ANNUAL REPORT

EXPLORATION LICENCE

EL22961

LITCHFIELD PROJECT

NORTHERN TERRITORY

FOR THE YEAR ENDED

10th July 2005

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SUMMARY

This report summarises work carried out on Exploration License 22961, Litchfield Project, Northern Territory for the year ended 10 July 2005.

Through compilation efforts, Falconbridge (Australia) Pty Limited identified the Litchfield/Batchlor area of the Northern Territory as being favourable to host Proterozoic, intrusive related, magmatic Ni-Cu-PGE sulphide mineralization, such as Thompson or Voiseys Bay in Canada. The area has seen little historic work and has not been the focus of dedicated nickel sulphide exploration in recent years. In December 2003, Discovery Nickel Limited acquired 100% interest in EL22961 and other Falconbridge tenements following the successful listing of Discovery Nickel on the Australian Stock Exchange.

The tenement area lies in the western parts of the Pine Creek Inlier (Litchfield Province) and is considered to have excellent potential for magmatic Cu-Ni mineralisation related to the Proterozoic Wangi Basics. The Litchfield Province is the continuation of the prospective Halls Creek Province of the Kimberley's, a known significant magmatic Cu-Ni province (e.g. Sally Malay Deposit).

Most significant nickel-copper massive sulphide deposits are extremely good conductors. Discovery Nickel's exploration approach relies heavily on airborne electromagnetic (AEM) surveying, followed up by ground EM to define targets. Plus where appropriate DNL conciders regional soil geochemistry an excellent technique to identify areas of mafics for further exploration.

This second annual report summarises all exploration work conducted by Discovery Nickel Ltd (DNL) on EL 22961 for the annual period ended 04 August 2005.

Exploration completed to date on EL 22961 includes:

- review and compilation of open file reports, published literature and data;
- interpretation of the aeromagnetic, gravity and landsat data;
- designing the boundaries of a Geotem Survey
- designing a soil sampling program;
- Collection and analysis of the 2004 field season.
- Assessment of geochemistry and recommendations for ground EM

The exploration work on EL 22961 has not advanced as fast as intended due to delays in gaining the relevant statutory permits, and due to the short field season that applies to this part of northern Australia and challenges in contracting specialists to complete planned exploration surveys.

During September-October 2004, soil sampling was initiated to test three prospect areas for Ni-Cu-PGE mineralisation, associated with the Wangi Basics (SW Daly, Chilling Creek and Sandy Creek Prospects). Both SW Daly and Chilling Creek fall on tenement 22961. The program highlighted four main Ni-related multi-element geochemical anomalies of interest. Anomaly LFGC1 at the northern end of the SW Daly Prospect is the most compelling as it shows elevated Ni-Cu-Pt-Pd-(Co) on three lines, over a strike length of about 2.5 km. The anomaly strikes roughly NNW and coincides with a linear magnetic feature. Another multi-element anomaly further SE at SW Daly (LFGC2), occurs in the vicinity of two strong magnetic features and some gabbroic outcrops. This anomaly is also worthy of further work.

Quantec Geoscience has been contracted to collect ground EM (SMARTEM) over these soil geochemistry anomalies during September 2005.

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1 INTRODUCTION

Discovery Nickel is exploring the Palaeoproterozoic rocks of the Litchfield Province for mafic hosted nickel-copper sulphide deposits. The area is interpreted to be an extension of the Western Australian, Halls Creek Mobile Belt, host to the Sally Malay Ni deposit.

Exploration Licence 22961 is a part of Discovery Nickel Limited's (DNL) Litchfield Project which comprises exploration tenements EL 10140, 22959, 22960, 22961, 23619, 23623, and tenement application ELA 22960. The area is located west of the Litchfield National Park in the Northern Territory (**Figure 1**).

