period ending 30 September 2014



# **HIGHLIGHTS**

## CORPORATE PROFILE

#### DIRECTORS

Peter Bilbe Chairman Peter Bradford Managing Director Kelly Ross Non-Executive Director Rod Marston Non-Executive Director Geoffrey Clifford Non-Executive Director Peter Buck Non-Executive Director

### **KEY MANAGEMENT**

Peter Bradford Managing Director Brett Hartmann General Mgr Operations Matt Dusci General Mgr New Business Tony Walsh Company Secretary Scott Steinkrug Chief Financial Officer Sam Retallack Human Resources Mgr

### **REGISTERED OFFICE**

Suite 4 Level 5 | South Shore Centre 85 South Perth Esplanade South Perth | Western Australia 6151 Telephone: +61 8 9238 8300 Facsimile: +61 8 9238 8399 Email: contact@igo.com.au Website: www.igo.com.au ABN: 46 092 786 304

### MINING OPERATIONS

Tropicana JV IGO 30% Long IGO 100% Jaguar IGO 100%

#### PROJECTS AT STUDY STAGE Stockman /GO 100%

#### **ISSUED CAPITAL**

234,256,573 ordinary shares

ASX CODE: IGO

#### **\$ CURRENCY**

All currency amounts in this report are Australian Dollars unless otherwise stated

#### CASH COSTS

All cash costs quoted include royalties and net of by-product credits unless otherwise stated

# Tropicana JV (IGO 30%)

- 119,593oz Au (IGO's 30% share: 35,878oz Au) produced at a cash cost of \$535/oz Au (IGO's attributable cash costs).
- 2.1Mt of ore (>0.6g/t Au) mined.
- 1.5Mt of ore milled at average grade of 2.82g/t Au.

## Long

- 61,986t of ore mined @ 4.12% Ni for 2,551t of contained nickel at \$4.11/lb payable Ni cash costs, 5% below FY2015 guidance.
- McLeay South drilling intersected 4.2m @ 4.89% Ni from 1,011.5m. New McLeay South drill drive is planned to commence in the December 2014 Quarter.

# Jaguar

- 12,013t Zn and 2,418t Cu metal in concentrates produced at \$0.19/lb payable Zn cash costs, including \$0.09/lb for royalties.
- 124,870t of ore mined @ 11.32% Zn and 2.33% Cu.
- 122,795t of ore milled @ 11.25% Zn and 2.22% Cu.
- Drilling at Bentley Deeps intersected 7.8m @ 10.1% Zn, 2.5% Cu, 99g/t Ag and 1.1g/t Au at 950m with further work planned.

# Financial and Corporate

- Unaudited profit after tax (NPAT) for the September 2014 Quarter was \$27.9 million.
- \$55.5 million net inflow of cash from operating activities.
- At 30 September 2014, the Company had cash of \$44.3 million.
- Net cash increased by \$13.1 million to \$41.6 million after:
  - o \$26.3 million of debt was repaid; and
  - payment of \$11.7 million in fully franked dividends.
- Peter Buck appointed as an independent non-executive director. Dr. Rod Marston will retire at the 2014 Annual General Meeting.



# **OPERATIONS AND PROJECTS LOCATION**

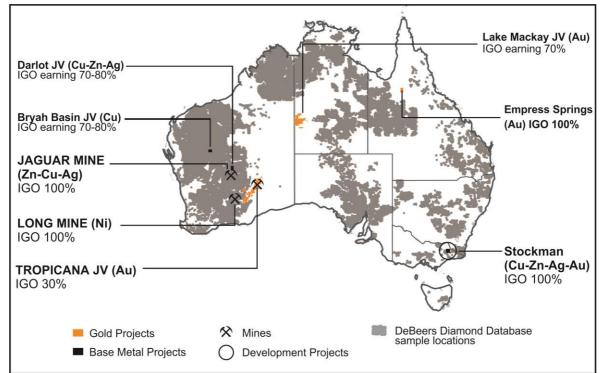


Figure 1: Independence Group - Mining Operations and Projects Location

## CORPORATE

Financial Highlights	September 2014 Quarter
Unaudited Profit after tax	\$27.9M
Unaudited underlying EBITDA <sup>1</sup>	\$64.0M
Cashflows	September 2014 Quarter
Net inflow of cash from Operations	\$55.5M
Material cash (outflows)	
Tropicana JV contribution for project development & exploration	(\$11.8M)
Long, Jaguar, Stockman & regional exploration	(\$10.5M)
Plant & Equipment and capitalised development costs	(\$7.9M) (Jaguar \$6.6M, Long \$1.1M, Other \$0.2M)
Debt repayment	(\$26.3M)
Cash	
Cash at 30 September 2014	\$44.3M
Debt	
Debt at end of September 2014	\$2.7M (Finance lease liabilities)
Hedging	As at date of this Report
Nickel for remainder of FY2015	200t/mth at Avg. price of \$18,135/t
Copper for remainder of FY2015	550t at \$7,700/t in Dec 2014,
	550t at \$8,294/t in March 2015 &
	550t at \$8,500/t in June 2015
Gold for remainder of FY2015 – Zero Cost Collars	Avg. 5,056oz/mth (range \$1,310 to
	\$1,757/oz)
Gold in FY2016 – Zero Cost Collars	Avg. 3,917oz/mth to Dec 2015 (range
	\$1,350 to \$1,744/oz)

<sup>&</sup>lt;sup>1</sup> Underlying EBITDA is a non-IFRS measure and comprises net profit or loss after tax, adjusted to exclude tax expense, finance costs, interest income, asset impairments, depreciation and amortisation.



# TROPICANA JOINT VENTURE (TJV)

Joint Venture: IGO 30%, AngloGold Ashanti 70% (Manager)

## Safety

No LTIs were recorded in the September 2014 Quarter. The 12-month LTIFR is currently 3.2.

## Production

During the September 2014 Quarter, 2.5Mt of ore comprising 0.4Mt of marginal ore (grading between 0.4 & 0.6g/t) and 2.1Mt of ore (> 0.6g/t Au) was mined. The ore was predominantly sourced from the Havana pit (1.8Mt) with increasing quantities from the Tropicana pit (0.7Mt). Total material movement, inclusive of ore, was 14.9Mt. Of the 2.1Mt of ore (> 0.6g/t Au) the average ROM grade was 2.25g/t Au.

A total of 1.5Mt of ore at an average ROM grade of 2.82g/t Au was milled during the September 2014 Quarter for 133,833 ounces of contained gold. Average metallurgical recovery was 88.7% for 118,728 ounces of gold recovered. During the September 2014 Quarter 119,593 ounces of gold were produced.

### Attributable Production

IGO's attributable gold production during the September 2014 Quarter was 35,878 ounces, a 10% decrease on the June 2014 Quarter. During the September 2014 Quarter IGO's attributable share of gold refined and sold was 35,703 ounces. IGO's attributable average cash costs for the September 2014 Quarter were \$535/oz Au produced and all-in sustaining costs (AISC) were \$875/oz Au sold. The increase in AISC for the September 2014 Quarter is mainly due to the lower Au ounces sold and greater waste movement from the Havana stage 2 compared to the June 2014 Quarter. Please refer to Table 1 in Appendix 1 for further details.

### Tropicana-Havana Near-Mine Exploration

Aircore drilling continued during the September 2014 Quarter with a total of 187 holes drilled for 7,034m completed at the Tumbleweed, Watchtower and Maple Leaf prospects. RC and diamond drilling was completed at Apocalypse, Voodoo Child and Tumbleweed during the September 2014 Quarter with six RC holes drilled for a total of 810m and three diamond holes drilled for a total of 483m. Assay results from much of this work are pending. Significant results received to date include an intercept of 2m @ 5.4g/t Au from an RC pre-collar at Voodoo Child.

Data acquisition for the 3D seismic survey was completed during the September 2014 Quarter. Delivery of the initial processed data is expected to be in the December 2014 Quarter.

### **Regional Exploration**

Exploration aircore drilling continued during the September 2014 Quarter, with 410 holes drilled for 23,508m completed at the Scarecrow, Sanpan, Zebra, Panama, Madras, Seahorse, Banshee, Sidewall and Black Orchid prospects. Very encouraging results were received from Madras with a best intercept of 13m @ 2.6g/t. Other results include 4m @ 0.97g/t at Scarecrow and 8m @ 0.76g/t from Sanpan.

### Beachcomber JV (IGO earning 70%)

Auger sampling was completed over the Maverick prospect with a total of 215 samples collected during the September 2014 Quarter. Several anomalous copper results have confirmed two separate low-order copper anomalies which are broadly parallel to a curvilinear magnetic feature. Follow up aircore drilling is planned for Maverick and two other prospects with base metal anomalies and coincident EM conductors during the December 2014 Quarter.

All significant aircore results are included in Table 2 in Appendix 2 and RC and diamond results are included in Table 3 in Appendix 2. Prospect locations and better results received during the September 2014 Quarter are shown in Figure 2 in Appendix 2.



# LONG OPERATION (Ni) – IGO 100%

## Safety

No LTIs were recorded in the September 2014 Quarter. The 12-month LTIFR is currently 8.8.

### Production

Production was 61,986t of ore mined at 4.12% Ni for 2,551 tonnes of contained nickel. A full breakdown of production statistics is provided in Tables 4 and 5 in Appendix 3.

Contained nickel metal in ore for the September 2014 Quarter was 3.5% higher than expected due to increased ROM grades. Metal was produced at a cash cost of \$4.11 per payable pound of nickel including royalties and net of copper credits (September 2013 Quarter: \$3.54/lb Ni payable).

