numerous other highly anomalous elements.
A further 24 additional rock chip samples were collected from pegmatite veining in the area and confirmed earlier high grade assays with a best of 7.7% U, 13.8% Ta and 8.54% Nb. Other anomalous elements included Dy, Er, Gd, Hf, Ho, Nd, Tb, Th, Y and Zr.

A total of 374 -80 mesh soil samples were collected over a 100m x 50m panel covering the Daicos prospect area during the reporting period. Nb+Ta (Niobium plus Tantalum) assays were gridded using Micromine. The resultant image indicates that other pegmatite veins are present in the area under surficial cover parallel to outcropping veins mapped earlier in 2007 (the yellow and orange areas on the gridded image). Red to purple highs are adjacent to mapped outcropping pegmatite veins at the base of the ranges.

Figure 7: Nb+Ta (Niobium plus Tantalum) gridded soil data for the Daicos prospect EL 24736
EL24765

19.0 LOCATION AND ACCESS

Exploration License 24765 includes 36 SBKS blocks with a total area of 75.76 km². It is situated some 265 km north east of Alice Springs, with access gained from the Stuart Highway and via the Plenty Highway (Figure 1).

20.0 GEOLOGY

The project area lies on the southern margin of the Entia Dome, joined to EL24736 in the north (Figure 7). The Bruna Gneiss and the Brady Gneiss form the west and central part of the Exploration License area. The Bruna Gneiss is classified as porphyroblastic feldspar gneiss, mylonitic and biotite rich in part. The Brady Gneiss is composed of calc-silicate rock containing clinozoisite, epidote, hornblende, clinopyroxene quartz and feldspar with minor garnet-biotite-muscovite schist. The Entia Gneiss (Harts Range Group) forms the eastern part of the Exploration License area. These rocks consist of acid muscovite biotite gneiss overlain by tonalitic quartzfeldspathic gneiss.

The western zone is dominated by the Mount Amphibolite Member which shows well developed compositional layering with subordinate intercalated garnet-biotite-quartz gneiss.

Figure 8: EL24765 Geology Map showing PNC prospects and more recent Hale Energy rock chip sample locations.
21.0 PREVIOUS EXPLORATION

The Placer uranium anomaly is located on the east edge of the Exploration License (Figure 7). A 200 x 150 m grid was constructed to investigate the 1,000 cps anomaly discovered during exploration in 1995. The anomaly is located over a partly dilatant; retrogressed, east-west fault, which cuts the layered felsic and mafic Entia Gneiss. Sporadic zeolite veining marks the dilatant segments of the fault zone, else where the fault is marked by non-dilatant fracturing. Grab soil sampling produced assays of 140-160 ppm U and 5,400-6,200 ppm P. Alteration (silicified zeolite) was traced over 100 m.

A single backhoe trench was excavated which exposed a well defined fault zone about 2 m wide and inclined steeply towards the south. Little crystalline zeolite was visible and the fault material was dominated by siliceous fault breccia. Green nontronite clay alteration was present at the margins of the faulted material. Only spotty radiometric anomalies are present on the trench walls associated with siliceous rubble (100-500 cps). Channel sampling revealed uranium – phosphorous association, indicating uraniferous apatite to be the likely uranium host phase. A total of 22 channels were collected with the best assay return at 0.5m of 260 ppm U.

Abundant elevated uranium bearing rock chips through out the tenement are closely associated with faulting. A major faulted zone striking N-S in the eastern portion of the EL hosts highly anomalous copper (13% Cu) nickel (1,310 ppm Ni) and cobalt (0.25% Co) rock chips. No follow up exploration has been conducted over these anomalous areas.