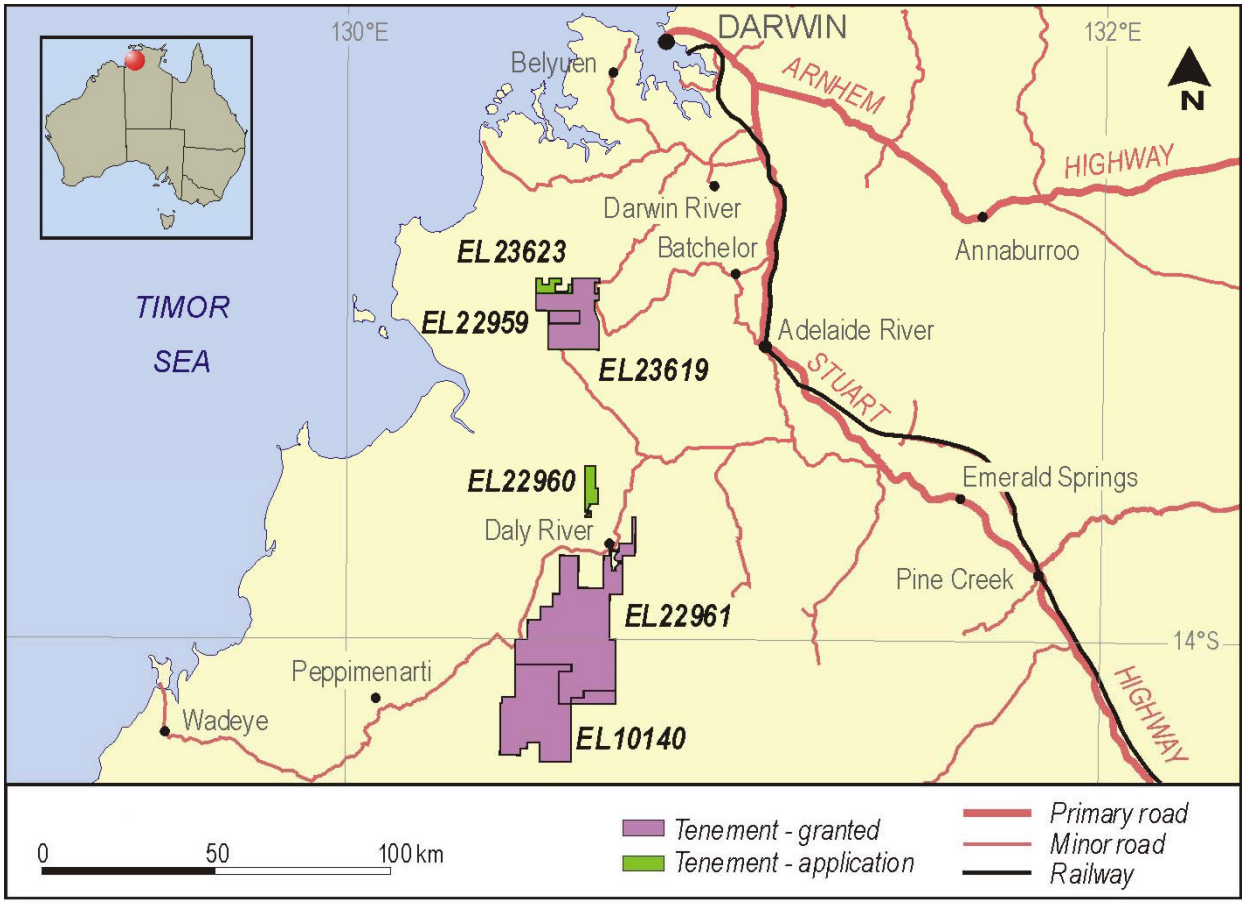

Figure 1. Discovery Nickel Limited Litchfield Project Tenements, showing EL22961 west of Batchelor.

EL 22961 was originally granted to Falconbridge (Australia) Pty Limited. On 15 October 2003, Falconbridge's 100% interest in the Litchfield project was acquired by Discovery Nickel Limited following the successful listing of DNL on the Australian Stock Exchange on 17th December 2003.

