



Independence Group

**FINAL SURRENDER REPORT ON EL26804,  
BIRRINDUDU BORE PROJECT,  
For the period  
12 January 2009 to 8 January 2013.**

**Author:** Sharon Bell & Morgan Frejabise  
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**INDEPENDENCE GROUP NL**

Suite 4 Level 5 | South Shore Centre  
85 South Perth Esplanade  
South Perth | Western Australia | 6151  
PO Box 496 | South Perth | WA | 6951

ABN 46 092 786 304  
**T** +61 8 9238 8300  
**F** +61 8 9238 8399  
**E** [contact@igo.com.au](mailto:contact@igo.com.au)  
**W** [www.igo.com.au](http://www.igo.com.au)

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## TABLE OF CONTENTS

<b>1</b>	<b>INTRODUCTION</b> .....	<b>10</b>
<b>2</b>	<b>LOCATION AND ACCESS</b> .....	<b>10</b>
<b>3</b>	<b>TENURE</b> .....	<b>12</b>
<b>4</b>	<b>REGIONAL GEOLOGY</b> .....	<b>12</b>
<b>5</b>	<b>PREVIOUS EXPLORATION</b> .....	<b>12</b>
5.1	WMC (1984) .....	12
5.2	Otter Gold Mines NL / Stockdale Prospecting Ltd (1996 - 2003) .....	13
<b>6</b>	<b>EXPLORATION BY IGO (2009 – 2013)</b> .....	<b>14</b>
6.1	Re-Assaying of DeBeers Geochemical Samples .....	14
6.1.1	Soil and Stream Samples .....	14
6.1.2	Heavy Mineral Concentrates .....	14
6.2	Stream Sediment Sampling .....	15
6.2.1	Phase 1 .....	15
6.2.2	Phase 2 .....	15
6.3	Rock Chip Sampling .....	16
6.4	Petrology .....	17
6.5	Soil Sampling .....	17
6.6	Rotary Rir Blast (RAB) Drilling .....	19
6.7	Geological Reconnaissance .....	20
6.8	Aircore (AC) Drilling .....	21
6.8.1	Drilling procedures .....	21
6.8.2	Results .....	23
6.8.3	Rehabilitation .....	26

## LIST OF FIGURES

Figure 1: Exploration Index Map with granted exploration lease in black and pending exploration lease in green. ....	9
Figure 2: IGO (black labels) and historical (red labels) prospects location and EL26804 tenement boundaries (blue contours) .....	10
Figure 3: Location of the Birrindudu Project (ELA26804) .....	11
Figure 4: Location of phase 1 (green square) and phase 2 (blue dots) stream sediments collected by IGO, and EL26804 tenement boundaries (blue contours) .....	16
Figure 5: Location of rock chips collected by IGO (red dots), and EL26804 tenement boundaries (blue contours) .....	17
Figure 6: Location of soil samples collected by IGO with orientation samples (green square), and “proper” soil samples (red dots), and EL26804 tenement boundaries (blue contours). ....	18



Figure 7: RAB drill holes (red dots) location map and EL26804 tenement boundaries (blue contours). 19

Figure 8: Aircore drill holes (black dots) location map and EL26804 tenement boundaries (blue contours). 22

Figure 9: Captain Jack drill-hole location with 2011 drilling campaign (blue dots) and this year drilling (black dots) and best Sn assays (see legend) over TMI-RTP aeromag image. 24

Figure 10: Jumping Jack drill-hole location with 2013 drilling (black dots) and best Au assays (see legend) over TMI-RTP aeromag image. 25

## LIST OF TABLES

Table 1: Summary of Stream Sediment Analytical Methods..... 14

Table 2: Summary of Stream Sediment Sampling Analytical Methods ..... 15

Table 3: Summary of Stream Sediment Sampling Analytical Methods ..... 18

Table 4: Summary of RAB Composite Sample Analytical Methods ..... 20

Table 5: Summary of rock chips Composite Sample Analytical Methods ..... 20

Table 6: Summary of AC Composite Sample Analytical Methods ..... 23

Table 7: Summary of AC Composite Sample Analytical Methods (reassaying)..... 23

Table 8: Captain Jack assays best intercepts..... 24

Table 9: Jumping Jack assays best intercepts..... 26

## LIST OF DIGITAL APPENDICES

- Appendix A: Drilling Data
- Appendix B: Surface Geochemistry Data
- Appendix C: Petrology Data
- Appendix D: Spectral Data



## DATA SHEET

<b>Project Name:</b>	Birrindudu
<b>Tenement Numbers:</b>	EL26804
<b>Tenement Operator:</b>	Independence Group NL
<b>Tenement Holder:</b>	Independence Group NL
<b>Contact Details:</b>	Suite 4, Level 5, South Shore Central 85 South Perth Esplanade South Perth, WA, 6151 Phone: (08) 9238 8300
<b>Report Type:</b>	Surrender
<b>Report Title:</b>	Final Surrender Report on ELA26804, Birrindudu Project, for the period 12 January 2009 to 8 January 2014
<b>Reporting Period:</b>	12 January 2009 to 8 January 2014
<b>Author:</b>	S. Bell & M.Frejabise
<b>Date of Report:</b>	February 2014
<b>1:250 000 map sheets:</b>	Birrindudu SE52-11
<b>1:100 000 map sheets:</b>	Mt Winnecke 4960 Styles 4961
<b>Target Commodity:</b>	Tin (Sn), Gold (Au)
<b>Geological Province:</b>	Birrindudu Basin
<b>Geological Units Targeted:</b>	Winnecke Granophyre
<b>Keywords:</b>	Birrindudu, EL26804, Winnecke Granophyre, gold, tin, Happy Jack Prospect, quartz veins, skarn mineralisation, Tanami-style gold



mineralisation, rock chip sampling, stream sediment sampling, soil sampling, RAB drilling, AC drilling

**Prospects drilled:** Captain Jack, Jumping Jack

**List of assays:** Al, Ag, As, Au, Ba, Be, Bi, Ca, Cs, Ce, Co, Cr, Cu, Cd, Dy, Er, Eu, Fe, Ga, Gd, Hf, Ho, In, K, La, Li, Mn, Mg, Mo, Nb, Nd, Ni, P, Pr, Pb, Re, Rb, S, Sc, Sb, Se, Sm, Sn, Sr, Ti, Tb, Th, Tl, Tm, U, V, W, Y, Yb, Zn, Zr,

## ABSTRACT

**Location:** The Birrindudu Project is located approximately 250km east of Halls Creek and 290km southeast of Kununurra on the Riverin and Birrindudu Pastoral Stations in the Northern Territory.

**Geology:** The Birrindudu Project covers the Palaeo-proterozoic Winnecke Granophyre which is overlain by Cambrian Antrim Plateau Volcanics (APV), composed of tholeiitic basalt. The Winnecke Granophyre, together with the Nanny Goat Volcanics and other metasedimentary units, form the Mount Winnecke Group, which is unconformably overlain by the Gardiner Sandstone, belonging to the Mesoproterozoic Birrindudu Group.

**Work done:** Exploration completed during the reporting period includes surface sampling, reconnaissance mapping, RAB and AC drilling.

**Results:** Several campaign of surface sampling followed up by RAB and AC drilling were completed over the past 3 years on EL26408. A significant Sn anomalies was identified from Debeers WMC database and follow-up stream sampling. These anomalies were interpreted to be leaking from an undercover nearby magnetic high, and targeting an endoskarn style mineralization in Proterozoic granites. Drilling succeeded to delineate a weak and narrow anomalous Sn zone (peak value of 112ppm Sn) but did not replicate similar Sn values collected from the stream sampling (peak value of 2,750ppm Sn in stream sediments and 1,150ppm Sn in soils).