#### Development

During the September 2014 Quarter, a total of 786m was advanced by jumbo development, of which 177m was booked as capital development and 609m as operational. The capital development is focusing on the development of the Moran South exploration drilling platform with the first platform expected to be completed by late October 2014.

Subsequent to the end of the September 2014 Quarter, the Company decided to proceed with the development of the McLeay South drill drive to establish an exploration drilling platform, from which drilling to increase understanding and confidence in the recently intersected McLeay South mineralisation can be done. The first exploration drilling platform is expected to be ready in the June 2015 Quarter.

### Near Mine Exploration

Near mine exploration drilling continued at the McLeay South and Long North prospects. Thirty three underground diamond drill holes and two surface diamond drill hole wedges for 5,502m were completed in the September 2014 Quarter. See Tables 6 and 7 in Appendix 4 for further details.

#### **McLeay South**

Two surface diamond drill hole wedges for 984m were completed at the McLeay South prospect in the September 2014 Quarter. Drilling intersected nickel sulphide mineralisation in both the underground and surface drill holes with the best results reported in drill hole LNSD065-W4 returning 4.2m @ 4.89% Ni from 1,011.5m (True Width 4.2m). See Table 6 in Appendix 4 for further details. This intercept also corresponds with a 40m by 40m off-hole Downhole EM (DHEM) target from the previously completed surface drill hole (LNSD-063). The new McLeay South drill drive is planned to commence in the December 2014 Quarter. The 530m drill drive will provide a platform for underground drilling to better define the McLeay South mineralisation (Figures 3 and 4 in Appendix 4).

#### Long North

Twenty three underground diamond drill holes for 3,087m targeting nickel mineralisation at the Long North prospect were completed in the September 2014 Quarter. Drilling intersected thin zones of nickel mineralisation with the best result returned in drill hole LG16-394 with 3.5m @ 7.44% Ni from 103.5m (True width 2.3m). See Table 7 in Appendix 4. The intercept is coincidental with a DHEM target approximately 50m by 45m in size and located 270m north of the 2013 Long resource boundary (Figure 3 in Appendix 4). Drilling has also identified five new DHEM targets. Surface diamond drill hole LNSD-066 has just commenced testing an EM target and potential channel nickel position 300m north of current mine development and 700m below the surface.



# JAGUAR OPERATION (Zn, Cu) – IGO 100%

## Safety

No LTIs were recorded in the September 2014 Quarter. The 12-month LTIFR is currently 3.4.

### **Mine Production**

During the September 2014 Quarter mining delivered 124,870t of ore at 11.32% Zn, 2.33% Cu, 168g/t Ag & 0.8g/t Au to the ROM stockpile.

### **Mill Production**

Mill production for the September 2014 Quarter was excellent with 122,795t of ore milled in the September 2014 Quarter at 11.25% Zn, 2.22% Cu, 168g/t Ag & 0.7g/t Au for 12,013 Zn and 2,418t Cu metal in concentrates. Further details of Mill production in the September 2014 Quarter are set out in Table 8 in Appendix 5.

Payable zinc metal during the September 2014 Quarter was produced at an average cash cost of \$0.19/lb of payable zinc including royalties and net of by-product credits (September 2013 Quarter: \$0.38/lb Zn).

### Concentrate

The mill produced 34,571t of concentrate during the September 2014 Quarter, of which 25,255t was zinc concentrate and 9,317t was copper concentrate (See Table 8 in Appendix 5). Nominally 44,000 wet metric tonnes (wmt) of concentrates were shipped (33,000wmt Zn & 11,000wmt Cu) during the September 2014 Quarter.

### Mine Development

During the September 2014 Quarter, a total of 875m of advance occurred, of which 583m was capitalised and 292m accounted for in operating costs.

### Near Mine Exploration

A two-hole drilling program testing deep target positions beneath the Bentley resource was undertaken from surface. The two diamond drill holes comprised an initial parent hole 14BTDD001 and a "wedge" hole 14BTDD001W1.

14BTDD001 was designed to test the Flying Spur position at a vertical depth of 930m, 120m down plunge from the closest mineralised hole (13BUDD143) and to pass through the main Arnage horizon 50m below the Flying Spur position and some 250m down plunge of the Arnage resource wireframe, as illustrated in Figures 5 and 6 in Appendix 6.

14BTDD001 was drilled to a down-hole depth of 1,249m and intersected weak mineralisation in three positions interpreted as the Flying Spur, Mulsanne and Arnage horizons. DHEM surveying of 14BTDD001 identified a conductive plate, with modelled dimensions of 100m x 100m located immediately north of, and below, the hole. Wedge hole 14BTDD001W1 targeting the centre of the modelled plate intersected two strongly mineralised horizons:

- 6.2m (true width) @ 2.6% Zn, 0.1% Cu, 45g/t Ag and 1.6g/t Au between 1112.0m and 1119.3m comprising semi-massive, massive and stringer mineralisation at the Flying Spur position, 136m down plunge of the deepest previous intercepts at Flying Spur; and
- 7.8m (true width) @ 10.1% Zn, 2.5% Cu, 99g/t Ag and 1.1g/t Au comprising massive sulphide in the Arnage stratigraphic position at a vertical depth of approximately 950m, some 250m down plunge from the base of the Arnage resource wireframe.

Both intercepts remain open down plunge and along strike, as illustrated in Figures 5 and 6 in Appendix 6. DHEM surveying of 14BTDD001W1 has generated further conductive responses. Initial follow-up testing, comprising a further three holes to test the horizons at nominal 80m step-outs up-plunge, down plunge and north along strike, has commenced.

Significant intercepts are provided in Table 9 in Appendix 6.

### Jaguar Regional Exploration

Exploration activities during the September 2014 Quarter focused on the Triumph prospect approximately 5km north of the Jaguar processing plant where ongoing exploration has identified a significant zone of



hydrothermally altered rocks containing varying thicknesses of VMS style massive to semi-massive pyrite-sphalerite rich mineralisation.

Recent 3D geological modelling and re-logging of an historic drill hole JHDD0003 in the prospect area identified that an additional target horizon may have been present beyond the end of the hole. Consequently, the hole was re-entered and extended from 764.4m to a final depth of 936.8m. Within 6m of the commencement of drilling, the extension intersected significant zones of light to heavy semi-massive sulphide mineralisation within a volcaniclastic sediment package which extended over a thickness of 50m. This mineralisation included a best intercept of:

• 8.4m (true width) @ 9.7% Zn, 0.1% Cu, 44g/t Ag and 0.3g/t Au between 788.0m and 799.1m.

This new intercept, which is open at depth, up-dip and along strike, significantly extends the area of known mineralisation and highlights the prospectivity of the Triumph Prospect (Figure 7 in Appendix 7). Follow-up work including further drilling is planned in the December 2014 Quarter.

Significant intercepts are provided in Table 9 in Appendix 6.

## EXPLORATION AND DEVELOPMENT PROJECTS

## STOCKMAN BASE METALS PROJECT (IGO 100%)

The Stockman Environmental Effects Statement (EES) Inquiry Panel was undertaken by Planning Panels Victoria (PPV) in June 2014. The Panel delivered its report to the Minister for Planning during the September 2014 Quarter, it is expected that the Minister will produce his Assessment Report as guidance for the licencing agencies during the December Quarter. Detailed licensing is expected during FY2015.

In parallel to the permitting process, updating and optimisation of key technical and economic parameters of the project has continued. The optimisation process has incorporated a review of proposed capital and operating expenditure as well as assessing opportunities to enhance revenue.

No exploration occurred at Stockman during the September 2014 Quarter.

## DARLOT JV (IGO Manager and Earning 70% - 80%)

Results from the aircore drilling program, completed in the June 2014 Quarter, have been integrated into an updated geological interpretation. Two areas with prospective stratigraphy and anomalous base metals geochemistry have been selected for testing by MLTEM survey, which is scheduled to commence early in the December 2014 Quarter.

## LAKE MACKAY GOLD/BASE METALS PROJECT (IGO Manager and Earning 70%)

Surface geochemical sampling continued during the September 2014 Quarter with the collection of 4,569 first pass reconnaissance samples and 2,125 follow-up samples providing in-fill coverage across previously defined anomalies. Results were received for 5,162 samples which have refined anomalies and identified additional areas for follow-up sampling next field season. A total of 13 gold-in-soil targets have been selected for drill testing this field season including the Windermere target in the highly prospective and previously unexplored south western zone of the project area (Figure 8 in Appendix 8).

An aircore drilling program comprising approximately 141 holes for 9,500 commenced in September 2014. At the end of the September 2014 Quarter, 26 holes covering two target areas had been completed.

## BRYAH BASIN JV (IGO Manager and Earning 70% - 80%)

An aircore drilling program comprising 115 holes for 6,759m was completed at the end of September 2014. The program tested areas of surface geochemical and EM anomalism as well as traversing prospective stratigraphy with little or no previous exploration. Assay results are awaited.

### **REBECCA JV**

Further surface geochemical sampling has downgraded the nickel sulphide potential of moving loop transient electromagnetic surveying (MLTEM) conductors previously defined. Consequently the Company has withdrawn from the Rebecca JV.



