

ANNUAL MINERAL RESOURCE AND ORE RESERVES

IGO Limited ('IGO' or 'the Company') (ASX: IGO) is pleased to report its annual Mineral Resource and Ore Reserve estimates as at 31 December 2019 as well as material Exploration Results for the calendar year ending 2019.

Summary total estimates by mining operation are set out below and full details of the estimates and results, including JORC Code Table 1 information, can be found in the attached report – CY19 Annual Update of Exploration Results, Mineral Resources and Ore Reserves as at 31 December 2019.

Highlights

- At 31 December 2019, IGO's total attributable Mineral Resources from our two mining interests, contained combined estimated metal contents of 234kt nickel (Ni), 94kt copper (Cu), 8kt cobalt (Co), and 0.21Moz gold (Au) metal, inclusive of the Ore Reserve estimates
- IGO's total attributable Ore Reserves as at 31 December 2019 contained estimated metal contents of 177kt Ni, 74kt Cu, 6kt Co and 0.91Moz Au
- Nova Ore Reserves are substantially all in the Proved Ore Reserve category as a result of investment in life of mine grade control early in the Nova mine life. This has enabled enhanced planning and forecasting during the year
- Nova Ore Reserves decreased by 42kt of nickel metal in CY19 of which 86% was due to mining and processing depletion. The Nova Operation mine life is now approximately seven years. Nova mine to mill Ore Reserve reconciliation performance for CY19 were robust
- The total Tropicana Gold Mine Ore Reserve contains 3.03Moz (100% basis), which represents a 19% decrease in total troy ounces mainly due to mining depletion
- At Nova and Tropicana significant near mine and regional exploration programs are underway to unlock new discovery and mine life extension
- During CY19, IGO continued to strengthen its exploration portfolio, and capability, with several new belt-scale opportunities in highly prospective emerging mineral terranes throughout Australia added to the portfolio

Peter Bradford, IGO's Managing Director and CEO said: "Our Nova Operation is a world-class asset. IGO's investment in completion of the grade control has ensured that we can fully optimise the mine plan and operation and reliably forecast production for future periods. This has been clearly demonstrated during the year with consistent delivery to guidance on a quarterly basis.

"We are encouraged by the exploration potential both nearby Nova and across the Fraser Range. Unlike other styles of mineralisation, discrete magmatic nickel sulphide deposits such as Nova-Bollinger do not lend themselves to year-on-year resource and reserve growth. Analogues to Nova-Bollinger elsewhere in the world, have seen growth by step-change through the discovery of new nearby lenses and whole new systems rather than by extension of initial discoveries. We have resourced the search for the next Nova accordingly and are optimistic of delivering discover.

"The Ore Reserve at Tropicana Gold Mine contains 3.03Moz. We are currently completing studies on the underground potential at both Havana South and Havana.

"IGO has one of the most exciting exploration portfolios amongst our peers, which we have continued to strengthen and expand during the year. Our aspiration continues to remain the delivery of a pipeline of organic growth opportunities by discovering the mines of the future."

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Table 1: IGO Total Mineral Resource Estimate as at 31 December 2019

Year		Grades			Metal					
ending	Operation	(Mt)	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Ni (kt)	Cu (kt)	Co (kt)	Au (koz)
2010	Nova (100%)	11.6	2.0	0.8	0.07	-	234	94	8	-
2019	Tropicana Gold Mine (30%)	Ina Gold Mine (30%) 38.6		-	-	1.70	_	-	_	2,106
IGO Total Mineral Resources		50.2	~ G	rades are	not additi	ve ~	234	94	8	2,106

See Annual Update of Exploration Results, Mineral Resources and Ore Reserve Report as an appendix to this release.

Table 2: IGO Total Ore Reserve Estimate as at 31 December 2019

See Annual Update of Exploration Results, Mineral Resources and Ore Reserve Report as an appendix to this release.

Year		Mass				Grades				Metal			
ending	Operation	(Mt)	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Ni (kt)	Cu (kt)	Co (kt)	Au (koz)			
2010	Nova (100%)	9.5	1.85	0.78	0.07	_	177	74	6	—			
2019	Tropicana Gold Mine (30%)	16.9	— — — 1.67		_	_	_	909					
IGO Total Ore Reserves			~ G	rades are	not additi	ve ~	177	74	6	909			

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CY19 ANNUAL REPORT OF EXPLORATION RESULTS, MINERAL RESOURCES AND ORE RESERVES 31 DECEMBER 2019

CONTENTS

Overview	1
Nova Operation	9
Tropicana Gold Mine	16
Greenfields Exploration	24

Supplementary Information

-	Abbreviation, units and symbols	33
-	Fraser Range drill hole intersections	34
-	JORC Table 1 Nova Operation	38
-	JORC Table 1 Tropicana Gold Mine	48
-	JORC Table 1 Fraser Range Results	57
-	JORC Table 1 Lake Mackay Results	61

FORWARD LOOKING STATEMENTS

This report contains forward-looking statements regarding future events, conditions and circumstances including but not limited to, statements regarding plans, strategies and objectives of management, anticipated construction timelines and expected costs and levels of production. Often, but not always, forward-looking statements can be identified using forward-looking words such as 'may', 'will', 'expect', 'intend', 'plan', 'estimate', 'anticipate', 'continue' and 'guidance', or similar words.

These forward-looking statements are not a guarantee of future performance and involve unknown risks and uncertainties, many of which are beyond IGO's control, which may cause actual results and developments to differ materially from those expressed or implied. These risks include but are not limited to, economic conditions, stock market fluctuations, commodity demand and price movements, access to infrastructure, timing of approvals, regulatory risks, operational risks, reliance on key personnel, Ore Reserve and Mineral Resource estimates, native title and title risks, foreign currency fluctuations, exploration risks, mining development, construction and commissioning risk.

Forward-looking statements in this report apply only at the date of issue. Subject to any continuing obligations under applicable law or regulations, IGO does not undertake to publicly update or revise any of the forward-looking statements in this report or to advise of any change in events, conditions or circumstances on which any such statement is based. Readers are cautioned not to place undue reliance on any forward-looking statements contained in this report.

Introduction

IGO Limited (IGO) is a diversified mining and exploration company listed on the Australian Stock Exchange (ASX). IGO produces saleable nickelcopper-cobalt (Ni-Cu-Co) and copper concentrates, and gold (Au) bars from its mining interests in Western Australia (WA). IGO also manages – through direct ownership or Joint Venture (JV) – extensive geological belt-scale exploration ground positions throughout WA, the Northern Territory (NT), South Australia (SA) and Greenland, as depicted in the map below. All these exploration projects are highly prospective for base metals and/or gold.

The primary purpose of this report is to provide investors and IGO's stakeholders with the technical information that is material to the estimation of IGO's Mineral Resources and Ore Reserves for the end of the 2019 calendar year (CY19). The secondary report purpose is to provide a snapshot of IGO's exploration activities for CY19.

IGO reports Exploration Results (ERs), Mineral Resource estimates (MREs) and Ore Reserve estimates (OREs) in accordance with the ASX listing rules and the requirements of the 2012 edition of the Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves (JORC Code).

For the end of CY19, IGO is reporting the MREs and OREs from its two WA mining operations – the Nova Operation (Ni-Cu-Co) mine, and IGO's 30% interest in the Tropicana Gold Mine (TGM). The details of the changes in the MREs and OREs from end of CY18 to CY19 are included in the following sections of this report along with material CY19 ERs from each mining operation. An extended summary of IGO's Greenfields ERs and plans is also included in the final section of this report.



OVERVIEW

		Massa		Gra	des			In site	ı metal	
ending	operation	Mass (Mt)	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Ni (kt)	Cu (kt)	Co (kt)	Au (koz)
31-Dec-2018	Nova Operation	13.2	2.0	0.8	0.07	_	270	107	9	_
Tropicana Gold Mine (30%)		40.9	—	—	—	1.76	—	_	—	2,310
	54.1	~ Gra	ides are i	not additi	ve ~	270	107	9	2,310	
31-Dec-2019 Nova Operation		11.6	2.0	0.8	0.07	_	234	94	8	_
Tropicana Gold Mine (30%)		38.6	—	—	—	1.70	—	—	—	2,106
End of CY19 total			~ Gra	ides are i	not additi	ve ~	234	94	8	2,106
CY19/CY118	Nova Operation	88%	101%	100%	100%	—	87%	88%	89%	—
% ratio	Tropicana Gold Mine (30%)	94%	—	_	_	97%	—	_	_	91%
CY19/CY18			~ Gra	ides are	not additi	ve ~	87%	88%	89%	91%

|--|

IGO total Ore Reserves estimates (OREs) at 31 December CY18/19

Veer	Mining			Gra	des			In situ	u metal	
ending	operation	Mass (Mf)	Ni	Cu	Co	Au	Ni	Cu	Co	Au
	operation	()	(%)	(%)	(%)	(g/t)	(kt)	(kt)	(kt)	(koz)
31-Dec-2018	Nova Operation	11.5	1.90	0.76	0.06	—	219	87	7	—
Tropicana Gold Mine (30%)		19.7	—	—	—	1.77	_	—	_	1,122
	31.1	~ Gra	ades are	not addit	ive ~	219	87	7	1,122	
31-Dec-2019	ec-2019 Nova Operation		1.85	0.78	0.07	—	177	74	6	_
Tropicana Gold Mine (30%)		16.9		_	_	1.67		—	_	909
	26.4	~ Gra	ades are	not addit	ive ~	177	74	6	909	
CY19/CY18	Nova Operation	83%	97%	103%	117%	—	81%	85%	86%	—
% ratio	Tropicana Gold Mine (30%)) 86% —		_	_	94%	—	—	_	81%
	85%	~ Gra	ades are	not addit	ive ~	81%	85%	86%	81%	



CY18/19 cascade charts of causes for changes in principal payable metal

Nova Operation

In CY19, IGO continued the mining and processing of Ni-Cu-Co ore from the Nova-Bollinger deposit with no changes to the MRE model. The daisy chart below depicts the change in contained nickel metal in the Nova Operation MRE and ORE for the end of CY18 and CY19.





The key changes for the Nova Operation end of CY19 estimates are mining depletion, adjustment of ORE mining dilution factors, and increases in the netsmelter-return (NSR) reporting cut-offs for both ORE and MRE, with the latter due to changes in IGO's assumptions for mining cost, metal prices and FX. The causes of net changes in nickel metal in the MRE and ORE are depicted in the cascade charts on page 2.

Note that in the cascade and daisy charts above, the mined nickel metal from the MRE model is based on a more optimistic metal price than that used for ORE and as such, the ORE and MRE estimates are not directly comparable in terms of nickel metal depleted by mining in CY19.

Assuming a production rate of 1.5Mt/a for Nova Operation, the total end of CY19 ORE of 9.5Mt gives an ~7-year mine life allowing for a decline in production rate towards the end of the mine life.

Tropicana Gold Mine

In CY19, AGA continued management of the open pit and underground mining of TGM, with the MRE model updated during CY19 and used as the basis for the CY19 ORE estimates. The daisy chart to the top right depicts the changes in contained gold for the TGM MRE and ORE and the causes of net changes in gold are depicted in the cascade charts on the previous page.

Over CY19, TGM's MRE and ORE decreased primarily due to mining depletion and to a minor degree increasing costs. At the end of CY19, IGO's 30% share of the total gold in the TGM MRE was 2,106koz, down 204koz from the prior year. IGO's

30% share of the ORE was reduced to 909koz, down 213koz from the end of CY18 ORE estimate.

Tropicana Gold Mines total metal estimates (IGO 30%)



Foreign exchange and metal prices

Metal prices and the FX rate between the Australian dollar (A\$) and United States dollar (US\$) are critical for the economic evaluation and reporting of OREs and MREs and for establishing NSR reporting cut-offs.

Nova Operation

In September 2019, IGO's business development group selected prices and (A\$/US\$) FX rates for Nova Operation's MRE-ORE assessment and reporting, based on Consensus Economics data for base metal prices and Bloomberg data for FX rates. The tables below are listings of IGO's metal price and FX assumptions for MREs and ORE work at the end of CY18 and CY19.

Year	Unit	Me	tal price or	FX
ending	Unit	Nickel	Copper	Cobalt
CY18	US\$/t	17,130	6,860	60,560
	A\$/t	23,150	9,270	81,840
	FX	0.74	0.74	0.74
CY19	US\$/t	16,740	6,580	49,980
	A\$/t	23,250	9,140	69,420
	FX	0.72	0.72	0.72
CY19/CY18	US\$/t	98%	96%	83%
% ratio	A\$/t	100%	99%	85%
	FX	97%	97%	97%

Nova Operation MRE metal price/FX assumptions

In Australian dollar terms, there have been no material changes in the assumed CY19 metal prices for nickel and copper, but due to market trends the price assumed for cobalt has dropped by ~15% relative for the CY18 MRE assumptions.

Nova Operation ORE metal price/FX assumptions

Year	Unit	Me	tal price or	FX
ending	Unit	Nickel	Copper	Cobalt
CY18	US\$/t	15,690	6,680	52,150
	A\$/t	20,120	8,560	66,860
	FX	0.78	0.78	0.78
CY19	US\$/t	15,920	6,370	40,060
	A\$/t	21,420	8,570	53,900
	FX	0.74	0.74	0.74
CY19/CY18	US\$/t	101%	95%	77%
%ratio	A\$/t	107%	101%	81%
	FX	95%	95%	95%

In United States dollar terms, there has been no material change in the assumed ORE nickel price. However, there has been a 7% relative increase in Australian dollar terms due to a lower FX assumption for CY19. The copper price is unchanged in Australian dollar terms, but the cobalt price ORE assumption has dropped by almost 20% compared to CY18 assumptions, again due to downward market trends in cobalt price.

Tropicana Gold Mine

AGA determines the TGM gold price and FX assumptions as per the listing below.

Year	Unit	Price	of FX
ending	Unit	MRE	ORE
CY18	US\$/oz	1,400	1,100
	A\$/oz	1,778	1,509
	FX	0.79	0.73
CY19	US\$/oz	1,400	1,100
	A\$/oz	1,981	1,512
	FX	0.71	0.73
CY19/CY18	US\$/oz	100%	100%
	A\$/oz	111%	100%
	FX	90%	100%

Tropicana Gold Mine metal price/FX assumptions

In Australian dollar terms, the gold price assumption has increased by \sim 10% for the end of CY19 MRE due to the equivalent relative reduction in the assumed FX. The ORE gold price assumption is unchanged.

Corporate governance

IGO publicly reports results and estimates in accordance with ASX listing rules and JORC Code requirements. In the JORC Code, MREs are reported according to increasing confidence classes of

Inferred, Indicated and Measured Resources, while OREs are reported in the increasing confidence classes of Proved or Probable Reserves, as depicted in the JORC framework image below.

JORC Code classification framework										
	Exploration Results Mineral Resources	Ore Reserves								
Increasing level of geological knowledge and confidence	Indicated	Probable								
	Measured	Proved								
↓ .	Consideration of mining, process economic, marketing, legal, environ (the "Modify	sing, metallurgical, infrastructure, ment, social and government factors ing Factors").								

Under the JORC Code, Exploration Results are the precursors to Mineral Resources, which in turn are the basis of Ore Reserve estimates. Only Indicated and Measured Resources can be converted to Ore Reserves. Measured Resources are usually converted to Proved Ore Reserves unless the confidence in a Modifying Factor, results in the conversion of a higher confidence Measured Resource to lower confidence Probable Ore Reserve.

Public reporting governance

IGO's public reporting governance ensures that the Competent Persons responsible for Public Reports:

- Are current members of a professional organisation that is recognised in the JORC Code framework
- Have sufficient mining industry experience that is relevant to the style of mineralisation and reporting activity, to be considered a Competent Person as defined in the JORC Code
- Have provided IGO with a written sign-off on the results and estimates that are reported, stating that the report agrees with supporting documentation regarding the results or estimates prepared by each Competent Person
- Have prepared supporting documentation for results and estimates to a level consistent with normal industry practices – including the JORC Code Table 1 Checklists for any results and/or estimates reported.

IGO also ensures that any publicly reported results and/or estimates are prepared using accepted industry methods and using correct corporate guidance for metal prices and foreign exchange rates. On operating mines, IGO ensures that the estimation precision is reviewed regularly through a reconciliation comparing the MRE and ORE forecasts to mine production.

Estimates and results are also peer reviewed internally by IGO's senior technical staff before being presented to IGO's Board for approval and subsequent ASX reporting. Market sensitive or production critical estimates may also be audited by suitably qualified external consultants to ensure the precision and correctness of the reported information.

Competent Persons

The table below is a listing of the names of the Competent Persons (as defined by the JORC Code) who are taking responsibility for reporting IGO's CY19 results and estimates.

This Competent Person listing includes details of professional memberships, professional roles, and the reporting activities for which each person is accepting responsibility for the accuracy and veracity of IGO's CY19 results and estimates. Each Competent Person has provided IGO with a sign-off for the relevant information provided by each contributor in this report.

Activity	Competent Professional association		ICO relationship and rela	A otivity reconcide	
ACTIVITY	Person	Membership	Number		Activity responsible
Exploration	lan Sandl	MAIG/RPGeo	2388	General Manager Exploration – IGO	IGO greenfield results
Results	Damon Elder	MAusIMM	208240	<i>Manager Mine Geology – TGM</i> AngloGold Ashanti Australia	Tropicana Gold Mine results
Mineral	Paul Hetherington	etherington MAusIMM 209805		Geology Superintendent – IGO Nova Operation	Nova Operation estimate
Resource Estimates	Damon Elder	MAusIMM	208240	<i>Manager Mine Geology – TGM</i> AngloGold Ashanti Australia	Tropicana Gold Mine estimate
Ore	Greg Laing	MAusIMM	206228	<i>Strategic Mine Planner – IGO</i> Nova Operation	Nova Operation estimate
Estimates	Joanne Endersbee	MAusIMM	334537	Manager Integrated Planning – TMG AngloGold Ashanti Australia	Tropicana Gold Mine estimate
Annual Report	Mark Murphy	MAIG/RPGeo	2157	Resource Geology Manager – IGO	Annual report compilation

Competent Persons responsible for the reporting of CY19 JORC Code estimates and results

- MAusIMM = Member of Australasian Institute of Mining and Metallurgy and MAIG/RPGeo = Member of Australian Institute of Geoscientists and Registered Professional Geoscientist
- Information in this report that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves is based on the information compiled by the relevant Competent Persons listed above
- · All IGO personnel are full-time employees of IGO; all AGA personnel are full time employees of AGA
- All the Competent Persons have provided IGO with written confirmation that they have sufficient experience that is relevant to the styles of mineralisation and types of deposits, and the activity being undertaken with respect to the responsibilities listed against each professional above, 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 2012 Edition
- Each Competent Person listed above has provided to IGO by e-mail:
 - Proof of their current membership to their respective professional organisations as listed above
 - A signed consent to the inclusion of information for which each person is taking responsibility in the form and context in which it appears in this report, and that the respective parts of this report accurately reflect the supporting documentation prepared by each Competent Person for the respective responsibility activities listed above
 - Confirmation that there are no issues that could be perceived by investors as a material conflict of interest in preparing the reported information



Ore haulage to the Nova Operation's ROM pad

Exploration summary

In 2019, IGO further progressed its strategy to transition the business into a producer of metals and products that are in demand for the growing energy storage and clean energy industries, including the rapidly growing electric vehicle and transport market. The priority metals for this strategy are nickel, copper and cobalt, with other metals and minerals being investigated by IGO's generative exploration team. IGO will also continue to consider and maximise value from other metals, such as gold, especially if deposits are discovered or acquired on, or near, existing IGO mining operations, exploration project generation programs.

Strategy and resources

IGO's exploration goal is to make mineral discoveries that are material to IGO within IGO's exploration portfolio – for example, another Nova-Bollinger equivalent deposit, or a second Tropicana Gold Mine. To achieve this, our plan is to develop and maintain a strong pipeline of project opportunities at different stages with the aim of having at least one feasibility project in the 'growth pipeline'.

IGO has further expanded its exploration team and enhanced its capability with talented and experienced explorers that are well resourced and have a clear mandate and imperative to discover new deposits. At our major belt-scale exploration projects, IGO's emphasis has been shifting further during the past year from a period of regional data collection to a greater focus on geoscience data interpretation, generation of drill targets and drill testing. Regional data gathering will continue in CY20 but at a more reduced level. For FY20, IGO has developed A\$66 million of exploration programs to achieve our exploration and discovery objectives.

Fraser Range and near-mine exploration

The Albany-Fraser Orogen (AFO), east of Kalgoorlie in WA, is prospective for a variety of base and precious metals. The majority of IGO's CY19 exploration expenditure was dedicated to the Fraser Range project, including on the Nova Operation mine lease. In the AFO, IGO has maintained a dominant ground position of >12,000km², including numerous partnerships. This includes tenure along trend of the Creasy Group's (Ni-Cu) Silver Knight Prospect and Legend Mining's recent (Ni-Cu) Mawson discovery.

IGO's CY19 exploration highlights include the detection of more airborne, ground and down-hole electromagnetic conductors along the belt with characteristics and geological settings permissive of massive sulphides. Other highlights include further evidence that there are many magmatic intrusions prospective for magmatic (Ni-Cu) deposits around the Nova Operation mining lease and along the belt, including in the area southwest of Nova where a 2D seismic line was completed near the Florida Prospect, and north of Silver Knight where encouraging (Ni-Cu) sulphide occurrences have been intersected at the Mammoth prospect. At the northern end of the belt, encouraging results were returned from the NW Passage prospect, as well as other nearby targets.

At the TGM, diamond and RC drilling further tested the Havana deeps mineralisation, both infilling previous intersections and extending the same, with high gold intercepts returned from most of the holes. More details of IGO's near-mine exploration initiatives are included in the operation specific sections of this report.



Fraser Range aircore drilling CY19





Fraser Range current IGO managed tenure and targets

Nova Operation near mine targets for FY20



Greenfield projects

During the past year, IGO has further reshaped its exploration portfolio in line with the Company's new strategy. New projects added to the portfolio in Australia include the 100%-owned East Kimberley Project and the (Ni-Cu-Co) Quick Shears JV option in the West Kimberley, both in WA. Project expansions include the (Ni-Cu-Co) Lake Mackay and Raptor projects in the NT, and the (Cu-Co) Yeneena JV option in WA. The latter projects are described in more detail in the greenfields section of this report.

Lake Mackay JV

IGO's Lake Mackay JV with Prodigy Gold NL (and Castile Resources Pty Ltd over a portion) is a beltscale ground position of 15,630km² across a major tectonic suture between two geological provinces in the NT. The belt is considered prospective for both base and precious metals. The project is ~400km NW of Alice Springs and crosses the WA border.

In CY19, additional ground was secured to the south of the project area within the younger Warumpi Province (WP) as the main mineralising events within the project are interpreted to be of similar WP age.

The highlights of the Lake Mackay CY19 exploration program were the identification of the (Cu-Au) Phreaker Prospect, which was discovered from the follow-up of a Spectrem-Air AEM conductor, the discovery of gold mineralisation at the Arcee Prospect from surface geochemistry and encouraging results returned from initial drilling and preliminary metallurgical test work from the (Co-Ni-Mn) Grimlock Prospect.

The Phreaker Prospect and several other targets will be tested with diamond drilling in the CY20 field season, which is expected to commence in March 2020.



Lake Mackay Project tenements and key prospects

Kimberley Project

The Kimberley Project is targeting Nova and Savannah-style (Ni-Cu-Co) mineralisation in the King Leopold and Halls Creek orogens. IGO has consolidated its tenure position in CY19 and now holds over 4,886km² in various JVs in the West Kimberley region whereby IGO can earn up to 64% to 85%, and 8,078km² on a 100% basis in the East Kimberley region for a total project area of 12,964km².