Falconbridge (Australia) Pty Limited and its consultants (e.g., White, 2001) identified the Litchfield Block in the Northern Territory as a prospective belt for magmatic Cu-Ni sulfide mineralization related to mafic/ultramafic intrusives. The Litchfield Project area is defined as the area 100-300 km SSW of Darwin, containing mapped exposures of Proterozoic Wangi Basics. These potential host

rocks occur on major NNE-SSW trending structures, (and fault splays associated with those main structures) that extend to the SSE towards the Halls Creek Block in WA.

Various magnetic/gravity images and regional geological maps indicate that the NNE-trending structures and associated (nickel-bearing) ultramafic and mafic intrusives in the Halls Creek Block continue to the NNE into the Litchfield area of the NT. The Halls Creek Block is considered to be highly prospective for Ni sulfide mineralisation and contains some defined (sub-economic) Ni-PGE resources (e.g. Sally Malay). The Argyle diamond mine also occurs along the Halls Creek Fault and therefore the Litchfield area is also prospective for diamonds..Unlike the Halls Creek area, the Litchfield Block has not been widely explored for Cu-Ni sulfide mineralisation, and no Cu-Ni-PGE resources have been discovered to date.

This report summarises the work carried out in the general tenement area for the period ended 10 July 2005.

2 PROPERTY DISCRIPTION AND TENURE

EL 22961 of 234 sub-blocks was granted to Falconbridge Australia Pty Ltd on 11 July 2003 for a period of six years. Falconbridge's interest in the tenement was transferred to Discovery Nickel Limited under a Terms Of Agreement dated 15 October 2003 that covered all of Falconbridge's tenements on the Litchfield Project. Tenement details are in **Table 1**.

Table 1. Tenement Details

EL	Sub-blocks	Grant Date	Expiry Date	Expenditure Commitment Yr 3
22961	234	11.07.03	10.07.09	$44,324.00

3 ACCESSIBILITY AND INFRASTRUCTURE

The project area can be accessed via the all weather Stuart Highway that runs between Darwin and Alice Springs. Then the Port Keats road to Daly River, Daly River is a township of approx one thousand people and is only a few km north of EL 22961 (**Figure 1**).

The region is considered accessible however the area is subject to the summer monsoons and quite often during this period can be cut off due to flooding. In general the area is arable supporting livestock and fruit trees.

4 GEOLOGICAL SETTING

The Litchfield Province is part of the western Pine Creek Inlier and southern extensions and is correlated with the Halls Creek Mobile Belt of the Kimberleys which contains numerous significant magmatic nickel occurrences and deposits such as Sally Malay. The Province contains Proterozoic to Quaternary geological units, including Proterozoic meta-mafic and meta-ultramafic units referred to as the Wangi Basics(**Figure 3**). These mafic and ultramafic rocks are considered to be a likely host for Cu-Ni sulfide mineralization similar to that in the Halls Creek area.

In the tenement area, there is considerable cover of Cambro-Ordovician sediments over Palaeoproterozoic basement of Myra Falls Metamorphics and Nourlangie Schist, together with Palaeoproterozoic granite (Mount Litchfield Granite). One body of northwest trending mafic-ultramafic intrusive is mapped in the Wangi area. Aeromagnetic data suggest northwest, north northeast and north-south structural controls and the possibility of other similar mafic/ultramafic bodies.

Deformation and metamorphism during the Nimbuwah Event (Needham, et al., 1988) is to upper amphibolite facies and is dated at 1870-1855 Ma. Rocks in the Litchfield Province are at least ~1885 Ma in age (Page et al., 1980).

The Proterozoic Wangi Basic rocks contain a range of largely mafic to ultramafic rocks including gabbro, felsic gabbro, dolerite, basalt, anorthosite, diorite, periodotite, pyroxenite, hatrzbergite and