## FY2015 GUIDANCE

Tropicana:	141,000 to 147,000oz (IGO 30% share) at an average cash cost of \$590 - \$630/oz Au.
	Sustaining capex (IGO 30% share) and exploration (IGO 30% share) are expected to be
	\$9M and \$6M respectively.
Long:	Production of 230,000 to 270,000 ore tonnes for between 9,000 and 10,000 tonnes of
	contained nickel at cash costs of \$4.30 to \$4.70 per payable pound of nickel including
	royalties and net of copper credits. Approximately \$12M is expected to be spent on
	exploration of which ~45% is development for exploration access. Sustaining capex is
	expected to be \$8M.
Jaguar:	Mine and mill production of 420,000 to 440,000 ore tonnes for between 40,000 to 43,000t Zn
	and 5,800 to 6,500t Cu metal in concentrate at cash costs of between \$0.40 - \$0.60/lb per
	payable pound of zinc including royalties and net of copper, silver and gold credits.
	Approximately \$8M is expected to be spent on exploration for ongoing work at Flying Spur,
	Triumph and elsewhere on the Jaguar concession and Darlot JV tenements. Sustaining
	capex and development are expected to be \$10M and \$11M respectively. The full year
	guidance incorporates a planned maintenance shutdown at the Jaguar processing plant in
	January 2015 which is expected to take approximately 3 weeks. This planned maintenance
	shutdown will not affect mine output and is already built into the FY2015 guidance provided
	in July 2014. While Jaguar's March 2015 Quarter production result will be slightly lower,
	Jaguar production guidance for FY2015 is unchanged.
Stockman:	Approximately \$3M is expected to be spent on evaluation, permitting and targeting for new
	mineralised zones to be revised once the outcomes of permitting is known.
Other:	Approximately \$11M is expected to be spent on greenfields and generative exploration.

## **COMPETENT PERSONS STATEMENTS**

The information in this report that relates to Exploration Results (excluding Bentley and Long exploration results) is based on information compiled by Mr. Timothy Kennedy who is a full-time employee and security holder of the Company and is a member of the Australasian Institute of Mining and Metallurgy. Mr. Kennedy has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Kennedy consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Bentley Exploration Results is based on information compiled by Mr Graham Sweetman who is a full-time employee and security holder of the Company and is a member of the Australasian Institute of Mining and Metallurgy. Mr Sweetman has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Sweetman consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Independence Long Exploration Results is based on information compiled by Ms. Somealy Sheppard. Ms. Sheppard is a full-time employee and security holder of the Company and is a member of the Australian Institute of Geoscientists. Ms. Sheppard has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which she is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (the JORC Code) and consents to the inclusion in the report of the matters based on her information in the form and context in which it appears.

The information in this report that relates to Mineral Resources or Ore Reserves is a compilation of previously published data for which Competent Persons consents were obtained. Their consents remain in place for subsequent releases by the Company of the same information in the same form and context, until the consent is withdrawn or replaced by a subsequent report and accompanying consent. The information in this report has been extracted from the IGO ASX Release for Mineral Resources and Ore Reserves dated 28 August 2014 and is available on the IGO website <a href="http://www.igo.com.au">www.igo.com.au</a>. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the estimates in the market announcements continue to apply and have not materially changed. The Company confirms that announcements.

## FORWARD LOOKING STATEMENTS

This document may include forward-looking statements. Forward-looking statements include, but are not limited to, statements concerning Independence Group NL's planned exploration program and other statements that are not historical facts. When used in this document, the words such as "could," "plan," "estimate," "expect," "intend," "may," "potential," "should," and similar expressions are forward-looking statements. Although Independence Group NL believes that its expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that actual results will be consistent with these Forward Looking statements.

## JORC CODE (2012) TABLE 1 INFORMATION

See Appendix 9 for Table 1 information.



# APPENDICES

## **TROPICANA PRODUCTION SUMMARY**

## **APPENDIX 1**

TROPICANA JV OPERATION	Note	Unit	September 2014 Quarter
Safety:			
Lost Time Injuries (No.)			0
Lost Time Injury Frequency Rate (LTIFR)			3.2
Production Details:			100% JV Operation
Waste mined		'000 wmt	12,360
Ore Mined (>0.4 and <0.6g/t Au)		'000 wmt	380
Ore Mined (>0.6g/t Au)	1	'000 dmt	2,148
Au Grade Mined (>0.6g/t Au)		g/t	2.25
Ore Milled		'000 dmt	1,478
Au Grade Milled		g/t	2.82
Average metallurgical recovery		%	88.7
Gold recovered		Oz	118,728
Gold-in-circuit adjustment		Oz	<u>865</u>
Gold produced		Oz	119,593
			IGO 30%
			attributable share
Gold refined & sold	2	Oz	35,703
			•
			100.000
Revenue/Expense Summary:			IGO 30% attributable share
Sales Revenue		A'\$000	49,460
Cash Mining & Processing Costs		A'\$000	(17,030)
Gold production inventory adjustments		A'\$000	1,954
Gold sales inventory adjustments		A'\$000	323
Other Cash Costs	3	A'\$000	(4,328)
By-product credits		A'\$000	212
Exploration & feasibility costs (sustaining & non-sustaining)		A'\$000	(1,213)
Plant & Equipment (construction and development capital)		A'\$000	(1,614)
Depreciation/Amortisation		A'\$000	(13,260)
Unit Costs Summary:			IGO 30%
-			attributable share
Mining & Processing Costs		\$ per Oz produced	475
Gold production inventory adjustments Other Cash Costs		<pre>\$ per Oz produced \$ per Oz produced</pre>	(54)
By-product credits		\$ per Oz produced \$ per Oz produced	<u>(6)</u>
Cash costs		\$ per Oz produced	535
Cash costs	2	\$ per Oz sold	528
Sustaining Capital		\$ per Oz sold	45
Capitalised sustaining stripping & other mine costs		\$ per Oz sold	278
Capitalised exploration costs (sustaining)		\$ per Oz sold	10
Rehabilitation – accretion & amortisation		\$ per Oz sold	<u>14</u>
All-in Sustaining Costs	4	\$ per Oz sold	875
Note 1:         Of the 2,148kt ore mined during the quarter at >0.6 g/t, 1,44           Note 2         Attributable share excludes gold-in-transit to refinery.           Note 3:         Other Cash Costs include costs relating to site managemen sustainability costs and state government royalties.           Note 4:         The World Gold Council encourages gold mining companie released via press release on 27 <sup>th</sup> June 2013 and is available	nt, administr s to report a	ation and support services, e an All-in Sustaining Costs me	nvironmental &

#### Table 1: Tropicana Production Summary for the September 2014 Quarter

Quarterly Report September 2014



# **TROPICANA DRILL RESULTS**

# **APPENDIX 2**

	Table 2 Sig	nificant Au resul	ts from a	ircore drill	ing received d	luring the S	September 20	14 Quarte	r	
		Collar Info	rmation					Intercept	Details	
Hole No	Easting (m)	Northing (m)	RL (m)	Azi (Degr)	Dip (Degr)	Total Depth (m)	Depth From (m)	Depth To (m)	Width (m)	Au (g/t)
MAA081*	644499	6739005	400	360	-90	60.0	53.0	55.0	2.0	6.50
MAA267*	644796	6735097	400	360	-90	59.0	47.0	52.0	5.0	0.92
MAA327	644508	6736600	400	360	-90	59.0	44.0	48.0	4.0	0.44
MAA367	644702	6735095	400	360	-90	68.0	36.0	44.0	8.0	0.56
MAA372	644797	6734982	400	360	-90	78.0	36.0	52.0	16.0	0.76
							56.0	60.0	4.0	1.39
							64.0	77.0	13.0	2.60
SAA118	613063	6703825	400	360	-90	55.0	32.0	36.0	4.0	0.31
SAA123	612998	6703659	400	360	-90	60.0	28.0	32.0	4.0	0.97
SPA081	638151	6714314	400	360	-90	52.0	32.0	40.0	8.0	0.76
MLA095	648154	6769039	400	360	-90	57.0	44.0	48.0	4.0	0.54
TUA765*	648274	6776701	400	360	-90	54.0	50.0	52.0	2.0	0.57
TUA770*	649036	6776701	400	360	-90	37.0	26.0	28.0	2.0	0.76
TUA878*	648442	6777297	400	360	-90	73.0	32.0	35.0	3.0	0.52
							68.0	70.0	2.0	0.71
TUA887	647982	6777195	400	360	-90	46.0	20.0	28.0	8.0	0.33

(All samples are composite samples except where denoted by \* which are 1m resplits. Intercept widths are down hole widths) Down hole widths shown, coordinates and azimuth are MGA94 zone 51. Significant intercepts >0.3g/t Au.