Furthermore, the presence of a high grade Au quartz vein



prospect (Happy Jack) nearby IGO's main project area and the known gold endowment further south in the Tanami area, indicated the potential for an economic size deposit on EL26804. A detailed geological and geophysical interpretation completed by IGO, enhanced the gold potential in the southern area of EL26804. Following up the interpretation completed, and also following-up the Otter Gold historical soil sampling which delineated some untested gold anomalies, an AC drilling programme was completed in August 2013. Results were unsatisfactory with a peak gold value of 60ppb.

**Conclusions:**

The lack of higher grade and wider Sn intercepts but also the lack of strong association in the drilling of key pathfinders for tin-tungsten deposits in fractionated granitoids such as W, As, Cu, Zn, and Bi diminished the chance of having an economic Sn deposit at Captain Jack. Also, regional drilling completed in 2011 over a great extent of the prospect did not highlight other obvious anomalies which reduced the prospectivity of the EL26804. Therefore, it appears that the high stream sediments values in Sn could be the results of a strong deflation of a cassiterite mineralized granitic body.

For the gold prospect further south, there is no evidence of significant gold mineralization in the supergene horizon, and the rare anomalous zone are of low interests and very narrow. The main surficial gold anomaly seems to be related with an elevated background within an ultramafic sill. Again, the poor association of discrete gold values and key pathfinders downgraded the potential for the area to host an economic gold deposit.

Recommendation were to completed a full hyperspectral and petrological analysis to understand some of the visible alteration in both prospects and to identify some mineral assemblages that could be not visible with naked eyes, which associated with a complete geological interpretation could have resulted in potential new targets.

However because of budget constraints and limited results, it was recommended to relinquish the entire tenement.



### TABLE OF ACTIVITIES (12/01/09 – 08/01/14)

Tenement	Geochemical			Drilling	
	Rock Chip	Stream	Soil	RAB	AC
ELA26804	126	172	324	2,099m	7,684





## EXPLORATION INDEX MAP

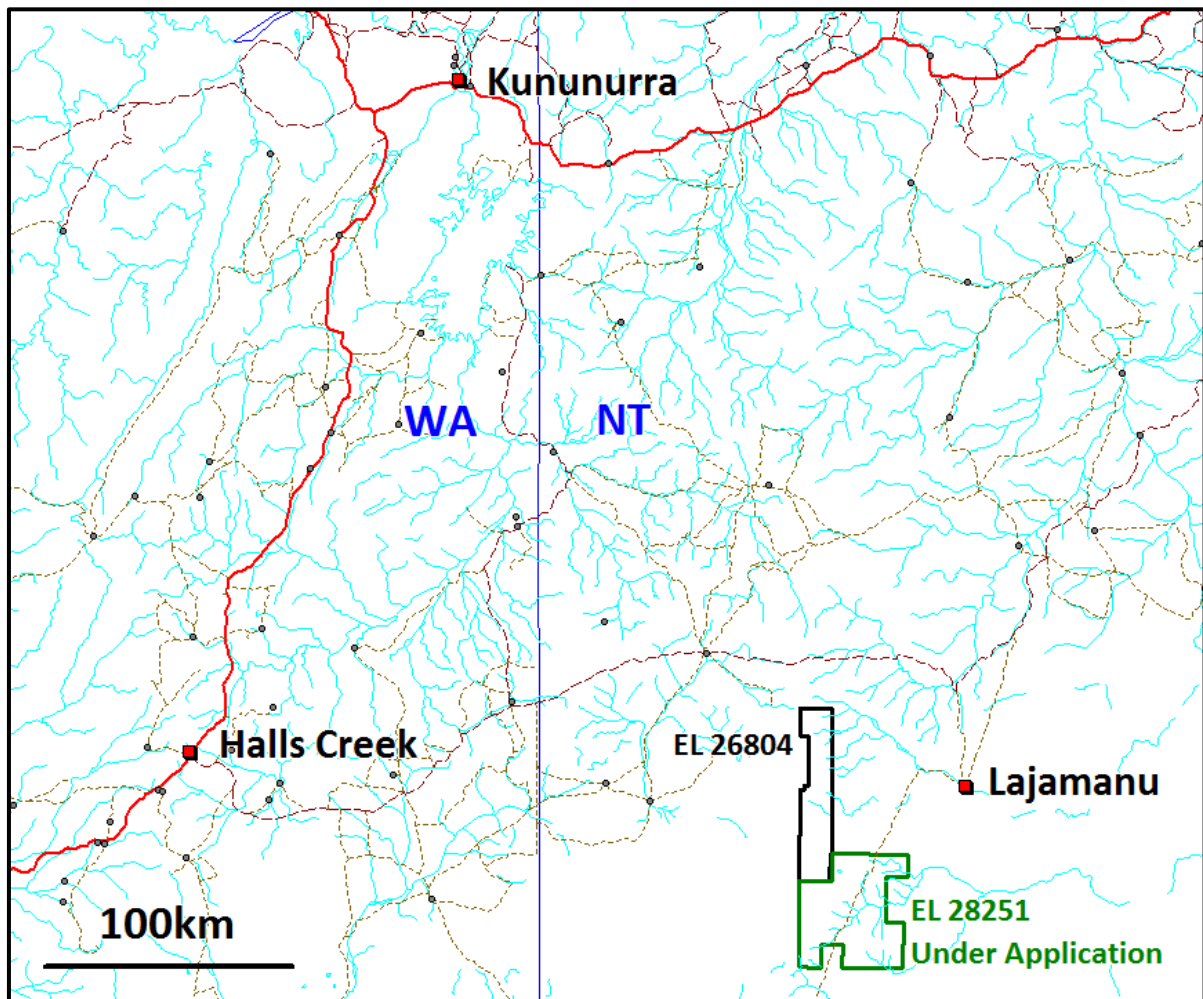


Figure 1: Exploration Index Map with granted exploration lease in black and pending exploration lease in green.



## 1 INTRODUCTION

In 2008 / 2009 IGO re-examined and re-assayed approximately 100 heavy mineral concentrates and stream sediment samples collected by Western Mining Corporation (WMC) and De Beers Australia Exploration in 1984 as part of their Australia-wide search for diamonds and kimberlitic indicator minerals.

Results were significant and confirmed the presence of tin (Sn), together with tungsten (W) and tantalum (Ta).

Based on this information, a tenement application was made resulting in the granting of EL26804 on 12 January 2009.

IGO explored the exploration for 5 years and decided to surrender EL26804 on the 8<sup>th</sup> of January 2014.

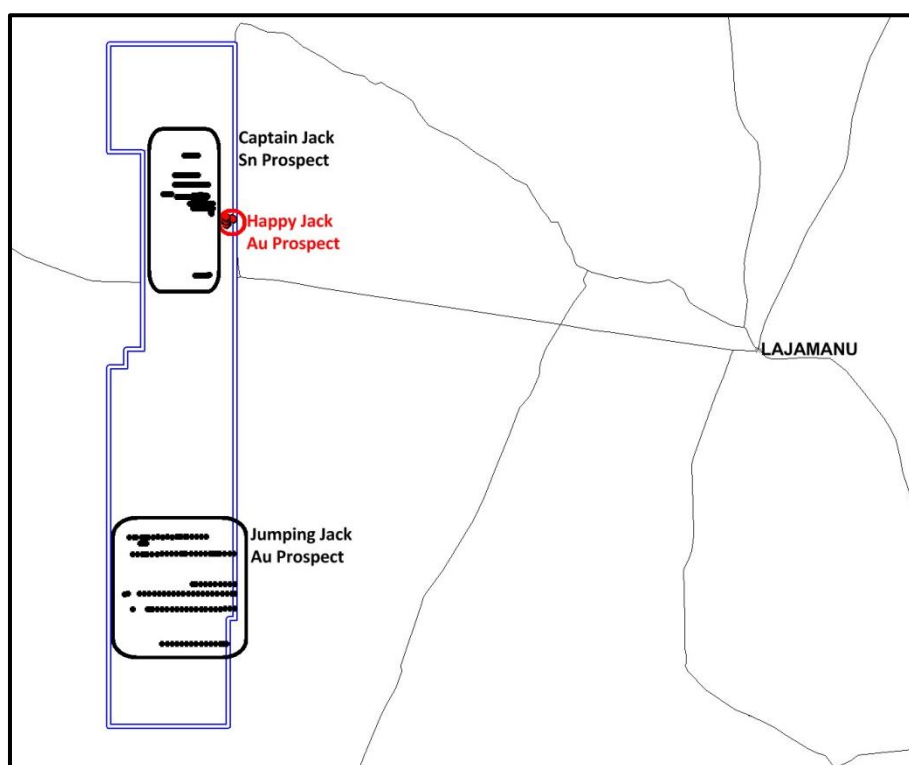


Figure 2: IGO (black labels) and historical (red labels) prospects location and EL26804 tenement boundaries (blue contours).