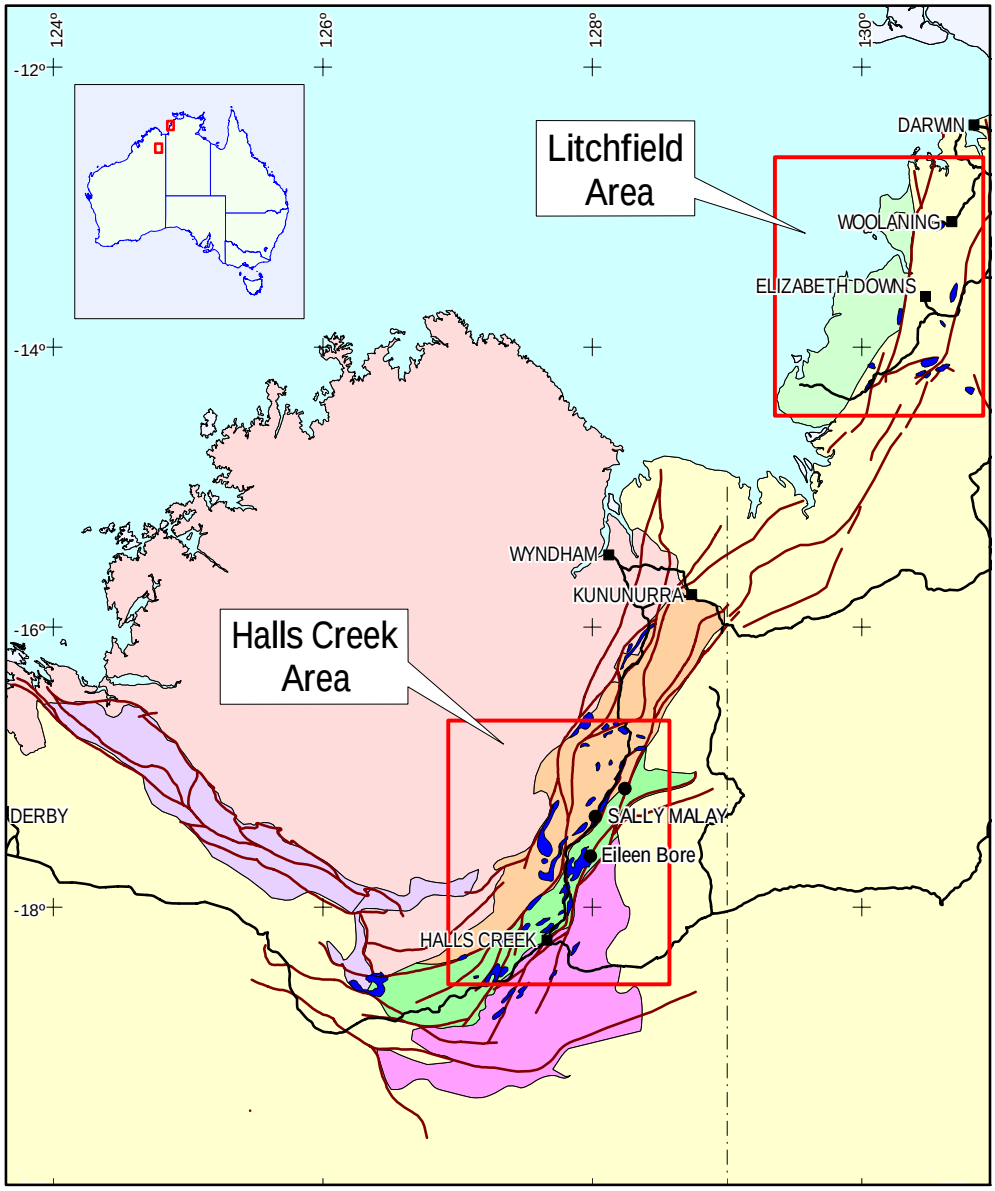

Figure 2 Regional Geology of the Halls Creek Belt, showing relationship to Lichfield Area.

troctolite. These rocks have undergone a single episode of high greenschist to low-amphibolite facies metamorphism. They are considered to be mainly intrusive however minor extrusive varieties have been noted due to presence of interpreted pillow lava structures. In the general region, the Wangi Basics have been dated as ~1850-1840 Ma (Page et al. 1984) and have intruded the older rocks of the Hermit Creek Metamorphics (~2400 Ma) and also the Finnis River Group (~1880 Ma).. The Wangi Basics are considered to be slightly older than the Mount Litchfield Granites (~1850-1840 Ma) that are widespread in the Litchfield area. The Wangi Basics have also been correlated with the Zamu Dolerite in the Pine Creek area (Needham et al., 1980) and the Golden Dyke Metadolerites (Maddocks 1985).