#### Table 3 Significant Au results from RC and diamond drilling received during the September 2014 Quarter

	Ŭ	Collar Info	rmation		Ŭ	Ū		Intercept I	Details	
Hole No	Easting (m)	Northing (m)	RL (m)	Azi (Degr)	Dip (Degr)	Total Depth (m)	Depth From (m)	Depth To (m)	Width (m)	Au (g/t)
MARC018	644602	6738699	364	270	-60	203.0	118.0	120.0	2.0	0.31
HBRC001	653523	6764616	344	270	-60	150.0	48.0	50.0	2.0	0.41
HBRC003	653575	6764512	344	270	-60	120.0	88.0	90.0	2.0	0.32
VCD005	674780	6800575	337	270	-65	336.8	74.0	76.0	2.0	5.43

(Intercept widths are down hole widths)

Coordinates and azimuth are MGA94 zone 51



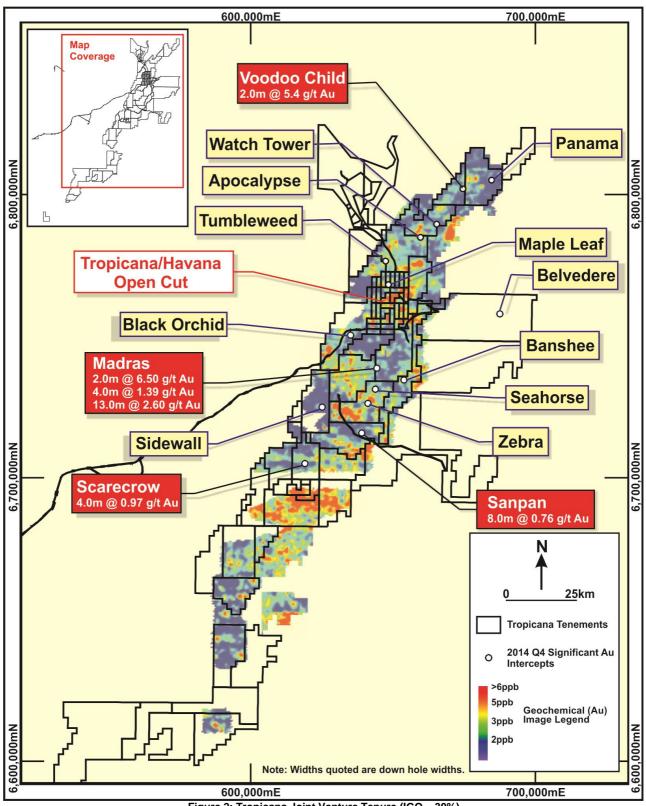


Figure 2: Tropicana Joint Venture Tenure (IGO - 30%)



# LONG OPERATION PRODUCTION SUMMARY

## **APPENDIX 3**

LONG OPERATION	Note	September 2014 Quarter	Corresponding Quarter September 2013
Safety:			
Lost Time Injuries (No.)		0	
Lost Time Injury Frequency Rate (LTIFR)		8.8	13.0
Production:			
Ore Mined (dmt)	1	61,986	73,43
Reserve Depletion (dmt)	2	29,164	45,85
Ore Milled (dmt)		61,986	73,43
Nickel Grade (%)		4.12	4.0
Copper Grade (%)		0.28	0.2
Metal in Ore Production			
Nickel (t)		2,551	2,99
Copper (t)		175	21
Metal Payable (IGO's share):			
Nickel (t)	3	1,542	1,80
Copper (t)	3	71	8
Revenue/Expense Summary:		\$000	\$00
Sales Revenue (incl. hedging)	5	28,339	28,27
Cash Mining Costs		(9,395)	(9,307
Other Cash Costs	4	(5,139)	(5,528
Exploration		(3,266)	(3,371
Mine Development		(308)	(401
Plant & Equipment		(815)	(106
Depreciation/Amortisation		(4,768)	(5,442
Notional Cost /Ib total metal:		\$/Ib of Total Metal	\$/Ib o Total Meta
Cash Mining Costs		1.67	1.4
Other Cash Costs	4	0.91	0.8
Copper Credit		<u>(0.10)</u>	<u>(0.11</u>
Ni C1 cash costs & Royalties		2.48	2.1
Exploration, Development, P&E		0.78	0.6
Depreciation/Amortisation		0.85	0.8
Notional Cost /Ib payable metal:		\$/Ib Payable Metal	\$/Ib Payabl Meta
Cash Mining Costs		2.76	2.3
Other Cash Costs	4	1.51	1.3
Copper Credit		<u>(0.16)</u>	<u>(0.18</u>
Ni C1 cash costs & Royalties		4.11	3.5
Exploration, Development, P&E		1.29	1.0
Depreciation/Amortisation		1.40	1.3

Note 2: Reserve depletion equals production from within reserves base.

Note 3: Payable metal is a function of recovery from concentrate smelting and refinery and is costed under a BHPB contract.

Note 4: Other Cash Costs include milling, royalties and site administration costs.

Note 5: Sales Revenue per pound includes nickel price adjustments for prior periods.

#### Table 5: Long Operation: production sources in the September 2014 Quarter (see Table 4 above for further detail)

Long	6,166t	@	2.51	% Ni for	155	Ni t	
McLeay	9,096t	@	2.849	% Ni for	258	Ni t	
Victor South	867t	@	3.85	% Ni for	33	Ni t	
Moran	45,857t	@	4.59	% Ni for	2,104	Ni t	
TOTAL	61,986t	@	4.12	% Ni for	2,551	Ni t	



# LONG OPERATION TARGET AREAS

**APPENDIX 4** 

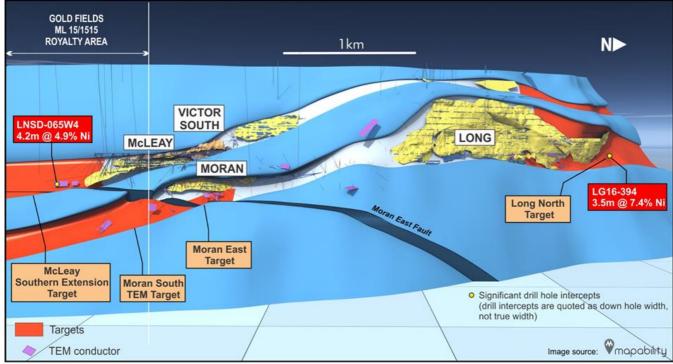


Figure 3: Long Operation – Longitudinal Projection showing Target areas, TEM conductors and significant intercepts (>0.5% Ni).

Hole ID	Northing (m)	Easting (m)	RL (m)	DEPTH (m)	DIP (degr)	AZIMUTH (degr)	m From	m To	Interval (m)	True Width	Ni %
LNSD-065-W2	546501	375315	286	1188.2	-79	94	977.6	978.1	0.5	0.3	10.06
LNSD-065-W3	546501	375315	286	1096.4	-79	94	977.5	978.6	1.1	0.8	3.49
LNSD-065-W3	546501	375315	286	1096.4	-79	94	981.48	981.6	0.12	0.05	3.93
LNSD-065-W3	546501	375315	286	1096.4	-79	94	990.2	990.4	0.2	0.1	2.29
LNSD-065-W4	546501	375315	286	1170.8	-80	97	1011.5	1015.3	4.2	4.2	4.89
LNSD-065-W4	546501	375315	286	1170.8	-80	97	1017.0	1019	2	2	1.39

Table 6: Long Operation – McLeay South Drilling, September Quarter 2014.

Mine Grid co-ordinates shown. KNO azimuth



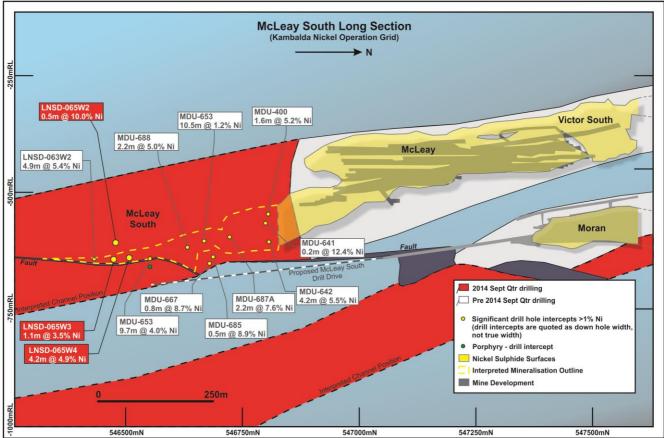


Figure 4: Long Operation – Longitudinal Projection showing McLeay South Target areas, TEM conductors and significant intercepts (>0.5% Ni).

	Northing (m)	Easting (m)	RL (m)	DEPTH (m)	DIP (degr)	AZIMUTH (degr)	m From	m To	Interval (m)	True Width	Ni %
Hole ID											
LG16-394	551029	373727	-633	120	-54	4	103.5	107	3.5	2.3	7.44
LG16-395	551029	373727	-633	175	-31	324	106.65				barren
LG16-396	551029	373727	-633	250	-19	311	328				barren
LG16-396	551029	373727	-633	250	-19	311	370				porphyry
LG16-397	551029	373727	-633	135	-48	82	86.78	88.51	1.73	0.7	3.69
LG16-399	551029	373727	-633	90	17	357	45.8	46.45	0.65	0.3	4.64
LG16-404	550881	373923	-598	110	33	77	99.8	102.55	2.75	1.8	1.49
LG16-408	550881	373919	-602	140	-72	345	22.8	23.1	0.3	0.15	3.45
LG16-411	550962	373827	-616	130	-73	53	29.95	30.45	0.5	0.2	7.26
LG16-413	550960	373828	-602	103.8	-35	125	78.7	81.5	2.8	0.8	3.57