Both orogens have magmatic (Ni-Cu-Co) sulphide mineralisation (with the Merlin Prospect discovered by Buxton Resources Limited in 2015 in the King Leopold Orogen and Panoramic Resources Limited's Savannah Mine) along with numerous other prospects, in the Halls Creek Orogen.

A 300m-line spaced Spectrem-Air AEM survey was flown by IGO covering 6,102 line-km over high priority tenements in the West Kimberley, and a 100m-line spaced airborne magnetic and radiometric survey is presently

OVERVIEW

in progress in the West Kimberley targeting the prospective Marboo Formation and Ruins Intrusive Suite. So far, 50% of the planned survey is complete with a total of 35,800 line-km flown.



Kimberley Project current tenure

Sunset at Lake Mackay Project CY19



NOVA OPERATION IGO 100%

LOCATION

 160km east northeast of Norseman and 380km northeast of Esperance in WA

SALEABLE PRODUCTS

Nickel-cobalt and copper concentrates

TENURE

 The Nova-Bollinger deposit is wholly within mining lease M28/376

MINING METHOD

- Contractor underground mechanised mining with paste and/or rock backfill used to stabilise stope voids
- Total (mine claim) ore mined in CY19 of 1.53Mt grading 2.35% Ni, 0.99% Cu and 0.09%Co

PROCESSING AND SALES

- Ore is processed through the Nova concentrator and delivered to customers by road-haulage to Kambalda or road-hauled then shipped from Esperance Port
- Total ore processed for CY19 was 1.53Mt with head grades of 2.36% Ni, 0.99% Cu and 0.09% Co

ORE RESERVES

- 9.5Mt grading 1.85% Ni, 0.78% Cu and 0.07% Co
- 177kt nickel, 74kt copper and 6kt cobalt metal

DIVATE PROVAN 19 INTAKE

DRN

MINERAL RESOURCES

- 11.6Mt grading 2.0% Ni, 0.8% Cu and 0.07% Co,
- 234kt nickel, 94kt copper and 8kt cobalt metal

MINE LIFE

 Approximately seven years at 1.5Mt/a processing rate

POTENTIAL

 Discovery of new magmatic nickel deposits within IGO's extensive tenement position in the Fraser Range

Introduction

The mine portal at IGO's Nova Operation is at latitude 123.10'40"°E and longitude 31.48'50"°S in south eastern WA, ~160km by road east northeast of Norseman and ~380km directly northeast of the port of Esperance.

The Nova zone of the Nova-Bollinger deposit was discovered in 2012 after targeting the area of a 1998 GSWA soil sample anomaly (271ppm Ni), which coincided with a 3km-long regional magnetics feature nicknamed 'The Eye'. In 2013, the Bollinger zone was discovered by drilling and tracking a thin mineralised conduit that trended east from the Nova Zone. The two zones are now recognised as the one Nova-Bollinger deposit.

Geology

Nova-Bollinger lies within the 425km by 50km wide, Mesoproterozoic-age Fraser Zone of the Albany-Fraser Orogen. The Fraser Zone is fault bounded by the Biranup Zone to the northeast, and the Nornalup Zone to the southeast. The Arid Basin forms the basement to the Fraser Zone and the Snowys Dam formation of the Arid Basin is the basement package in the Nova-Bollinger area.

Mafic, ultramafic and granitic intrusions were emplaced in the region during the first phase of the Albany-Fraser Orogeny (~1.30Ga). Later, intense tectonic events (1.12-1.14Ga), metamorphosed the Fraser Zone rocks to granulite facies grade, and the zone is now characterised by gneissic fabrics, complex refolding and major mylonitic zones.

The rocks within the Nova-Bollinger region are consistent with the regional descriptions of the Snowys Dam formation and include pelitic to psammitic gneisses, a local carbonate unit, along with metamorphosed mafic/ultramafic and volcanoclastic rocks. The Nova-Bollinger mafic-ultramafic sill complex that hosts the Nova-Bollinger deposit, is a doubly plunging synform, where a magnetite-bearing footwall gneiss has been identified as the cause of 'The Eye' magnetic feature.

The mafic/ultramafic sill complex is a dishshaped package ~ 2.4km by ~1.2km in plan and ~450m in thickness. The rocks of the complex range from peridotite to pyroxenite, to gabbronorite and norite, with both sharp and gradational contacts between different intrusive phases.

The mine area is covered by a (<3m) thick regolith and/or transported cover, with some of oxidation of sulphides in fresh rock down to \sim 20m in the western end of the Nova area.

12312 12312 12314 Lease Boundary M28/376 Nova NICOCO 31/42 Portal Portal Tailings Storage Aerodrome 23/40 Question 12312 M28/376 M28/3

Satellite image of Nova Operation - December 2018

Nova-Bollinger regional geology map



Nova-Bollinger mine area geology map



Nova-Bollinger's mineralisation is associated with a mafic magmatic conduit known as the Nova Gabbro, from which the sulphide mineralisation precipitated and accumulated within the conduit and the fracture zones surrounding this source intrusion. The Nova Gabbro and associated sulphide mineralisation is interpreted to have been emplaced in a dynamic environment, at peak metamorphism, with most of the sulphide mineralisation remobilised into structures and/or fracture zones surrounding the mineralising intrusion.

There are several mineralisation styles in the Nova-Bollinger Deposit ranging from massive sulphide accumulations, breccias, net-textured zones (olivine + sulphide matrix), stringer-sulphides in metasediments, and disseminated and blebby textures in gabbroic units.

The massive sulphide mineralogy is dominated by pyrrhotite (80-85%), minor pentlandite (10-15%) with lesser chalcopyrite (5-10%). Concentrations (up to 5%) of magnetite also occur locally within massive sulphides. Cobalt is strongly and positively correlated with nickel as both elements are found concentrated in pentlandite, albeit both also occur in minor concentrations in solid solution with pyrrhotite.

Mineral Resource estimate

IGO estimated the end of CY18 Nova-Bollinger MRE using routine industry methods of geological

interpretation of drilling results, preparation of digital wireframes of the geology and mineralisation, and then estimated grades into digital block models using routine industry geostatistical methods. Full details are included in the Nova-Bollinger JORC Table 1 in the supplementary information of this report.

The Nova-Bollinger end of CY19 MRE is based on ~443km of surface and close-spaced underground drilling, which has tested the entire known deposit area on a nominal 12.5m by 12.5m pierce-point spacing. Most of the data informing the MRE is from high-core-recovery diamond drilling with a smaller component of RC drilling (totalling 5km at the shallower western end of the deposit). The end of CY19 MRE was updated in November 2018 using all drill holes and assays available to September 2018, with the MRE model depleted for mining to the end of CY19. There are still a few infill drill holes to be incorporated in the end of CY20 update, but these are not expected to materially change the global MRE estimate.

The CY19 MRE comprises interpreted 22 distinct estimation zones using all the drilling information and confirmatory mapping from underground development. One of these zones is the 'waste halo zone' that encompasses all other zones, which facilitates estimation of dilution grades in downstream ORE studies. The figure below is a 3D view of the major estimation zones in the Nova-Bollinger MRE model.



Estimation zones of the Nova-Bollinger end of CY19 MRE model

	IODO	31 December 2018								31 December 2019					
Source	JURG	Mass	Nic	Nickel		Copper		Cobalt		Nickel		Copper		Cobalt	
	01055	(Mt)	(%)	(kt)	(%)	(kt)	(%)	(kt)	(Mt)	(%)	(kt)	(%)	(kt)	(%)	(kt)
Underground	Measured	12.5	2.10	261	0.80	104	0.07	9	10.9	2.07	226	0.83	90	0.07	7
	Indicated	0.6	1.00	6	0.40	2	0.04	<1	0.6	0.96	6	0.44	3	0.04	<1
	Inferred	<0.1	1.9	1	0.7	<1	0.06	<1	<0.1	1.9	1	0.7	<1	0.06	<1
	Subtotal	13.2	2.0	268	0.8	106	0.07	9	11.5	2.0	232	0.8	93	0.07	8
Stockpiles	Measured	0.1	2.10	1	0.9	1	0.08	<1	0.1	1.88	1	0.8	1	0.06	<1
Total	Measured	12.6	2.10	263	0.80	104	0.07	9	11.0	2.07	227	0.83	91	0.07	8
	Indicated	0.6	1.00	6	0.40	2	0.04	<1	0.6	0.96	6	0.44	3	0.04	<1
	Inferred	<0.1	1.9	1	0.7	<1	0.06	<1	<0.1	1.9	1	0.7	<1	0.06	<1
Nova Ope	ration total	13.2	2.0	270	0.8	107	0.07	9	11.6	2.0	234	0.8	94	0.07	8

Nova Operation - Mineral Resource estimate for the end of CY18/19

The end of CY19 MRE is reported using a A\$56/t NSR cut-off based on the metal prices listed in this annual report

 The end of CY18 MRE is reported using a A\$50/t NSR cut-off based on prices listed in the end of CY18 annual report

• Some averages and sums are affected by rounding

 MREs are considered generally inclusive of OREs and no Inferred Resources are considered excessively extrapolated

The table above is a comparative listing of the end of CY18 and CY19 MREs for the Nova Operation including the in situ grade estimates for all payable metals (Ni, Cu and Co) as well as total in situ estimates for each metal.

The NSR cut-off for the end of CY19 MRE was increased from A\$50/t to A\$56/t due to the corresponding increases in development and marginal stoping costs in the end of CY19 ORE estimate. The A\$56/t threshold is midway between the development and stoping costs in the ORE discussed in detail further below. However, this NSR increase has had an immaterial effect on the reported MRE.

The dot plot to the right is a summary of the changes in the MRE by JORC code class for in situ nickel metal. This plot also includes changes to the run-of-mine (ROM) stocks between the start and end of the CY19 year and the head nickel metal to the process plant over CY19.

The total Nova-Bollinger MRE reduced by 36kt of nickel metal over CY19, with a reduction of ~36kt of metal from the Measured Mineral Resource JORC Code class. Other classes were effectively unchanged at the precision reported, as were ROM stockpiles. The plant processed 1kt more nickel metal in CY19 compared to CY18.

The cascade chart to the right depicts the change in the in situ nickel metal where the change in the MRE for CY19 is driven solely by the 36kt of mining and processing depletion.

Nova Operation MRE – annual nickel metal changes CY18/19



Nova Operation MRE - nickel metal change causes CY18/19



Ore Reserve estimate

The Nova Operation's ORE was prepared using routine industry methods whereby the MRE block model was coded with in situ and reconciled grades and A\$/t NSR mining value for each model block, then optimum stoping shapes were prepared using an industry standard stope optimiser (SO) software. The SO shapes were then used to validate the final development and stope designs and to prepare an extraction schedule including the life-of-mine plan and financial model that demonstrates the economic viability of the mine plan. Full details of the ORE modifying factors applied are included in the relevant JORC Code Table 1 (Section 4) for the Nova-Bollinger ORE in the supplementary information of this report.

Due to the variable geometries of the Nova-Bollinger mineralisation, IGO uses several different mining methods for ore extraction with each method specific to different areas of the deposit. In the thicker portions of Nova-Bollinger (see the 3D image below) bulk stopes up to 75m high are designed, drilled and blasted, then extracted using remotely controlled loaders. The stopes are then backfilled with paste, which comprises non-sulphide process tailings mixed with a binder. The paste-fill is then left to cure to a strength that supports the stope walls so that adjacent secondary stopes can be safely mined. This mining method ensures near full extraction of the ORE, while minimising any ore dilution from potential stope wall and crown over-break effects.

In the Upper Nova area, where the mineralisation is narrower and more steeply dipping, either long-hole stoping or a modified Avoca mining method is used for extraction. The Upper Nova stopes are backfilled with waste-rock (or in some areas cemented waste-rock) to provide post-mining geotechnical stability. While these two mining methods have inherent higher mining dilution than the paste backfill method, both methods are more cost and production-rate effective in the areas of narrow and steeply dipping mineralisation.

In the flat lying Mid Zone between Nova and Bollinger, the planned mining method is paste-filled inclined room and pillar mining with full pillar extraction. Access to these areas is currently being developed, with mining of the first stope in the Mid Zone planned in CY20.

The current mining rate targets ~130kt/month with a contractor mining fleet of six trucks, five loaders, and one to two development drills and two to three production drills.





IORC				31 Dec	ember	2018			31 December 2019						
Source		Mass	Nic	kel	Сор	per	Cob	oalt	Mass	Nic	kel	Сор	per	Cob	alt
	01055	(Mt)	(%)	(kt)	(%)	(kt)	(%)	(kt)	(Mt)	(%)	(kt)	(%)	(kt)	(%)	(kt)
Underground	Proved	11.3	1.91	215	0.76	86	0.06	7	9.2	1.86	172	0.78	72	0.07	6
	Probable	0.2	1.26	2	0.46	1	0.04	<1	0.2	1.49	3	0.58	1	0.05	<1
	Subtotal	11.5	1.90	217	0.76	87	0.06	7	9.5	1.85	176	0.78	74	0.07	6
Stockpiles	Proved	0.1	2.11	1	0.86	1	0.08	<1	0.1	1.88	1	0.79	1	0.06	<1
Total	Proved	11.4	1.91	216	0.76	87	0.06	7	9.3	1.86	174	0.78	73	0.07	6
	Probable	0.2	1.26	2	0.46	1	0.04	<1	0.2	1.49	3	0.58	1	0.05	<1
Nova Ope	eration total	11.5	1.90	219	0.76	87	0.06	7	9.5	1.85	177	0.78	74	0.07	6

Nova Operation – Ore Reserve estimate for the end of CY18/19

 End of CY18 estimates are reported using NSR cut-off grades of A\$27/t for development, A\$63/t incremental stoping and A\$102/t for full stoping costs

 End of CY19 estimates are reported using NSR cut-off grades of A\$37/t for development, A\$75/t incremental stoping and A\$125/t for full stoping costs

Some averages and sums are affected by rounding

 An immaterial tonnage (<5kt) of Inferred Mineral Resources is included in the ORE for reasons of practicality of design

The tabulation above is a comparative listing of the end of CY18 and CY19 ORE for the Nova Operation, including estimates of the grades of payable metals (Ni, Cu and Co) and metal tonnages. The dot plot to the right is a summary of the changes in the ORE by JORC Code class for in situ nickel metal. This plot also includes changes to ROM stocks and the nickel metal (based on head grade) to the process plant.

The total ORE nickel metal reduced by 42kt of nickel metal over CY18, all from the Proved Ore JORC Code class. There was a small increase in Probable Ore due to reallocation of some stope waste draw-cones, which were previously classified as waste and are now being included in the ORE as these cones will be mined as ore. As noted above, the plant processed 1kt more nickel metal in CY19 compared to CY18.

There are two major causes of the reductions in the ORE from the end of CY18 estimate being:

- 36kt nickel metal depleted from mining (from 1.53Mt ore), and
- 6kt nickel metal removed from the ORE mainly due to minor modifications to the mine dilution factor and optimisation of the mine design

The end of CY19 Nova-Bollinger mine schedule forecasts the last ore will be mined in FY26, giving Nova Operation a mine life of approximately seven years assuming a mining and processing rate of 1.5Mt/a and decline in production rate in the final year of life.

Nova Operation ORE – nickel metal changes causes CY18/19



Nova Operation ORE - nickel metal change causes CY18/19



Nova mining lease exploration

IGO's exploration strategy on the Nova Operation's mining lease (the Mining Lease) is to apply the latest geophysical technologies to discover new massive sulphide deposits, which are likely to be 300m or more from surface and close to the existing mine infrastructure.

Significant interpretation breakthroughs were made using the 3D seismic dataset delivered in mid-CY18. The new insights have culminated in an aggressive drilling season and the identification of several new mafic-ultramafic intrusions on the Mining Lease - refer to images at the base of this page. Many of these intrusions host disseminated to blebby sulphides enriched in nickel and copper, which indicates that the intrusions are fertile with the potential to have formed a Nova-Bollinger style massive sulphide deposit. The volume of the intrusions intersected indicates that the Nova host intrusion is a small part of a much larger and fertile magmatic complex than previously thought, and the exploration search space has increased substantially as a result of the 3D seismic work.

During CY19, IGO drilled ~50,380m of diamond core using four drill rigs (two at surface and two underground), with holes testing for mineralisation immediately around the Nova-Bollinger deposit as well as new seismic targets around the Mining Lease.

Drilling from underground extended the Bollinger and C5 zone mineralisation by up to 30m from the limits of the MRE, with low-grade mineralisation intersected in multiple drill holes including drill hole NBU1953: 30.1m grading 2.08% Ni, 0.89% Cu and 0.08% Co from 98.9m; NBU1965: 19m grading 0.62% Ni, 0.38% Cu and 0.02% Co from 99m and NBU1959: 9.5m grading 0.28% Ni, 0.18% Cu and 0.02% Co from 59m (see the significant intersection table in the supplementary information at the end of this report for more example results).

The surface drilling targeted 3D seismic features at depths up to 2km below surface resulting in IGO completing its longest ever drill hole of 2,506m at the Hercules Prospect, where a 1,050m thick, weakly mineralised mafic-ultramafic intrusion was intersected. Overall, the CY19 drilling intersected a complex network of mafic-ultramafic intrusions ranging from several tens of metres to over 1,000m thick at the Hercules, Elara, Leo, Double Dipper, Western Mafics and Orion prospects (see image below).

 115,000 mE
 117,500 mE
 520,000 mE

 1000 mE
 100 me
 110 me

 1000 mE
 100 me
 100 me

Key Prospects on the Nova Mining Lease

These intrusions display variably textured, predominantly mafic and lesser ultramafic compositions with associated disseminated to blebby magmatic sulphides. While nickel and copper analyses are typically low, results are consistent. IGO is encouraged by the sulphides having a high base metal to sulphur ratio, which is an indication of the potential of these intrusions to host high-grade (ni-Cu-Co) mineralisation.

CY20 will see continued diamond core drilling from both underground and from surface to follow up encouraging results from CY19 and to test additional seismic targets. A budget of A\$26 million is allocated for FY20 to accelerate discovery around the Nova Operation.



IGO's 3D seismic interpretations on the Nova Operation's Mining Lease

Left: Seismic model slices looking northwest with major shear surfaces over a 9x9km area (3km deep). Right: 500m-spaced sections looking northeast, with multiple interpreted intrusions (in different hues) that have been confirmed by diamond drilling.

TROPICANA GOLD MINE (IGO 30%)

LOCATION

330km northeast of Kalgoorlie in WA

SALEABLE PRODUCT

Gold doré bars with 513,433oz produced in CY19

TENURE

 The Tropicana Gold Mine deposits are wholly within mining lease M39/1096, which is part of 2,923km² of JV exploration tenements

MINING METHODS

- Truck and shovel mining from four continuous open pits
 over a strike length of 5km
- Long-hole open stoping in the Boston Shaker underground

PROCESSING AND SALES

- Ore is processed through at 8.3-8.4Mt/a (achieved ~8.65Mt/a in CY19) conventional CIL plant to produce gold bars
- Gold is sold to the Perth Mint and several financial
 institutions via forward sales contracts

ORE RESERVES (100%)

- 56.3Mt grading 1.67g/t Au
- 3.03Moz of gold

MINERAL RESOURCES (100%)

- 128.5Mt grading 1.70g/t Au
- 7.02Moz of gold

MINE LIFE

 Approximately seven years at current throughput rates based on known reserves

POTENTIAL

 Definition of additional underground Mineral Resources (resource development budget of A\$11.7 million) and discovery of new deposits on extensive tenement holdings (regional exploration budget of A\$10.3 million)



Introduction

Tropicana Gold Mine (TGM) is on the western edge of the Great Sandy Desert in WA at latitude 29°14'48"S and 124°32'18"E, which is ~1,000km east northeast of the state capital Perth. TGM and the surrounding 2,923km² of exploration tenement holdings are held in a 2002 JV agreement between IGO (30%) and JV manager AGA (70%) – AngloGold Australia Pty Ltd.

AGA's exploration teams discovered the TGM deposits through targeting a historic WMC goldin-soil anomaly, which was found in the Geological Survey of WA (GSWA) open file records. With further work, the team developed an interpretation that an inlier of Archean greenstone rocks occurred within the younger Proterozoic age Albany Frazer Zone, and that the inlier should be considered prospective for Yilgarn-style gold deposits.

In 2002, the JV's first air-core drilling program tested the regolith below the unconformable cover in the Tropicana area, and intersected gold mineralisation, including one intercept of 7m grading 2.02g/t Au. These initial results were followed up by diamond core drilling in 2004 with a best drill intersection of 13m grading 1.7g/t Au Further drilling in 2005 intersected higher-grade mineralisation including 19m grading 4.7g/t Au. An RC drilling follow-up program in the later part of 2005 defined continuous gold mineralisation over a 1km strike length over the Tropicana Zone. More drilling in 2006 discovered the Havana Zone, 1.5km south of Tropicana and then the Havana South and Boston Shaker zones. The total strike length of mineralisation is ~5km and drilling has confirmed now mineralisation extends at least ~1.5km down dip. The total TGM gold production for the CY19 year was ~514koz and ~2.97Moz for the life of mine to date.

On-going extensional drilling has continued around the deposit with recent work focussing on the underground mine potential below the Havana and Boston Shaker open pits.

Geology and mineralisation

The TGM deposits are hosted by high metamorphic granulite-grade gneissic rocks in the shear-bounded Plumridge Terrain on the eastern edge of Yilgarn Craton and within the western edge of the Proterozoic Albany-Frazer Zone. The TGM area is covered by a 10-30m thick unconformable cover of Permian and Tertiary sedimentary rocks that have Tertiary lateritic weathering and further cover in some areas by Holocene aeolian sands and colluvium.

Satellite image of Tropicana Gold Mine December 2019



Notes: ESA satellite taken 29 December 2019

Surface geology plan of Tropicana Gold Mine area



Notes: Modified from geological mapping or the GSWA

The Neoarchean Tropicana Gneiss of the Plumridge Terrain hosts the Tropicana gold mineralisation with the constituent garnet and quartz-feldspar gneisses interpreted to be the products of partial melting during peak metamorphism. The compositional bandings of the gneisses dip moderately to the east. The host rocks and gold mineralisation are cross-cut by 1.2Ga age (barren) basalt and dolerite dykes.

Havana Deposit geological cross section



Economic Geology vol.111 p.395-420

The 5km strike of gold mineralisation at TGM is subdivided into five shear-offset zones from north to south - Boston Shaker, Tropicana, Havana, Havana Deeps, and Havana South. The mineralised corridor is ~1.2km wide and up to 1.5km down dip to the current deepest drill intercepts. Within each zone the gold mineralisation trends north to northeast. Gold is concentrated in ~2m to ~50m thick subparallel layers within the 'favourable horizon' of the quartz-feldspar gneiss units.

Geological studies concluded that the gold postdates the gneissic banding and the metamorphic thermal maximum event. Highgrade mineralisation (>3g/t Au) lenses occur within the broader low-grade gold envelopes (>0.3g/t Au). The higher tenor mineralisation is associated with more closely spaced veins and sericite alteration.

Gold is spatially correlated with greenschist facies biotite-pyrite alteration where fine-grained disseminations of pyrite and gold replace metamorphic biotite and micro shears in amphibole minerals.

Mineral Resources

AGA's mineral resource estimators prepared an updated MRE model for TGM in September 2019, with the updated model using all relevant drill data available at the end of July 2019.

As with previous models, AGA's geologists interpreted 24 geological domains and composited the drill hole data to 2m lengths for geostatistical analyses and grade estimation. Full details regarding the sampling and MRE estimation methods are listed in the TGM JORC

Table 1 in the ancillary information at the end of this report.