Baseds on a small number of analyses, Maddocks (1985) concluded that the Daly River Metadolerites (Wangi Basics) are probably oceanic tholeiitic basalts. Maddocks suggests that these “Si-rich” mafic rocks (relative to the other basalts in the Pine Creek Geosyncline) are related to the Golden Dyke Metadolerites (exposed further to the northeast), and were derived from the progressive differentiation of a single basic magma.

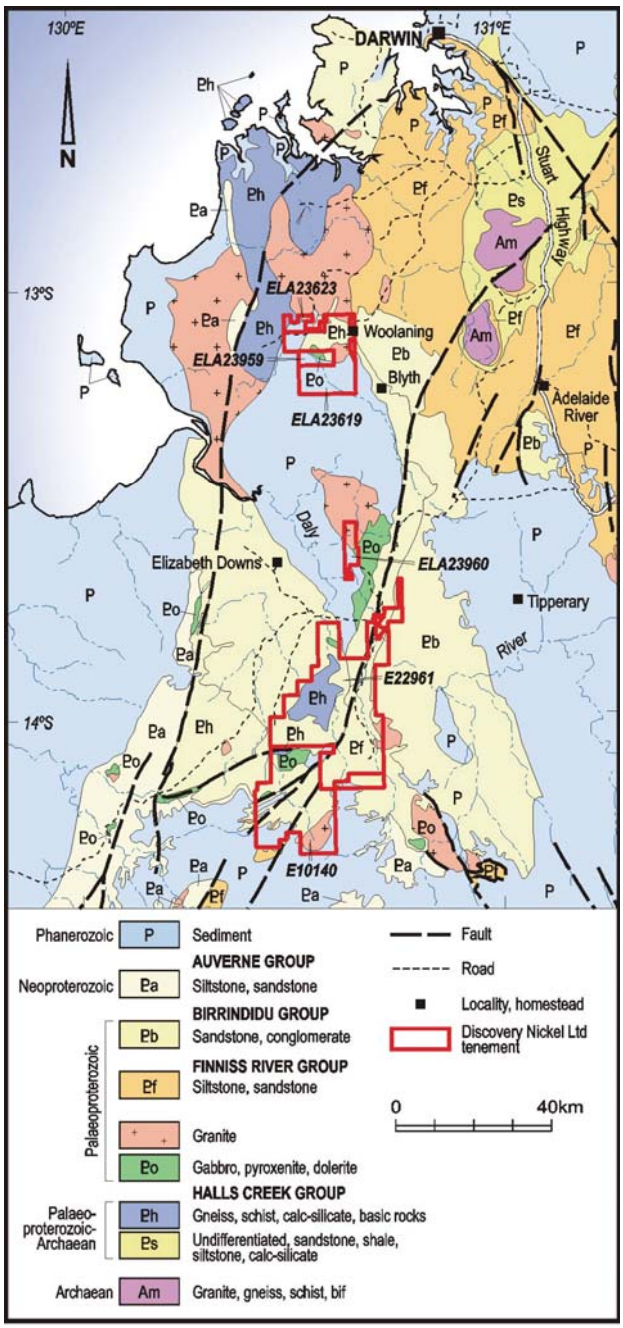

Figure 3: Regional Geology – Litchfield Project

5 PREVIOUS EXPLORATION, OPEN FILE SEARCHES

The previous exploration over the area was initially assessed by Falconbridge and its consultants (e.g. White 2001). Prospecting and small scale mining in the Litchfield area commenced in the late 1800s to early 1900s. Small gold, copper and tin prospects were worked during these times. The largest known base metal prospects occur in the Daly River area (e.g. Daly River Copper Mine). This mine has a past production of ~6000 tonnes of ore at 20% Cu, extracted between 1884 and 1918. The workings at the mine consist of 22 shafts and an opencut. Other Pb, Zn, Ag prospects also occur in the area, hosted within the same Proterozoic submarine volcanic rocks along strike. A resource at Anomaly A nearby is quoted as 300,000 t @ 12% Zn (Ahmad 1998). In addition, small tin-tantalum prospects hosted within pegmatite veins were worked during this era.