#### Table 7: Long Operation – Long North Drilling, September Quarter 2014.

Mine Grid co-ordinates shown



# JAGUAR OPERATION PRODUCTION SUMMARY

## **APPENDIX 5**

JAGUAR OPERATION	Note	September 2014 Quarter	Corresponding Quarter
			September 2013
Safety: Lost Time Injuries (No.)			
		0	
ost Time Injury Frequency Rate (LTIFR)		3.4	4.
Production Details:		404.070	407.05
Ore Mined (dmt)	1	124,870	107,05
Reserve Depletion (dmt) Ore Milled (dmt)	2	120,231 122,795	<u>65,18</u> 117,41
Zinc Grade (%)		11.25	10.6
Copper Grade (%)		2.22	1.6
Silver Grade (g/t)		168	14
Gold Grade (g/t)		0.7	0.
Concentrate Production		0.017	0.74
Copper concentrate (dmt)		9,317 25,255	6,71
Zinc concentrate (dmt) Zinc recovery (%)		25,255	23,150 88.9
Copper recovery (%)		88.0	86.
Silver Recovery in Copper conc. (%)		63.2	62.
Metal in Concentrate:	3		
Copper(t)		2,418	1,71
Zinc (t)		12,013	11,14
Silver ( Oz )		532,195	427,08
Gold ( Oz ) Metal Payable in Concentrate:	3	1,529	1,44
Copper (t)	5	2,325	1,64
Zinc (t)		9,992	9,29
Silver ( Oz )		401,430	307,65
Gold ( Oz )		1,406	1,33
Revenue/Expense Summary:			·
•		\$'000's	\$'000'
Sales Revenue (incl. hedging TC's/ RC's) Cash Mining & Processing Costs		50,331 (13,905)	47,38
Site Admin & Trucking Costs		(7,033)	(10,000) (6,647
Shipping		(1,919)	(1,585
Royalties		(2,049)	(1,975
Exploration		(2,175)	(1,462
Mine Development		(2,645)	(4,352
Plant & Equipment		(4,150)	(303
Depreciation/Amortisation		(4,898)	(1,376
Notional Cost/lb Total Zn Metal		\$/Ib Total Zn Metal	\$/Ib Total Zn Meta
Produced		Produced	Produce
Mining & Processing Costs Other Cash Costs	4	0.52	0.6
Copper, Silver and Gold credits	4	0.69 (1.05)	0.5
Zn C1 Costs & Royalties	5	0.16	0.3
Exploration, Development, P&E		0.34	0.2
Depreciation/Amortisation		0.18	0.0
Notional Cost /Ib Total Zn Metal		\$/Ib Total Zn Metal	\$/Ib Total Zn Meta
Payable Mining & Dressesing Costs		Payable	Payabl
Mining & Processing Costs Other Cash Costs	4	0.63	0.7
Copper, Silver and Gold credits	4	(1.26)	0.6
Zn C1 Costs & Royalties	5	0.19	0.3
Exploration, Development, P&E	5	0.13	0.3
Depreciation/Amortisation		0.22	0.0
	alal. 1		
Note 1:         Total mined ore, from inside and out           Note 2:         Reserve depletion equals production           Note 3:         Payable metal is a function of recover	n from wit		ontrolled by Sales

shipping and notional royalties.
 Note 5 C1 Costs include credits for copper, silver and gold notionally priced at US\$3.15 per pound, US\$19.11 per ounce and US\$1,269 per ounce for the Quarter respectively.



**APPENDIX 6** 

# JAGUAR OPERATION NEAR MINE EXPLORATION

#### Table 9: Significant Drill Results: 14BTDD001W1 and JHDD0003 extension.

		Tables	. Sign		III Kes	suits. I	4610000	IVVI all	a JHDD000	externs	ion.								
HOLEID			JMG	i			FROM	то	INTERVAL	TRUE WIDTH	Zn (%)	Cu (%)	Ag (g/t)	Au (g/t)	LITH				
HOLEID	Easting	Northing	RL	Azimuth	Dip	Total Depth													
							1112.0	1119.3	7.3	6.2	2.6	0.1	45	1.6	LSM				
							including												
14BTDD001W1	8758.1	51273.1	4442	88.9	66.5	1330	1113.0	1115.6	2.6	2.2	4.8	0.2	98	3.8	LSM/LSU				
461DD001001	0700.1	51273.1	4442	00.9		1550	1134.7	1143.9	9.2	7.8	10.1	2.5	99	1.1	LSU				
							including												
								1135.5	1137.2	1.7	1.4	27.9	5.8	190	1.7	LSU			
										770.3	799.1	28.8	21.8	4.9	0.7	44	0.4	LSM	
							including												
JHDD0003	10069.8	62101.3	4481	90.4	90.4	90.4	90.4	90.4	60	937.3	788	799.1	11.1	8.4	9.7	0.1	44	0.3	LSM
									including										
							793	796.2	3.2	2.4	17.5	0.2	80	0.3	LSM				
							503.3	522.35	19.05	13.3	1.6	0	59	0.16					
14TRDD007	10276.7	62189.4	4483	89.8	65.3	649.1	including												
							510.6	515.8	5.2	3.6	2.8	0.1	41	0.2					
14TRDD009	10273.8	62040.7	4482	89.4	61.9	652	538.8	539.8	1	0.9	2.3	0.1	2.1	-					
							406.05	411.2	5.15	4.45	1.3	0.1	45	0.2	LSM				
14TRDD010	10290.2	62040.8	4482	00.0	07	589.8	462.9	473.6	10.7	9.69	1.3	0	37	0.4	LSM				
141 KDD010	10290.2	62040.8	4482	90.9	67	589.8	including												
							469.4	473.1	3.7	3.3	2.8	0.1	38	0.1	LSM				
			-		-														

Results are density and length-weighted. LSM = Semi-massive sulphide. LSU= Massive sulphide. Grid co-ordinates are Jaguar Mine Grid.



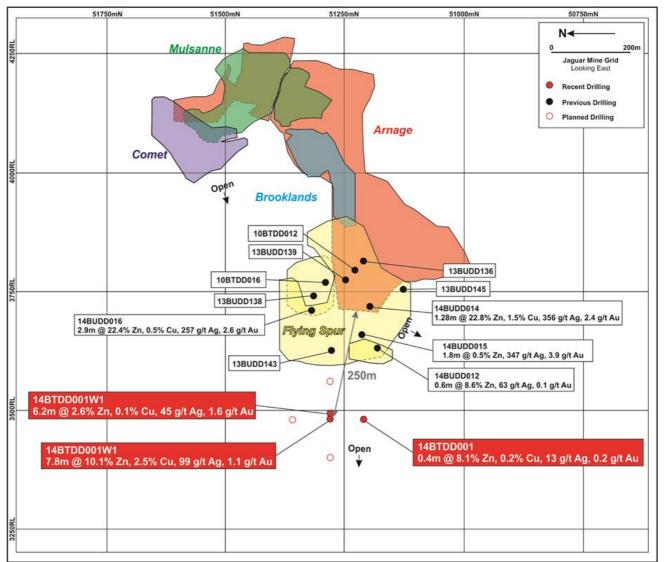


Figure 5: Jaguar Operation: Bentley Composite Long Section showing location of Flying Spur and Bentley Deeps drill holes. Down hole widths are true widths. Note: North is to the left in the diagram. See ASX release dated 22 September 2014



Independence Group

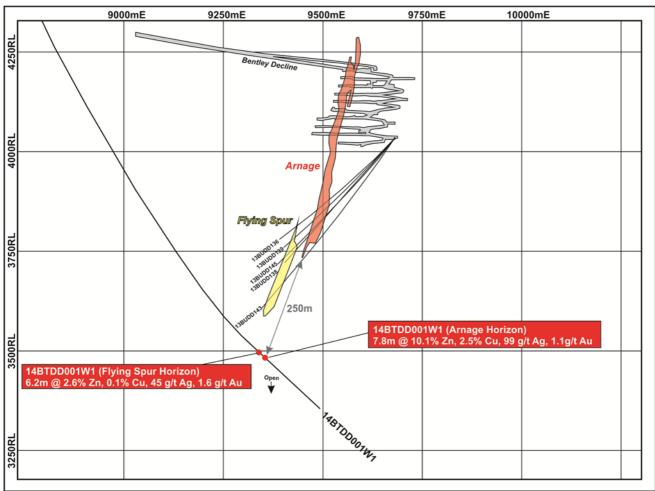


Figure 6: Cross Section of Bentley deposit showing location of Arnage and Flying Spur lenses, intercept pierce points and planned follow-up drilling pierce points (see ASX release dated 22 September 2014)



# JAGUAR PROJECT EXPLORATION



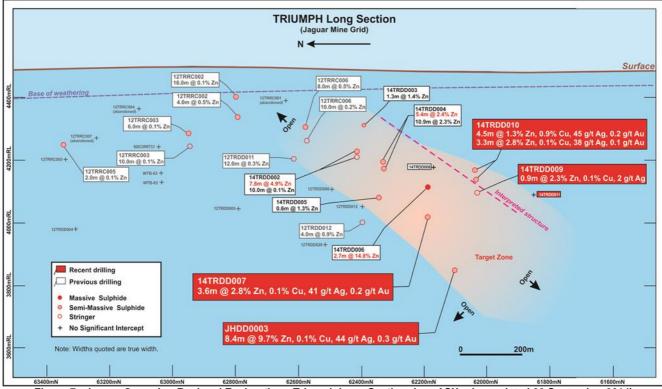


Figure 7 : Jaguar Operation Regional Exploration - Triumph Long Section. (see ASX release dated 22 September 2014) Note: Previous Triumph Long Sections disclosure to ASX had North pointing to right of the figure.