Tropicana Gold Mine – 100% Mineral Resources CY18/19

		31 De	cember	2018	31 De	ecember	2019
Estimate	JORC	Mass	Go	old	Mass	G	old
	01033	(Mt)	(g/t)	koz	(Mt)	(g/t)	(koz)
Open pit	Measured	6.5	1.29	270	2.4	1.68	130
	Indicated	75.5	1.50	3,640	53.3	1.57	2,690
	Inferred	5.6	1.31	240	3.3	1.23	130
	Subtotal	87.6	1.47	4,140	59.0	1.56	2,950
Underground	Measured	_	_	_	_	_	_
	Indicated	8.5	4.11	1,120	11.4	3.08	1,130
	Inferred	12.4	4.36	1,730	19.1	3.24	1,990
	Subtotal	20.8	4.26	2,850	30.5	3.18	3,120
Stockpiles	Measured	27.8	0.79	700	39.0	0.76	950
Total	Measured	34.3	0.88	970	41.4	0.81	1,080
	Indicated	84.0	1.76	4,760	64.7	1.84	3,820
	Inferred	17.9	3.41	1,970	22.4	2.95	2,120
Tropicana Go	ld Mine total	136.2	1.76	7,700	128.5	1.70	7,020

Open pit block cut-off >0.3g/t Au for oxide, otherwise >0.4g/t Au; Underground MREs reported using cut-off >1.8g/t Au

Some totals and averages are affected by rounding

MRE is inclusive of ORE

AGA estimated the TGM MRE using a 'recoverable-resource' grade estimation method known as Local Uniform Conditioning (LUC) to estimate gold grade and tonnages. This estimation method is widely used in the gold mining industry to provide more reliable estimates for preferential mining of higher grades (and stockpiling of lower grades) in open pit mine planning.

The limits of the open pit MRE are set by the current life-ofmine pit designs for Boston Shaker, Tropicana and Havana Pits. The Havana South MRE is limited by a pit optimisation shell prepared using a US\$1,400/oz gold price and current mining cost assumptions for open pit mining.

TGM – MRE gold changes by type and JORC class



The dot plot above is a graphical summary of the changes in the TGM MRE over the CY19 reporting period in terms of MRE type (total, open pit or underground) and JORC Code classification.

The total TGM MRE at the end of CY19 has decreased by 680koz with the difference is predominantly due to mining depletion from the open pit MRE sources. The total Measured Resources increased mainly due to the addition of 250koz in ore to interim stockpiles, while total Inferred Mineral resources increased due to exploration success in defining underground resources, mainly around Boston Shaker.

For the end of CY19 MRE, AGA limited the underground MRE using SO software, with SO shapes having an average MRE block grade >1.8g/t Au cut-off grade reported as the underground MRE – see the figure below.

The TGM within open pit MRE decreased by 1,190koz from the end of CY18. The decrease is mainly due to mining to stockpiles and ore processing depletion. However, there was also a reduction in the size of Havana South pit optimisation shell, which limits the MRE reported from this area. The shell reduction is a response to the application of higher mining costs in the optimisation process.

In terms of estimated contained metal, the total TGM end of CY19 MRE of 7,020koz comprises ~42% open pit resources, 44% underground resources and ~14% in interim stockpiles. The TGM MRE contained gold in the underground fraction of the end of CY19 now exceeds open pit MRE gold for the first time. Drilling and studies are in progress focused on the

conversion of this material to underground Ore Reserves.

The total (head grade) gold delivered in ore to the TGM process plant in CY19 was ~572koz, up ~37koz from CY18 total head production. Additionally, mining from mainly open pit sources added ~250koz to the lower grade interim stockpiles during the year.



Tropicana Gold Mine – MRE gold changes

The main causes of the changes in the TGM MRE from CY18 to CY19 in terms of contained gold metal are depicted in the cascade chart above, with the major cause being mining depletion. The mining depletion does not necessarily agree with the head grade gold production due to model estimate to mine production reconciliation for the ore processed.

The figure below depicts the locations and controls of the end of CY19 TGM open pit and underground MRE fractions along with a listing for the in situ contained tonnes, grade and gold in the three MRE fractions (pit, underground and stockpiles). IGO's 30% share represent 2,106koz of the total 7,020koz of in situ gold in the end of CY19 estimate.



Tropicana Gold Mine - MRE locations and controls

Ore Reserves

AGA's ore reserve estimators prepared TGM's end of CY19 ORE from the TGM end of CY19 MRE using the metal prices and FX rates described in the beginning of this report along with current cost, mining method and geotechnical assumptions for each TGM deposit area. Full details of the ORE estimation assumptions are listed in the TGM JORC Table 1 in the ancillary information at the end of this report.

For open pit mining at TGM, excavators and face shovels load trucks from 10m and 15m high benches, with a vertical advance rate of ~90-120m/a in the mine schedule. In the Boston Shaker underground, mining comprises long-hole stoping with mined out stopes stabilised with paste backfill. The current planned underground ore production rate is ~1Mt/a, stoping commenced in June 2020.

The tabulation to the right is a comparative listing of the TGM end of CY18 and CY19 OREs on a 100% basis. AGA has limited the open pit and underground OREs by current open pit and underground mine designs and the cut-off grades listed in the notes below the ORE listing tabulation.

The dot plot below is a graphical summary of the changes in the TGM OREs over the CY19 reporting period in terms of MRE type (total, open pit, underground or stockpiles) and JORC Code classification.



TGM – ORE gold changes by type and JORC class

Tropicana Gold Mine –	100% (Ore Reserves	CY18/19
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	1070	31 De	ecember	2018	31 December 2019				
Estimate	JORC	Mass	G	old	Mass	Gold			
	01033	(Mt)	(g/t)	(koz)	(Mt)	(g/t)	(koz)		
Open pit	Proved	4.2	1.68	230	1.5	2.28	110		
Probable		43.2	1.94	2,690	30.1	2.00	1,940		
	47.4	1.91	2,920	31.6	2.02	2,050			
Underground Proved		_	_	_	_		_		
	Probable	2.7	3.65	320	2.7	3.60	310		
	Subtotal	2.7	3.65	320	2.7	3.60	310		
Stockpiles	Proved	15.5	1.01	500	22.0	0.94	670		
Total	Proved	19.8	1.15	730	23.5	1.03	780		
	Probable	45.9	2.04	3,010	32.8	2.13	2,250		
Tropican	65.7	1.77	3,740	56.3	1.67	3,030			

Open pit block cut-off >0.7g/t Au for fresh rock, otherwise >0.6g/t Au

Underground block cut-off 2.6g/t Au

Some totals and averages are affected by rounding

• See the introductory section of this report for details of gold price and FX assumptions

The TGM total ORE decreased by 710koz over CY19, with the open pit fraction of the ORE decreasing by 870koz, due to mining to stockpiles and ore processing. The underground ORE also decreased minimally due the effects of infill drilling and minor design changes.

In addition to the ~572koz of gold delivered to the TGM process plant in CY19, the interim grade ore stockpiles increased by ~170koz (using ORE cut-off grades, which are higher than the MRE stockpile reporting cut-off grades).

The cascade chart below depicts the principal changes in contained gold for between the end of CY18 and end of CY19 TGM OREs, with the major change being mining depletion.



Tropicana Gold Mine - ORE gold metal changes



Tropicana Gold Mine - ORE locations, mine development and mine plans

Exploration

AGA continued with both Mineral Resource definition and regional exploration programs during CY19 to confirm and extend the mine area MRE and search for new deposits on the extensive JV tenement holdings as discussed below. All exploration programs were completed for a CY19 (100%) spend of A\$14 million.

Mineral Resource definition

Mineral Resource definition drilling completed on Tropicana mine tenements in CY19 included 22,446m of RC, and 27,133m of diamond core drilling. The programs focused on:

- In-pit definition programs completed at Boston Shaker, Havana and Havana South
- Extensional drilling completed at Boston Shaker, Tropicana, Havana and Havana South testing for underground extensions
- Surface definition drilling designed to increase the resource confidence of high-grade material within Havana open pit cut-backs along with upgrading the resource confidence of material beneath Havana open pit.

Refer to the table and images on the following pages below for a listing of significant intercepts from both extensional drilling and drilling within the cut-back zones with the final Havana Pit design. The Havana Pit cut-back drilling has confirmed the confidence in the mineralisation at depth and the continuity of high grade into the underground MRE and supports ongoing work to consider the trade-off between open cut and underground mining the study into the potential for an underground mine below the Havana Pit.

The nine extensional drill holes have improved confidence in or extended the mineralisation in other areas of the deposit and highlight the potential to extend the Boston Shaker underground at depth as well as new underground mine targets below Tropicana Pit and Havana South.

The JV exploration plan for FY20 continues to focus on Mineral Resource and Ore Reserve development to support near mine open pit and underground options with a budget of A\$11.7 million.

Regional exploration

Regional exploration drilling completed on the Tropicana JV tenements in CY19 included 20,903m of aircore,10,808m of RC, and 4,329m of diamond core drilling. These programs designed to map basement geology and explore the potential mineralised corridors identified in regional structural reconstruction and target generation work. The regional exploration discovery budget for FY20 is A\$10.3 million.



Significant CY19 extensional drill results and underground potential areas

Tropicana Gold Mine CY19 extensional drilling significant intercepts

	Drill	Inte	rcept	Grades						
Hole name	East (mE)	North (mN)	Elevation (mRL)	Dip (°)	Azimuth (°)	Total Depth	From (m)	Length (m)	Au (g/t)	Au (g /t×m)
BSD307	652,764.2	6,763,247.8	350.4	-58.2	318.8	820.5	778.00	4.00	5.57	22.30
BSD309	652,833.3	6,763,178.8	350.7	-67.1	318.7	850.1	767.00	25.00	2.03	50.90
BSD311	652,599.0	6,763,271.0	348.2	-61.7	319.6	744.8	672.00	22.00	3.03	66.60
BSD312A	652,671.0	6,763,199.0	349.2	-71.1	318.5	755.3	699.00	23.00	4.11	94.50
HSD144	650,155.7	6,760,617.9	364.5	-60.6	316.6	702.72	615.00	8.00	3.31	26.50
HSD154	650,179.0	6,760,326.2	360.9	-60.6	314.4	741.5	673.00	12.00	2.57	30.80
TPD550	651,726.3	6,762,904.9	383.4	-78.0	317.6	693	635.00	20.00	1.77	35.50
TPD553	651,601.7	6,762,915.7	383.1	-65.7	316.4	693.5	565.00	25.00	1.87	46.90
TPD554	651,603.6	6,762,913.6	383.2	-74.1	318.0	684.5	569.00	27.00	1.14	30.90



Havana cut-back - example CY19 significant intercepts indicative of underground potential grades

	Tropicana Gold Mine Havana CY19 cut-back drilling significant intercepts										
	Drill	hole collar loc	ation and ho	ole path			Inte	rcept	Gı	rades	
Hole name	East (mE)	North (mN)	Elevation (mRL)	Dip (°)	Azimuth (°)	Total Depth	From (m)	Length (m)	Au (g/t)	Au (g /t×m)	
HDD319	649,979.9	6,762,003.3	364.2	-57.7	320.6	333.5	267.00	11.00	5.94	65.30	
HDD322A	650,006.6	6,762,047.5	361.8	-66.2	321.2	339.7	269.00	34.00	3.35	113.90	
HDD324	650,005.6	6,762,084.8	360.9	-62.3	315.6	342.9	257.00	32.00	2.23	71.40	
HDD326	650,044.5	6,762,049.1	360.4	-64.5	313.2	380.3	284.00	31.00	3.77	116.80	
HDD327	650,049.2	6,762,075.2	360.0	-66.3	314.1	363.6	292.00	25.00	2.51	62.90	
HDD328	650,135.5	6,761,989.1	360.0	-59.8	314.0	426.8	354.00	19.00	3.51	66.70	
HDD329	650,052.6	6,762,093.3	359.9	-68.5	320.4	387.5	282.00	10.00	1.85	18.50	
HDD330	650,166.4	6,762,010.4	360.2	-60.0	314.8	423.7	344.00	11.00	1.39	15.30	
HDD339	650,186.0	6,761,775.7	360.6	-63.0	360.0	450.5	391.00	2.00	2.43	4.90	
HDD340	650,126.1	6,761,892.4	360.2	-62.6	312.8	425.7	345.00	21.00	2.23	46.80	
HDD341	650,158.7	6,761,859.8	360.2	-67.3	315.9	438.6	362.00	3.00	2.72	8.10	
and	_	_	_	_	_	_	372.00	12.00	6.17	74.10	
HDD342	650,143.0	6,761,911.3	359.9	-62.9	314.9	411.4	353.00	26.00	5.77	150.10	
HDD342	650,143.0	6,761,911.3	359.9	-62.9	314.9	411.4	385.00	2.00	1.26	2.50	
HDD343	650,115.6	6,761,973.1	360.0	-66.3	317.4	429.9	347.00	30.00	2.74	82.10	
HDD344	650,178.7	6,761,910.2	359.6	-62.9	317.0	459.4	371.00	3.00	5.85	17.60	
HDD344	650,178.7	6,761,910.2	359.6	-62.9	317.0	459.4	385.00	26.00	3.57	92.80	
HDD346	650,182.1	6,761,943.1	359.6	-60.3	316.3	460.97	368.00	4.00	2.06	8.20	
HDD346	650,182.1	6,761,943.1	359.6	-60.3	316.3	460.97	384.00	30.00	3.76	112.80	
HDD347	650,277.8	6,761,867.7	359.0	-60.0	360.0	468.46	413.00	2.00	1.12	2.20	
and	_	_	_	_	_	_	423.39	8.61	5.13	44.10	
HDD349	650,220.3	6,761,974.9	359.8	-62.4	315.5	450.5	377.00	11.00	8.16	89.80	



Tropicana Gold Mine – CY19 open pit ORE and underground potential

Tropicana Gold Mine - first blast for the Boston Shaker underground decline portal in CY19

GREENFIELDS EXPLORATION

PROJECT AREAS

- Fraser Range east of Kalgoorlie WA
- Lake Mackay/Raptor southwest and central NT
- Kimberley northern WA
- Generative WA, NT, SA and Greenland

PRIMARY TARGETS

• Nickel, copper and cobalt deposits

KEY GROUND POSITIONS

- Fraser Range ~13,000km²
- Kimberley ~13,000km²
- Lake Mackay ~15,000km²
- Raptor ~17,000km²

EXPLORATION METHODS

- Aerial geophysics (Spectrem-Air AEM) and ground geophysics (SQUID EM and gravity) for deep imaging and detection of deposits below cover
- 3D seismic over the Nova Operation's Mining Lease
- Soil sampling and aircore drilling for bedrock geology and geochemical mapping, plus anomaly detection
- Diamond core drilling for direct target testing

GENERATIVE

- Identify belt-scale regions in Australia and overseas prospective for energy storage metals
- Exploit the extensive De Beers Australia-wide geochemical and heavy mineral concentrate database and samples to assist with ground selection

PLANNED EXPENDITURE FOR FY20

- Fraser Range >A\$20 million
- Kimberley >A\$4 million
- Lake Mackay >A\$2 million
- Generative >A\$5 million

Introduction

IGO aims to discover mineral deposits that will deliver high-margin long-life mines of a companyexpanding scale. Our strategy is to provide a stepchange in IGO's share value through organic growth by using an in-house exploration approach that matches the entrepreneurial spirit and nimbleness of a junior explorer with the sciencedriven approach and longer-term vision of a major company.

IGO's teams are exploring for mineral deposits that can supply the emerging energy metals markets, such as (Ni-Cu-Co) magmatic deposits (like IGO's Nova-Bollinger deposit in the Fraser Range), (Cu-Co) sediment-hosted, and iron oxide/sulphide (Cu-Au±Co) deposits. The discovery of one or more of these deposits will enable IGO to develop large scale business hubs centred on long-life mining and processing assets, which ideally would be positioned in the bottom half of the industry cost curve.

IGO differentiates its exploration approach from many other mining and exploration companies in the following three ways:

- Exploring 'belt-scale' projects in highly prospective emerging mineral terranes that are within favourable investment jurisdictions. This approach not only includes underexplored belts where IGO can be a 'first mover', but also belts in proven world-class terranes where new exploration opportunities can be quickly realised through the application of new ideas, technologies and/or applying existing technologies in new ways.
- Recognition that IGO's exploration teams and leaders are crucial to deposit discovery. IGO has assembled a high-quality exploration

management and technical exploration teams, which are led by some of the most successful and knowledgeable explorers in the business, like Mr Ian Sandl (formerly Teck Resources and BHP Minerals), Dr Paul Polito (formerly Anglo American), Dr Steve Beresford (formerly First Quantum Minerals and WMC), Dr Andrew Fitzpatrick (formerly Cameco and CSIRO) and Mr Graeme Cameron (formerly Quantum Pacific Exploration and Geoinformatics).

3) Using leading-edge technologies and embedding research and development into the culture of IGO as enablers that should result in new mineral discoveries, particularly under cover and in the deep bedrock environments nearby IGO's current mining assets. IGO adopts the use of advanced technologies and research to generate new data and methodologies for targeting, which vector towards or directly detect mineral deposits and their host geological environments.

IGO is also working closely with exploration industry researchers and geoscientists at many external organisations, including the CSIRO, the Centre of Exploration Targeting (CET) at the University of Western Australia, and various consultancies. Our research collaborations include applied research in geophysical methods, exploration geochemistry and mineral deposit studies.

In FY19, IGO's near-mine and greenfields exploration expenditure was A\$54 million.

In FY20, IGO's total exploration and discover expenditure is budgeted at A\$66 million including more than A\$35 million for greenfields exploration as the Company also begins exploring new project areas developed over CY19. CY20 will again see an aggressive exploration program in the Fraser Range, initial drilling programs in the West Kimberley and Yeneena JV, and continuing field programs at Lake Mackay and Raptor projects.



Spectrem-Air EM aircraft with bird deployed over Nova Operation's airstrip

Fraser Range Project – WA

IGO is aggressively exploring the Fraser Range Project, east of Norseman in WA, which hosts the IGO's Nova-Bollinger deposit. This region is considered highly prospective for (Ni-Cu-Co) magmatic sulphide, (Cu-Zn-Ag-Au) polymetallic volcanogenic hosted massive sulphide (VHMS), and orogenic gold deposits. Recent (Ni-Cu-Co) magmatic sulphide discoveries in the Fraser Range include the Silver Knight (Creasy Group) and Mawson discovery (Legend Mining). By the end of CY19, IGO had consolidated the largest ground position in the Fraser Range with tenure totalling ~12,700km², through direct ownership or JV partnerships.

IGO's Fraser Range exploration team continued to focus on belt-scale geophysical data collection. The high-powered airborne electromagnetic (AEM) platform, Spectrem-Air, completed the beltscale survey started in CY18, collecting and reporting on over 47,500 line-km of AEM data.

On the ground, IGO increased its moving loop electromagnetic (MLEM) capacity, with IGO geophysics and logistics teams managing four deep-penetrating low- and high-temperature (LT and HT) superconducting quantum interference device (SQUID) EM systems in addition to IGO's in-house fluxgate MLEM system and downhole EM (DHEM) systems.

To compliment the geophysical data collection, IGO drilled 107km of aircore in CY19 that has tested existing geophysical and geochemical targets and generated new targets. IGO tested 26 geophysical targets using RC and diamond core drilling, completing 14,237m of RC and 10,486m of diamond core. Refer to the drill hole locations on the following page for collar locations of holes having significant intercepts, and the supplementary information at the end of this report for a listing of intercept intervals and assay results.

Andromeda Prospect

IGO reported a VHMS discovery at the Andromeda Prospect in July 2018 and drilled four more diamond drill holes during CY19 to test for mineralisation extensions. Significant mineralised intersections included (see the figure and tabulation to the right):

- 19AFRD208: 5.4m grading 1.40% Cu, 1.72% Zn, 0.19g/t Au and 20g/t Ag from 108m down hole, and
- 19AFRD016 intersected 9.33m grading 2.23% Cu, 2.59% Zn, 0.64g/t Au and 42g/t Ag from 112m.

These intercepts represent a new, shallower mineralised lense 300m to the southwest of the original discovery.

A series of 13 infill and step-out RC drill holes intersected intermittent low-level stratabound mineralisation extending for 2km along strike to the northeast of the main lense. Full details regarding the Andromeda drill intersections are included in the supplementary information of this report.



Andromeda cross section looking east

Andromeda diamond drilling significant intercepts

		Interval			G	rades	
Hole ID	From (m)	To (m)	Width (m)	Cu (%)	Zn (%)	Au (ppm)	Ag (ppm)
19AFRD008	108.00	116.00	8.00	1.22	1.00	0.14	14.7
(including)	108.00	113.40	5.40	1.40	1.72	0.19	20.0
19AFRD016	67.67	73.00	5.33	0.21	0.61	0.20	3.9
	77.00	80.00	3.00	0.07	1.14	0.10	2.0
	95.50	122.40	26.9	1.08	1.28	0.33	19.8
(including)	112.00	121.33	9.33	2.23	2.59	0.64	42.0

Other Fraser Range prospects

IGO's Fraser Range aircore drilling program has identified several new targets in CY19 that require additional testing in CY20. The best aircore results for CY19 included 28m grading 0.39% Ni in a hole 15km west of Nova, and 32m grading 0.2% Ni in a hole 30km north of the Trans-Australia Railway line. Several aircore holes intersected >2m grading 0.1% Ni or 0.1% Cu at the bottom of the hole. These results require follow-up with infill aircore drilling and ground-based geophysics.

GREENFIELDS EXPLORATION

IGO's diamond core and RC drilling programs, and associated DHEM surveys, also returned encouraging results at numerous prospects in CY19 that require follow-up in CY20. Refer to the tabulation in the ancillary information for this report for a representative listing of prospective drill intersections from all of IGO's Fraser Range drilling in CY19.



Fraser Range drill holes containing significant intercepts

Lake Mackay Project – NT

The Lake Mackay JV is 400km west-northwest of Alice Springs in the NT and extends across the border into WA. IGO is the 70% ownership manager and operator of the main JV, with JV 30% partner Prodigy Gold NL (Prodigy) also funding their respective share of the program. Minor JV partners are Castile Resources Ltd and Prodigy on tenements EL29747 and EL31794. The sole funding expenditure earn-in was achieved in CY19 and Castile has elected not to contribute and are currently diluting, with IGO and Prodigy funding 70% and 30% of work respectively. Lake Mackay is a belt-scale project covering the margin of the Palaeoproterozoic Aileron and Warumpi Provinces of the North Australian Craton. The project comprises 4,206 km² of granted tenements and 10,964 km² of tenement applications. In March 2019, IGO staked nine additional tenements covering 6,547km² of the Warumpi Province. IGO interprets that this new ground has likely undergone mineralising events that are known to have occurred in the adjacent Aileron Province immediately north of the currently granted JV tenure.



Lake Mackay Project - location, tenure and key prospects

In January 2019, IGO completed a 14,951 line-km Spectrem-Air AEM survey over the Lake Mackay Project. Parts of this survey were co-funded by the Northern Territory Geological Survey (NTGS) under the NTGS' 'Geophysics and Drilling Collaboration Program'.

From the Spectrem-Air survey, IGO identified 60 AEM anomalies for more detailed testing using ground MLEM surveys. Of these targets, 48 were MLEM tested in CY19 for a total of 194 line-km of surveying while11 targets were surveyed in the previous year. One target in WA remains and this will be surveyed in CY20. From the MLEM surveys, 29 targets were delineated in the form of subsurface conductive 'EM plates', and 27 of these plates were tested with a total of 42 RC holes. Two of the more remote targets remain to be tested in CY20.