Modern minerals exploration at Litchfield began in the 1960s and 1970s. Several companies such as Planet, Western Nuclear, Le Nickel, BHP, Kewane, Mobil, Uranez etc. explored the area for uranium, base metals and diamonds. Minor coal exploration was also carried out (Utah). Planet Management and Research Pty Ltd discovered anomalous Ni-Cu stream/soil geochemistry at the Sandy Creek Mafic Complex (to the south).

Larger exploration programs for base metals, diamonds and uranium were undertaken in the late 1970s to 1980s by companies such as Suttons in JV with Mobil Energy, Urangasellschaft, Carpentaria, BHP, Stockdale, Geopeko, PNC, Total and Idemitsu. Mobil (in JV with Suttons), and also Carpentaria (MIM) carried out widespread regional stream sediment sampling programs across the region. These two companies worked the region for many years and identified several key areas in which they focused their detailed follow-up work. These exploration efforts included widespread regional stream sediment programs (with Ni assays) which have been digitally captured. Mobil recognised the significant Ni anomaly over the Sandy Creek Mafic Complex previously identified by Planet.

The BMR flew wide-spaced aeromagnetic in 1964 and more detailed aeromagnetics/ radiometrics in 1984. Reconnaissance drilling and 1:100,000 scale geological mapping was undertaken by the NT geological survey in 1982-83.

During the 1990s, the key exploration efforts were from RGC, Geopeko, Troy Resources, North, CRAE, Stockdale and Black Range Minerals. During this period, one of the key targets was VHMS mineralisation in submarine volcanics (Proterozoic Barinka Volcanics, Muluk Muluk Volcanics and Warrs Volcanic Member). No significant prospects of this type were discovered. Stockdale focused their diamonds exploration along the western side of the area, along the Tom Turners Fault, which is interpreted to be along strike from Argyle. Black Range Minerals followed on from Stockdale and identified a number of stream-soil Cu-Ni-Co anomalies.

In summary, the Litchfield area has received a large amount of diversified regional-scale (greenfields) exploration work. A large proportion of the previous work was for uranium and diamonds, using regional stream geochemistry, aeromagnetics and radiometrics as the main exploration tools. Only a very small proportion of the previous work was dedicated towards Ni-sulfide exploration. The base metal exploration efforts have been mainly for Cu and Zn within the Proterozoic submarine volcanics, (e.g. along strike of the Daly River Copper Mine). In many cases, Ni was not analysed for in many of the previous geochemical surveys.

It is thus concluded, that the Ni-PGE potential of the Litchfield area remains high and has not been downgraded by the previous exploration.

6 EXPLORATION RATIONALE.

Work completed has been mostly office based and involved review and compilation of open file reports, review of published literature, regional aeromagnetic, landsat TM and gravity data, a GIS review and planning for the field season. Some of this was done prior to application and during appraisal and due diligence for the Discovery Nickel Prospectus.

This work confirms the potential of the region for Cu-Ni and the possibilities of covered mafic intrusives along major structures and associated splays.

7 EXPLORATION COMPLETED DURING THE PERIOD

Exploration completed during 2004/2005 within EL22961 included the following:

- Access negociation
- Revision of proposed soil sampling program
- Completion of soil sampling
- Interpretation of soil geochemistry results. Targets Defined
- 2004 GEOTEM$_{TM}$ Survey

7.1 Land Access Issues

Extensive correspondence has taken place with Land Owners to facilitate access.

7.2 Aeromagnetic Survey Interpretation and soil sampling program

The aeromagnetic data over the Litchfield project area was also interpreted in conjunction with the satellite and geological data. The location of soil grids were positioned to cover interpreted locations of the Wangi Basics.