# LAKE MACKAY PROJECT EXPLORATION

**APPENDIX 8** 

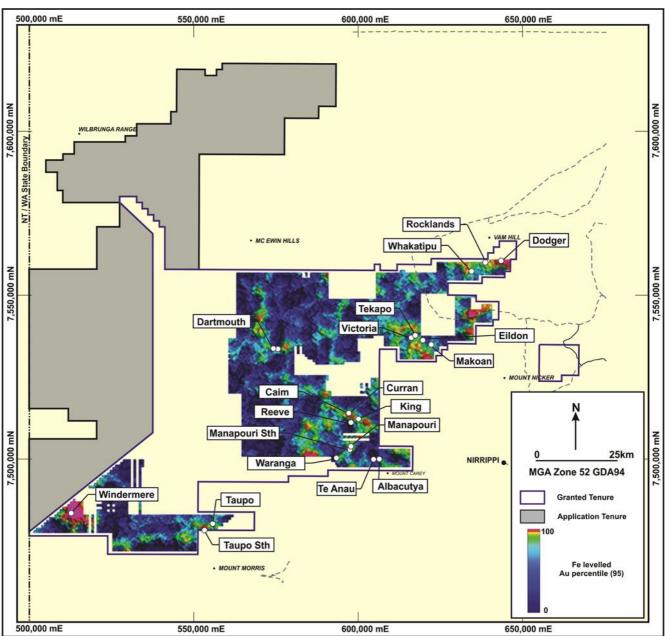


Figure 8 : Lake Mackay Project tenure (IGO Manager and Earning 70%)



## **APPENDIX 9**

## JORC CODE 2012 TABLE 1

## A. JORC CODE, 2012 EDITION – TABLE 1 – TROPICANA EXPLORATION RESULTS 2014 SECTION 1 SAMPLING TECHNIQUES AND DATA

Criteria	Commentary
Sampling techniques	Aircore samples were collected with a scoop from spoil piles placed on the ground as one metre samples. Sampling aimed to be as representative as possible by sampling through the entire spoil pile. Samples are collected as 4m composite samples or smaller composites where required to complete the hole. Samples weigh approximately 3kg in total. Anomalous intercepts >0.05g/t Au at early stage targets are resampled at 1m intervals and resubmitted for analysis.
	Reverse Circulation (RC) samples were collected as 1m samples at the rig using a cone splitter. Two samples at a variable split of approximately 1-in-8 were collected with the resultant samples each weighing
	about 2-3kg. Mineralised zones and zones of geological interest were submitted to the laboratory for assay as 1m samples. Unmineralised zones were submitted to the laboratory for assay as 2m composite samples. The 2m composite samples are split through a riffle splitter and submitted for analysis. Archive 1m samples of the entire hole are retained for future sampling and check work if required.
	Diamond core (NQ2 diameter) was sampled as half core over typical down-hole widths of 1m for mineralised intervals (minimum width 0.3m maximum width 1.3m as appropriate geologically). Sampling intervals are extended across larger intervals (up to 2m) as quarter-core through unmineralised zones.
Drilling techniques	All samples from aircore drill holes were collected using standard 89mm (3.5") diameter aircore bits. RC drilling was collected using a face sampling hammer with a 127mm (5") bit. Diamond core was NQ2 diameter (75.7mm hole diameter, 50.5mm core diameter). Core was orientated using the Ace Core Tool <sup>™</sup> .
Drill sample recovery	RC and aircore sample recovery was based on visual estimates and generally good and recorded in the drill database. Wet samples were recorded in the database.
	Diamond core recovery is measured and logged across core runs during the core mark-up process. Due to the early stage of exploration, no quantitative measures were taken for sample recovery for the RC and aircore samples.
	Diamond core recovery was generally good. Core was reassembled for mark-up and was measured, with metre marks and down-hole depths placed on the core. Depths were checked against driller's core blocks and any discrepancies corrected after discussion with drillers. Core loss was recorded in the geological log.
Logging	There is no obvious relationship between sample recovery and grade. Geological logging was completed using standard logging digital data entry software and the AGA geological
Logging	logs and coding system. Data on rocktype, deformation, colour, structure, alteration, veining, mineralisation and degree of weathering were recorded.
	These samples have not been used for any Mineral Resource estimation, mining studies or metallurgical studies, but the level of detail is sufficient to support Mineral Resource estimation and Mining Studies.
	Logging is both qualitative and semi-quantitative in nature. All drill core is photographed.
	Each hole is logged and sampled in full.
Sub-sampling techniques and sample preparation	Aircore chips were sampled using a scoop and were generally dry, but some wet samples were collected. Samples were initially collected as 4m composites or smaller composites where required to complete the hole, with a 1m or 2m sample at the bottom of the collected to enable analysis of the freshest material. Intervals returning >0.05g/t Au at early stage targets were typically resampled from the cuttings pile with a scoop, on a 1m basis.
	RC samples were split at the rig using a cone splitter with one sample sent to Genalysis for fire assay and the other sample retained for future sampling if required. All diamond core has been cut into half or guarter core for sampling.
	All samples were submitted to Genalysis for lead collection fire assay for either gold only or gold, platinum and palladium analysis, and for four-acid analysis of 46 elements. Samples were oven dried at 105°C then jaw crushed to -10mm followed by a Boyd crush to a nominal -2mm. Samples were then pulverised in LM5
	mills to a nominal 85% passing 75µm. Samples were analysed for gold using the Genalysis FA25/SAA technique, or for gold, platinum and palladium using the Genalysis FA25/MS technique. The FA25/SAA technique utilises a 25g lead collection fire assay with analysis by solvent extraction Atomic Absorption
	Spectrometry and the FA25/MS uses a 25g lead collection fire assay with analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS). The fire assay method is considered a suitable assaying method for total Au determination. Multi-element analysis was completed using the Genalysis 4A/OM10 technique, which uses four-acid digestion with analysis of 46 elements by a combination of ICP-MS and Inductively Coupled Plasma Optical Emission Spectroscopy (ICP-OES).
	The sample preparation technique is appropriate and is standard industry practice for gold exploration. Aircore composite samples returning >0.05g/t Au are typically resampled at 1m intervals (resplit samples) and assayed as above. Where 1m resplits have been taken, these results are reported in preference to the
	4m composite samples assays. No quality control procedures were adopted to prove sample representivity. No field duplicate samples were taken for aircore, RC or diamond samples. The drilling completed at Tropicana Q4 was for exploration only and is not used in resource estimation, where more rigorous QAQC is employed. Sample size is appropriate for the targeted mineralisation styles.
Quality of assay data and	The 25g fire assay technique used is a total extraction method for gold.
laboratory tests	No geophysical or XRF results are reported.
	Quality control procedures included insertion of certified standards (approximately 1 in 25), and blanks (1 in each hole). No external laboratory checks have been completed and therefore precision levels have not been established. Review of the analyses of the certified standards do not indicate any accuracy issues.



Criteria	Commentary
Verification of sampling and assaying	No checks were made or required for this level of exploration.
	No twin holes have been completed.
	Primary data are collected in Field Marshall files on portable computers. Data are imported directly to the database using software with built in validation rules.
	Assay data are imported directly from digital assay files supplied from the laboratory and are merged in the database with sample information. Data are uploaded to a master SQL database stored in Perth, which is backed up daily.
	There has been no adjustment to assay data.
Location of data points	Hole collars have been surveyed using a hand held GPS. Downhole surveys were completed at 30m intervals in RC and diamond holes utilising a Reflex Ez-Trac instrument. The dip and azimuth from the collar setup were used for aircore holes.
	Drillhole location data were captured in the MGA94 grid system, Zone 51.
	There is no topographical control. Holes are assigned a collar RL from a regional digital elevation model. As these holes do not form part of a resource model, it is not necessary for accurate topographic control.
Data spacing and distribution	Drillhole spacing varies between prospects from 50m and 1600m along strike and 20-200m across interpreted strike.
	Data have not been used for a Mineral Resource estimate.
	No compositing, other than preliminary sample compositing, has been applied to the data.
Orientation of data in	Orientation of mineralisation is unknown at this early stage.
relation to geological structure	
Sample security	Samples are sealed in calico bags, which are in turn placed in large poly-weave bulk-bags for transport. Filled poly-weave bulk-bags are secured on wooden crates and transported directly via road freight to the laboratory with a corresponding submission form and consignment note.
	Genalysis checks the samples received against the submission form and notifies AGA of any missing or additional samples. Once Genalysis has completed the assaying, the pulp packets, pulp residues and coarse rejects are held in their secure warehouse. On request, the pulp packets are returned to the AGA warehouse on secure pallets where they are documented for long term storage and retrieval.
Audits or reviews	There has been no review of sampling techniques or data.

#### SECTION 2 REPORTING OF EXPLORATION RESULTS

Criteria	Commentary
Mineral tenement and land tenure status	Tropicana is a joint venture between AngloGold Ashanti Australia Limited (AGA) and Independence Group NL (IGO) (AGA:IGO, 70:30) AGA is the manager of the JV. Significant results are from several tenements within 90km of the Tropicana Mine. There are no known heritage or environmental impediments over the leases where significant results were received. The tenure is secure at the time of reporting. No known impediments exist to operate in the area.
Exploration done by other parties	The intercepts reported are from drill programs designed to follow up mineralisation discovered by AGA during regional exploration since the JV inception in 2002. The area had previously been essentially unexplored until the JV discovered gold mineralisation at Tropicana in 2005.
Geology	The host rocks are predominantly gneisses interpreted to be in the same package of rocks as the Tropicana and Havana gold deposits. Controls on mineralisation are currently unknown.
Drill hole Information	The easting, northing, approximate RL, dip, azimuth, hole depth, down hole length and intercept depth of all intercepts >2m @ 0.3g/t Au are given in tables in the text of the report. Details for holes which returned <2m @ 0.3g/t Au are not tabulated as they are not significant. The absence of the details of the holes with <2m @ 0.3g/t Au is not considered material given the early stage
	of exploration at these prospects. The exploration is at an early stage and no continuity between mineralised intercepts is implied.
Data aggregation methods	Intercepts were calculated using length-weighting above a 0.3g/t Au cut off with a minimum downhole length of 2m and maximum of 2m of internal dilution. No top-cuts have been applied.
Relationship between mineralisation widths and intercept lengths	Intercepts reported are downhole lengths, true widths are unknown.
Diagrams	A plan view of the locations of the significant intercepts is provided. Due to the early stage of exploration, sections have not been included.
Balanced reporting	All intercepts >2m @ 0.3g/t Au have been provided. Holes with intercepts <2m @ 0.3g/t Au have not been reported due to their large number.
Other substantive exploration data	There are no other exploration data to report that are considered material.
Further work	Follow up drilling is planned in the coming quarters.