During CY19, 1,548 soil samples were collected over the JV tenements, with infill soil sampling completed over areas that returned anomalous metal values in previous programs, including the (Au) Arcee Prospect. An initial soil reconnaissance program was completed over WA tenement E80/5001 and follow up sampling will occur in CY20.

Additionally, 22 rock samples were collected across the project, often collected during soil sampling campaigns in areas where prospects had been defined, but also during reconnaissance soil sampling programs to provide knowledge and to identify new anomalies within the regional package.

The Lake Mackay CY19 RC drilling programs tested many ground EM plate targets, soil anomalies and the (Ni-Co-Mn) Grimlock Prospect. Numerous drill holes intersected significant base and/or precious metal mineralisation at the Arcee, Grimlock and Phreaker prospects, as listed in the table below.

GREENFIELDS EXPLORATION

		Location	n (GDA, UTN	Z52)	Int	erval	Grades							
Prospect (Tenement)	Hole name	Easting (mE)	Northing (mN)	Elev (m)	From (m)	Length (m)	Au (ppb)	Co (ppm)	Cu (ppm)	Ni (ppm)	Ag (ppm)	Mn (ppm)	Pb (ppm)	Zn (ppm)
Grimlock	19LMRC003	567,365	7,444,637	488	2	4	2	6,019	28	4,992	_	55,546	18	179
(EL24915)	19LMRC004	567,322	7,444,695	483	8	1	1	18,659	174	8,372	1	17,8349	48	520
		567,322	7,444,695	483	20	4	2	2,178	6	6,476	-	11,141	7	320
	19LMRC005	567,449	7,444,775	481	2	4	3	1,342	51	3,254	_	16,466	24	210
		567,449	7,444,775	481	13	3	5	2,106	48	3,289	-	29,578	12	238
		567,449	7,444,775	481	17	1	1	474	24	6,258	-	4,893	9	303
		567,449	7,444,775	481	22	2	2	170	13	5,704		4,131	8	178
	19LMRC018	566,784	7,445,019	473	13	4	1	1,696	23	7,850	_	12,093	13	672
		566,784	7,445,019	473	17	2	-	704	51	7,502	-	5,153	8	454
	19LMRC019	567,668	7,444,677	478	1	5	1	1,848	48	1661	-	19,564	23	158
		567,668	7,444,677	478	26	5	2	372	51	6,536	-	13,98	12	366
		567,668	7,444,677	478	32	1	9	1,146	35	4230	-	20,611	13	362
		567,668	7,444,677	478	36	1	-	257	29	5,067	-	2,488	5	281
	19LMRC020	568,211	7,443,144	479	2	2	-	2,918	34	4,101	_	39,811	50	544
		568,211	7,443,144	479	18	3	1	3,962	26	9,964	-	30,442	18	756
		568,211	7,443,144	479	22	1	-	1,410	20	7,439	-	9,254	10	408
	19LMRC021	568,277	7,443,342	475	13	1	-	1,908	34	1,283	-	23,092	21	144
		568,277	7,443,342	475	35	4		627	30	6,571		1,972	7	498
	19LMRC022	566,980	7,445,013	476	4	1	-	4,194	24	1,720	-	55,872	58	107
		566,980	7,445,013	476	18	3		1,614	4	6,047		4,237		151
	19LMRC023	565,990	7,444,115	470	3	1	_	1,059	35	2,851	-	7,820	13	130
		565,990	7,444,115	470	8	1	2	1,141	31	5,102		13,095	10	310
	19LMRC024	566,123	7,444,306	471	4	2	2	1,331	7	6,157	1	1,4132	18	331
		566,123	7,444,306	471	8	1	1	1,018	11	7,358	1	8,089	7	250
Phreaker	19LMRC028	586,669	7,435,199	501	240	4	834	16	2	16	-	219	-	23
(EL30731)		586,669	7,435,199	501	353	1	219	115	17,719	20	8	1,115	230	736
		586,669	7,435,199	501	355	5	56	145	10,107	22	4	753	230	476
		586,669	7,435,199	501	363	3	210	327	9,009	31	5	474	250	2,762
	19LMRC031	586,657	7,434,922	499	146	5	104	602	8,963	28	15	375	1,855	4,110
		586,657	7,434,922	499	148	2	149	1,320	5,744	36	21	432	2,891	6,434
		586,657	7,434,922	499	152	4	57	146	12,174	22	14	431	1,393	2,536
		586,657	7,434,922	499	163	1	90	46	10,300	53	7	1,413	102	385
	19LMRC032	586,672	7,434,897	497	189	8	71	157	12,624	26	9	455	863	2,163
		586,672	7,434,897	497	198	1	63	125	17,718	24	9	1,080	732	1019
		586,672	7,434,897	497	204	1	1,805	416	2815	73	2	2,233	51	109
		586,672	7,434,897	497	212	4	634	21	164	32	-	99	16	25
	19LMRC063	587,230	7,435,390	500	80	4	747	9	42	16	-	406	5	44
	19LMRC064	586,817	7,435,231	502	198	2	835	148	884	31	-	636	27	82
		586,817	7,435,231	502	205	2	251	87	10,888	30	7	1,413	658	1,296
	19LMRC065	586,514	7,435,114	502	243	1	71	158	5,746	41	13	1,073	3,280	9,722
	19LMRC067	587,136	7,435,108	504	232	1	62	30	6,318	30	2	799	249	2,749
		587,136	7,435,108	504	237	1	304	21	10,997	13	3	1,239	526	3,495
Acree	19LMRC071	500,588	7,448,208	435	34	1	1,369	5		11	-	203	18	16
(EL31234)	19LMRC072	500,767	7,447,930	436	115	1	998	63	77	6	1	2,277	9	171
		500,767	7,447,930	436	117	5	8,067	59	119	6	1	2,210	7	163
		500,767	7,447,930	436	123	1	1,182	70	54	13	1	23,93	6	157
	19LMRC073	500,841	7,447,993	437	72	4	1,646	23	214	2	1	660	733	90
	19LMRC076	500,743	7,448,136	438	128	4	1,525	19	243	1	-	595	18	85
	19LMRC078	500,494	7,448,343	437	104	4	852	5	8	11	-	141	28	14
EL31794	19LMRC044	588,720	7,453,982	488	96	1	924	5	329	4	1	843	20	17
Notes: Signifi	cant intercepts	are reporte	ed for interva	ls havir	ng >500p	opb Au an	d/or >1,()00ppm C	o and/or	>5,000pp	om Cu ar	nd/or 5,000	ppm Ni	

Lake Mackay -	 significant 	RC drilling	intercepts
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In total, the Lake Mackay CY19 RC drilling programs drilled 79 RC holes for a total length drilled of 16,376m. All holes that were drilled to test MLEM targets were also surveyed using DHEM surveys to ensure the MLEM targets were effectively tested and to also test for possible 'off hole' conductors.

Phreaker Prospect

Mineralisation at the (Cu-Au-Ag) Phreaker Prospect was discovered through drill testing a 3,000S MLEM conductor plate. Hole 19LMRC028 intersected a stringer and semi-massive pyrrhotite breccia with associated stringer chalcopyrite mineralisation over a 16m down hole interval on the contact of a 70mwide garnet-mica schist unit, which is weakly goldenriched – see the cross section below.



Phreaker Project schematic drill section looking west

Holes 19LMRC031 and 9LMRC032 were then drilled in the opposite direction and intersected the same zone of mineralisation ~ 200m up dip from the 19LMRC028 intersection. Both holes returned intervals with similar copper and gold grades.

A follow up program of six RC holes tested the along strike continuity of mineralisation and found variable thicknesses and lower grades returned from these generally shallower holes. Subsequent DHEM surveys in these six holes indicates the main conductive plate remains at depth. Two diamond core drill holes are planned to test this deeper target in CY20.

Arcee Prospect

The Arcee Prospect contains orogenic shear-hosted gold mineralisation, which was discovered from the discrete >50ppb gold soil results that defined an anomaly over 100's of metres of strike. Three RC holes were initially drilled to test below the peak soil sampling results, with 19LMRC072 intersecting 5m grading 8.0g/t Au from 117m down hole.

Follow up drilling with a further six RC holes was completed in CY19, with three of the six holes intersecting 4m intervals with grades exceeding 0.5g/t Au. These holes have extended the strike length of known the mineralisation to 500m and the zone of mineralisation is still open to the northwest.

Grimlock Prospect

In CY19, IGO drilled 10 RC holes around the rim of the Grimlock intrusion to test the (Mn-Co-Ni-rich) laterite profile. The drill targets were generated from high cobalt grades in surface lag samples from the previous field season combined with results from rock chip sampling.

The drilling has confirmed the presence of shallow (Mn-Co-Ni) mineralisation in several locations around the intrusion rim with varied depth, grade and thickness. Initial metallurgical testing of high-grade surface samples is encouraging, with up to 97% cobalt extraction into solution by using atmospheric pressure leaching.

Testwork feed grade and a sample of Grimlock mineralisation



Raptor - NT

The Raptor Project is ~350km northwest of Alice Springs in the NT. Raptor is a 100% IGO-owned belt-scale project that was recently expanded to 16,979km² in late-CY19 with the staking of four additional exploration licence applications. The project is targeting outcropping to shallow-covered Paleoproterozoic geology along the Willowra Gravity Ridge (WGR), which is the east-west trending gravity high depicted by the red colour gravity contours (under IGO's tenure) in the following image.


Raptor Project tenure over gravity intensity image

IGO interprets the WGR to be a paleo-cratonic margin of the North Australian Craton, which is characterised by an extensive belt of mafic to ultramafic intrusions that have potential to host magmatic nickel-coppercobalt sulphide deposits, akin to the Fraser Range and IGO's Nova-Bollinger deposit.

During CY19, IGO collaborated with the NTGS to collect aerial aeromagnetic and radiometric data over the eastern part of the project area. The NTGS was flying a regional 200m flight line spacing survey and IGO infilled prospective parts within the eastern tenements to 100m line spacing. This involved IGO funding 14,300 line-km of surveying. The data for this survey is still pending. The NTGS also awarded IGO co-funding under the 'Geophysics and Drilling Collaboration Program' for a Raptor West 100m flight line spaced survey. This survey is due to be flown imminently.

IGO also held two on-country meetings in CY19 with local Traditional Owners and negotiations for an exploration deed have now commenced. This deed is required before the tenements can be granted and field exploration activities can start.

Kimberley Project – WA

The Kimberley Project is a belt-scale project targeting Nova-Bollinger style (Ni-Cu-Co) mineralisation in the King Leopold (West Kimberley region) and Halls Creek Orogens (East Kimberley region). IGO entered the Kimberley Project in late-CY18 through a series of earn-in/JV agreements with Buxton Resources Limited (Buxton)*.

During CY19, IGO has continued to consolidate the West Kimberley Project through further earn-in/JV agreements with various private and listed entities, including Baracus Pty Ltd, Elderberry Resources Pty Ltd and Apollo Consolidated Ltd. These agreements enable IGO to earn up to 64% to 85% of the West Kimberley tenement portfolio, which covers a total area of 4,886 km².

In October 2019, the Buxton earn-in/JV agreements were restructured and are currently pending Buxton shareholder approval[†], which is anticipated to be given at a shareholder meeting to be held in Q1 CY20.

Kimberley Project - Boab tree



[†] IGO ASX: 2 October 2019 'BUX: West Kimberly JV Restructure'

^{*} BUX ASX: 29 November 2018 'Buxton's Double Magic Exploration Success Secures Partnership with Independence Group (IGO)'



Kimberley Project gravity image and current tenure

West Kimberley

IGO's CY19 West Kimberley region exploration work included:

- A 300m-line spaced Spectrem-Air AEM survey covering 6,102 line-km, which was flown over high priority tenure,
- Ground LT SQUID and MLEM surveys,
- Reconnaissance geological and portable XRF (pXRF) traverses of EM anomalies, and,
- Various other geochemical orientation programs over the (Ni-Cu-Co-PGE) Merlin Prospect for which results are pending.

A 100m-line spaced AEM-radiometric survey is currently in progress with ~35,800 line-km flown, which is 43% of the total planned survey. This survey has been designed to map the highly prospective Ruins Intrusive Suite hosted in the Marboo Formation within the King Leopold Orogen.

Due to a restructuring of the Buxton JV agreements, several deep diamond drill holes that were designed as step-outs to test the Merlin Prospect at depth, have been postponed until the CY20 dry-season. Exploration Incentive Scheme co-funding of up to A\$200,000 has been awarded by the WA Government for this program.

Several meetings were held with Native Title Prescribed Body Corporates and claimants to develop

heritage protection agreements that will facilitate the granting of tenement applications.

East Kimberley

In the East Kimberley region, IGO tenure covers 8,078 km² on a 100% basis, taking the total Kimberley Project portfolio to 12,964 km². The project area covers numerous intrusive suites prospective for (Ni-Cu-Co-PGE) sulphide mineralisation, including parts of the Sally Malay Suite, which is known to host economic (Ni-Cu-Co) mineralisation at the Savannah Mine north of Halls Creek.

Generative exploration

During CY19, IGO's expanded project generation and evaluation team identified and progressed several new belt-scale copper-cobalt and lithium opportunities, including the Frontier Project (Cu) in Eastern Greenland, the Yeneena Project (Cu-Co) in the Paterson Province of WA, and the Lyons River Project (lithium and borate) in WA.

Frontier Project

In July 2018, IGO entered an option/JV arrangement for the Frontier Project in Greenland with Greenfields Exploration Ltd (Greenfields), which is a private Australian company. IGO can ultimately earn an 80% JV interest in a belt-scale package of granted exploration licences through in-ground exploration

expenditure. Greenfields is the initial project manager. In July and August 2019, a project-wide mapping and sampling campaign was completed. This program focused on specific stratigraphic horizons identified as the important components of large-scale coppermineralising events within the province.

The CY19 sampling program involved the collection of 663 rock chip samples across 13 areas of interest. These 13 areas were pre-defined through extensive interpretation of hyperspectral data, aerial photography, and historic mapping and sampling work. Based on the exploration work completed in CY19, three areas of interest have been identified as priority one targets as described below identified by the red polygons on the figure to the right.

The Strindberg North area – see figure right – is characterised as a chalcocite-dominated copper system hosted in Neoproterozoic Siltstone of the Ymer Ø Group. Copper sulphides were observed over an area of ~6.5×2km, contained within one or two mineralised horizons, each ranging from 1-4m in thickness.

Chalcocite mineralisation - Strindberg North Prospect



The Noah Dal area has been identified as an area of significant structural complexity with major structures controlling the copper sulphide distribution. Observed copper sulphides including chalcopyrite and bornite occur within targeted stratigraphic positions and are preferentially located around major basin-controlling faults.

The Ladderbjerg Prospect is a conglomerate-hosted copper occurrence dominated by chalcopyrite and malachite with an exposed lateral extent >2km. The conglomerate unit has been observed to be up to approximately 8m thick and is topographically recessive, concealing its true extent.

Frontier Project geology and rock chip sample locations



Yeneena Project

The Yeneena Project covers 1,100 km² of tenure across the highly prospective Paterson Province in West Australia, the host to world-class copper(-gold) deposits at the Nifty and Telfer mines, and to the recent Rio Tinto 'Winu' and Greatland Gold 'Haverion' discoveries reported in the press. Yeneena is a collaboration between IGO and Encounter Resources Limited³.

IGO's goal for 2019 was to image and interpret the 3D sedimentary basin architecture of the Yeneena Project area to identify new high-quality exploration target opportunities. Field work commenced in mid-CY19, including a magnetotelluric (MT) survey (see image below), a fine-fraction soil sampling program, historic drill hole resampling and analysis, and the reinterpretation of historic geophysical data.

A total 103 line-km of MT data was collected along four regional section lines and included an additional 3D audio-magnetotelluric (AMT) survey targeting the Aria IOCG copper prospect. The state-of-the-art MT and AMT surveys were successful in identifying basin architecture as well as new structural and electromagnetic targets – refer the figure further below.

³ IGO ASX announcement 12 Nov 2018 'Encounter and Independence to advance Paterson Copper-Cobalt Exploration'

Yeneena Project MT cross section⁴



Two modern soil sampling techniques were tested in conjunction with bottom-of-hole geochemical sample reanalysis. The objective was to identify large-scale alteration signatures associated with concealed sediment-hosted copper-cobalt deposits. The techniques were successful in identifying areas of base-metal anomalism and alteration in areas of shallow sand cover.



Yeneena Project tenure and CY19 MT and soil lines

Lyons River

The Lyons River Project was developed as a conceptual target for Jadar-style lithium-borate mineralisation. The project was initially identified by the significant lithium and boron anomalism in the CSIRO Capricorn hydro-geochemical dataset – see image to the top right.

Lyons River tenure, GSWA geology and groundwater Li



Results from IGO's reconnaissance field observations indicate the project area contains only low-level lithium anomalism with no clear indication of significant lithium mineralisation. Work has been discontinued and the tenure dropped.

De Beers Database

IGO owns one of the largest competitive Australiawide geochemical datasets and mineral sample collections, including the former De Beers heavy mineral concentrate and geochemical sample collection and associated database. IGO's primary goal is to leverage the data and samples to assist in our exploration efforts for key battery metals (Ni-Cu-Co), and hard-rock lithium pegmatite deposits.

During CY19, the entire sample collection has been checked, re-organised and catalogued to allow for quick access and processing of the Australia-wide sample set. The first orientation samples (from the Kimberley) were collected and processed in December 2019, with results pending. IGO has allocated a robust budget for this initiative in FY20.

⁴ ENR ASX: 28 Nov 2019 'MT Survey Generates New Copper Targets in Paterson Province'

SUPPLEMENTARY INFORMATION

ABBREVIATIONS, UNITS AND SYMBOLS

FRASER RANGE SIGNIFICANT DRILL INTERSECTIONS

JORC CODE TABLE 1 CHECKLISTS

- Nova Operation MRE and ORE
- Tropicana Gold Mine MRE and ORE
- Fraser Range Exploration Results
- Lake MacKay Exploration Results

SUPPLIMENTARY INFORMATION

Initialisms

Abbreviation	Explanation
3D	Three dimensional
AEM	Airborne electromagnetic survey
AGA	AngloGold Ashanti Australia Pty Ltd
ALS	ALS laboratories
AMT	Audiomagnetotelluric (survey)
ASX	Australian Stock Exchange
Buxton	Buxton Resources Limited
CIL	Carbon in leach extraction
Creasy	Creasy Group Pty Ltd
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CY18	2018 calendar year
CY19	2019 calendar year
DHEM	Down hole electromagnetic survey
EM	Electromagnetic survey
ER	JORC Code exploration results
ESA	European Space Agency
FX	Foreign exchange A\$:US\$
FY19	2019 financial year
FY20	2020 financial year
FY26	2026 financial year
GFA GSWA	Gold Fields Australia Pty Ltd Geological Survey of Western Australia
IGO	IGO Limited
JORC	Joint Ore Reserves Committee
JORC Code	Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (2012 Edition)
JV	Low or high temporature superconducting
SQUID	quantum interference device Local uniform conditioning
MAIG	Member of the Australian Institute of Geoscientists
MAusIMM	Member of the Australasian Institute of Mining and Metallurgy
MGA	Map grid of Australia
MLEM	Moving loop electromagnetic survey
MRE	JORC Code Mineral Resource estimate
MT	Magnetotelluric survey
NSR	Net smelter return
NT	Northern Territory
NTGS	NT Geological Survey
ORE	JORC Code Ore Reserve estimate
PSD	Particle size distribution
PGE	Platinum group elements
pXRF	Portable XRF assay equipment

Initialisms

Abbreviation	Explanation
QLD	Queensland
RPGeo	Registered Professional Geoscientist
RQD	Rock quality designation
RC	Reverse circulation drilling
SA	South Australia
SO	Stope optimiser software
TGM	Tropicana Gold Mine
WA	Western Australia
WMC	Western Mining Corporation
WP	Warumpi Province
WGR	Willowa Gravity Ridge

Units of measurement

Unit	Explanation
\$A	Australian dollars
\$US	United States of America dollars
μm	Micrometre - one thousandth of a millimetre
g/t	Grams per tonne
Ga	Billions of years
km	Kilometres
km ²	Square kilometres
koz	Thousands of troy ounces
kt	Thousands of tonnes
line-km	Kilometres surveyed along survey lines
m	Metre
Ма	Millions of years
mE	Grid metres in the east direction
mElev	Grid metres in elevation
mN	Grid metres in the north direction
Moz	Millions of troy ounces
Mt	Millions of tonnes
Mt/a	Millions of tonnes per year
mΧ	Grid metres in the X-direction
mY	Grid metres in the Y-direction
mZ	Grid metres in the Z-direction
οz	Troy ounce (31.1035 grams)
ppm	Parts per million
S	Siemen – electrical conductance
t	Tonne(s)

Symbols

Symbol	Explanation
%	Weight percent or percentage proportion
o	Degrees
~	Approximately
"	Seconds
"	Minutes
±	Plus, and minus or above and below
Ag	Silver
As	Arsenic
Au	Gold
Co	Cobalt
Cr	Chromium
Cu	Copper
Fe	Iron
Ni	Nickel

Symbols

Symbol		Explanation
S	Sulphur	
Zn	Zinc	

Drill	core sizes
Code	Diameter (mm)
HQ	63.5
BQTK	40.7
AQ	30.5
NQ2	50.6
NQ	47.6
LTK48	50.6
LTK60	50.6

Fraser Range CY19 drilling significant intercepts

Tenement	nent Drill hole Location		ion (GDA ,-UTM Zone 51)		Intersection (m)		Grades (ppm)					
number	identifier	mE	mN	mElev	From	Length	Ni	Cu	Co	Zn	Ag	Au
E28/1712	19AFAC31013	538,544	6,539,202	244	10.00	16.00	1,800	18	85	41	0.1	5
E28/1724	19AFRC2055	503,305	6,484,157	352	98.00	4.00	102	404	15	1,200	3.8	2
E28/1904	19AFRD2010	553,676	6,531,589	233	210.00	3.90	1,721	888	142	116	0.4	26
					214.60	6.57	1,818	2,094	150	149	0.9	27
	19AFRD2011	553,755	6,531,357	235	191.00	1.50	4,274	1,500	294	140	0.4	53
E28/1959	19AFAC30562	584,485	6,531,568	213	50.00	4.00	43	1,430	53	193	0.6	_
	19AFAC30586	577,044	6,531,626	206	30.00	8.00	1,175	107	241	106	_	2
	19AFAC30590	575,422	6,531,641	201	18.00	5.00	2,090	7	133	57	0.3	5
E28/2017	19AFRC2048H	558,694	6,540,313	244	119.00	6.00	15	468	15	2,427	0.2	11
	19AFRD2006	558,697	6,540,586	247	411.00	9.00	9	1,527	29	3,996	1.7	19
	19AFRD2008	558,327	6,540,212	232	108.00	8.00	10	10,051	38	12,165	14.7	141
	19AFRD2016A	558,256	6,540,139	232	67.67	5.33	8	2,122	67	6,088	3.9	201
					77.00	3.00	7	770	49	11,372	2.0	98
					95.50	26.9	8	10,783	52	12,795	19.8	330