## 2 LOCATION AND ACCESS

The Birrindudu Project (EL26804) is located approximately 250km east of Halls Creek and 290km southeast of Kununurra on the Riveren and Birrindudu Pastoral Stations in the Northern Territory (Figure 3).

Access to the project area is from Halls Creek via the Buntine Highway, or from Kununurra via Duncan Road, and then via station tracks to / from Riveren Station.



The eastern and southern boundaries of EL26804 are coincident with boundaries of the Hooker Creek Aboriginal Reserve, within which is the Lajamanu Aboriginal Community, located approximately 60km east of the EL26804.

The bulk of the project area is open plain and forms a watershed between Sturt Creek to the west and Hooker Creek to the east. Breakaways occur in the north-east of the project area, with the far north consisting of relatively low relief, undulating basaltic hills.

Vegetation consists mainly of grass with occasional small trees and shrubs, although larger trees can be found along creek beds.

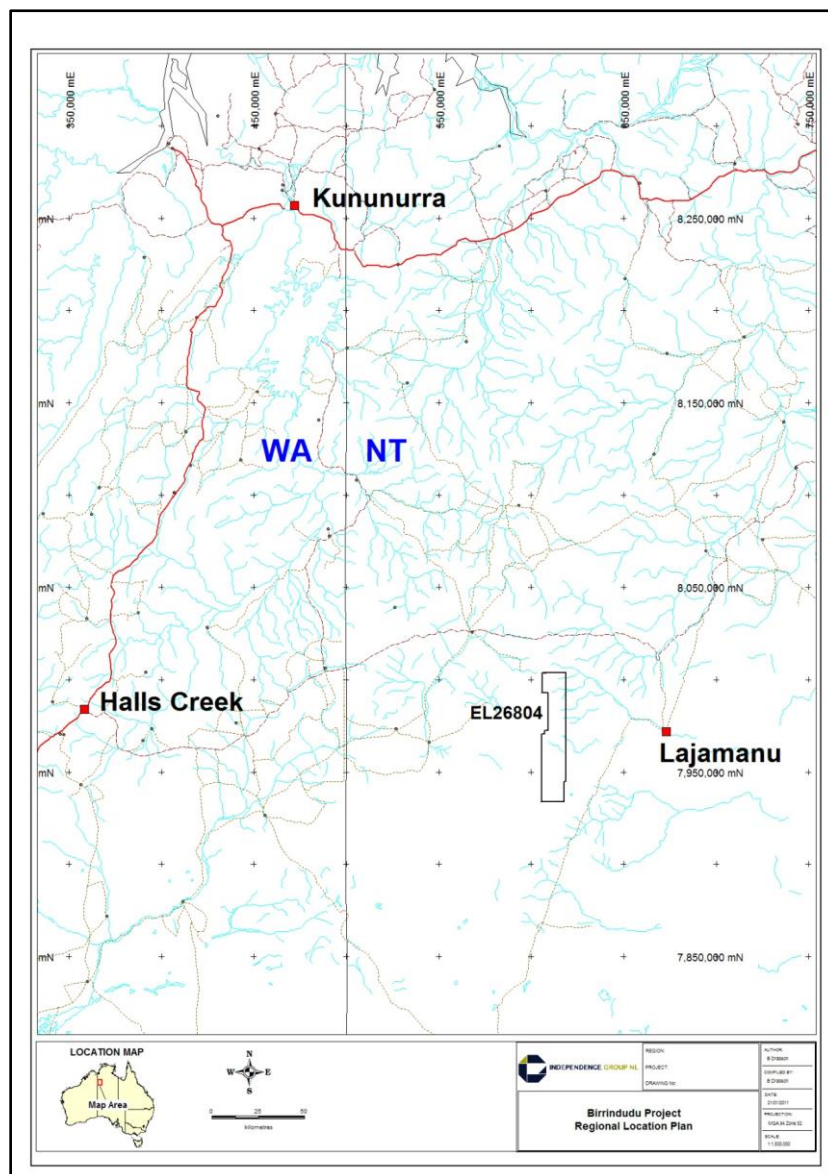


Figure 3: Location of the Birrindudu Project (ELA26804)



### 3 TENURE

EL26804 was granted on 12 January 2009 and expires on 11 January 2015.

A 2nd year compulsory 50% reduction of the tenement area (834km<sup>2</sup>) was due on 11 January 2011. However, IGO submitted a waiver of reduction which was approved.

A 4th year compulsory 50% reduction is due on 11 January 2013.

IGO have submitted another waiver of reduction

EL26804 was surrendered on the 8<sup>th</sup> of January 2014.

### 4 REGIONAL GEOLOGY

The Birrindudu Project covers the Palaeo-proterozoic Winnecke Granophyre which is overlain by Cambrian Antrim Plateau Volcanics (APV), composed of tholeiitic basalt.

On a regional scale the oldest rocks in the immediate area belong to the Tanami Group (previously the Tanami Complex) and are mapped as Nongra and Helena Creek Beds. The latter are mapped as cropping out immediately east of the tenement where they occur as roof pendants within the Winnecke Granophyre.

On the Birrindudu 250,000 map sheet the Helena Beds are described as being composed of greywacke, tuff, phyllites, conglomerate, lithic arenite and acid porphyry. They form part of what has been reinterpreted as the Killi Killi Formation by Hendrick et al (2000).

The Winnecke Granophyre, together with the Nanny Goat Volcanics and other metasedimentary units, form the Mount Winnecke Group, which is unconformably overlain by the Gardiner Sandstone belonging to the Mesoproterozoic Birrindudu Group. The Gardiner sandstone is exposed in low ridges to the west of the project at the southern end.

To the north and west, the Winnecke Granophyre is enveloped by a sheet of basalt of the Cambrian, Antrim Plateau Volcanics. The thickness of the basalt is not known but gravity contours on the Birrindudu mapsheet show a gravity high which indicates that the basalt is relatively thick compared to further west and could represent a feeder zone.

The basalt, although extensive, is poorly exposed because it is covered by what is mapped as Tertiary laterite and Quaternary sand and silt.

### 5 PREVIOUS EXPLORATION

#### 5.1 WMC (1984)

In 1984 WMC undertook heavy mineral sampling for diamonds and kimberlitic indicator minerals over the eastern part of the Birrindudu map sheet. Sampling identified a spread of samples that contained cassiterite grains, with one sample recording 940 grains. This sample is shown as being on the northern end of the Winnecke Granophyre.



This work was carried out on open ground and, as such, there was no requirement to produce an annual exploration report and there is no evidence of follow-up sampling – either for kimberlitic indicators or tin.

It is unlikely that WMC would have followed-up the cassiterite anomaly because at the time of this work the tin price plummeted and all tin exploration in Australia ceased.