## B. JORC CODE, 2012 EDITION – TABLE 1 – JAGUAR OPERATION EXPLORATION RESULTS

## SECTION 1 SAMPLING TECHNIQUES AND DATA

Criteria	Commentary
Sampling techniques	All sampling is from the 3 diamond holes at Bentley (14BTDD001, 14BTDD001W1) and Triumph (JHDD0003).
	Core samples are selected based on geological logging for appropriate representative samples of mineralisation. All identified mineralised zones are sampled along with appropriate buffers either side of mineralisation.
	Diamond core size is HQ and NQ2. Core samples are ¼ and ½ core respectively to give sample weights under 3 kg. Sampling is on geological intervals (0.1 m to 1.2 m). Samples were crushed, dried and pulverised (total prep) to produce a sub sample for analysis by four acid digest with an ICP/OES, ICP/MS or fire assay FA/AAS (Au) finish.
Drilling techniques	Drilling is diamond with RC pre-collars through the regolith generally in the order 80 metres depth. Core is HQ and NQ2 standard tube. Holes are generally drilled towards the footwall (approximately 66° magnetic and with a 60° dip from horizontal). Core is oriented using a Reflex ACT II tool - generally every 6 metres core run.
Drill sample recovery	Diamond cores are logged and recorded in the database. The measured lengths are compared with expected lengths to calculate recovery. There are no significant core loss or sample recovery issues.
Logging	There are no known sample bias issues related to recovery.         All drillholes were geologically logged for their full length. Geological logging included rocktype, deformation, structure, alteration, mineralisation, veining and RQD measurements. Geological logging is adequate for eventual resource estimation.
	Core is photographed dry and wet for the full length.
	All core is retained and permanently stored at the Company's facilities.
Sub-sampling techniques and sample preparation	Core was cut in ½ and ¼ depending on core size in the Company's core farm. All samples were collected from the same side of the orientation line.
	Samples were sent to Intertek Genalysis in Maddington, WA. The sample preparation method was to dry the core in ovens for at least 2 hrs (105°C), then jaw crush the samples to a nominal minus 10mm size then Boyd crush samples to a nominal minus 2mm. After crushing, the samples were pulverised in a mixer mill in a single stage mix and grind process (SSMG) to a nominal 85% passing 75 micron. Any samples that exceeded the 3kg mill limit were rotary split to 3kg prior to the pulverising stage. This technique is appropriate for base metals samples.
	Coarse crush washes at the crusher stage and quartz washes at the pulverising stage have been implemented between every sample to combat sample carryover (contamination) during the sample preparation process. Sieve tests on 10% of the samples are performed to measure the fraction of pulp passing the 75 micron threshold.
Quality of assay data and laboratory tests	The sample sizes are considered to be appropriate for the base metal (VMS) mineralisation style. The analytical techniques used a four acid digest multi-element suite with ICP/OES or ICP/MS finish (25 gram fire assay (FA/AA) for Au). The acids used are hydrofluoric, nitric, perchloric and hydrochloric acids, suitable for silica based samples. The method achieves total dissolution for most silicate minerals. Detection limits for ICP-OES were Cu (10ppm), Zn (10ppm), Pb (50ppm), Ag (5ppm), Fe (0.01%). Detection limit for Au was 0.01ppm. The assay techniques used are considered appropriate for this type of mineralisation.
	No geophysical methods were used in determining assay data. Field QC procedures involve the use of certified reference material as assay standards, along with blanks.
	For core the insertion rate of these varied between 1in 10 to 1 in 15, with an increased rate in mineralised zones. Standards indicate that individual laboratory batch jobs are within acceptable limits of 2 standard deviations from the accepted values. In addition grind size is also measured and is acceptable with plus 85% below 75 micron grind size.
Verification of sampling and assaying	Drill core are checked for mineralised zones by senior site base geologists. Assay data are checked by senior IGO geologists.
	There were no twinned holes drilled.
	Data are entered in the field electronically into Toughbook computers running the acQuire geological data entry system. Data are then transferred electronically to a dedicated Microsoft SQLServer database. Data are verified by routine internal software processes for data integrity and by manual checking by project and supervising geologists.
Location of data points	There are no adjustments to primary assay data. DD collars are located using RTK differential GPS for an accuracy of better than 0.3 m.
	DD holes are downhole surveyed using a north seeking gyro survey tool. Data are captured every 5 metres.
	Grid system used is MGA_GDA94 Zone 51 and local JMG mine grid. Topographic control is from survey methods described above.
Data spacing and	DD spacing is defined on geological criteria considered appropriate to define the scale of mineralisation in
distribution	<ul> <li>DD spacing is defined on geological chiefla considered appropriate to define the scale of infretalisation in each prospect. Nominal drill spacing is 80-160 metres. Drill spacing is shown in the accompanying sections.</li> <li>Data distribution is regarded as appropriate for the style of mineralisation sought, the stage of the exploration and the geological conditions encountered.</li> </ul>



Criteria	Commentary
	DD samples are selected on geological criteria and are not composited.
Orientation of data in relation to geological structure	DD holes are sited to intersect mineralisation perpendicular to orientation to minimise sample bias – holes are generally drilled towards the footwall at 66° magnetic and with a 60° dip from horizontal.
Sample security	Samples are stored on site then transported to the Perth laboratory via truck. Samples are stored in a locked yard at the laboratory and are electronically tracked. Pulps are stored in a locked shed at both the laboratory and when returned to site.
Audits or reviews	Sampling techniques and data QAQC is reviewed by Company based senior geologists.

#### SECTION 2 REPORTING OF EXPLORATION RESULTS

Criteria	
Mineral tenement and land tenure status	Drilling was conducted on M37/1290 and E37/496. All tenements are kept in good standing and no known impediments to ongoing DMP licensing are anticipated.
Exploration done by other parties	There was no exploration conducted by other parties.
Geology	Mineralisation styles sought are VMS base and precious metals.
Drill hole Information	Drillhole summary is included in the report.
Data aggregation	Length and density-weighting of grade is applied to reported intersections.
methods	Metal equivalent reporting is not used.
Relationship between mineralisation widths and intercept lengths	Where mineralisation geometries are known and relevant they are described. For exploration drilling and sampling geometries are inferred from adjoining prospects.
Diagrams	All appropriate maps and sections are included in the report.
Balanced reporting	Representative reporting of results is provided in the report.
Other substantive exploration data	All relevant and meaningful data is acknowledged in the report.
Further work	Further work programs and areas of assignment are appropriately detailed in the report.

## C. JORC CODE, 2012 EDITION - TABLE 1 - LONG EXPLORATION RESULTS 2014

## SECTION 1 SAMPLING TECHNIQUES AND DATA

Criteria	Commentary
Sampling techniques	Surface and underground diamond drill core consisted of six different diameters, PQ, HQ, NQ2, LTK-60, BQ and BQTK. Sampling was undertaken by ½ or ¼ coring to logged geological intervals using an automatic core saw. Maximum sample length is 1.1m and minimum sample length was 0.1m for all core sizes. Sample lengths did not cross geological intervals. Core was cut to give sample weight of approximately 3.2kg. All geological contacts between the footwall basalt and hanging wall ultramafics, with or without the presence of sulphides, were sampled. Sample intervals extend at least 5m beyond the sulphide zone (greater than 1% nickel grade) within the footwall and hanging wall geological contact positions. Samples were crushed and pulverised (total prep) to produce sub-samples of 400mg for analysis by mixed four acid digest, followed by ICP-OES analysis. Down hole electromagnetic geophysical surveys have been undertaken to assist in targeting of massive sulphide horizons. Densities were determined using Archimedes water immersion technique.
Drilling techniques	Diamond tails. Recent diamond drill core consisted of four different sizes. PQ (core diameter 85.0mm) or HQ (core diameter 63.5mm) holes are drilled where bad ground is expected, and the hole is often completed with a smaller NQ2 (core diameter 50.6mm). Drilling also consisted of LTK-60 (core diameter 43.9mm), BQTK core sizes (core diameter 40.7mm) and BQ core sizes (core diameter 30.4mm). Drill core were un-orientated.
Drill sample recovery	Diamond core was logged and recorded in the database. Intervals of core loss are logged as geological units with a code of 'CLOSS'. Intervals of partial core recovery are rare, but are noted in comments for both the sample and geology logs. Overall recoveries are >95% and there are no core loss issues or significant sample recovery problems. Intervals of core loss were not included in the sample intervals. All recent drilling is completed using underground diamond drill holes with high (>95%) core recovery. Diamond core was reconstructed into continuous runs, where possible, and each interval identified on the core and the depths checked against the depth given on the core blocks. Rod counts are marked on additional core blocks routinely completed by the drill contractor. Core losses are marked on additional core blocks marking the start of core loss and end of core loss intervals, by the drill crew. PQ and HQ drill core was used in areas of bad ground to assist in core recovery.
Logging	Geotechnical logging was captured on diamond drill holes for recovery, RQD, and number of fractures (per interval). The information is captured in the main database.