The Culay copper occurrence was investigated in 1994 following the discovery of secondary copper mineralisation in 1993 (refer to Figure 7). Some features of the mineralisation exposed in the previous trenching suggest a cross cutting structure and associated biotitisation and calc-silicate alteration of the wall rocks. The single trench was excavated over an outcropping layer of quartz-feldspar-garnet-biotite gneiss, exhibiting malachite smears where a grab sample returned a 1,800 ppb Au assay. The trenching showed no garnet-biotite gneiss, despite the mineralised rock type outcropping a few meters north and south of the trench. Best copper assays from channel sampling returned 0.9-5.35% Cu over 50 centimeters. Only minute traces of malachite smear were visible in the northern trench wall. There were no radiometric anomalies in the trench.

In 1993 at the Goanna prospect (Figure 7) a grid measuring 200 x 200 m (pegs at 25m spacing) was constructed to cover a pegmatite quartz vein containing scattered fragments of U-Nb-Ta minerals. The vein was intruded along an E-W fault showing dextral offset. Two trenches were excavated, with the western trench sited where fragments of radioactive minerals were previously discovered. Only pegmatite and quartz veining was exposed with no radiometric anomalies. The trenching encountered a 2,500 cps radioactive anomaly with U-pyrochlore in a narrow biotite filled fault. Channel sampling confirmed the U-Nb-Ta-Y mineralisation. Detailed ground work and ground geophysics failed to locate any further significant features.

The Horse area (western portion of EL, Figure 7) was discovered by follow-up of numerous uranium channel anomalies. Surface mapping outlined units comprising interleaved quartzo-feldspathic and para-amphibolite layers of the Entia Gneiss. The prospect is located on a broad, open fold structure with a NW trending axial plane. Regional quartz-pegmatite dykes cuts all the units, resulting in patchy epidosite along the margins of the pegmatite dykes hosting sporadic uranium anomalism.
A backhoe trench was excavated over the epidote anomaly located in 1993 (440-510 ppm U). The trench exposed a six meter wide zone of altered felsic gneiss. Minor uranium anomalist was encountered with assays returning 95 ppm U and 7-220 ppm Y.

Other uranium prospects in the area include the Blizzard 1 and 2 prospects (Figure 7). The Blizzard 1 prospect (550 cps) is a garnet contaminated pegmatoid (280 ppm U, 1000 ppm Nb) in epidotised mylonite (53 ppm, 4, 970 ppm Ti) with weak uranium anomalist over 25 m².

The Blizzard 2 prospect (Figure 7) (1,000 cps) is hosted in pegmatoid with several hotspots over 10 m², with assays of 590 ppm U.

The Zephyr prospects (Zephyr 1-3, refer to Figure 7) are located 1.5 km west of the Pony prospect, within the layered Entia Gneiss. Radiometric anomalies at Zephyr is of two types; uraniferous alunite hosted by a pegmatite dyke and uraniferous epidote hosted by a stratiform calc-silicate layer. Radiometric anomalies occur as clusters centered on lensoidal epidote dominated pods within the ‘target stratum’. The pod designated “Zephyr 3” measures 20 x 5 m on the surface and is continuously anomalous over this area. The pod designated “Zephyr 2” is larger, around 30 x 5 m on the surface.

Two trenches were completed over Zephyr 2 and 3. The uranium bearing horizon proved to be lithic with problems encountered during channel sampling. A total of 13 channel samples were taken from both trenches, with the best channel sample interval resulting in an intersection of 2 m @ 285 ppm U. Best assays from grab samples are 390-480 ppm U and 9-25 ppm Th. The true width of the uraniferous horizon in Zephyr 2 is 1.7 m and 1.3 m in Zephyr 3. Both prospects have been covered by ground spectrometer and magnetic surveys at 10x12.5 and 10x25m patterns respectively.

White Mountain prospect is a low order uranium anomaly associated with garnet bearing pegmatites dykes. The prospect comprises an east west pegmatite dyke system located approximately 2 km from Mount George. The pegmatites intrude the felsic Entia Gneiss with some associated interlayered amphibolite.

The large pegmatite (800 x 100 m) forms the crest of White Mountain and contains numerous low order hotspots associated with garnet contamination within the pegmatite and epidote alteration in the wall rocks. Maximum recorded counts were 800 cps, with assays ranging from 35-430 ppm U, 50-200 ppm Zr-REE’s.