Tenement Drill hole		Location (GDA ,-UTM Zone 51)			Intersection (m)		Grades (ppm)					
number identifier	mE	mN	mElev	From	Length	Ni	Cu	Co	Zn	Ag	Au	
E28/2177	19AFAC20088	510,145	6,466,738	327	62.00	28.00	3,934	51	63	335	0.1	12
	19AFAC20098	511,528	6,466,906	318	54.00	8.00	1,195	215	293	156	0.2	_
	19AFAC20114	513,175	6,468,283	306	38.00	4.00	1,350	300	167	325	—	37
	19AFAC20144	507,176	6,471,786	325	42.00	4.00	1,400	412	438	176	0.2	5
	19AFAC20188	509,562	6,472,072	292	38.00	4.00	1,130	36	470	290	—	_
	19AFAC20208	508,490	6,472,212	300	78.00	4.00	2,100	87	453	236	—	-
	19AFAC20215	505,310	6,469,816	321	58.00	3.00	505	711	781	178	0.4	73
	19AFAC20255	507,248	6,470,627	330	14.00	4.00	1,140	24	432	49	—	_
	19AFAC20259	507,045	6,470,995	317	6.00	4.00	1,350	803	136	47	—	-
	19AFAC20288	510,080	6,475,505	302	58.00	4.00	247	1,190	130	85	0.2	-
	19AFAC20308	511,605	6,474,570	309	26.00	16.00	1,880	294	132	321	—	-
	19AFAC20321	511,518	6,466,902	315	<u>58</u> .00	4.00	1,130	129	186	168	—	-
	19AFAC20324	510,137	6,466,745	322	50.00	8.00	1,870	61	22	184	—	16
	19AFAC20325	510,241	6,466,737	325	34.00	4.00	1,160	48	99	75	—	-
	19AFAC30266	517,711	6,475,528	285	30.00	4.00	29	1,030	36	5	0.9	3
E28/2201	19AFRC2005	541,570	6,503,383	259	174.00	12.00	1,153	498	94	82	0.3	4
	19AFRC2007	544,559	6,501,460	241	103.00	18.00	216	783	19	2,809	4.1	34
E28/2266	19AFAC10741	648,563	6,636,289	216	6.00	22.00	1,623	6	95	18	0.7	1
	19AFAC10742	648,169	6,636,299	212	22.00	6.00	1,210	141	148	96	0.1	3
	19AFAC10745	648,692	6,636,591	216	10.00	27.00	1,623	10	98	37	0.3	2
	19AFAC10746	648,293	6,636,589	212	14.00	20.00	1,349	10	84	38	0.2	2
	19AFAC10770	635,462	6,631,548	224	34.00	4.00	1,630	94	124	415	0.4	69
	19AFAC10779	636,992	6,624,034	206	26.00	32.00	2,063	8	124	44	0.3	1
	19AFAC10802	636,773	6,620,955	204	50.00	4.00	8	737	5	1,113	0.9	2
E28/2267	19AFAC10437	605,986	6,621,526	285	54.00	4.00	255	50	78	1,060	0.1	_
	19AFAC10452	603,714	6,615,006	275	2.00	4.00	27	109	1,480	70	0.1	4
E28/2301	19AFAC10422	627,592	6,640,042	255	0.00	2.00	18	8	5	31	0.3	664
E28/2419	19AFAC10538	584,774	6,567,668	255	54.00	8.00	68	1,510	18	179	0.2	1
E28/2459	19AFRC1025	586,362	6,598,178	292	128.00	4.00	1,923	120	95	133	—	5
E28/2528	19AFAC30568	582,031	6,531,599	207	58.00	1.00	196	270	148	3,180	0.9	8
	19AFAC30597	585,228	6,534,634	212	106.00	1.00	12	4,250	51	225	0.3	1
	19AFAC31132	583,437	6,536,021	210	74.00	9.00	1,604	74	97	373	0.2	6

Fraser Range CY19 drilling significant intercepts

Tenement	Drill hole	Location (GDA ,-UTM Zone 51)			Intersection (m)		Grades (ppm)					
number	identifier	mE	mN	mElev	From	Length	Ni	Cu	Co	Zn	Ag	Au
E28/2595	18AFAC30771A	579,287	6,516,821	193	47.00	8.00	31	10	4	37	0.2	830
	and	_	_	_	60.00	4.00	45	9	38	45	0.1	1,148
	19AFAC30448	591,504	6,526,798	195	70.00	4.00	39	39	16	91	_	252
	19AFAC30547	590,400	6,531,504	203	70.00	4.00	76	32	47	136	0.2	448
	19AFAC30799	585,316	6,516,450	183	70.00	4.00	5	4	1	5	_	666
	19AFAC30801	586,083	6,516,778	185	38.00	4.00	19	7	3	37	_	796
	19AFAC31317	585,134	6,516,441	181	70.00	4.00	8	8	1	11	_	269
	19AFAC31318	584,700	6,516,503	179	66.00	4.00	9	6	1	8	_	614
	19AFAC31322	579,895	6,516,817	195	66.00	7.00	34	6	36	57	_	528
	19AFAC31329	589,373	6,519,722	191	86.00	4.00	10	18	2	22	0.2	531
	19AFAC31337	588,006	6,521,227	187	66.00	4.00	4	15	1	7	_	625
	19AFAC31338	587,601	6,521,218	186	78.00	4.00	17	22	20	108	_	944
E28/2615	19AFAC30944	535,641	6,491,749	254	42.00	4.00	802	7	724	5	_	_
	19AFAC30963	537,656	6,488,736	240	30.00	4.00	757	13	881	1	_	_
	19AFAC30981	532,080	6,484,972	251	26.00	4.00	1,400	44	747	39	_	_
E28/2623	19AFAC10529	572,703	6,574,059	281	30.00	24.00	1,723	45	250	49		
E28/2625	19AFRC1003	622,223	6,606,497	226	244.00	2.00	1,245	1,138	117	143	0.3	13
E39/1654	19AFDD1001	675,523	6,710,882	288	267.00	5.44	1,995	12	97	93	0.1	28
	19AFDD1002	675,443	6,710,697	286	218.10	4.90	1,552	39	84	86	0.1	12
	and	_	_	_	269.80	3.40	1,879	14	91	51	_	3
E39/1731	19AFAC10110	670,347	6,684,441	245	38.00	57.00	1,664	59	89	42	0.1	5
E39/1733	19AFAC10352	679,583	6,683,355	233	54.00	3.00	312	58	1,540	60	3.1	4
E69/2989	19AFAC20295	520,489	6,477,589	280	34.00	4.00	962	46	844	61	0.2	2
	19AFAC20299	520,440	6,477,819	283	30.00	4.00	82	1,420	82	41	2.3	10

Fraser Range CY19 drilling significant intercepts

Tenement	Drill hole	Location (GDA ,-UTM Zone 51)			Intersection (m)			Grades (ppm)					
number	identifier	mE	mN	mElev	From	Length	Ni	Cu	Co	Zn	Ag	Au	
M28/376	19AFAC30364	518,454	6,479,202	290	2.00	55.00	2,367	346	257	159	0.1	9	
	19AFAC30385	518,453	6,479,705	291	18	27.00	2,879	186	608	276	0.1	7	
	19AFAC30388	519,250	6,480,102	306	2.00	27.00	1,485	413	288	36	0.2	4	
	NBU1953	518,588	6,479,691	18	98.90	30.10	20,809	8,997	792	196	2.0	34	
	NBU1958A	518,950	6,479,822	-32	105.50	22.56	1,688	1,510	110	105	0.8	11	
	NBU1959	518,948	6,479,823	-31	43.50	9.50	2,830	2,139	201	110	1.3	15	
	and	—	_	_	53.34	32.66	1,137	708	123	101	0.6	7	
	NBU1960	518,953	6,479,821	-32	27.00	2.00	2,662	2,877	155	103	1.0	20	
	and	_	_	_	64.00	9.45	2,390	1,307	149	106	1.1	23	
	NBU1961	518,948	6,479,822	-32	14.17	55.37	1,730	1,077	146	91	0.7	11	
	NBU1963	518,947	6,479,822	-32	59.00	5.40	2,869	1,792	190	120	0.9	13	
	NBU1963	518,947	6,479,822	-32	80.68	5.18	2,365	1,528	165	108	1.0	18	
	NBU1965	518,587	6,479,692	18	99.00	19.00	6,220	3,827	250	183	1.4	33	
	NBU1966	518,587	6,479,692	18	100.86	27.14	2,403	1,404	118	160	0.7	12	
	NBU1969	518,589	6,479,692	18	97.29	23.71	1,775	1,286	94	98	0.7	18	
	SFRD0255	519,049	6,479,599	288	323.20	7.82	1,028	844	90	60	0.7	8	
	and	_	_	_	187.50	15.89	1,221	674	128	48	0.9	6	
	SFRD0740	521,536	6,481,904	287	689.92	18.61	786	248	94	70	0.1	3	
	and	_	_	_	1,572.93	27.79	932	50	123	94	0.1	2	
	and	—	_	_	1,614.96	32.37	910	63	119	95	0.1	1	
	SFRD0742	520,264	6,482,701	296	774.00	39.47	838	106	116	101	0.2	2	
	and	—	—	_	910.21	46.79	1,113	158	122	86	0.2	3	
	and	—	—	_	653.00	2.40	1,631	2,166	194	135	0.6	28	
	and	—	—	_	665.00	9.35	1,368	484	205	131	0.3	11	
	NBU1987	518,537	6,479,543	-95	341.80	1.18	7	11,068	43	764	12.0	195	

Fraser Range CY19 drilling significant intercepts

Notes:

- 1,000ppm = 0.1%

Leasing letters in the drill hole prefix denotes the drill hole type with:

'19AFAC' = aircore

• '19AFRC' = reverse circulation drilling

• '19AFDD' = surface diamond core drilling

• 'NBU' = underground diamond core drilling

- Hole SFRD072 was originally drilled by Sirius Resources but was extended by IGO in CY19

	SECTION 1 – NOVA OPERATION – SAMPLING TECHNIQUES AND DATA
JORC Criteria	Explanation
Sampling techniques	 The Nova-Bollinger deposit has been sampled using diamond drill holes (DD) on a nominal 12.5×12.5m grid spacing with a much lesser lenght of Reverse Circulation (RC) drilling. A total of 15 RC, 271 Surface DD and 1,843 Underground DD holes were drilled for 3,120m, 113,180m and 280,055m respectively. The holes drilled from surface are generally oriented towards grid west, but the plunge angles vary to optimally intersect the mineralised zones. The underground infill drilling took place from the hangingwall and footwall mine infrastructure. DD core drilling has been used to obtain high quality samples that were logged for lithological, structural, geotechnical, density and other attributes. The RC drilling was completed in dry ground with generally good sample recovery. Representivity has been ensured by monitoring core recovery to minimise sample loss. Sampling was carried out under IGO protocols and QAQC procedures consistent with good industry practices.
Drilling techniques	 DD accounts for 99% of the drilling in the Mineral Resource estimation (MRE) area and comprises BQTK (40.7mm diameter), NQ2 (50.7mm diameter) or HQ (63.5mm diameter) sized core. Surface drill hole pre-collar lengths range from 6-150m and hole lengths range from 50-1,084m. Where possible, the core was oriented using Camtech or Reflex Act III orientation tools. RC percussion drilling used a 140mm diameter face-sampling hammer drilling with RC representing 1% of the total drilling database. RC hole lengths range from 90-280m.
Drill sample recovery	 DD recoveries are quantified as the ratio of measured core recovered lengths to drill advance lengths for each core-barrel run. RC recoveries are logged qualitatively from poor to good. Overall DD recoveries are on average ≥ 99% for both Nova and Bollinger and there are no core loss issues or significant sample recovery problems logged. RC samples were visually checked for recovery, moisture and contamination. For orientation marking purposes, the DD core from Nova and Bollinger was reconstructed into continuous runs on an angle iron cradle. Down hole depths are checked against the depth recorded on the core blocks and rod counts are routinely carried out by the drillers to ensure the marked core block depths were accurate. There is no relationship between sample recovery and grade as there is minimal sample loss. The bulk of the Nova DD resource definition drilling has almost complete core recoveries. A sample bias due to preferential loss or gain of material is unlikely given the high core recovery.
Logging	 Geotechnical logging at Nova-Bollinger was carried out on all DD holes for recovery, RQD and number of defects (per interval). Information on structure type, dip, dip direction, alpha angle, beta angle (oriented core only), texture, shape, roughness and fill material details are stored in the structure table of the database. The information collected is considered appropriate to support any downstream studies by the Competent Person. Qualitative logging of DD core and RC samples at Nova and Bollinger included lithology, mineralogy, mineralisation, structure (DDH only), weathering, colour and other features of the samples. All DD core ore has been photographed in wet condition. Quantitative logging has been completed for geotechnical purposes. The total lengths of all drill holes have been logged except for rock-roller DD pre-collars that have lengths not logged for the intervals from surface to 20m-60m.
Sub-sampling techniques and sample preparation	 DD core from Nova-Bollinger was subsampled over lengths ranging from 0.3-1.3m using an automatic diamond-blade core saw as either whole core (BQTK infill), half-core (BQTK, NQ2 for resource definition) or quarter core (HQ for metallurgical drilling). All DD subsamples were collected from the same side of the core. The sample preparation of DD core involved oven drying (4-6 hrs at 95°C), coarse crushing in a jaw-crusher to 100% passing 10 mm, then pulverisation of the entire crushed sample in Essa LM5 grinding mills to a particle size distribution of 85% passing 75 microns. The sample preparation for RC samples was similar but excluded the coarse crush stage. QC procedures involve insertion of certified reference materials, blanks, collection of duplicates at the coarse crush stage, pulverisation stage, assay stage, and barren quartz washes of equipment every 20 samples. The insertion frequency of quality control samples averaged 1:15 to 1:20 in total, with a higher insertion ratio used in mineralised zones. For RC samples, duplicates were collected from the 1m routine sample intervals using a riffle splitter. The primary tool use to monitor drill core representativeness was monitoring and ensuring near 100% core recovery. While no specific heterogeneity testing has been completed on the mineralisation. The sample sizes are appropriate to correctly represent the sulphide mineralisation based on the style of mineralisation (massive sulphides), the thickness and consistency of the intersections, the sampling methodology and percent value assay ranges for the primary elements. The results of duplicate sampling are consistent with satisfactory sampling precision.

	SECTION 1 – NOVA OPERATION – SAMPLING TECHNIQUES AND DATA
JORC Criteria	Explanation
Quality of assay data and laboratory tests	 Surface drill hole samples: Samples collected using surface drilling were analysed using a four-acid digest multi element suite with ICP/OES or ICP/MS finish (25g or 50g FA/MS for precious metals). The acids used were hydrofluoric, nitric, perchloric and hydrochloric acids, suitable for silica-based samples. The digestion method approaches total dissolution for a sulphide all but the most resistant silicate and oxide minerals. Total sulphur from surface drill holes was determined using a combustion furnace. Underground drill hole samples: Samples collected from underground diamond drilling have been analysed by mixing ~0.33g of the pulp with a flux of Lithium-Borate and Sodium Nitrate and cast to form a glass bead which has been analysed by XRF. A pre-oxidation stage has been used to minimise the loss of volatiles in fusion. The digestion method is considered a total dissolution. No geophysical tools were used to determine any element concentrations. The laboratory completed sample preparation checks for particle size distribution compliance as part of routine internal quality procedures to ensure the target particle size distribution of 85% passing 75 microns is achieved in the pulverisation stage. Field duplicates are inserted routinely at a rate of 1:20 samples and replicate results demonstrate good repeatability of results within the mineralised zones. Laboratory quality control processes include the use of internal lab standards, certified reference materials (CRMs), blanks, and duplicates. Umpire laboratory checks are routinely carried out on 5% of the total number of samples. The results returned to date have good precision as quantified by the half-absolute-relative difference (HARD) statistics. CRMs us
Verification of sampling and assaying	 Significant intersections from DD have been inspected and verified on multiple occasions by IGO's senior geological staff and Optiro's independent review consultants. The current mine development has intersected the mineralisation and the mine exposures are consistent with the observations from drilling intersections. Two PQ and one HQ metallurgical DD holes have been drilled at Nova since March 2013 and the logging of these holes is consistent with the geological and mineralisation domain interpretations from the MRE definition drilling. Three holes have been twinned. The twin hole results confirmed the prior hole geology. Primary data for both areas has been directly entered into an 'acQuire' database via data entry templates on 'Toughbook' laptop computers. The logging has been validated by onsite geology staff and loaded into a SQL database server by IGO's Database Administrator. Data is backed up regularly in off-site secure servers. No adjustments or calibrations were made to any assay data used in either estimate, other than conversion of detection limit text values to half-detection limit numeric values prior to MRE work.
Location of data points	 The collar locations of surface holes were surveyed by Whelan's Surveyors of Kalgoorlie who used real-time kinematic global positioning system (RTK GPS) equipment, which was connected to the state survey mark (SSM) network. Survey elevation values are recorded in a modified Australian Height Datum (AHD) elevation where a constant of +2,000m was added to the AHD RL for the mine coordinate grid. The expected survey accuracy is ± 30mm in three dimensions. Down hole drill path surveys have been completed using single shot camera readings collected during drilling at 18m down hole, then every 30m down hole. Gyro Australia carried out gyroscopic surveys on surface holes using a Keeper high speed gyroscopic survey tool with readings every 5m after hole completion. Expect survey accuracy is ±0.25° in azimuth and ±0.05° in inclination. Down hole survey QC working involved field calibration using a test stand. Underground holes collar locations were surveyed by IGO's mine surveyors using Leica TS15P total station units. The underground drill hole paths were surveyed using reflex single shot surveys with readings taken every 30m down hole. The final down hole survey for underground holes was by Deviflex (non-magnetic strain gauge) electronic multi-shot and Minnovar Azimuth Aligner tools that survey hole paths on 1m intervals relative to the collar azimuth and dip. The expected accuracy is ±0.2° in azimuth and ±0.1° in inclination. Only gyro and Deviflex data has been used for MRE work. The grid system for Nova-Bollinger is Map Grid Australia (MGA) Zone 51 projections and a modified AHD94 datum (local RL has 2,000m added to value). Local easting and northing coordinates are in MGA. The topographic surface for Nova-Bollinger is a 2012 Lidar survey with 50cm contours, which is acceptable for mine planning and MRE purposes.

SECTION 1 – NOVA OPERATION – SAMPLING TECHNIQUES AND DATA	
JORC Criteria	Explanation
Data spacing and distribution	 The nominal drill hole mineralisation pierce point spacing is 12.5 mN×12.5mE. The drilling and mine development into the mineralised domains for Nova-Bollinger has demonstrated sufficient continuity in both geological and grade to support the definition of Mineral Resources and Reserves, and the classifications applied under the JORC Code. For MRE grade estimation purposes samples have been composited to a target of a one metre length for both deposits, with an optimised compositing approach used to ensure that no residual samples are created.
Orientation of data in relation to geological structure	 Both Nova and Bollinger have been drilled from surface and underground locations on a variety of orientations designed to target the mineralised zones at the nominal spacing whilst maintaining reasonable intersection angles. Structural logging based on oriented core indicates that the main sulphide controls are largely perpendicular to the average drill orientation. Due to the constraints of infrastructure location a small number of holes are oblique to the C5 mineralisation at the northern margin of the deposit. The Competent Person considers that there is no material level of orientation-based sampling bias in the Nova-Bollinger MRE.
Sample security	 The sample chain-of-custody is managed by IGO. Samples for Nova-Bollinger are stored on site and collected by reputable road haulage contractor (McMahon Burnett Transport) and delivered to their depot in Perth, then to the main assay laboratory. Whilst in storage, samples are kept in a locked yard. Tracking sheets are used to track the progress of batches of samples. A sample reconciliation advice is sent by the laboratories to IGO on receipt of the samples and any issue are resolved before assaying work commences The Competent Person considers that risk of deliberate or accidental loss or contamination of samples is considered low.
Audits or reviews	 A review of the sampling techniques and data was carried out by Optiro consultants as part of prior MRE and onsite in September 2016. An independent audit of the database was carried out in February 2018 by Optiro. Optiro has provided confirmation that it considers that the MRE database is of sufficient quality for MRE studies.

Section 2 – Nova Operation – Exploration Results	
JORC Criteria	Explanation
Mineral tenement and land tenure status	 The Nova-Bollinger deposit is wholly within WA Mining Lease M28/376. This tenement is 100% owned by Independence Nova Pty Ltd – wholly owned subsidiary of IGO. The tenement is held by Independence Nova Pty Ltd and expires on 14/08/2035. The IGO tenements are within the Ngadju Native Title Claim (WC99/002). There are no third-party rights or encumbrances on Nova Operation. Native title royalties are outlined in the Ngadju Mining Agreement. The WA State royalties are paid in accordance with the Mining Act 1978 (WA). IGO has provided the Competent Person with written assurance that the tenement is in good standing and no known impediments exist.
Exploration done by other parties	 Sirius Resources NL explored for base metal deposits in Fraser Range area over a 3-year period and discovered Nova area deposit July 2012, with Bollinger discovered shortly after. No previous systematic exploration was carried out in this area prior to the 2012 discovery.
Geology	 The global geological setting is the high-grade metamorphic terrane of the Albany Fraser mobile belt of Western Australia. The Nova-Bollinger (Ni-Cu-Co) is hosted by Proterozoic age gabbroic intrusions that have intruded a metasedimentary package within a synformal structure. The sulphide mineralisation is interpreted to be related to the intrusive event with mineralisation occurring in several styles including massive, breccia, network texture, blebby and disseminated sulphides. The main sulphide mineral is pyrrhotite, with nickel and cobalt associated with pentlandite and copper associated with chalcopyrite. The deposits are analogous to many mafic hosted nickel-copper deposits worldwide such as the Raglan, Voisey's Bay in Canada, and Norilsk in Russia.
Drill hole Information	 As this is an advanced stage report related to an MRE in production, it is impractical to list drill information for the numerous drill holes used in the estimate. Representative intercepts have been reported in previous IGO Public Reports.
Data aggregation methods	 No drill hole related exploration results are included in this Public Report for the Nova-Bollinger MRE. Samples were aggregated into 1m long (optimised) composites for MRE work.

SECTION 2 – NOVA OPERATION – EXPLORATION RESULTS	
JORC Criteria	Explanation
Relationship between mineralisation widths and intercept lengths	 The Nova area of the Nova-Bollinger deposit is moderately east dipping in the west, flattening to shallow dipping in the east, while the Bollinger area of the deposit is more flat lying. Due to the style of mineralisation under consideration there is no expectation of sampling bias due to the relationship between drill hole interception angle with the mineralisation and the intersection length.
Balanced Reporting	• The MRE gives the best and balanced view of the drilling and sampling to date.
Other substantive exploration data	For this active mine there is no other substantive exploration data material to the MRE.
Diagrams	 Representative sections and plans are included in the body of this reports as well as in IGO's prior ASX releases of exploration results relating to Nova-Bollinger.
Further work	 Further diamond drilling of targets proximal to the mine and beneath the Nova-Bollinger mineralisation with subsequent geophysical survey work.