Criteria	Commentary
	Logging of drill samples recorded lithology, mineralogy, mineralisation, veins, alteration minerals, contact type. Recent core samples were photographed wet and the images stored in the main database. The drill samples were logged qualitatively in full for all samples.
Sub-sampling techniques and sample preparation	All samples were cut in ½ or ¼ using an automatic core saw cutter. All core samples were collected from the same side of the core. Extremely broken core is sampled by visually picking a representative sample consisting of half of the rock fragments. The core samples were totally crushed in a jaw crusher to a nominal particle size of 6mm then fine crushed in a Boyd crusher to a nominal size of 2mm. A sub-sample of approximately 750g is split out via a rotary divider (the rotary divider is adjustable so that consistent-sized splits can be taken for pulverising, regardless of original sample weights). The sample is then pulverised in a ring mill. A sub-sample of 100g is taken from the pulverised, homogenised sub-sample; this sub-sample is retained as the 'pulp'. An assay sample of 400mg is taken from the pulp for mixed four acid digest and then ICP-AES analysis. Sample preparation checks for grain size were carried out by the contract laboratories as part of its internal checks to ensure the grind size of 90% passing 75 microns. Greater than 90% of all sizing tests met acceptable limits. Field QC is through the use of certified reference material as assay standards inserted at irregular intervals and blank core samples inserted after massive sulphide mineralisation and at irregular intervals. The insertion rate is 1 in 10 blank samples and 1 in 20 standard samples. Results of standards and blanks from each batch are scrutinised at the time they are reported, and compared with expected values. Variation outside two standard deviations of the expected result is reported to the lab for checking, and re-assaying if required. In-house QAQC reports are produced quarterly and yearly to examine variability in standards and blanks performance and reliability. The ½ and ¼ core were sampled at 0.1m to 1.1m sample intervals was considered to be appropriate to correctly represent the sulphide mineralisation based on the style of dominantly massive and matrix
Quality of assay data and laboratory tests	assay range for the primary elements. The analytical techniques used a 400mg sub sample digested in mixed 4 acid digest (Nitric Acid, Perchloric Acid, Hydrochloric Acid and Hydrofluoric Acid). The digest commences with the samples at room temperature and after thirty minutes the beakers are transferred to a hotplate which heats the digest solution to 20°C. The digest solution is reduced until the solution is reduced to a dry, solid, state. This process takes approximately four hours. The dry, powdery, material which remains is soluble in Hydrochloric Acid and is ready for the next stage. The beaker is then removed from the hot plate and Hydrochloric Acid is added. The beaker is then returned to a hotplate, this time operating at 100°C. This "leach back" stage ensures all solids are dissolved back into solution. The beaker is then removed from the hotplate and allowed to cool. De-iodised water is then added to the beaker to bring the volume up of the solution up to a standard 18ml and the solution is then transferred to a test tube, where the volume is checked again and if necessary adjusted. This solution is vigorously agitated, so that solution is fully homogenised. This "Primary Digest Liquor solution" is diluted on a 1:1 basis. Included in the diluent are two rare elements, which are used as "internal standards" - Yttrium (Y) and Ytterbium (Yb). The ICP-DES analysis is run for either four (production drilling) or nine elements (exploration drilling). The four element suite with detection limits is: Ni (10ppm), Cu (10ppm), S (100ppm). The nine element suite is: As (10ppm), Co (10ppm), Gr (20ppm plus the possibility of incomplete digestion), S (100ppm), Cu (5ppm), Fe (100ppm), Mg (100ppm), Ni (10ppm), Zn (10ppm). No geophysical tool was used to determine element concentrations. Sample preparation checks for grain size were carried out by the contract laboratories as part of its internal checks to ensure the crush size of 90% passing 2mm and grind size of 90% passing 75 microns. Greater th
Verification of sampling and assaying	Due to the high visibility of mineralisation, significant intersections in diamond core were visually verified following lithological logging of core samples and after laboratory analysis, by IGO geologists. Core photos and visual checks from remaining half core samples were randomly checked. No drill holes were twinned. Primary data was collected using an Excel template on laptop computers using look up codes. The information was transferred into acQuire Database version 4.4.1.2 with SQL2008 database server. There was no adjustment to assay data. Assay results are submitted from the laboratory via email in CSV and PDF files. Original Assay files are archived digitally in the company computer network. CSV files are imported into acQuire database through a database extraction protocol.
Location of data points	The planned drill collar for underground diamond drill holes are laid out by marking the back-sight and fore- sight pins drilled in the walls of the mine development by the Company Surveyor using a Viva TS15 Total Station Theodolite considered to be accurate to 0.002m. The collar position is later picked up locating the exact position of the drill hole. The collar coordinates are stored in a database. The recent planned drill collars for surface diamond drill holes were laid out using a Leica-RTK GPS by IGO surveyors. The collar position is later picked up locating the exact position of the drill hole. The collar coordinates are stored in a database. Down hole surveys were taken using an Electronic Reflex Ez-Trac down hole survey tool by the Diamond drilling contractors. Holes were down hole surveyed with multi-shot surveys (6m intervals) at the completion



Criteria	Commentary
	of the hole. Single-shot surveys were progressively taken as the hole was drilled to maintain planned drill direction at 15m, and 30m intervals. Stated accuracy of the Electronic Reflex Ez-Trac down hole survey tool is 0.35 degrees on azimuth and 0.25 degrees on Dip. All down hole surveys were stored in the database and de-surveyed as curvilinear projections down the drill hole trace. One gyroscopic validation of down hole survey was undertaken in surface diamond drill hole. No other gyroscopic validation of down hole survey was undertaken for the drill holes reported this quarter. Validation of the surveys with the SMART TEM geophysical probe was completed for the underground diamond drill holes. No significant survey problems were identified. The grid system is MGA_GDA94, Zone52. The resource is calculated in Local Grid (KNO-Grid). It is a non-linear projection of MGA co-ordinates. All collars are captured in Local Grid. North-South Local Grid is -1 degrees off Magnetic North declination. MGA co-ordinates are generated by automated scripts within the database.
Data spacing and distribution	Diamond drill spacing for drill holes reported this quarter were variable, between 40m to 120m drill spacing along plunge and between 20m to 80m drill spacing down dip. Sample compositing has not been applied to the drill core.
Orientation of data in relation to geological structure	Orientation of mineralisation is interpreted to be similar to the McLeay and Long ore body trending north- south and plunging shallowly to the south. Surface diamond drill holes are angled near perpendicular to the mineralisation. Underground diamond drill holes are angled up dip or down dip of the ore bodies due to unfavourable geometries of the drill rig location and the ore bodies, with drill hole collars fanned off sections.
Sample security	Core samples are stored on site and delivered by IGO personnel to ALS in Kalgoorlie which is transported and processed in ALS Perth Laboratory. Whilst in storage the samples are kept in a fenced and locked yard on site. ALS has a batch tracking system that allows IGO staff to track progress of batches of samples from delivery to submission of results. Half core and quarter core is kept for reference is stored in a fenced and locked yard on site. The location and photographs of the core samples are stored on a regular basis in the main database.
Audits or reviews	The sampling techniques and data are collected and managed by IGO staff geologists familiar with the local rock-types and data collection process established over 14 years, with IGO and previously through WMC Resources The major rock-types of the area are visually distinct from each other in drill core, there are no major inconsistencies or errors in the logging of lithology or mineralised zones. The database is audited annually by IGO staff.

#### SECTION 2 REPORTING OF EXPLORATION RESULTS

Criteria	Commentary
Mineral tenement and land	Mineralisation intercepts reported this quarter are located on the tenements listed below:
tenure status	Listed below are tenement numbers and expiry dates.
	M15/1515 – expiry date 23/12/2025
	Location 48 - Non Crown Lease
	There are no Native Title Claims registered over the lease and no other known impediments.
	The mineralisation reported on M15/1515 which forms a part of a Joint Venture Agreement with St Ives
	Gold Mining Co. Pty Ltd (SIGM).
Exploration done by other	Exploration was initially undertaken by WMC and eventually commissioned the Long Shaft and Victor
parties	decline mine development. This data is of high quality with most of the historic work is concentrated in areas
	that have been mined out.
Geology	The mineralisation is typical Kambalda-style nickel deposits, consisting of narrow, steeply dipping, shallowly
	south-plunging, ribbon-like accumulations of massive and semi-massive (with minor disseminated)
	sulphides. The mineralisation is located at the base of Archaean komatiitic ultramafic flows at the contact
	with an underlying tholeiitic basalt unit. The massive sulphide is overlain by matrix then disseminated
	mineralisation, with the bulk of the nickel mineralisation being massive and matrix in nature. The host
	rocks and associated contacts have been subjected to lower amphibolite facies metamorphism, structural
	modification, and intrusion by multiple felsic to intermediate igneous dykes and sills.
Drill hole Information	Holes drilled in the mineralisation are described in Section 1 and new mineralisation intercepts are tabulated
	in the announcement.
Data aggregation methods	Exploration results are calculated as the length and density weighted average to a 1% nickel cut-off.
	Maximum internal waste of 2m may be included however the total nickel composite average grade must be
	>1% nickel.
<b>2</b> • • • • • •	Intercepts are length-density weighted across the entire width of the mineralised unit.
Relationship between	All mineralisation intervals are reported as down hole lengths as well as true widths. The plunge and dip of
mineralisation widths and	the mineralisation is generally well understood so estimated likely true widths are calculated and reported.
intercept lengths	
Diagrams	Longitudinal diagrams are shown in the announcement.
Balanced reporting	No material information has been excluded.
Other substantive	Geophysical plates generated from down hole electromagnetic surveys are used for targeting additional
exploration data	drilling. EM targets are generated as 3D surfaces in a geological modelling program to target exploration
	testing.
	EM targets are displayed as rectangular shapes on plans to identify the proximal location of potential nickel
Further work	mineralisation targets.
	Further surface and underground diamond drilling is expected to follow up the mineralisations.