Surface sampling in 1993 gave assay results in the order of 1,900 ppm U (known as the Garnet prospect, refer to Figure 7). A detailed grid was established at a scale of 1:1000 to map to confirm the nature and orientation of the structure hosting the pegmatite and biotite-garnet alteration associated with the U-Y-Nb-Zr mineralisation.

The main mineralisation seen at Garnet occurs at the western termination of the cross cutting pegmatite. The pegmatite terminates in a 6m wide amphibolite layers. Minor anomalies have been detected along the margins of the pegmatite. The mineralisation occurs where garnet contamination of the pegmatite has taken place.
The mineralisation is probably due to the development of hydrothermal metasomatic fluids that have come through the fractured pegmatite and reacted with adjoining, iron rich amphibolite producing biotite and spessartine garnet, at the same time attracting any uranium which may be present in fluids. The smaller anomalies also occur on the amphibolite/pegmatite contact.

One trench was sited on a radiometric anomaly located at the margin of a pegmatite where a large megacryst of garnet outcrops. The strongest radioactivity occurs where the pegmatite has been more extensively altered to garnet. Assays returned ranged between 18-2,900 ppm U, 100-4,000 ppm Y and 100-2,600 ppm Nb. Garnet contaminated pegmatite produced the highest assays while garnet-quartz-biotite alternation gave lower grade.

A detailed ground spectrometric survey over the Garnet pegmatite delineated a linear uranium anomaly along the northern (footwall) margin of the pegmatite.

Rock chip sampling of the 'Garnet', and 'Ant' prospects was conducted by Hale Energy Limited in Dec 2006. The Ant composite sample HR 19 was taken in an anomalous zone with silica-epidote veining but returned a low uranium content of 34.4ppm. The Garnet samples were taken in an old trench (garnet rich rock skarn rafts in pegmatite), and returned u values of 1700ppm U (HR10) and 2600ppm U content (HR17).

22.0 YEAR 2 EXPLORATION

The year 2 exploration included compilation of all known open file reports and field checking of data.

A24766

23.0 LOCATION AND ACCESS

Authorisation 24766 includes 3 SBKS blocks with a total area of 9.47 km². It is situated approximately 289 km north east of Alice Springs. Access can be gained from the Stuart Highway and via the Plenty Highway (Figure 1).

24.0 GEOLOGY

The project area lies on the southern margin of the Entia Dome (Figure 8). The Bruna Gneiss and the Brady Gniess form the western and eastern part of the tenement, with the Entia Gneiss (Harts Range Group) situated in the central area. These rocks consists acid muscovite biotite gneiss overlain by tonalitic quartzfeldspatic gneiss.
25.0 PREVIOUS EXPLORATION

No exploration for uranium has been conducted over the area. Several abandoned open cut mines were worked in the turn of the century for pegmatite hosted mica-beryl-copper within the Irindina Gneiss. Vein hosted lodes were excavated by trenches and other small mining methods.

26.0 YEAR 2 EXPLORATION

The year 2 exploration included compilation of all known open file reports and field checking of data.

EL24827

27.0 LOCATION AND ACCESS

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

28.0 GEOLOGY

Tenement 24827 lies on the north western margin of the Entia Domal Structure. 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 (porphyroblastic 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 10: EL24827 Regional Geology Map showing more recent Hale Energy Limited sample locations.

29.0 PREVIOUS EXPLORATION

Six samples (HR1-HR6) were collected by Hale Energy Limited during late 2006 in the Eagle Beak Area on EL24827; with strong epidote alteration 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.

30.0 YEAR 2 EXPLORATION

A total of 2 rock chip samples were collected from EL 24827 during year 2 exploration (A1056679 & A105680). A105679 returned a weakly anomalous assay of 86.7ppm U. Both samples returned weakly anomalous thorium assays.

APPENDICES

Appendix 1: Harts_Range_Geochem_Sampling_Year2_2008.txt