Section 3 – Nova Operation – Mineral Resources	
JORC Criteria	Explanation
Database integrity	 All data entry has been via direct entry into data electronic templates with lookup tables and fixed formatting are used for logging, spatial and sampling data at Nova-Bollinger. Data transfer and assay loading has been electronic. Sample numbers are unique and pre-numbered bags were used. IGO's data management procedures make transcription and keying errors unlikely, and digital merging by unique sample number keys reduces the risk of data corruption. IGO's geological staff have validated the data under the direction of the Acquire Database Administrator using IGO's protocols. The data for the Nova-Bollinger MRE is stored in a single acQuire database.
Site visits	The Competent Person for the MRE is the Geology Superintendent for Nova Operation and as such has detailed knowledge of the data collection, estimation, and reconciliation procedures for this MRE.
Geological interpretation	 The confidence in the geological interpretation of Nova-Bollinger is considered high in areas of close-spaced drilling. Nearly full development of the mine has added substantially to the geological understanding of the deposit through mapping of drives and cross cuts. Inferred Mineral resources make up a very small proportion of the tonnage (< 0.4%). Core samples taken for petrography and litho-geochemical analysis have been used to identify and define the rock type subdivisions applied in the interpretation process. The assumptions made are that zones of similar sulphide have a spatial association that allows them to be interpreted as continuous or semi-continuous (dependent on setting). There are also assumptions that the breccia zones can have variable continuity due to the internal nature of the domains, with this variability is accounted for in the estimation methodology. The Nova-Bollinger deposit has a generally tabular geometry, with geological characteristics that define the mineralised domains. The current interpretation is geologically controlled, and supported by the new drilling and underground development, and is robust. Geological controls and relationships were used to define grade estimation domains with hard boundary constraints applied on an estimation domain basis. The Nova-Bollinger breccia zones have mixed grade sample populations due to spatial mixing of massive sulphides and mineralised clasts within these domains. MgO-Ni grade relationships are interpreted to be influences on local grade estimates and the estimation domaining has addressed these controls in the resource estimation process. The spatial continuity of high and low MgO geological units has assisted in refining contact relationships.
Dimensions	 The Nova area mineralisation commences from 40m below surface and extends to 470m below surface. The Nova area extents are ~650m (northeast to southwest) and ~300m (northwest to southeast). The Bollinger mineralisation abuts the Nova zone and starts at ≈360m below surface (highest point) and extends to ~425m below surface. Bollinger has areal extents of ~300m (north) and 400m to 125m (east). The Nova and Bollinger deposits are joined by an interpreted narrow east-west trending feeder 'Mid' zone that has a length of
	~180mm, thickness of 10-20m and north-south width of up to 80m.

	SECTION 3 – NOVA OPERATION – MINERAL RESOURCES
JORC Criteria	Explanation
Estimation and modelling techniques	 Metal accumulations (grade × density) for Ni, Cu, Co, Fe, Mg, S and in situ density were estimated into the Nova-Bollinger digital block model using the Ordinary Block Kriging (OK) routines implemented in implemented in Datamine Studio RM version 1.4.175.0. Block grades where then back calculated by dividing each accumulation by the density local estimates
	• The estimation drill hole sample data was coded for estimation domain using the three-dimensional wireframe interpretations prepared in LeapFrog Geo 4.2.3 software.
	• The drill hole sample data from each domain was then composited a target of a one metre downhole length using an optimal best fit-method, to ensure no short residuals were created.
	• The influence of high-grade distribution outliers was assessed to be negligible, and no top cuts have been applied to the final estimate.
	 Estimates were prepared using Datamine's unfolding algorithm to optimise the grade connectivity in the often-undulating domain geometry.
	 For all domains, directional anisotropy axis semivariograms were interpreted using traditional experimental semivariograms or back-transformed normal-scores model interpretations. Semivariogram nugget effects were found to be low to moderate in the range of 6% to 20% of the data variance. The maximum range of grade continuity varied and was found to be deposit/domain dependant. Typically, maximum continuity ranges varied from 20m to 180m in the major direction dependent on mineralisation style.
	• Estimation sample searches were set to the ranges of the nickel accumulation variogram for each domain in the first sample pass and increased by factors for subsequent estimation passes. The maximum distance to nearest sample for any estimated block was 100 metres. The inferred portion of the MRE is <0.3% of the total tonnage, approximately 60% of the Inferred Mineral Resource is extrapolated greater than 30 metres beyond the data.
	 This estimate is an update of the prior Mineral Resource Estimates (MREs) for Nova-Bollinger. Reconciliation information is largely based on results of processing one from development headings and stones. Refer to the
	item on accuracy further below for reconciliation factors.
	 The main by-product of the nicker and copper co-products is cobait. Cobait value is dependent of any on-take agreement and may realise a credit.
	 The accessory grades estimated in the update are Fe%, Mg% and S%. No specific acid-mine drainage variable has been estimated but sulphur can be used as a proxy where needed.
	 A single digital block model for Nova-Bollinger was prepared in Datamine Studio RM using a 6 mE×6mN×2mElv parent block size with sub-blocks permitted down to dimensions of 1.0 mE×1.0 mN×0.5mRL.
	 All block grade estimates were completed at the parent cell scale. Block discretisation was set to 6×6×2 nodes per block for all domains.
	• The dimensions of the sample search ellipse per domain was set based on the nickel variography parameters, due to the moderate to strong correlations between nickel with the other variables estimated.
	• Two estimation search passes were applied to each domain. The first estimation pass had ranges set to the nickel semi- variogram maximum with a requirement to find minimum of six and maximum of 36 samples for a block to be estimated. Sample selection was limited to three samples per hole. In the estimation second pass, the search ranges were doubled.
	 In the most of domains, most blocks were estimated in the first estimation pass (particularly for the main domains). However, some more sparsely-sampled domains were predominantly estimated on the second pass.
	 No assumptions regarding selective mining units were made in this estimate. Strong positive correlations occur between nickel, sulphur, iron and cobalt, with copper sometimes not as strongly correlated.
	The correlation between nickel and copper is variable with domain and mineralisation style. All variables have been estimated within the nickel domains.
	 The geological interpretation modelled the sulphide mineralisation into geological domains at Nova- Bollinger. The deposit framework incorporates gabbroic intrusives, high and low magnesium intrusive units, deformation partitioning, folding, sulphide remobilisation, brecciation and replacement.
	• These form a complex deposit where geological relationships are used to define mineralisation domain geometries and extents. Grade envelopes are not applied, apart from reference to the natural ≥0.4% Ni cut-off that appears to define the extents of the global mineralised system.
	 The boundaries of mineralised domains were set to hard boundaries to select sample populations for variography and estimation.
	• The statistical analyses of the drill hole sample populations in each domain generally have low coefficients of variation with no extreme values that could potentially cause local grade biases during estimation.
	 Validation of the block model volumes was carried out using a comparison of the domain wireframes volumes to the block model volumes. Grade/density validation included comparing the respective domain global mean grades of block model grades to the estimation drill hole composites, and moving window mean grade comparisons using swath plots within northing, easting and elevation slices.
	 Visual validation was completed on screen to review that the input data grade trends were consistent with the output block estimate trends.
	 The final mine depleted estimates were reported out of two different software systems and checked by both IGO and Optiro for accuracy.
	Refer further below to the item on estimation accuracy for model to mill reconciliation results.
Moisture	The tonnages are estimated on a dry basis.

	Section 3 – Nova Operation – Mineral Resources
JORC Criteria	Explanation
Cut-off parameters	 The MRE is reported using ≥56 A\$/t Net-Smelter-Return (NSR) block cut-off as an proxy for a break-even level between mining development cost and incremental stoping cost.
Mining factors or assumptions	 Mining of the Nova-Bollinger deposit is and will be, by underground mining methods including mechanised mining, open stoping and/or paste backfill stoping.
Metallurgical factors or assumptions	 The ore processing method at Nova-Bollinger is well-established with a crushing, grinding and floatation flow sheet with metals recovered to either a nickel-copper-cobalt concentrate and a copper rich concentrate. Metallurgical recovery values are sourced from the modelling from the project-to-date processing where the steady-state metallurgical recoveries were modelled as a function of grade with mean values, with a pattern of decreasing metallurgical recovery with decreasing head grade. For the total MRE the recovery ranges from 85% to 89% for all payable metals.
Environmental factors or assumptions	 All necessary environmental approvals have been received. Sulphide tails are being pumped to a specific waste storage facility and non-sulphide tails are used in paste backfill. Rock wastes are stored in a conventional waste dump, with the mine closure plan specifying all rock waste to be transferred back to underground at mine closure. For the waste dump at surface, any potentially acid forming (PAF) waste is tipped on a prepared pad of inert waste, then encapsulated in inert waste at the end of the mine life.
Bulk Density	 In situ density measurements were carried out on 43,209 core samples using the Archimedes Principle method of dry weight versus weight in water. The use of wax to seal the core was trialled but was shown to make less than 1% difference between measurements on the same core sample. Density standards were used for QAQC using an aluminium billet and pieces of core with known values. Pycnometer density readings (from sample pulps) were carried out for 21,632 samples by assay laboratories to accelerate a backlog of density samples. A comparison of 263 samples from holes that that had both methods carried out showed an acceptable correlation coefficient of 0.94 but also that the pycnometer results were reporting slightly lower density than the measured results, which is expected given pycnometer readings do not provide an in situ bulk density. The density difference between methods was not considered to be material to the MRE. The density ranges for the mineralised units are: Massive sulphides 2.0-4.7g/cm³ (average: 3.9g/cm³), net textured sulphides 3.0 -4.4g/cm³ (average: 3.6g/cm³) and disseminated sulphides 2.5-4.6g/cm³ (average: 3.5g/cm³). The host geology comprises high grade metamorphic rocks that have undergone granulite facies metamorphism. The rocks have been extensively recrystallised and are very hard and competent. Vugs or large fracture zones are generally annealed with quartz or carbonate in breccia zones. Porosity in the mineralised zone is low. As such, voids have been accounted for in all but the pycnometer density measurements. Missing density measurements were imputed using a multiple element regression on a domain basis. Correlations between density and all elements were assessed for each domain and appropriate elements chosen for use in a multiple regression formula that was subsequently used to calculate the density for any missing values prior to estimation of in situ bulk density unaled DM
Classification	 The Nova-Bollinger Measured Mineral Resource MRE is classified based on the high confidence in the geological and grade continuity, along with 12.5×12.5m spaced drill hole density and information from mine development. Estimation parameters, including conditional bias slope of regression have also been utilised during the classification process, along with the assessment of geological continuity. The Indicated Mineral Resource is classified based on high confidence geological modelling using the knowledge gained from the close spaced infill drilling to update the mineralisation domains in areas of 25×25m spaced drilling. The Inferred Mineral Resource category was applied to isolated lenses of mineralisation in the upper levels of Nova, the tonnage represents <0.4% of the total MRE. The input data is comprehensive in its coverage of the mineralisation and does not favour or misrepresent in situ mineralisation. Geological control at Nova-Bollinger consists of a primary mineralisation event modified by metamorphism and structural events. The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. This model has been confirmed by infill drilling and mine development exposures, which confirm the initial interpretation. The validation of the block model has confirmed satisfactory correlation of the input data to the estimated grades and reproduction of data trends in the block model. The Mineral Resource estimate appropriately reflects the view of the Competent Person. This is an update of the prior estimate for Nova-Bollinger and has been extensively reviewed internally by IGO geologists. An independent external review of all aspects of the MRE has been undertaken by Optiro Pty Ltd., who have found no material
Relative Accuracy/Confid ence	 The MRE for Nova-Bollinger has been estimated using standard industry practices for the style of mineralisation under consideration. The geological and grade continuity of the domains is such that the Indicated Mineral Resource has a local level of accuracy which is suitable for achieving annual targets, while Measured Mineral Resource estimates are considered commensurate with

Section 3 – Nova Operation – Mineral Resources	
JORC Criteria	Explanation
	 meeting quarterly production targets. Inferred Mineral Resource are indicative of areas and tonnages that warrant further drill testing but are not suitable for Ore Reserve estimation. There has been no quantitative geostatistical risk assessment such that a rigorous confidence interval could be generated but the nature of the mineralisation is such that, at the grade control drill spacing, there is minimal risk to the extraction schedule on a quarterly basis. Production data has provided a satisfactory assessment of the actual accuracy compared to the estimate for development ore. The Measured and Indicated Resources are considered suitable for Ore Reserve conversion studies and should provide reliable (± 15%) estimates for quarterly and annual production planning respectively. The Inferred Mineral Resource estimates identify one area that requires further drilling and assessment before it can be considered for mine planning. Total ore processed from Nova-Bollinger to 31 Dec 2019 has been ~4.2Mt grading 1.99% Ni, 0.84% Cu and 0.07% Co. Mine-claimed ore from the model update is ~4.1Mt grading 2.16% Ni, 0.87% Cu, 0.07% Co, with ~66kt on ROM stockpiles on 31 Dec 2019. Reconciliation factors (mill / MRE) for the project to date are therefore 104% for tonnage, 92% for nickel grade, 96% for copper grade and 100% for cobalt grade. The reconciliation factors indicate that the Mineral Resource estimate may be an optimistic predictor of grade, however there is a continued trend of improvement of reconciliation against the MRE.

Section 4 – Nova Operation – Ore Reserves	
JORC Criteria	Explanation
Mineral Resource estimate for conversion to Ore Reserves	 The MRE used for the Nova-Bollinger Ore Reserve estimate (ORE) is the estimate described in the section above relating to Mineral Resources. The MRE model was coded with in situ NSR values that account for corporate directed metal prices, metallurgical recovery and all costs associated with sale of concentrates from the mine gate. Separate NSR values were applied for MRE and ORE work with more optimistic metal prices assumed for the MRE NSR values. The MRE reported for CY19 is nominally inclusive the CY19 ORE, expect for where the ORE includes dilution below MRE reporting cut-off
Site Visits	 The Competent Person for the estimate is IGO's Strategic Mine Planner for IGO and has detailed knowledge of the mining methods, costs, schedule and other material items relating to ORE work for this estimate, having recently been promoted from the site based role of Superintendent Planning.
Study Status	 The Ore Reserves have been designed based on the current operational practices of the operating mine. All Ore Reserves were estimated by construction of three-dimensional mine designs using DESWIK.CAD software (Version 2019.4) and reported against the updated MRE block model. After modifying factors are applied, all physicals (tonnes, grade, metal, development and stoping requirements etc.) were input to the Nova Operation cost model where each stope was economically evaluated, and the total reserve was evaluated to assess its economic viability. Previous mine performance has demonstrated that the current mining methods are technically achievable and economically viable. The modifying factors are based on historical data utilising a similar mining method As Nova Operation is an ongoing concern the study level can be considered better than a Feasibility Study level.
Cut-off parameters	 ORE block cut-off values are based on a net-smelter-return (NSR) values where the reporting NSR is defined as the net value \$A value per tonne of ore after consideration or all costs (mining, process, G&A, product delivery), metallurgical recoveries, sustaining capital, concentrate metal payabilites and treatment charges, transport costs and royalties. The Resource model is evaluated against the NSR cut off value and mining areas (stopes and development) are designed for those areas above the NSR cut-off value. All designed stopes and development are then assessed individually to verify that they are above the NSR cut-off and can be economically mined. The NSR cut-off are \$A125/t for full stoping and \$A75/t for incremental stoping. For development the NSR cut-off is \$A37/t.

SECTION 4 – NOVA OPERATION – ORE RESERVES	
JORC Criteria	Explanation
Mining factors or assumption	 The mining method assumed for the Ore Reserve is long-hole sub-level open stoping, and sub level open stoping, which is considered appropriate for the for the style of mineralisation under consideration.
	In some that lying areas inclined room and pillar mining has been considered in the ORE.
	 Geotechnical parameters are based on recommendations made in the Nova-Boilinger Feasibility Study (FS) prepared in 2014. No material geotechnical issues have been encountered in mining to date.
	 Three-dimensional mine designs are designed based on known information about the mineralised zones based on physical characteristics and the geotechnical environment.
	 The designs are consistent with what has been in practice on with ore loss and dilution modifying factors based MRE to plant reconciliation results. The reconciliation factors are applied directly onto the in situ grades of the MRE model, to generate tonnes and grade estimates expected to be delivered to the processing plant (1.0016× for density, 0.9072× for Ni grade, 0.9541× for copper grade and 1.0085× for cobalt grade).
	A minimum mining width of 3.0m was used for all stoping.
	Current infrastructure supports mining of the ORE. Any additional capital required has been included in the cost model.
	 In cases where Inferred Mineral Resources are present in a design, this material has been assigned as dilution and has been included in the reserve. Inferred tonnage has been included up to 20% of total stope tonnage at grade, above 20% as zero grade as planned dilution in the reserve. The tonnage affected by this process is immaterial to the Ore Reserve.
Metallurgical factors or assumptions	 The metallurgical process for Nova-Bollinger ores is already established and is a process flow of crushing, grinding to nominally sub 105 microns, the differential froth-floatation of a nickel concentrate grading 13.5% Ni and 0.4% Co, and a copper concentrate grading 29% Cu.
	The throughput rate assumed is 1.5Mt/a.
	 Metallurgical recovery values are based on the Nova 2014 FS testwork and are dependent on grade. Current recoveries being achieved are at ~87% for both nickel and copper.
	 No deleterious elements are materially present in the ore albeit, concentrate penalties apply on the nickel concentrate when the Mg:Fe ratio is outside certain limits. This ratio is managed in the mine planning through blending of high magnesium ores as required.
	 No specific minerals are required for the saleable concentrates, which are primarily composed of pyrrhotite (gangue), with pentlandite the payable mineral in the nickel concentrate, and chalcopyrite the payable mineral in the copper concentrate. Cobalt is strongly correlated with pentlandite.
Environmental	 The Nova-Bollinger deposit was discovered in July 2012 and studies were initiated shortly afterwards to establish baseline environmental conditions
	 The Nova project self-referred to the Environmental Protection Authority (EPA) and in August 2014 received confirmation that the operation could be adequately managed under WA Mining Act provisions.
	• Following the granting of mining tenure, Mining Proposals for Stage 1 and Stage 2 of the Nova Operation were submitted to the then DMP, approved at the end of 2014, enabling construction to begin in January 2015.
	All necessary operational licences were secured including clearing permits and groundwater extraction.
	 A tailings storage facility has been constructed to contain the sulphide bearing wastes from the processing operation and non- sulphide tailings are pumped to the paste-fill plant and then into completed stopes as paste fill.
	• Potentially acid-generating mine development rock (containing >0.7% S) is either used as rock-fill in some completed stopes or encapsulated in non-acid generating rock in the mine waste dump.
	 Nova operation maintains a compliance register and an environmental management system to ensure it fulfils its regulatory obligations under the Nova EP licence.
	A mine closure plan is in place to address full rehabilitation of the site once mining activities are completed.
Infrastructure	 All major infrastructure required for the mining, processing and sale of concentrates is in place and operation including mine portal and decline, ventilation systems and paste plant, water bore field, tailing storage facility, process plant and power plant, sealed road to the main access highway, accommodation camp for IGO and contractors and all-weather air strip with 100-seat jet capacity. The owner and contractor personnel are sourced from Porth and work on a fly in out basis.
	Ine owner and contractor personnel are sourced from Perth and work on a fly-in-out basis.

	SECTION 4 – NOVA OPERATION – ORE RESERVES
JORC Criteria	Explanation
Costs	 All major capital costs associated with the Nova operation infrastructure are already spent. Sustaining capital costs for the decline development and stope accesses are based on operational experience to date. Operating costs for the ORE are based on budget estimates from a mining reputable contractor and experienced independent consulting firms. No allowances have been made for deleterious elements as Nova's concentrates are clean and generally free of deleterious metals at concentrations that would invoke penalty clauses. Product prices assumed for the ORE are discussed further below. Foreign exchange rates are based on in-house assessments of Bloomberg data with an assumption of 0.74 \$A/\$US Concentrate transport costs have been estimated by a logistics consultant with shipping cost from Esperance estimated by an experienced shipping Broker. Treatment and refining charges, applicable to offshore shipments are based on the confidential terms of sales contracts. Allowances have been made for WA state royalties, with a 2.5% royalty applicable to the sale price of nickel and cobalt in the nickel concentrate, and a 5% royalty applicable to the value of copper in copper concentrate, with the latter applied to copper after the deduction of concentrate sales costs. IGO also pays a small commercially confidential royalty to the Ngadju people.
Revenue Factors	 Head grades and concentrate produced is determined by the mine plan. NSR values per mined block were calculated by IGO from the cost and revenue inputs. Treatment, refining and transport assumptions are discussed under costs (above) Commodity prices are based on IGO in-house assessments of Consensus Economics data with prices of \$A53,904/t for cobalt, A\$8,574/t for copper and A\$21,421/t for nickel metal, using the exchange rate discussed above for currency conversions from \$US prices. Different metal prices have been assumed for MRE and ORE reporting refer to the discussion in the main report.
Market assessment	 The inputs into the economic analysis for the Ore Reserve update have already been described above under previous subsections. The economic evaluation has been carried out on a nominal basis (no adjustment for inflation) on the basis that saleable product values will be correlated with inflation. The confidence in majority of the economic inputs is high given the input sources at the time of the Ore Reserve study. The confidence in metal prices and exchange rates is consistent with routine industry practices with the data derived from reputable forecasters. The discount rate used for NPV calculations was 10% per annum and the NPV is strongly positive at the assumed payable metal prices.
Social	 The Nova deposit was discovered in July 2012 and development of the site commenced in January 2015 following regulatory approval in December 2014. IGO's operations are also managed under a Mining Agreement with the Ngadju people, who the traditional owners and custodians of the land occupied by Nova. WA Mining lease M28/376 covers all the Nova mining, process and support infrastructure. IGO has all the necessary agreements in place with key stakeholders and has both statuary and social licence to continue operation of Nova for the life of mine.
Other	 There are no material naturally occurring risks associated with the Nova operation. There are no material legal agreements or marketing arrangements not already discussed in prior sub sections. All necessary government and statutory approvals are in place. There are no unresolved third-party matters hindering the extraction of the Ore Reserve. Additional water bores are required to ensure water security and exploration for an additional bore field in in progress.
Classification	 The Ore Reserve has been classified into the Proved Probable Ore Reserve JORC Code classes based on the underlying Mineral Resource classification in the Mineral Resource model, with Indicated Mineral Resources converted to Probable Ore Reserves. Due to the large dimensions of many stopes, the same stope can contain more than one MRE class. As such, stopes where ≥95% of the contained MRE tonnage is classified as Measured Resource have been classified as Proved Ore, those with ≥95% Indicated Resource classified as Probable Ore Reserves. In development, Measured Resources have been converted to Proved Reserves and Indicated Resource converted to Probable Ore Reserves. The classifications applied to the estimate are consistent with the opinion of the Competent Person reporting the ORE.
Audits and reviews	 The estimate has been reviewed internally by Nova's senior mine engineering staff and IGO's Perth office technical staff. Mine planning consultants Deswik are independently reviewing the ORE for end of CY19 – no material issues have been identified to date

SECTION 4 – NOVA OPERATION – ORE RESERVES	
JORC Criteria	Explanation
Discussion of relative accuracy/	 No statistical or geostatistical studies, such as conditional simulations, have been completed to quantify the uncertainty and confidence limits of the estimates.
confidence	 Confidence in Ore Reserve inputs is generally high given the mine is in full operation and costs, prices, recoveries and so on are well understood.
	 The Ore Reserve estimates are considered to have sufficient local accuracy to support mine planning and production schedules with Proved Ore Reserves considered a reliable basis for quarterly production targeting and Probable Ore Reserves reliable for annual production targets.
	 Confidence in the mine design and schedule are high as mining rates and modifying factors are based on actual site performance. Mine design is consistent with what has been effective previously.
	 The 10% shortfall in nickel grade reconciliation described above in relation to the Mineral Resource estimate, is currently accommodated in the mine planning dilution assumptions where zero grade dilution is applied to planned over-break. Investigations are ongoing into the possible sources of grade loss in the MRE model but at the time of reporting the mine dilution modelling approach accounts for this grade loss in the Ore Reserve.