## 5.2 OTTER GOLD MINES NL / STOCKDALE PROSPECTING LTD (1996 - 2003)

EL9592 was granted to Otter Gold Mines NL (Otter) in October 1996 and covered an area similar to that of EL26804. Between 1996 and January 1999 the tenement was subject to a Joint Venture Agreement with Stockdale Prospecting Ltd (SPL), who subsequently became DeBeers Exploration Australia.

In 1997 SPL undertook heavy mineral loam and geochemical sampling on a 2km by 2km grid. This work was part of a larger survey over their Wallamunga Project. These geochemical samples were re-analysed by Otter for low level gold (Au), with results highlighting coherent anomalism over several kilometres (Muir, 2001A).

This sampling was followed-up with infill sampling, resulting in the delineation of several targets – one of which was the Happy Jack Prospect.

Twenty one angled RAB holes were drilled at the Happy Jack Prospect. Best result were 2m @ 1.7g/t Au, 6m @ 0.78g/t Au and 2m @ 1.46g/t Au.

In 1999, detailed geological mapping was carried out at the Happy Jack Prospect and it was “concluded that finer grained ‘intrusions’ exist within a coarse grained porphyry” (Muir, 2001B). It was also recognised that there are two types of quartz veins present – igneous and mesothermal. While the mesothermal veins are reportedly parallel to the aforementioned finer grained intrusions, it was the igneous veins that were interpreted to contain the Au.

In February 2000, approximately 2,300 soil samples were collected on a 400m by 400m grid over the central portion of what is now EL26804. A total of 14 samples returned >0.5g/t Au.

Detailed interpretation of these results identified several possible features of interest:

- Seepage from beneath the Antrim Plateau Volcanics;
- Northwest trending structures:
- A large north-northwest trending patchy zone through the central north of the tenement; and,
- A cluster of lower order anomalies that appeared to be coincident with a cross-cutting, northwest trending structure.

In December 2000 detailed aeromagnetic and radiometric surveys were flown over several prospects, including the Happy Jack Prospect. The surveys were flown by UTS with east-west lines 50m apart with readings taken every 4-5m.

Interpretation of both NTGS regional data and the December 2000 survey data identified numerous targets and features of interest. Within the Happy Jack Prospect, the radiometric data displayed a



high potassium (K) signature, interpreted at the time to be the result of either hydrothermal alteration or simply granite outcrop.

To the east, regional aeromagnetic data identified a prominent shear that Hungerford (2001) believed could be related to more significant Au mineralisation.

In addition, at least two phases of faulting were interpreted in the centre of the region, trending southwest-northeast and post-dating the north-south shear identified by Hungerford.

It was also noted by Muir (2001B) that fluid inclusion studies from the area indicated boiling of fluid and, therefore, an epithermal to mesothermal environment.

In August 2001, during field reconnaissance to the west of the Happy Jack Prospect, samples of quartz and greisen veins were taken. Some of the greisen veins were described as being green in colour, possibly reflecting alteration and the presence of chlorite and / or epidote.

Stockwork veining was also identified 5km south of the Happy Jack Prospect, in what was reported to be highly altered granite but was mapped on the Birrindudu map sheet as Helena Creek Beds. Two types of granite were recognised – coarse and fine, with the fine grained granite reported to contain an average of 0.2g/t Au and the coarse grained granite containing lower levels of Au (Muir 2001B).

## 6 EXPLORATION BY IGO (2009 – 2013)

### 6.1 RE-ASSAYING OF DEBEERS GEOCHEMICAL SAMPLES

In 2008 / 2009 IGO re-examined and re-assayed roughly 100 heavy mineral concentrates and stream sediment samples collected by WMC and De Beers Australia Exploration in 1984 as part of their Australia-wide search for diamonds and kimberlitic indicator minerals.

#### 6.1.1 Soil and Stream Samples

105 DeBeers geochemical samples, comprising 64 soil samples and 41 stream sediment samples, were sent to Genalysis Laboratory Services in Perth for re-analysis using aqua regia digest.

Table 1: Summary of Stream Sediment Analytical Methods

Element	Genalysis Code	Description
Ag, As, Ba, Be, Bi, Cs, Ce, Co, Dy, Er, Eu, Ga, Gd, Hf, Ho, In, La, Pb, Li, Mo, Nd, Nb, Pd, Pt, Pr, Re, Rb, Sm, Sn, Sc, Se, Sr, Ta, Te, Tb, Tl, Th, Tm, W, U, V, Yb, Y, Zr	B25/MS	25g aqua regia / ICP-MS
Al, Ca, Cd, Cr, Cu, Fe, Mg, Mn, Ni, P, K, Sc, Ti, V, Zn	B25/OES	25g aqua regia / ICP-OES
Au	B25/EETA	25g aqua regia / Enhanced sensitivity graphite furnace AAS

#### 6.1.2 Heavy Mineral Concentrates

103 DeBeers heavy mineral concentrate samples were re-analysed by representatives of IGO using a portable hand held Innov-X XRF.



## 6.2 STREAM SEDIMENT SAMPLING

2010 saw a program of stream sediment sampling completed at the Captain Jack Prospect.

The purpose of this stream sediment sampling was to determine whether or not there was potential for tin mineralisation along the full extent of the Winnecke Granophyre.

Access issues resulted in the program being split into two phases, the second of which was carried out with the aid of a helicopter to overcome access issues encountered during the first phase.

### 6.2.1 Phase 1

Representatives of IGO collected a total of 54 stream sediment samples (8kg of -2mm) from drainages within the Birrindudu Project.

These samples were subsequently separated into two separate samples – one 2kg sample and one 6kg sample.

The 2kg sample was sent to Genalysis Laboratory Services in Perth for analysis using aqua regia digest with sodium peroxide fusion for Sn.

**Table 2: Summary of Stream Sediment Sampling Analytical Methods**

Element	Genalysis Code	Description
Ag, As, Ba, Be, Bi, Cs, Ce, Co, Dy, Er, Eu, Ga, Gd, Hf, Ho, In, La, Pb, Li, Mo, Nd, Nb, Pd, Pr, Rb, Sb, Sm, Sr, Tb, Tl, Th, Tm, W, U, V, Yb, Y, Zr	B25/MS	25g aqua regia / ICP-MS
Al, Ca, Cr, Cu, Fe, Mg, Mn, Ni, P, K, Sc, Ti, V, Zn	B25/OES	25g aqua regia / ICP-OES
Au	B25/EETA	25g aqua regia / Enhanced sensitivity graphite furnace AAS
Sn	DX/MS	Sodium peroxide fusion / ICP-MS

The 6kg sample was concentrated by firstly de-sliming on a Wilfley table and then undergoing heavy mineral separation using tetrabromoethane (TBE: SG 2.96). This sample was retained by IGO.

### 6.2.2 Phase 2

Representatives of IGO collected a total of 77 stream sediment samples (2kg of -1mm) from drainages within the Captain Jack Prospect.

Due to the fact that Sn was not being reported at the levels expected (but was clearly visible in concentrated samples) in the first phase of stream sediment sampling, the decision was made to concentrate all samples collected in the second phase of stream sediment sampling by de-sliming them on a Wilfley table before sending them to Genalysis Laboratory Services in Perth for analysis using the same method summarised in Section 6.2.1.