7.3 2004 Litchfield Soil Sampling Program

During September-October 2004, soil sampling was initiated to test three prospect areas for Ni-Cu-PGE mineralisation, associated with the Wangi Basics (SW Daly, Chilling Creek and Sandy Creek Prospects). Both SW Daly and Chilling Creek fall on tenement 22961.

-80 Mesh samples were collected along 14 lines at SW Daly and 3 Lines at Chilling Creek Prospect.

The program highlighted three main Ni-related multi-element geochemical anomalies of interest. Anomaly LFGC1 at the northern end of the SW Daly Prospect is the most compelling as it shows elevated Ni-Cu-Pt-Pd-(Co) on three lines, over a strike length of about 2.5 km. The anomaly strikes roughly NNW and coincides with a linear magnetic feature. Another multi-element anomaly further SE at SW Daly (LFGC2), occurs in the vicinity of two strong magnetic features and some gabbroic outcrops. This anomaly is also worthy of further work. A complete report of the soil sampling program is included in **Appendix A.**

Table 2: Geochemical Anomaly Details

Anomaly	Prospect	Anomalous Elements	Size of Anomaly	GEOTEM Anomaly	Surface Character	Recommended Follow-Up	Rank
LFGC1	SW Daly	Ni-Cu-Pt-Pd-(Co)	2.5 km long and up to 600 m wide	Not Surveyed	Laterite and residual soils	In-fill soils, mapping and possible ground EM.	1
LFGC2	SW Daly	Ni-Cu-Pt-Pd-(Co)	4.5 km long and up to 500 m wide but patchy	Not Surveyed	Wangi Basics outcrops, residual soils and laterite	In-fill soils and mapping.	2
LFGC4	Chilling Creek	Ni-Cu	Single Point Only	Not Surveyed	Laterite at single point sample site	Site visit and possible in-fill soils.	3

7.4 **2004 GEOTEM$_{TM}$ Program**

In early October 2004 GEOTEM$_{TM}$ was collected by Fugro Airborne Services (Fugro) over two areas of Wangi basics in Discovery Nickel Limited (DNL) Litchfield Project area south of Darwin. A total of 1009 line km of data was collected as part of the Sandy Creek Survey block, which covered most of EL 10140. Only a very minor portion of tenement EL 22961 was covered by the survey, unfortunately yielding no anomalies warranting further investigation.