SECTION 1 – TROPICANA GOLD MINE – SAMPLING AND DATA	
JORC Criteria	Explanation
Sampling techniques	 AngloGold Ashanti Australia (AGA) has used drilling and subsampling of the cuttings or cores as the data basis for the Mineral Resource estimates (MREs) of the Tropicana deposits. Details are given in the following subsection of this Table 1 section. Drill hole spacings range from 25×25m grids to 100×100m grids, with most of the drilling of the open pit MRE on a 50m×50m spacing with 25×25m testing the starter pits of the Tropicana and Havana initial pits, and the southern end of the Boston Shaker deposit. A 100×100m area of Havana was drilled out on a 10×10m grid to validate the MRE model and optimise the grade control sample spacing. The Boston Shaker underground MRE is drilled at 50×25m in the upper levels and up to 100×100m at deeper levels. The underground MRE down-plunge extensions of Havana Deeps have been tested using a 100×100m grid. Deep +800m deep step-out holes have been drilled on nominal ~200×100m to test the high-grade mineralisation of Havana Deeps. All holes are drilled plunging towards the west to intersect the east dipping mineralised zones at a high angle.
Drilling techniques	 Reverse circulation (RC) percussion drilling using face-sampling bits (5¼ inch or 133mm diameter) have been used to collect samples from the shallower (up-dip) part of the deposits with a nominal maximum RC depth of ~150m. Diamond core drilling has been used for deeper holes, with diamond tails drilled from RC pre-collars. To control the deviation of deep DD holes drilled since 2011, many of these holes were drilled from short ~60m RC pre-collars or using 63.5mm (HQ) diameter core from surface. Diamond core drilling for MRE definition is predominantly 47.6mm (NQ) diameter core, with a lesser number of holes drilled for collection of metallurgical and/or geotechnical data using 63.5mm (HQ2, HQ3) ore 85mm (PQ) core diameters. In fresh rock, cores are oriented wherever possible for collection of structural data. Prior to 2009, core orientations are made using the EzyMark tool with the Reflex Ace Tool replacing the system in later drilling programs.
Drill sample recovery	 RC recovery: Prior to 2008 semi-quantitative assessment was made regarding RC sample recovery with recovery visually estimated as 25%, 50%, 75% or 100% of the expected volume of a 1m drilling interval. Since 2008, AGA has implemented quantitative measure on every 25th interval where the masses of the sample splits are recorded and compared to the theoretical mass of the sampling interval for the rock type being drilled. AGA found that overall RC recovery in the regolith was >80% and total recovery in fresh rock. DD Recovery: DD recovery has been measured as percentage of the total length of core recovered compared to the drill interval. Core recovery is consistently high in fresh rock with minor losses occurring in heavily fractured ground or for DD drilling in the regolith. The main methods to maximise recovery have been recovery monitoring as described above and diamond core drilling below a ~150m depth. No relationship exists between sample recovery and grade and the Competent Person considers that grade and sample biases that may have occurred due to the preferential loss or gain of fine or course material are unlikely.
Logging	 RC cuttings and DD cores have been logged geologically and geotechnically with reference to AGA's logging standard library, to levels of detail that support MRE work, Ore Reserve estimation (ORE) and metallurgical studies. Qualitative logging includes codes for lithology, regolith, and mineralisation for both RC and DD samples, with sample quality data recorded for RC such as moisture, recovery, and sub-sampling methods. DD cores are photographed, qualitatively structurally logged with reference to orientation measurements where available. Geotechnical quantitative logging includes QSI, RQD, matrix and fracture characterisation. The total lengths of all drill holes have been logged.
Sub-sampling techniques and sample preparation	 RC – Primary splitting: Prior to 2007 RC samples were collected from the RC cyclone stream using a tiered riffle splitter. From 2007 a static cone splitter was introduced and replaced riffles splitters on all rigs. The RC sampling interval is generally 1m but from 2016, 2m intervals were introduced for RC pre-collar holes. The splitters collected a ~12% split from the primary lot with two 12% splits collected – the first for laboratory submission and second as a reference or replicate. Most samples were collected dry with <2% of samples recorded as being split in moist or wet state. The main protocol to ensure the RC samples were representative of the material being collected was monitoring of sample recovery and collection and assay of replicate samples. DD – Primary sample: DD cores are collected of intervals determined by geological boundaries but generally targeting a 1m length All NQ cores have been half-core sampled with the core cut longitudinally with a wet diamond blade. A few of the DD whole cores have been sampled from HQ3 cores drilled to twin RC holes in the regolith or for geotechnical or metallurgical testing. In 2005, some 1,150m of cores drilled in the oxide zone were chisel split rather than wet-cut, but this poorer sub-sampling represents <0.01% of the core drilled.

SECTION 1 – TROPICANA GOLD MINE – SAMPLING AND DATA	
JORC Criteria	Explanation
	 Laboratory preparation: Sample preparation has taken place at three laboratories since commencement of MRE definition drilling including SGS Perth (pre- 2006), Genalysis Perth (2006 to April 2016) and SGS TGM onsite laboratory (2015 Boston Shaker samples and post-April 2016 to Dec 2017 samples). and SGS Perth from Jan 2018 onwards.
	 RC samples are oven dried then pulped in a mixer mill to a particle size distribution (PSD) of 90% passing 75 μm before subsampling for fire assay.
	 SGS prepared DD half-core samples by jaw-crushing then pulverisation of the whole crushed lot to a PSD of 90% passing 75 μm. A 50g subsample of the pulp was then collected for fire assay.
	 Genalysis prepared the samples in a 'Boyd' crusher rotary splitter combo with nominally 2.5kg half-core lots crushed to <3mm then rotary split to ~1 kg before pulverisation and sub-sampling for fire assay.
	 At SGS Tropicana laboratory samples are processed in automated sample preparation system, where samples are crushed in a Boyd crusher to a PSD of 90% passing 2mm then subsampled using a linear sample divider to ~1kg. Samples with mass <800g are pulped in a LM2 mill to a PSD of 75 microns before sub-sampling for fire assay.
	 From May 2016, a jaw crusher has been used to crush half-core samples to a PSD of 100% passing 6mm allowing for diamond core processing at the SGS Tropicana laboratory.
	 Quality controls for representativity: SGS inserted blanks and standards at a 1:20 frequency in every batch with a duplicate pulp collected for assay every 20th sample. Further replicates were also completed at a 1:20 frequency in a random manner.
	 Sieve checks were completed on 5% of samples to monitor PSD compliance.
	 Genalysis inserted blanks and standards in every batch and a replicate pulp was collected for assay on every 25th sample and 6% of each batch was randomly selected for replicate analysis. Sieve checks were completed on 5% of samples to monitor PSD compliance.
	 Tropicana laboratory used barren basalt and quartz to clean equipment between routine samples.
	 Sample size versus grain size. No specific heterogeneity tests have been completed but the sample sizes collected are consistent with industry standards
	for the style of mineralisation under consideration.
	 A 2008 sampling variability study found that 72% of the gold in the samples tested was in size fraction <300 µm, and that repeated sampling of the same lot have very low variance between replicates.
Quality of assay	No geophysical tools have been used to determine any element concentrations material to the MRE.
data and laboratory tests	 All MRE prepared pulps have undergone 50g fire assay, which is considered a total assay for gold.
	 As discussed above all laborationes have used industry-standard quality control procedures with standards used to monitor accuracy, replicate assay to monitor precision, blanks to monitor potential cross contamination and sieve tests to monitor PSD compliance.
	 AGA has also used other 'umpire' laboratories to monitor accuracy including Genalysis Perth (prior to November 2006), SGS Laboratory (from November 2006 to August 2007) and ALS Perth (since August 2007), with these check assaying campaigns coinciding with each MRE update. All check assay results have been deemed acceptable.
	 AGA has reviewed the quality sample results on a batch by batch and monthly basis and has found that the overall performance of the laboratories used for MRE samples is satisfactory.
Verification of sampling and	 Significant drill hole intersections of mineralisation are routinely verified by AGA's senior geological staff and have also been inspected by several independent auditors as describe further below.
assaying	 Twin holes have been drilled to compare results from RC and DD drilling with the DD results confirming that there is no material down hole smearing of grades in the nearby RC drilling and sampling.
	 All logging and sample data is captured digitally in the field using Field Marshall Software, prior to upgrade to Micromine's Geobank database in 2016. Data is downloaded daily to the Tropicana Exploration Database (Datashed) and checked for accuracy, completeness and structure by the field personnel.
	 Assay data is merged electronically from the laboratories into a central Datashed database, with information verified spatially in Vulcan software. AGA maintains standard work procedures for all data management steps.
	 An assay importing protocol has been set up to ensure quality samples are checked and accepted before data can be loaded into the assay database
	All electronic data is routinely backed up to AGA's server in Perth and provided to IGO via FTP transfer.
	 There have been no adjustments or scaling of assay data other than setting below detection limit values to half detection for MRE work.

SECTION 1 – TROPICANA GOLD MINE – SAMPLING AND DATA	
JORC Criteria	Explanation
Location of data points	 All completed drill hole collar locations of surface holes have been using real time kinematic global positioning (RTK GPS) equipment, which was connected to the state survey mark (SSM) network. The grid system is GDA94 Zone 51 using AHD elevation datum. Prior to 2007, drill hole path surveys have been completed on all holes using 'Eastman' single shot camera tools, with down hole gyro tools used for all drilling post 2007. A digital terrain model was prepared by Whelan's Surveyors of Kalgoorlie from aerial photography flown in 2007, which has been supplemented with collar data surveyed using RTK GPS. This model is considered to have centimetre-scale accuracy. The MRE and ORE are on a local Tropicana Gold Mine grid (TMG), which is derived by a two-point transform from Map Grid Australia (MGA) and Australian Height Datum (AHD) as follows: Point 1: MGA Zone 51: 617.762.61mE = TMG: 50,000.00mE MGA Zone 51: 67.27,822.78mN =TMG: 95,000.00mN AHD elevation = TMG: MGA elevation + 2,000m Point 2: MGA Zone 51: 688,473.50mE = TMG: 50,000.00mE MGA Zone 51: 67,98,533.48mN = TMG: 195,000.00mN AHD elevation = TMG: MGA elevation + 2,000m
Data spacing and	The drill hole spacing used to define MREs nominally ranges from 25mN×25mE to 100mN×100mE (local grid) over most of the
distribution	 MRE area with a small area of 10mN×10mE used for grade control calibration work. Most of the open pit MRE has been tested on a 50mN×50mE grid with closer spaced 25mN×25mE patterns in the upper parts of the deposit. Open pit grade control is completed on a 12mN×12mE pattern. The Boston Shaker underground MRE is drilled at 50mN×25mE in the upper levels and out to 100mN×100mE at deeper levels. The Havana Deeps underground MRE has been drilled on a 100mN×100mE pattern. Down-hole sample intervals are typically 1m with 2m compositing applied for MRE work. The Competent Person considers that these data spacings are sufficient to establish the degree of geological and grade continuity appropriate for the MRE and ORE estimation procedures, and the JORC Code classifications applied.
Orientation of data in relation to geological structure	 Most drill holes are oriented to intersect the shallowly east dipping mineralisation at a high angle and as such, a grade bias the Competent Person considers that a grade bias due to the orientation of data in relation to geological structure is highly unlikely.
Sample security	 The chain-of-sample custody is managed by AGA. Samples were collected in pre-numbered calico bags, which are then accumulated into polywoven bags for transport from the collection site. The accumulated samples are then loaded into wooden crates and road hauled to the respective laboratories (Perth) or processed onsite at the TGM laboratory. Sample dispatches are prepared by the field personnel using a database system linked to the drill hole data. Sample dispatch sheets are verified against samples received at the laboratory and any missing issued such as missing samples and so on are resolved before sample preparation commences. The Competent Person considers that the likelihood of deliberate or accidental loss, mix-up or contamination of samples is very low.
Audits or reviews	 Field quality control data and assurance procedures are review on a daily, monthly and quarterly basis by AGA's field personnel and senior geological staff. The field quality control and assurance of the sampling was audited by consultant Quantitative Geoscience in 2007 and 2009. The conclusion of the audit was that the data was suitable for MRE work. In 2017, MRE consultants Optiro reviewed data collections and assay quality as part of an MRE review and found no material issues.

Section 2 – Tropicana Gold Mine – Exploration Results	
JORC Criteria	Explanation
Mineral tenement and land tenure status	 The TGM MREs are located wholly within WA mining lease M39/1096, which commenced on 11 Mar 2015 and has a term of 21 years (expiry 10 Mar 2036). TGM in a joint venture between AGA (70%) and IGO (30%) with AGA as manager. Gold production is subject to WA State royalties of 2.5% of the value of gold value. The Competent Person has confirmed that there are no material issues relating to native title or heritage, historical sites, wilderness or national parks, or environmental settings. The tenure is secure at the time of reporting and there are no known impediments to exploitation of the MRE and ORE and ongoing exploration of the mining lease.
Exploration done by other parties	 AGA entered into a joint venture (JV) with IGO in early 2002 with the main target of interest being a Western Mining Corporation (WMC) gold soil anomaly of 31ppb, which was reporting in an WA government open file report. Prior to the JV, the WMC soil sampling program was the only known exploration activity and the only dataset available were WA government regional magnetic and gravity data.
Geology	 TGM is on the western margin of a 700km long magnetic feature that is interpreted to be the collision suture zone between the Archean age Yilgam Craton to the west and the Proterozoic age Albany-Fraser Origan to the east of this feature. The gold deposits are hosted by a package of Archean age high metamorphic grade gneissic rocks. Four distinct structural domains have been identified – Boston Shaker, Tropicana, Havana and Havana South, which represent the same mineral deposit disrupted by NE striking faults that post-date the mineralisation. The gold mineralisation is hosted by a shallowly southwest dipping sequence of quartz-feldspar gneiss, amphibolite, granulite and meta-sedimentary chert lithologies. The gold mineralisation is consentrated in a 'favourable horizon' of quartz-feldspar gneiss, with a footwall of garnet gneiss, amphibolite or granulite. Mineralisation is characterised by pyrite disseminations, bands and crackle veins within altered quartz-feldspar gneiss. Higher grades are associated with close-spaced veins and sericite and biotite alteration. Mineralisation presents as stacked higher grade lenses within a low-grade alteration envelope. Geological studies suggest the mineralisation is related to shear planes that post-date the development of the main gneissic fabric and metamorphic thermal maximum.
Drill hole information	 A summary of the many hole used to prepare the MRE is not practical for this public report. The MRE gives a best-balanced view of all the drill hole information.
Data aggregation methods	No drill hole intercepts are reported
Relationship between mineralisation width and intercept lengths	• All MRE drilling intersects the mineralisation at a high angle and as such approximates true thicknesses in most cases.
Diagrams	IGO has included representative diagrams in the main body of the report and prior ASX public reports.
Balanced reporting	• The MRE is based on all available data and as such provides the best-balanced view of the TGM gold deposits.
Further work	Exploration drilling is continuing the within the TGM tenement.

SECTION 3 – TROPICANA GOLD MINE – MINERAL RESOURCES	
JORC Criteria	Explanation
Database integrity	 AGA captures field data and drill hole logging directly in to handheld devices or laptop computers using Field Marshall and Geobank software. The drill hole data is managed in DataShed software, which is an industry well recognised system for management of geoscientific drill hole information. Logging, assays and survey information is loaded directly into Datashed using data import
	 routines, with loading procedures incorporating quality control checking. Data is validated following loading through visual inspection of results on-screen both spatially and using database queries and cross section plots. Typical checks carried out against original records to ensure data accuracy include items such as overlapping records, duplicate records, missing intervals, end of hole checks and so on.
Site visits	• The MRE Competent Person is site based and is actively involved in the management and supervision of the MRE work.
Geological interpretation	 To control the MRE process, three dimensional digital solids were prepared in LeapFrog software for the mineralised zones, dykes, shears and garnet (mostly hangingwall) gneiss.
	 Mineralised solids were prepared using a nominal ≥0.3g/t Au drill hole cut-off grade to encompass the gold mineralisation targeted for MRE. The dykes, shears and garnet gneiss solids were prepared from geological logging codes.
	 Regolith units were prepared as digital surfaces below topography based on the geological logging. The resulting MRE models encompass the mineralisation, the post-mineralisation barren dykes, the shears controlling higher grade mineralisation and the main waste rock units that are the footwall and hangingwall to the mineralisation.
Dimensions	 The open pit MRE is reported within an open pit Lerchs-Grossman-Analysis (LGA) pit optimisation 'shell' based on a gold price of \$A1,981/oz. (\$US1,400/oz), and life-of-mine pit designs.
	 This reporting shell has dimensions of approximately 4.7km along strike, up to 1km wide and up to 450m deep, spanning all the major deposits.
	 The underground MRE extends from the base of the open pit MRE below the open pit designs with plan extents in long dimension down dip to the SE by up to 900 m and up to ~200m wide. A smaller lode extends from the Havana South pit with down dip extents of ~200m and up to 200m wide. Other parts of the underground MRE are below the other pits.
Estimation and modelling techniques	 The TGM MRE was updated in August 2019: A single model was created to estimate both the open pit and underground MRE. Has been estimated from the drill hole data available to 15 July 2019, which included 20,352 drill holes for a total of 1,413,864 m of drilling of which, 1,437 holes were DD for 533,553m and 2,631 holes were RC for 302,646m. An additional 16,284 RC Grade Control holes were used in the estimate (577,665m). The drill hole data was composited to 2m lengths within geological estimation domains using Vulcan software. Grade top-cut or caps were applied to the composites after examining cumulative probability plots of the data, and high-grade estimation limits were applied to limit the spatial spread of high grades in weakly mineralised domains. The composite data was declustered in each estimation domain using cell declustering with varying cell sizes, to determine a stable declustered mean grade. Gold continuity was interpreted for each estimation domain and grades for large panels were estimated using ordinary block kriging in lsatis software, with estimation panel dimension 24mEx36mN×10mElv. A multi-pass search was used to account for the different drill hole spacings after incorporating the grade control drilling into the estimate. A short search-radius was used to estimate blocks in and around the grade control dral, with an expanding search up to 120×120m used for wider-spaced data. Selective Mining Unit (SMU) grades were then estimated for each panel using the Local Uniform Conditioning (LUC) method, where the SMU grade distribution within each panel is estimated through a change of support then the SMUs are localised using kriging so the distribution within each panel is estimated through a change of support then the SMUs. The SMU dimensions were set to prepare multiple SMUs per panel wi
Moisture	Tonnages are estimated on a dry basis.

SECTION 3 – TROPICANA GOLD MINE – MINERAL RESOURCES	
JORC Criteria	Explanation
Cut-off parameters	 Open pit: The open pit estimate is reported within a pit optimisation shell with an assumed gold prices of \$US1,400/oz (\$A1,981/oz) and cost assuming back-filling of pits ('Long Island Study'). On the basis described above, and assuming lower processing costs and higher metallurgical oxide ore, the cut-off are ≥0.3g/t Au for oxide MREs and ≥0.4g/t Au for transitional and fresh MREs. Underground: The underground MRE cut-off grade is based on the assumptions of the Boston Shaker Pre-Feasibility Study (PFS), and uses a gold price of \$US1,400/oz (\$A1,981/oz) and underground mining and processing cost assumptions for fresh MRE. The cut-off grade for reporting the underground MRE on this basis is ≥1.8g/t Au.
Mining factors or assumptions	 The mining factors and assumptions for the open pit MRE is the current mining method of conventional truck and shovel mining with blasting of 10 m benches in Tropicana and Havana and blasting of 7.5 m benches in Boston Shaker. Open pit ore is mined in three 1/3 blast height flitches, with ore predefined by 12mE×12mN RC grade control drilling and 1m downhole sampling. The assumed open pit mining selectivity are the SMU dimensions assumed for the LUC estimates. The assumption for the underground MRE is long-hole open stoping between 25m levels with paste backfill of stopes. No MRE margin (extremal) dilution has been modelled in either estimate. Eventual prospects of economic extraction for the open pit MRE have been assessed through pit optimisation studies and reporting the MRE within pit designs and a pit optimisation shell. For underground the underground MRE fraction, stope optimiser software has been used to create potential stope shapes that have a grade that exceeds 1.5 g/t Au
Metallurgical factors or assumptions	 The ore processing method at TGM is well-established with conventional, crushing, grinding then carbon-in-leach (CIL) extraction of gold followed by electrowinning to produce gold doré bars. An average metallurgical recovery as described in Section 4 further below, has been assumed for both the open pit and underground MREs based on metallurgical testing completed as part of the FS for the Havana Open Pit.
Environmental factors or assumptions	 TGM operates under an environmental management plan that meets or exceeds all statutory and legislative requirements. Mined waste rock is disposed in waste dumps which are progressively rehabilitated as mining progresses with any potentially acid generating waste encapsulated in non-acid generating material. A tailing storage facility is used to contain and capture process residues. The mine produces rehabilitation plans for ongoing rehabilitation and mine closure plans, and the costs are included in the ORE financial model.
Bulk density	 AGA routinely collects in situ bulk density measurements on ~10cm long core segments using the Archimedes Principle method of dry weight versus weight in water. There are ~206,395 density measurements in the estimation database with ~98% of measurements from fresh rock and the remainder in the regolith or cover. Measurements are collected over 1-5m intervals targeting intervals that are deemed representative of key lithologies in fresh rock. Density has been collected on core within the regolith from 'core-from-surface' drill holes, with the measurement method accounting for voids. Depending on rock type density ranges of 1.89-2.18 t/m³ in the saprolite and ranges from 2.56-2.96 t/m³ in the transitional and fresh rock domains. Density is estimated by OBK in the MREs apart from a few minor domains with sparse data (such as the regolith), where density is assigned as a mean of the data.

SECTION 3 – TROPICANA GOLD MINE – MINERAL RESOURCES	
JORC Criteria	Explanation
Classification	 The basis of classification of the TGM MREs into different JORC Code confidence categories is drill hole spacing. Open pit: Measured Mineral Resources: average 25mE×25mN collar spacing. Indicated Mineral Resources: average 50mE×50mN collar spacing. Inferred Mineral Resources: average 100mE×100mN collar spacing (or less) when evidence of geological or grade continuity is sufficient to support grade estimation. Underground: Measured Mineral Resources: average 12.5mE×12.5mN intercept spacing. Indicated Mineral Resources: average 12.5mE×12.5mN intercept spacing. Indicated Mineral Resources: average 25mE×50mN intercept spacing. Indicated Mineral Resources: average 100mE×100mN collar spacing (or less) when evidence of geological or grade continuity is sufficient to support grade estimation. Underground: Measured Mineral Resources: average 100mE×100mN collar spacing (or less) when evidence of geological or grade continuity is sufficient to support grade estimation. Inferred Mineral Resources: average 100mE×100mN collar spacing (or less) when evidence of geological or grade continuity is sufficient to support grade estimation. The underground MRE has been calculated using Datamine's Mineable Shape Optimizer (MSO), using 1.80 g/t cut-off. The UG MRE is then calculated as tonnes and grade inside the MSO volume at 0 g/t cut off. AGA considers that the Measured Mineral Resources support mine planning with a 90% confidence interval of ±15% on tonnage or grade on a quarterly production basis, with Indicated Mineral Resources have the same confidence but applicable on an annual production basis. The Competent Person considers this classification takes in to account all relevant factors such as data reliability, confidence in the continuity of geology and grades, and the quality, quantity and distribution of the data. The classification refl
Audits or reviews	 The open pit MRE methodology was audited by MRE consultants Quantitative Geoscience in 2007, 2009 and 2011. MRE consultants Golder Associates audited the 2015 estimate in 2015. MRE consultants Optiro reviewed and endorsed the MRE prepared in November 2017. AGA also conducts internal peer reviews on the completion of estimate updates.
Relative Accuracy/ Confidence	 AGA has carried out non-conditional simulation studies to confirm the relationship between drill spacing and 90% confidence interval assumptions and found the study results in agreement with the drill spacing classification criteria described above. The trial grade 10mE×10mN control pattern drilled within a 100×100m areas during the project FS has also confirmed the precision assumptions and confidence the MRE in that area Mine reconciliation for the life-of-mine to date is satisfactory.