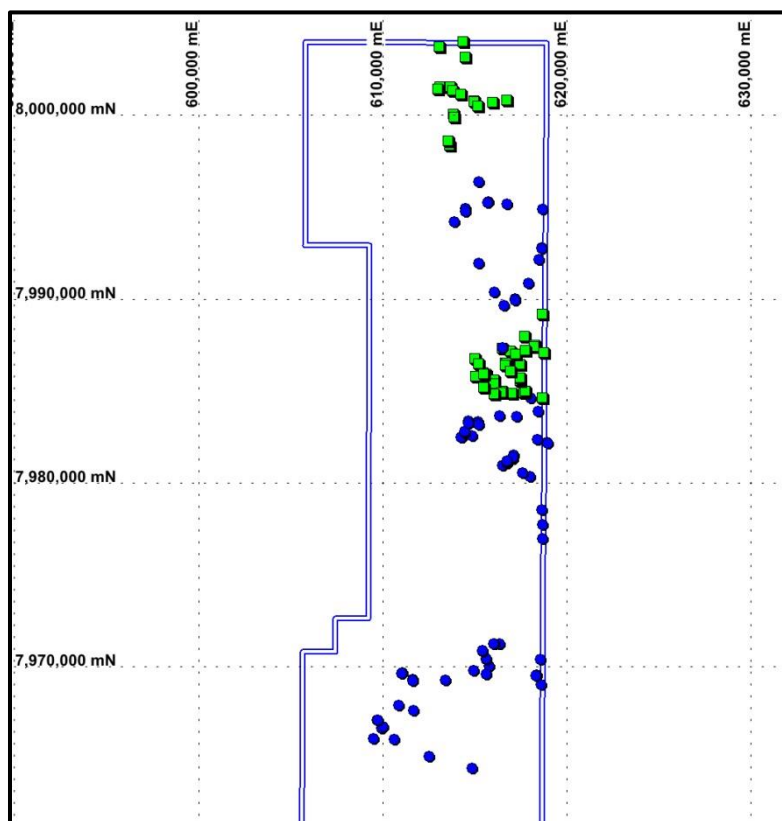


Figure 4: Location of phase 1 (green square) and phase 2 (blue dots) stream sediments collected by IGO, and EL26804 tenement boundaries (blue contours).

Digital data pertaining to the aforementioned stream sediment sampling is included as [Appendix 2](#).

### 6.3 ROCK CHIP SAMPLING

A total of 117 rock chip samples were collected during the stream sediment sampling program outlined in Section 6.2. Also, in June 2012, 9 samples were collected during the Happy jack prospect review.



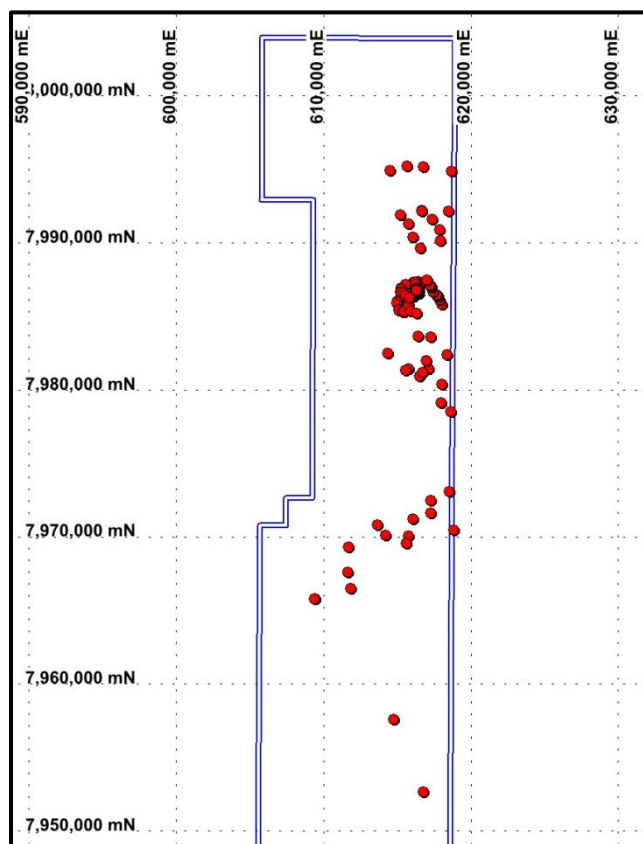


Figure 5: Location of rock chips collected by IGO (red dots), and EL26804 tenement boundaries (blue contours).

## 6.4 PETROLOGY

12 of the aforementioned rock chip samples were sent to R. Taylor at James Cook University in Queensland for petrographic description and rock type determination.

A copy of R. Taylor's report, "Petrological Description and Comment Concerning 12 samples from the Winnecke Granophyre, Northern territory", is included as Appendix C.

## 6.5 SOIL SAMPLING

In 2010, representatives of IGO carried out a program of soil sampling at the Captain Jack Prospect.

A total of 270 soil samples were collected. The first 25 soil samples (8kg of -2mm) completed an orientation program, while the remaining 245 soil samples (2kg of -1mm) comprised a soil sampling program 'proper'.

The program was designed to determine whether or not soil sampling could be used to identify and / or delineated potential tin mineralisation.

Samples were collected by removing the top 20mm of soil with a shovel, placing the shovelled soil into either a 2mm or 1mm sieve (depending on whether the sample was an orientation or 'proper' sample, respectively) and sieving it into a clearly labelled green plastic bag. This process was repeated until an



8kg or 2kg (depending on whether the sample was an orientation or ‘proper’ sample, respectively) sample was collected.

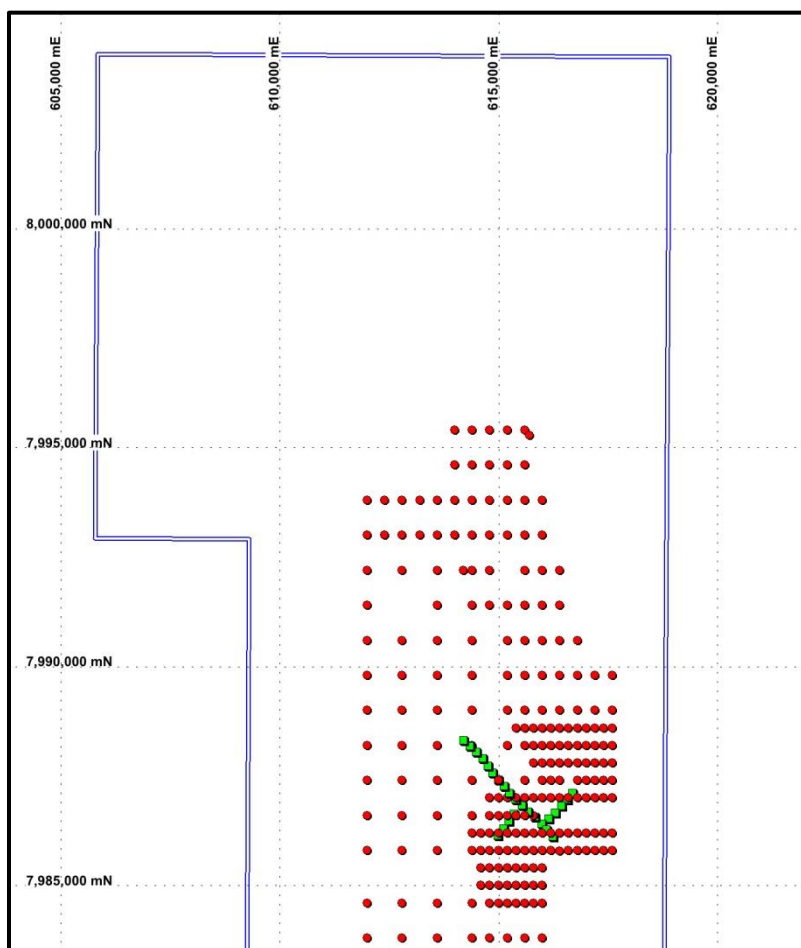


Figure 6: Location of soil samples collected by IGO with orientation samples (green square), and “proper” soil samples (red dots), and EL26804 tenement boundaries (blue contours).

A total of 25 orientation soil samples were sent to Genalysis Laboratory Services in Perth for re-analysis using aqua regia digest with sodium peroxide fusion for Sn.