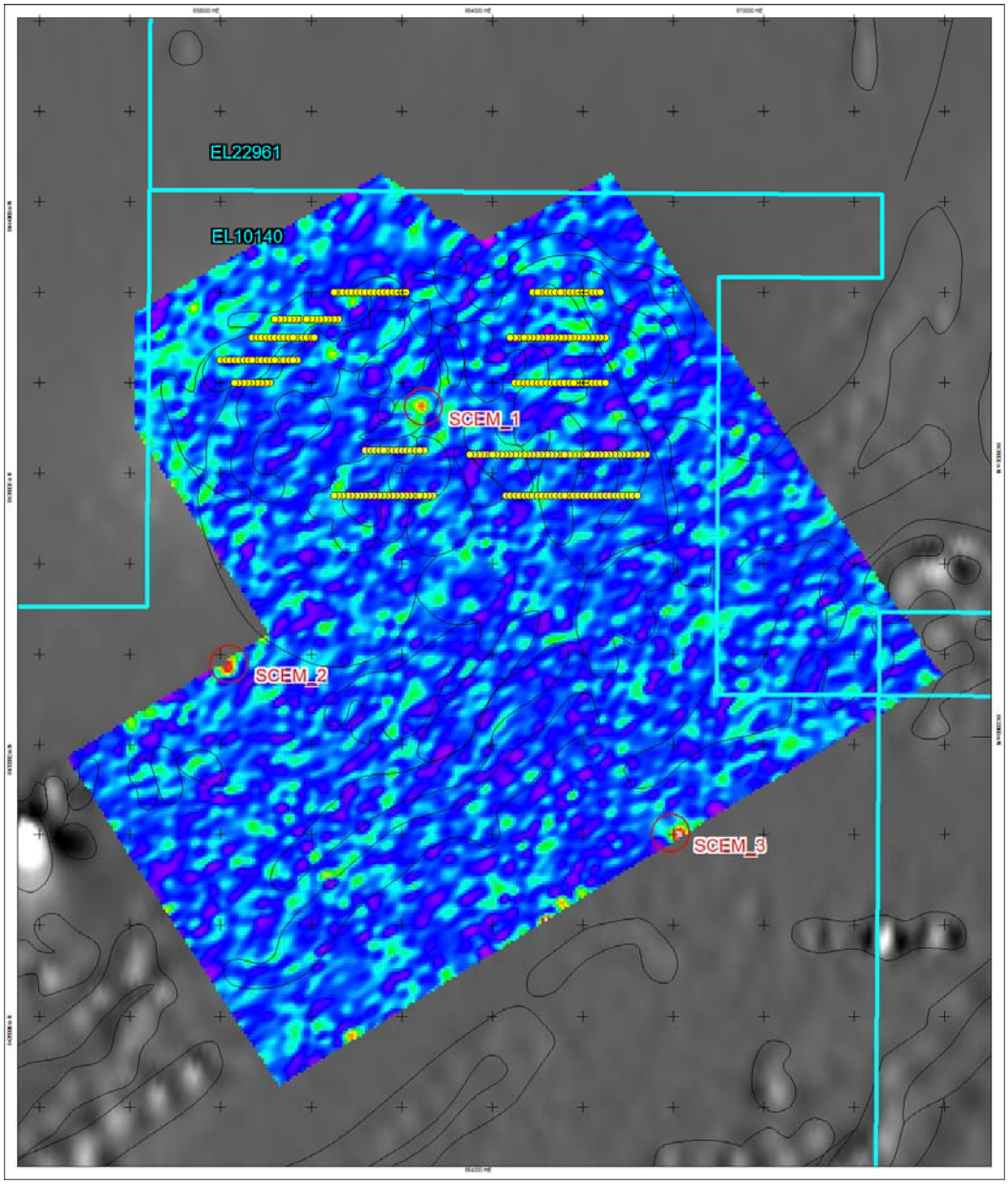

Figure 4: Sandy Creek GEOTEM with three anomalies chosen. Black polygons show areas of Wangi basics interpreted from the magnetics. Soil grids shown in yellow. A small portion of the GEOTEM falls on EL 22961

8 WORK PROGRAM 2005

During 2005 DNL plans to further process and interpret the GEOTEM data collected over EL 22961 to define targets for ground follow up. DNL plans to then cover conductors with ground EM. And acquire surface geochem data over selected areas. If ground EM confirms conductive features then either surface sampling and/or drill testing of bedrock features will be undertaken.

- Processing and interpretation of the soil geochemistry data
- Processing and interpretation of GEOTEM data
- Ground EM surveying
- Interpretation and processing of the ground EM data
- Clearance of the proposed drill sites by the Traditional Owners
- RC drilling
- Rehabilitation

9 EXPENDITURE

Annual expenditure for each tenement is summarised in **Table 3**.

Table 3 - Expenditure Details.

Type of Expenditure	Costs (GST exc.)
Geochem Sample Analysis	$9087.70
Geochem Sample Acquisition	$5537.10
Geological Consulting (Matt White)	$4031.82
Contractor Geochem	$3636.36
Contractor Land	$45.45
Land Fees	$1700.00
Geological Consulting (Geodiscovery)	$9570.49
Salery: Andrew Johnstone	$1216.84
Travel Airfares	$148.44
Travel Accom and Meals	$66.69
RENT	$2574.00
Administration 15%	$5624.23
TOTAL	$43257.12

10 CONCLUSIONS AND RECOMMENDATIONS

Tenement EL 22961 is located in an interesting structural position as a continuation of the prospective Halls Creek Province. The Cu-Ni potential is high and has not been downgraded by the diversity of previous exploration. The 2004 soil survey had successfully defined a number of targets that will be investigated with ground EM and drilling during 2005.

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APPENDIX 1

2004 Soil Sampling Report
Litchfield Project Northern Territory
Matthew J White