Table 3: Summary of Stream Sediment Sampling Analytical Methods

Element	Genalysis Code	Description
Ag, As, Ba, Be, Bi, Cs, Ce, Co, Dy, Er, Eu, Ga, Gd, Hf, Ho, In, La, Pb, Li, Mo, Nd, Nb, Pd, Pr, Rb, Sb, Sm, Sr, Tb, Tl, Th, Tm, W, U, V, Yb, Y, Zr	B25/MS	25g aqua regia / ICP-MS
Al, Ca, Cr, Cu, Fe, Mg, Mn, Ni, P, K, Sc, Ti, V, Zn	B25/OES	25g aqua regia / ICP-OES
Au	B25/EETA	25g aqua regia / Enhanced sensitivity graphite furnace AAS
Sn	DX/MS	Sodium peroxide fusion / ICP-MS



Unfortunately, 42 of the 245 ‘proper’ soil samples were lost in transit by Toll Ipec.

The remaining 203 soil samples were concentrated by de-slimes them on a Wilfley table before being sent to Genalysis Laboratory Services in Perth for analysis using the same method summarised in Table 3.

Three distinct Sn in soil anomalies were identified at the Captain Jack Prospect.

### 6.6 ROTARY RIR BLAST (RAB) DRILLING

In September 2011, Rockbeare was contracted by IGO to carry out a program of RAB drilling at the captain Jack Prospect.

The purpose of this drilling was to test the potential of a distinct magnetic feature to be the source of Sn anomalism identified at the Captain Jack Prospect.

A total of 220 holes (BURB001 – 220) were drilled over 8 traverses for 2,099m.

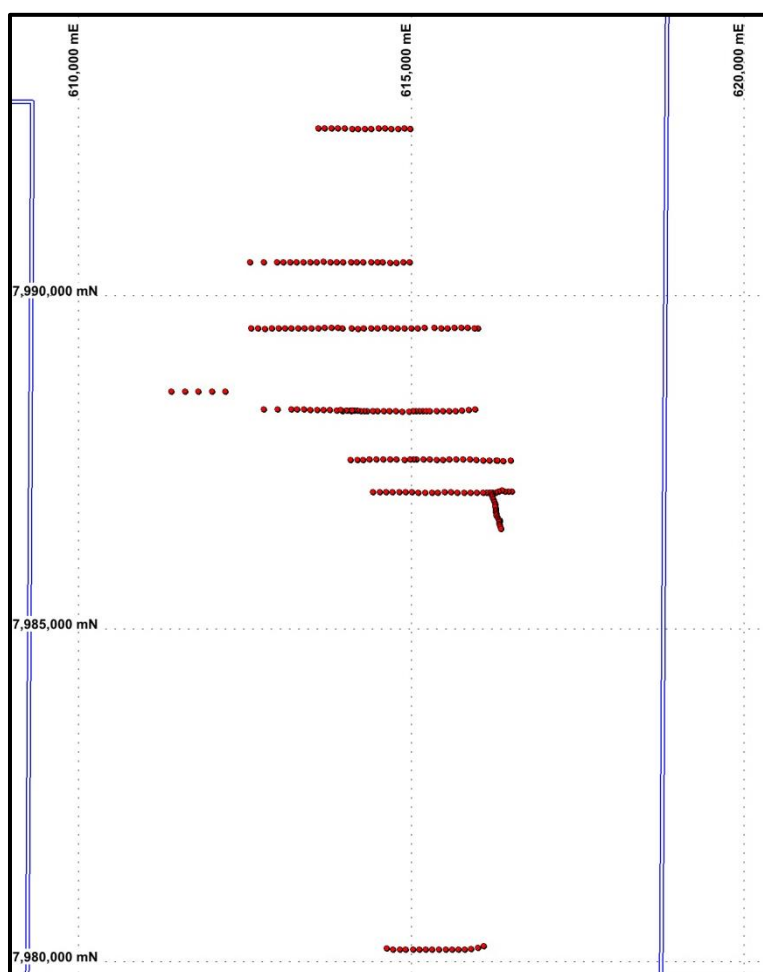


Figure 7: RAB drill holes (red dots) location map and EL26804 tenement boundaries (blue contours).



All holes were drilled vertically, with depth of drilling limited by the number of drill rods carried on the drill rig. Bedrock, ranging from slightly through highly weathered, was intersected in most drill holes.

1m drill cuttings were collected from the cyclone and laid on the ground in rows of 10 (from left to right). Wet samples were poured (still in sequence) into holes dug with a shovel.

4m composite samples were collected by spearing (with PVC pipe) each 1m sample of the relevant 4m interval being sampled. Bottom of hole (BOH) samples ranged from 2m through 4m composites, depending on the depth of the hole.

A total of 715 samples were collected and delivered to Genalysis Laboratory Services in Perth for analysis.

All composite samples were analysed using the methods outlined in Table 4.

**Table 4: Summary of RAB Composite Sample Analytical Methods**

Element	Genalysis Code	Description
Ag, As, Ba, Be, Bi, Cd, Ce, Co, Cs, Dy, Er, Eu, Ga, Gd, Hf, Ho, In, La, Li, Lu, Mo, Nd, Nb, Pd, Pt, Pr, Re, Rb, Sm, Sc, Se, Sr, Ta, Sn, Te, Tb, Tl, Th, Tm, W, U, V, Yb, Y, Zr	B25/MS	25g aqua regia / ICP-MS
Al, Ca, Cd, Cr, Cu, Fe, Mg, Mn, Ni, P, K, Sc, Ti, V, Zn	B25/OES	25g aqua regia / ICP-OES
Sn, Sm, U, Yb, W, Th, Tb, Ta, Pr, Nd, Lu, La, Ho, Hf, Gd, Ga, Eu, Er, Dy, Ce, Be	DX/MS	Sodium peroxide fusion / ICP-MS

Bottom of hole drill cuttings were also washed (sieved in water) and stored in labelled chip trays for future reference.

Digital data pertaining to this RAB drilling is included as Appendix A.

## 6.7 GEOLOGICAL RECONNAISSANCE

In June 2012, representatives of IGO visited the Birrindudu Project in order to delineate the position of proposed RC drill holes planned to determine the source of both the Au anomalism at the Happy Jack Prospect and the Sn anomalism at the Captain Jack Prospect.

As part of this process, the original RAB holes drilled by Stockdale were located at the Happy Jack Prospect but no sample piles remained to be observed. However, known Au anomalism could be traced to the surface due to the presence of extensive outcrop, and, in all cases, appears to be associated with narrow quartz veins in lithic wackes and grits.

A total of 9 rock chips samples were collected and submitted to Genalysis Laboratory Services in Perth for analysis.

All composite samples were analysed using the methods outlined in Table 5.

**Table 5: Summary of rock chips Composite Sample Analytical Methods**

Element	Genalysis Code	Description
Ag, Al, As, Au, Ba, Bi, Ca, Cd, Ce, Co, Cr, Cu, Fe, K, La, Li, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Sc, Sr, Te, Ti, Tl, V, W, Zn	AR25/OES	25g aqua regia / ICP-MS



Results and observations confirmed that Au anomalism is, in fact, associated with narrow quartz veins. As a result, the decision was made that no further drilling was required at the Happy Jack Prospect. However, a concurrent detailed internal review led to the development of a new geological interpretation of the Birrindudu Project, which re-highlighted its potential to host high grade, Tanami-style quartz vein Au mineralization. Digital data pertaining to these rock chip samples is included as Appendix B.

## **6.8 AIRCORE (AC) DRILLING**

### **6.8.1 Drilling procedures**

In September 2013, Raglan Drilling was contracted by IGO to carry out a program of AC drilling on EL26804 at the Captain Jack and Jumping Jack prospects.

The purpose of this drilling was firstly to better define a potential endoskarn Sn mineralisation at the Captain Jack prospect. And secondly to drill tested an interpreted dome/antiforms features undercover and nearby major fault linking to the Tanami goldfields at the Jumping Jack prospect.

A total of 195 holes (CJAC001 – 63, CJRC001 – 4, JJAC001 - 128) were drilled for 7,684m.

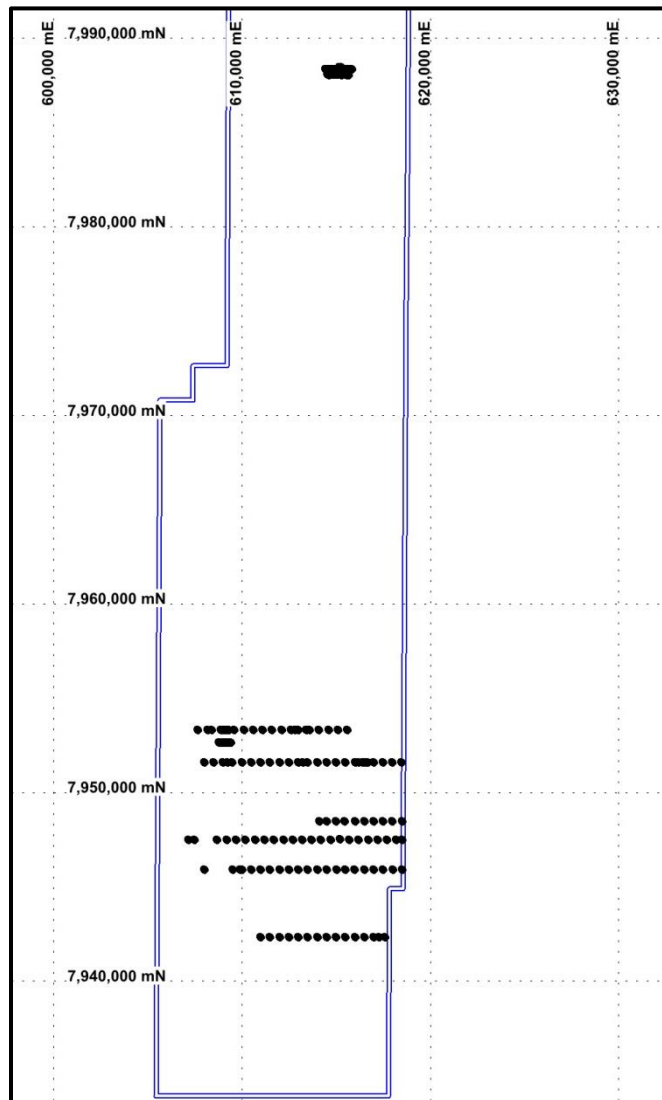


Figure 8: Aircore drill holes (black dots) location map and EL26804 tenement boundaries (blue contours).

All AC holes were drilled vertically to blade refusal and 4 Slim line RC were drilled with angle.

1m drill cuttings were collected from the cyclone and laid on the ground in rows of 10 (from left to right). Wet samples were poured (still in sequence) into holes dug with a shovel.

4m composite samples were collected by scooping each 1m sample of the relevant 4m interval being sampled. However 1m composite were splitted and sampled for the 4 Slim Line RC drill holes.

A total of 2,328 samples were collected and delivered to Genalysis Laboratory Services in Perth for analysis. And a total of 9 samples were respited to get re-assay and submitted to Ultra trace Laboratory in Perth.

All composite samples submitted to Genalysis were analysed using the methods outlined in Table 6.

**Table 6: Summary of AC Composite Sample Analytical Methods**

Element	Genalysis Code	Description
Nb, Sn, Th, W	FB6/OM	Lithium borate fusion / ICP-MS
Ag, As, Bi, Cu, Fe, Mo, Ni, Pb, Pd, Pt, Sb, Te, W, Zn	ARU10/OM	10g aqua regia / ICP-MS and AAS
Au	AR10/G01	10g aqua regia / Graphite furnace AAS

All composite samples submitted to Ultra Trace were analysed using the methods outlined in Table 7.

**Table 7: Summary of AC Composite Sample Analytical Methods (reassaying)**

Element	Ultratrace Code	Description
Au, As, Co, Cu, Ti, Cr, Fe, Ni, Pd, Pt, Mg, S	IGO custom	4 mixed Acid digest / ICP-MS or OES

Drill cuttings were also washed (sieved in water) and stored in labelled chip trays for future reference. Spectral data was also collected from each BOH sample using Spectral Evolution spectrometer. Digital data pertaining to this AC drilling is included as Appendix A.

## 6.8.2 Results

### 6.8.2.1 Captain Jack drilling results

63 vertical AC holes and 4 angled Slim Line RC holes for a total of 2,048m were drilled along 4 different lines Figure 9. All assays were received during the current reporting period with the best intercept for CJAC061 with 4m @ 112ppm Sn.

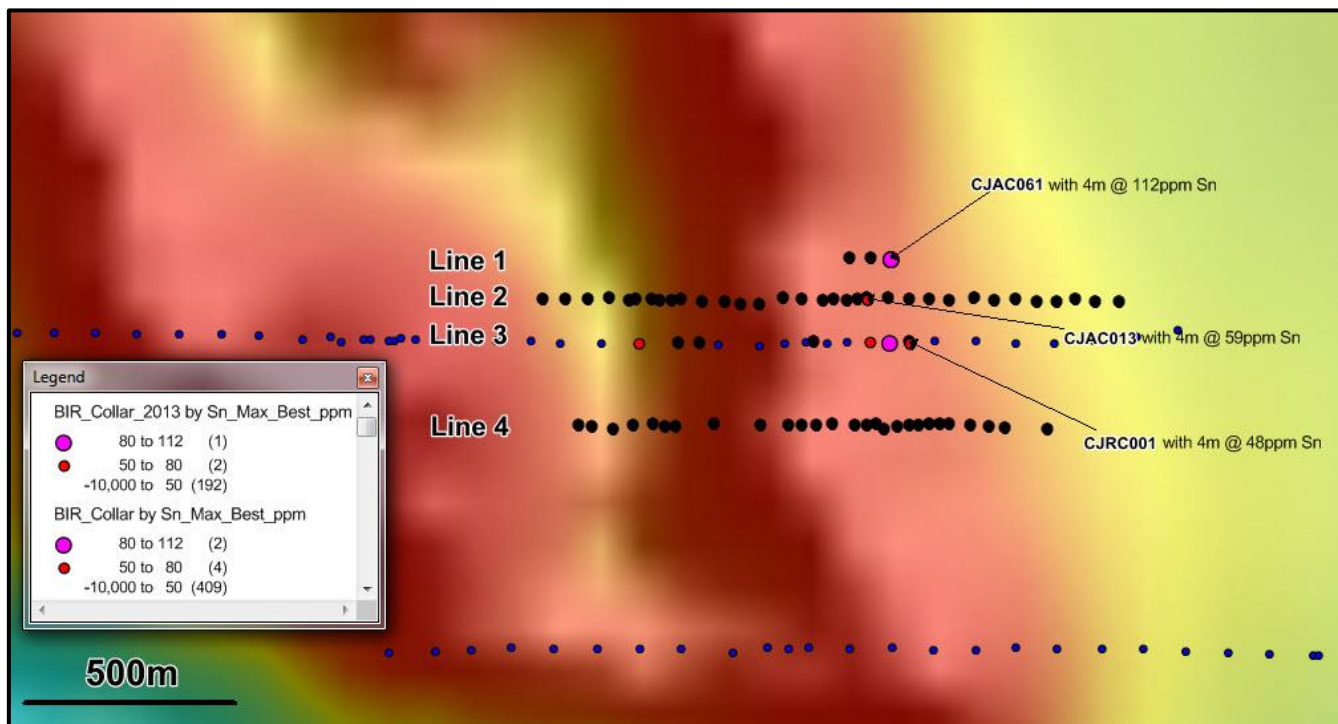


Figure 9: Captain Jack drill-hole location with 2011 drilling campaign (blue dots) and this year drilling (black dots) and best Sn assays (see legend) over TMI-RTP aeromag image.

Table 8: Captain Jack assays best intercepts.

Hole	From	To	Width	Intercepts
CJAC061	8	12	4	112ppm Sn
CJAC013	4	8	4	59ppm Sn
CJRC001	75	78	3	45ppm Sn
CJAC038	20	55	35	500ppm Ni,
CJAC024	20	55	35	140ppm Cu and Ni

Line 2 and 4 intersected a monotonous granophyric granitoid rich in pink K-feldspar and ovoid to angular quartz and trace of sericite-epidote. This unit ranged from bleached to strongly hematite altered.

At the western end of Line 2 (CJAC021-23), a possible lamprophyre intrusion-diatreme? was intersected Drill chips were weathered and rich in plagioclase, amphiboles, magnetite and possibly pyroxenes. Corresponding assay results show an increase in Ni (<800ppm) and Cu (<200ppm) and the handheld XRF showed an increase in Mn (<0.5%).

The zone of anomalous Sn is defined by CJAC001, CJAC013 and CJRC061 (Figure 9) and located within





a hematite rich granophyric granitoid with a dark black pervasive chlorite alteration. A magnetic high directly west of the Sn anomalism appears related to a thick magnetic rich granophyre.

Although the AC drilling successfully replicated the best anomalies from 2011 RAB drilling (4m at 99ppm Sn in BURB008), it failed to find any evidence of high grade Sn mineralisation as well as obvious signs of skarn-style alteration. As a result, the prospect has been downgraded.

### 6.8.2.2 Jumping Jack drilling results

128 vertical and angled holes over 7 traverses were drilled for a total of 5,636m at Jumping Jack, following up soil anomalies and structural targets.

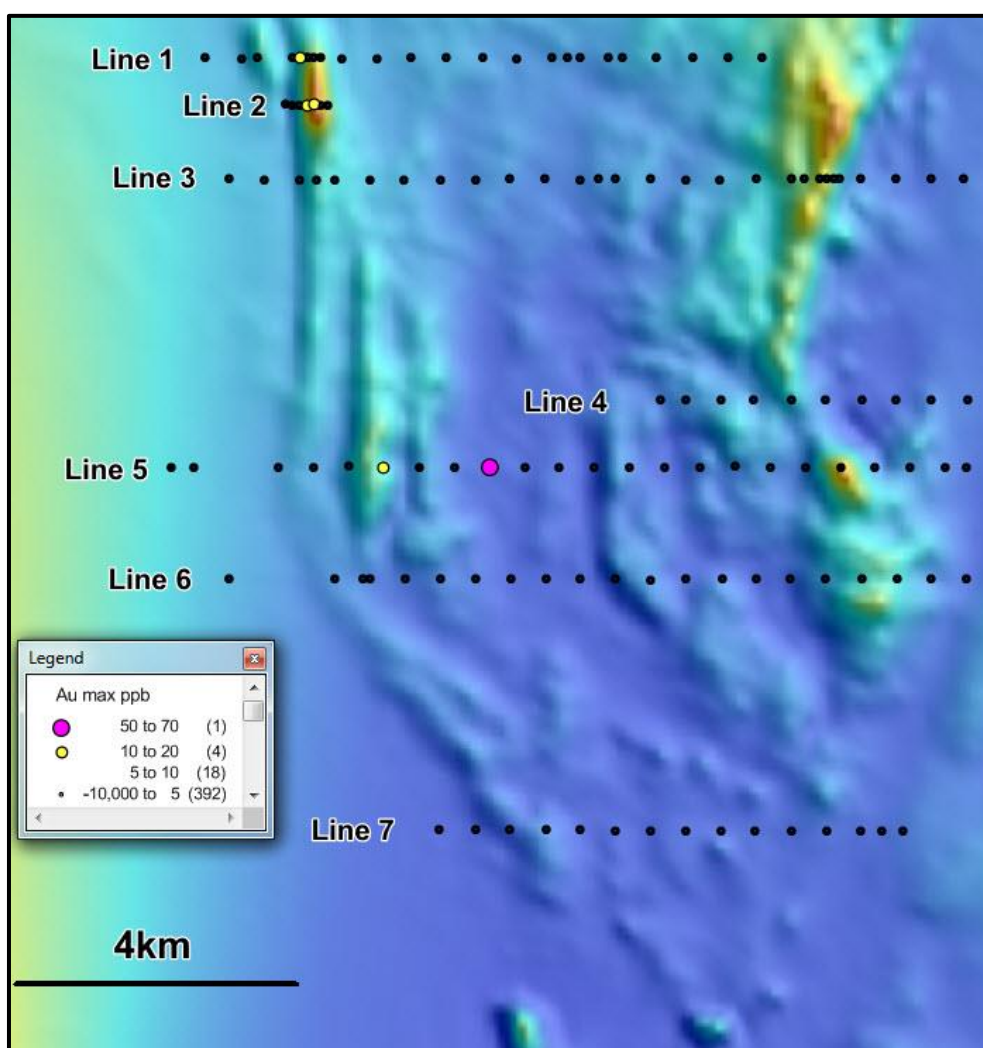


Figure 10: Jumping Jack drill-hole location with 2013 drilling (black dots) and best Au assays (see legend) over TMI-RTP aeromag image.



Most of the drillholes intersected silica and fedspar rich epiclastics with fine to medium grain sericite / hematite rich matrix and coarse granophyre clasts.

More mafic, detritic, wacke sediments are also present. These epiclastics are rich in hornblende, silica and sericite and grade locally into dirty siltstone / argillites.

In the northern portion of the prospect, a younger calcic granitoid / tonalite intrudes these sediments (JJAC042).

In addition, a significant ultramafic intrudes the western ‘limb’ of the sedimentary sequence. It is interpreted as being approximately 250m wide and described as a high MgO (>2500ppm Ni, >200ppm Cu, >2000ppm Cr and >40ppb Pt+Pd), serpentinised ultramafic sill. Petrography will be necessary to confirm this interpretation.

Interestingly, the ultramafic unit also displays higher than background Au values (<14ppb Au) which probably explains the nearby historical Au soil anomaly discovered by Otter Gold NL

As anticipated, the Gardiner unit part of the younger Birrindudu Group (Palaeozoic) is obscuring the basement at the west of the prospect area and described as an immature sandstone which explains the monotonous de-mag zone at the west of Jumping Jack. Note that the transported cover goes deeper, up to 25m over the Gardiner sandstones, as opposed to the 10m (average) of transported cover in the whole Jumping Jack prospect area.

Finally, these coarse grain lithic sediments shows an early stage of extensional basin development near a major fault at the east, which confirms the in-house IGO interpretation completed in April 2013, however no favourable Fe-rich fine grain sediments were encountered during this drilling campaign.

All assays were received during reporting period with discrete supergene gold anomalies within epiclastics and ultramafic lower saprolite associated with Bi anomalies.

Table 9: Jumping Jack assays best intercepts.

Hole	From	To	Width	Intercepts
JJAC065	28	32	4	59ppm Au
JJAC121	48	52	4	14ppm Au
JJAC125	20	24	4	0.6% Ni and 200ppm Cu

### 6.8.3 Rehabilitation

All holes drilled by IGO have been rehabilitated in accordance with Northern Territory statutory requirements.

A record of this rehabilitation, including photographs of drill holes and traverses to monitor vegetation regrowth and environmental recovery, as well as collar and sump status and maps, is compiled within the rehabilitation report and would be forwarded to the Northern Territory DME in the upcoming weeks.



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