Section 4 – Tropicana Gold Mine – Ore Reserves	
JORC Criteria	Explanation
Mineral Resource estimate for conversion to Ore Reserves	 The MRE used for the open pit ORE is described in the preceding sections of this JORC Table 1. The estimate used for the underground ORE study is the underground MRE described in the preceding sections of this JORC Table 1. The TGM MREs are reported inclusive of the open pit and underground OREs.
Site visits	 The Competent Person for the TGM OREs works onsite and as such has a good knowledge of the operation and has regular contact with personnel providing key inputs to the estimate.
Study status	 Open pit: Mine design using conventional mining methods and current processing operations confirming that the mine plans are technically feasible and economically viable. Underground: Mine design using conventional mining methods and current processing operations confirming that the mine plans are technically feasible and economically viable.
Cut-off parameters	 Open pit: The open pit ORE cut-off grade is reported within a pit design with an assumed gold price of \$US1,100/oz (\$A1,512/oz) and costs assuming back-filling of pits. On the basis described above, the cut-off is ≥0.6g/t Au for oxide ORE and ≥0.7g/t Au for transitional and fresh ORE. Underground: The underground MRE cut-off grade is based on the assumptions of the Boston Shaker PFS and the net return of gold produced at the processing plant for each ore type, and uses a gold price of \$US1,100/tr.oz (\$A1,512/tr.oz). The specific cut-offs for reporting the underground ORE are ≥1.8g/t Au for fresh rock. Costs include processing and maintenance fixed and variable costs, general administration costs, ore premium including rehandle and overhaul, closure costs and all non-mining related stay-in-business capital expenses. Underground costs include development and stoping cost.

SECTION 4 – TROPICANA GOLD MINE – ORE RESERVES	
JORC Criteria	Explanation
Mining factors or assumptions	 Open pit: The open cut material is scheduled to be mined using conventional methods using a large hydraulic shovel/excavator fleet matched with large rear dump trucks. The pits are designed based on 10.0m to 12.5m benches. Overall wall angles for the open pit designs range between ~36° for the footwall and 59° for the hangingwall. Conventional drill and blast techniques are used to break the rock. Within the open pit MRE model ore loss and dilution is accounted for in the selectivity of the SMU sizes volume, as such no further factors applied. Underground:
Metallurgical factor or assumptions	 The metallurgical process for TGM's ores is established and is a process flow of crushing (grinding rolls), grinding, and the recovery of gold through CIL and electrowinning to produce gold bars. Gold recovery factors are based on extensive metallurgical testing and range from 92.5% recovery in mineralised transported material down to 89.9% recovery in fresh rock. No deleterious elements are present in the open pit or underground ores. In the project FS, pilot scale metallurgical testing was carried out on large diameter (PQ) core collected in a spatially representative manner from the deposit. To date metallurgical recoveries have been consistent with the forecasts from these studies. As a gold mine, the gold doré bars produced are not subject to any specification requirements. Installation of additional ball mills, which is in progress is anticipated to improve metallurgical recovery by up to 3%.
Environmental	 TGM operates under an environmental management plan that meets or exceeds all statutory and legislative requirements. Rock waste is disposed in waste dumps which are progressively rehabilitated as mining progresses with any potentially acid generating waste encapsulated in non-acid generating material. A tailing storage facility is used to contain and capture process residues. The mine produces rehabilitation plans for ongoing rehabilitation and mine closure plans, and the costs are included in the ORE financial model.
Infrastructure	 All major infrastructure required for the mining and processing is in place. The owner and contractor staffing are fully complete, with personnel sourced on a fly-in-out basis from Perth or Kalgoorlie. No other significant infrastructure is anticipated and sustaining capital cost for infrastructure are included in the financial model.
Costs	 The capital cost of removing waste overburden are included in the evaluation of the applicable pit or underground mine designs. Mining operating costs are provided by the mining contractor and other costs are sourced from in the mine operating budget. As discussed, there are no deleterious elements and as such related costs are not relevant. The source of \$A:\$US exchange rates is AGA corporate guidance. Transportation charges for gold doré bars is relatively minor and are charged on a contract basis with the refinery. Treatment and refining charges are included in the refining contract and there are no specification ore penalties associated with treatment and refining. WA State royalties are levied at 2.5% of the value of gold produced.
Revenue factors	 The assumption for gold prices for ORE is based on corporate guidance and assessment of historical prices. The \$AU to \$US exchange rate is also based on corporate guidance and assessment of historical exchange rates. Refer to the body of this ASX public report for price and FX details.
Market assessment	 No market assessment has been completed for TGM ORE given the ready saleability of gold. IGO's share of TGM's gold is sold to the Perth mint or through agreements with several financial institutions.

SECTION 4 – TROPICANA GOLD MINE – ORE RESERVES	
JORC Criteria	Explanation
Economic	 The inputs into the economic analysis for the underground ORE update have already been described above in previous subsections. The economic evaluation has been carried out on a real basis (adjusted for inflation) with rates provided by AGA corporate. The confidence in majority of the economic inputs is high as TGM is an operating mine and as such, operating and capital costs are well understood. The confidence in metal prices and exchange rates is consistent with routine industry practices with the data derived from reputable forecasters. The discount rate used for NPV calculations is derived from the weighted average cost of capital in Australia.
Social	• TGM has all necessary agreements in place with key stakeholders and matters leading to social licence to operate.
Other	 There are no material naturally occurring risks associated with the TGM. There are no material legal agreements or marketing arrangements not already discussed in prior sub sections of this table. There are no unresolved third-party matters hindering the extraction of the open pit or underground OREs. Necessary government and statutory approvals are current.
Classification	 The TGM open pit and underground OREs has been classified into Proved and Probable Ore Reserve as per the JORC Code classification based on the underlying MRE classification in the MRE model, with Measured Mineral Resources converted to Proved Ore Reserves, and Indicated Mineral Resources converted to Probable Ore Reserves. The classifications applied to the estimate are consistent with the opinion of the Competent Person reporting the both the open pit and underground ORE.
Audits or reviews	• The current open pit and underground OREs has been reviewed internally by AGA technical personnel.
Discussion of relative accuracy and confidence	 AGA has carried out simulation to quantify the confidence in the open pit and underground OREs – refer to the commentary at the end of Section 3 above. The main driver of accuracy and confidence is the spacing of the pre-production drilling, which is captured in the MRE JORC Code classifications underpinning the underground OREs. Confidence in the open pit and underground inputs is high given the mine is in operation and costs, prices and recoveries are well understood. The open pit and underground ORE estimates are considerate to have sufficient local accuracy to support mine planning and production schedules with Proved Ore Reserves considered a reliable basis for quarterly production targeting and Probable Ore Reserves reliable for annual production targets. Confidence in the mine design and schedule are high as mining rates and modifying factors are based on actual site performance. Mine designs are consistent with what has been effective previously. The mine to mill reconciliation data to date indicates the forecast precision of the open pit estimates is good with the Ore Reserve estimate being slightly conservative.

	SECTION 1 – FRASER RANGE DRILLING RESULTS – SAMPLING TECHNIQUES AND DATA
JORC Criteria	Commentary
Sampling techniques	 The sampling techniques used at Fraser range have been aircore drilling, reverse circulation (RC) drilling and diamond drilling (DD) as detailed in the following subsections.
Drilling techniques	 Aircore: Aircore holes have been drilled by six rigs owned and operated by Wallis Drilling Pty Ltd. Aircore holes are NQ (50.6mm) diameter at a depth directed by IGO geologist and drilled using tungsten carbine air core bits. All aircore holes are vertical. Reverse Circulation: RC holes were drilled using a KWL 700 or Schramm 685 truck mounted drilling rig owned and operated by Frontline Drilling Australia Pty Ltd. Holes are drilled to a depth directed by the on-site geologist using standard 143mm tungsten carbide bits attached to a percussion hammer. Holes are typically drilled at an inclination of between -60° and-70° on an azimuth directed by the supervising rig geologist. Holes paths are surveyed using a gyro instrument every 30m to check for any deviation and allow reliable determination of the sample location. Diamond: DD holes were drilled by five track or truck mounted rigs owned and operated by West Core Drilling Pty Ltd, Frontline Drilling Australia Pty Ltd and DDH1 Drilling Pty Ltd. Holes were collared from surface with either PQ-core (85mm diameter) or PQ rock-rolled, which was then reduced to HQ-core (63.5mm diameter) and subsequently NQ2-core (50.6mm diameter) at depths directed by the IGO geologist. All HQ and NQ core was oriented using REFLEX ACT III-H or N2 Ezy-Mark orientation tools.
Drill sample recovery	 Aircore and RC sample recovery is not assessed and logged but noted if sample recovery is wet or dry to determine the potential sample smearing contamination. Aircore and RC down hole depths are checked against drill rod counts. For recovery checking and orientation marking purposes, the DD core was reconstructed into continuous runs in an angle iron cradle. DD recoveries were quantified as the ratio of measured core recovered length to drill advance length for each core-barrel run. There were no material core-loss issues or poor sample recoveries over the sampled intervals. DD down hole depths were checked against the depth recorded on the core blocks, and rod counts were routinely carried out and marked on the core blocks by the drillers to ensure the marked core block depths were accurate.
Logging	 Qualitative logging of aircore and RC chips and core and DD core included lithology, mineralogy, mineralisation, structural, weathering, colour and other features of the samples. Quantitative logging of DD core was completed for geotechnical purposes. The total lengths of all drill holes have been logged. Photographs of all DD trays are taken and retained on file with the original core trays stored in the core library at the 100% IGO owned Nova Operation. All RC and aircore chip trays and aircore bottom of hole core samples are retained at the IGO Midvale shed. End of hole aircore plugs ranging from ~5-15cm are drilled where possible for bottom of hole analysis work. The logging is considered adequate to support downstream exploration studies and follow-up drilling with RC or diamond core.
Sub-sampling techniques and sample preparation	 Sample piles representing one aircore or RC drilling metre are spear sampled to collect 4m composite samples, with ~ 3kg collected in pre-numbered calico bags. This style of sampling is acceptable for prospectivity assessment but not Mineral Resource Estimation work. A 1m RC split sample is also collected directly from the cyclone port and stored in pre-numbered calico bags. These samples are not analysed unless the 4m-composite sample assays report significant mineralisation. The DD core was generally subsampled into half-core using an automated wet-diamond-blade core saw. Exceptions were for duplicate samples of selected intervals, where quarter-core subsamples were cut from the half-core. All samples submitted for assay were selected from the same side of the core. The primary tool used to ensure representative drill core assays was monitoring and ensuring near 100% core recovery. The nature of the drilling method means representation is indicative with sampling aimed at finding anomalous concentrations rather than absolute values for MRE work. The laboratory sample is by oven drying (4-6 hours at 95°C), coarse crushing in a jaw-crusher to 100% passing 10 mm, then pulverisation of the entire crushed sample in LM5 grinding robotic mills to a particle size distribution of 85% passing 75 µm and collection of a 200g sub-sample. Quality control procedures involve insertion of certified reference materials, blanks, and collection of duplicates at the pulverisation stage. The results of quality control sampling are consistent with satisfactory sampling precision.

	SECTION 1 – FRASER RANGE DRILLING RESULTS – SAMPLING TECHNIQUES AND DATA
JORC Criteria	Commentary
Quality of assay data and laboratory tests	 No geophysical tools were used to determine any element concentrations. Bureau Veritas-Perth completed sample preparation checks for particle size distribution compliance as part of routine internal quality procedures to ensure the target particle size distribution of 85% passing 75 microns is achieved in the pulverisation stage. Field duplicates and CRMs were routinely inserted in the routine aircore and RC sample stream at a frequency of 1:20 samples. Field duplicates, CRMs and blanks were routinely inserted at frequencies between 1:10 and 1:20 samples for DD sample streams. Laboratory quality control processes include the use of internal lab standards using certified reference materials (CRMs) and duplicates. CRMs used to monitor accuracy have expected values ranging from low to high grade, and the CRMs were inserted randomly into the routine sample stream to the laboratory. The results of the CRMs confirm that the laboratory sample assay values have good accuracy and results of blank assays indicate that any potential sample cross contamination has been minimised. Following sample preparation and milling, all aircore and RC samples were analysed for a 63-element suite: Inductively coupled plasma mass spectroscopy (ICP-MS) for Ag, As, Au, B, Be, Bi, Cd, Ce, Co, Cr, Cs, Ga, Hg, La, Mo, Nb, Pb, Pd, Pt, Rb, Sb, Sc, Se, Sr, Te, Th, U, W, Y and Zn. Fire assay digestion and mass spectroscopy (FA-MS) for Ag, As, Be, Bi, Cd, Ce, Co, Cr, Cs, Ga, Gd, Ge, Hf, Ho, In, La, Lu, Mn, Mo, Nb, Nb, Pb, Pr, Rb, Sb, Sc, Se, Sn, Ta, Tb, Te, Th, Th, TH, Y b and Zr. Fusion digestion and X-ray fluorescence (XRF) analysis of powder fused with lithium borate flux including 5% NaNO3 – AI, Ba, Ca, Fe, K, Mg, Na, Ni, P, S, Si, S, Sr, Ti, Th, W and Zr. Fire assay of 40g charge with ICP-MS finish – Ag, As, Be, Bi, Cd, Ce, Co, Cr, Cs, Cu, Dy, Er, E
Verification of sampling and assaying	 Euss of righted (EO) was determined by fobolic thermo gravimetic analysis at 1000 °C. Significant intersections were checked by the senior IGO geological personnel. No twinned holes were completed. The logging has been validated by an IGO on-site geologist and compiled onto the IGO acQuire SQL drill hole database by IGO's Geological Database Administrator. Assay data are imported directly from digital assay files from contract analytical company Bureau Veritas (Perth) and are merged in the Company acQuire SQL drill hole database by IGO's Geological Database Administrator. Data is backed up regularly in off-site secure servers. No geophysical or portable XRF results are used in exploration results reported. There have been no adjustments to the assay data.
Location of data points	 Surface hole collar locations were surveyed using either a Leica GPS1200 (expected accuracy is better than ±0.25m for all three dimensions) or a handheld Garmin GPS unit and averaging for 90 seconds with an expected accuracy of ±6m for easting and northing with elevation also recorded and later adjusted using surveyed topography. Aircore hole path surveys are not completed as holes are not used for MRE work. RC downhole surveys are completed using a gyro instrument every 30m to check for any deviation and allow reliable determination of the sample location. Drill path gyroscopic surveys were completed at either 10m or 12m intervals down hole using a north seeking REFLEX GYRO SPRINT-IQ for DD holes. The grid system is GDA94 / MGA Zone 51 using the AHD for elevation.
Data spacing and distribution	 Aircore holes are drilled on a ~400m or 800m line spacing on east-west fences at a ~1.5km to 3.0km fence spacing north south. The DD and RC drilling targets conductive plates generated from surface geophysics (moving loop EM) and anomalous geochemistry generated from aircore and soil sampling. All samples have been composited using length-weighted intervals for Public Reporting.

SECTION 1 – FRASER RANGE DRILLING RESULTS – SAMPLING TECHNIQUES AND DATA	
JORC Criteria	Commentary
Orientation of data in relation to geological structure	 The aircore and RC drilling from surface is designed to test the regolith and basement below cover – the orientation in relation to geological structure is not always known. DD from the surface was designed to cross the conductive plate targets at a high angle. Holes have been drilled from both the southeast and northwest to provide stratigraphic coverage. True widths of the intervals are often uncertain as the drilling is aimed at finding anomalies not MRE definition. The possibility of bias in relation to orientation of geological structure is currently unknown.
Sample security	 The chain-of-sample custody is managed by the IGO staff. Samples were stored at the IGO's currently active mine site Nova Operation ("Nova") and sampled in the field by IGO staff and contractors, at the time of drilling. The DD core was wet cut using a diamond bland and sampled at Nova by IGO staff and contractors. Samples were placed in pre-numbered calico bags and further secured in green plastic sample bags with cable ties. The samples are further secured in a bulk bag and delivered to the Bureau Veritas-Perth by contractor freight McMahon Burnette. A sample reconciliation advice is sent by the Bureau Veritas-Perth to IGO's Geological Database Administrator on receipt of the samples. Any inconsistences between the despatch paperwork and samples received is resolved with IGO before sample preparation commences Sample preparation and analysis is completed at the one the laboratory – Bureau Veritas-Perth. The risk of deliberate or accidental loss or contamination of samples is considered very low.
Audits or reviews	No specific external audits or reviews have been undertaken.

Section 2 – Fraser Range Results – Exploration Results				
JORC Criteria	Commentary			
Mineral tenement and land tenure status	 The Fraser Range significant intercepts are in 19 exploration licences. The table management and JV arrangements relating to these tenements. 	below is a listi	ng of the expiration	
	Joint venture	Tenement	Expiry	
	IGO (30%)/ AngloGold Ashanti Australia Ltd (70%)	E39/1454	6/05/2022	
	IGO (90%)/Buxton Resources Ltd (10%)	E28/2201	27/09/2022	
	IGO (51%) /Carawine Resources Ltd (49%)	E39/1733	18/11/2023	
		E69/3052	10/12/2022	
	IGO (70%)/FraserX Pty Ltd (30%)	E28/1630	1/10/2019	
	IGO (60%)/Geological Resources Pty Ltd (20% + Kamax 10%)	E39/1653	19/04/2022	
	IGO (100%)/Independence Newseach Pty Ltd	E28/2623	4/01/2022	
		E28/2625	5/01/2022	
	IGO (100%)/ Independence Winward Pty Ltd	E28/2266	21/09/2022	
		E28/2419	14/09/2021	
		E28/2459	2/11/2019	
		E69/2989	3/04/2023	
	IGO (70%)/Kamax Resources Ltd (30%)	E28/2367	6/05/2020	
	IGO (60%)/NBX Pty Ltd (30% + 10% Orion)	E39/1654	22/04/2022	
	IGO (70%)/Rumble Resources Ltd (30%)	E28/2366	17/08/2019	
	IGO (51%)/Segue (Plumridge) Pty Ltd (49%)	E28/1475	16/11/2019	
		E28/2301	24/07/2023	
		E39/1731	23/09/2023	
	IGO (70%)/Tasex Geological Services Pty Ltd (30%)	E28/2017	23/12/2018	
Exploration done by other parties	 There has been historical reginal explored for gold and base metals by Companies listed above. Previous work o tenements consisted of aeromagnetic/radiometric and DTM Aeromagnetic / Radiometric / DTM surveys, soil sam geological mapping, ground EM survey. 			
	There has been previous sporadic air core, RC and diamond drilling conducted.			
Geology	• The regional geology setting is a high-grade metamorphic terrane in the Albany Fraser belt of Western Australia.			

SECTION 2 – FRASER RANGE RESULTS – EXPLORATION RESULTS		
JORC Criteria	Commentary	
	 Gabbroic intrusions have intruded a metasedimentary package within the belt are host the Ni-Cu-Co mineralisation. The deposits are analogous to many mafic hosted nickel-copper deposits worldwide such as the Raglan, Voisey's Bay in Canada, and Norilsk in Russia. The sulphide mineralisation is interpreted to be related to the intrusive event with mineralisation occurring in several styles including massive, breccia, network texture, blebby and disseminated sulphides. The main sulphide mineral is pyrrhotite, with nickel and cobalt associated with pentlandite and copper associated with chalcopyrite. The region is considered by IGO to have the potential to host mafic or ultramafic intrusion related Ni-Cu-Co deposits based on the discovery of Nova-Bollinger Ni-Cu-Co deposit and volcanic massive sulphide deposit based on IGO's Andromeda exploration prospect. 	
Drill hole Information	Location details of significant intercept holes are tabulated in the body of the ASX Public Report	
Data aggregation methods	 Significant drill hole intercept results have been reported using a combined >1000ppm cut-off for key elements with no internal dilution consideration No capping or top-cutting of high grades were undertaken. The intercepts are calculated on a length weighted basis. Holes included on maps and diagrams without significant values are not considered for follow up assessment Metal equivalent grades were not reported. 	
Relationship between mineralisation widths and intercept lengths	Only downhole intersection widths are provided due to the nature of the drilling – any relationships between width and intercept lengths are likely coincidental	
Diagrams	A plan of significant intercepts and intercept table is included in the body of the ASX Public Report	
Balanced reporting	 Drill intercepts having lengths >4m and with one or more Ni, Cu, Co and Zn values greater than 1,000ppm grade are listed in the main body of this Public Report The remainder of the results are considered low grade or barren. Drill hole locations of not reported drill holes are included in the maps in the main body of this Public Report. All drill results provided in the Table represent the intervals as sampled and assayed. 	
Other substantive exploration data	 Surface Moving Loop EM survey identified three dimensional geophysical targets that are included in the diagrams in the body of this ASX release. 	
Further work	• Further drilling is underway to test the conductive plates generated from the Surface Moving Loop EM surveys.	

SECTION 1 – LAKE MACKAY PROJECT – SAMPLING TECHNIQUES AND DATA		
JORC Criteria	Explanation	
Sampling	 Reverse Circulation (RC) drilling commenced in April 2019 – see relevant subsection below related to drilling, sample collection, sample propagation and assay 	
techniques	 The results are effectively specimens used to assess prospectivity and not intended for use in Mineral Resource estimation (MRE) grade determination work. 	
Drilling techniques	 RC drilling was completed using a 127mm face-sampling hammer bit. The rig was owned and operated by drilling contractor Strike Drilling. 	
Drill sample recovery	 RC drilling recovery was visually estimated from the cutting piles that were placed on the ground with qualitative recovery codes assigned to each sample - being 'C' for contaminated, 'G' for good, 'M' for moderate, 'O' for oversize, 'P' for poor and 'U' for undersized. The sample were also logged as being wet or dry. With recovery logged as good and dry for most of the samples collected through zones of mineralisation. 	
Logging	 The RC cutting were qualitatively logged for each one metre interval using IGO's lithological coding system capturing information for lithology, weathering, colour, alteration, veining and mineralisation. A washed chip sample was collected in a chip tray for each drill hole one metre interval. The total length of each drill hole was logged. The detail of logging is acceptable for any downstream studies such as Mineral Resource/Ore Reserve estimation or metallurgical studies. 	
Sub-sampling techniques and	Four-metre composite samples of approximately 4kg were collected from an orbital splitter into pre-numbered calico bags. One- metre drill samples were laid out on to the ground in 30m rows	
sample preparation	 Selected zones of interest were grab sampled using a scoop over one-metre intervals (~1-2kg). This was determined based on visual logging of mineralisation, hand-held XRF or once assay results were returned from the composite samples. The calico bag samples were then packed into polywoven sacks and transported by IGO's field team to Intertek Laboratory in Alice Springs. Samples were dried, and the whole sample was crushed and pulverised to 85% passing 75µm, and a sub-sample of approx. 200g retained. A duplicate field sample was taken at a rate of 1 in 50. Field duplicate assay results are reviewed to confirm that the sample results are representative. For exploration drilling the sample size is considered appropriate to give an indication of mineralisation given that the sample is crushed to -75µm. 	
Quality of assay data and laboratory tests	 Four-metre composites were analysed used 10g Aqua Regia and analysed for Au, Ag, Al, As, B, Ba, Bi, Ca, Cd, Ce, Co, Cr, Cu, Fe, La, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sc, Sr, Te, Ti, Tl, V, W and Zn. Aqua Regia is considered a partial digest. 1 metre intervals were analysed using 25g fire assay for Au at all prospects with Pt and Pd included at the Grimlock Prospect. The fire assay is a total digest. 1 metre intervals were analysed using four-acid digest for Ag, Al, As, Ba, Bi, Ca, Cd, Ce, Co, Cr, Cu, Fe, K, La, Li, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sc, Sn, Sr, Te, Ti, Tl, V, W and Zn The four-acid is considered a "near total" digest. No geophysical or hand-held XRF results are used in exploration results reported. Laboratory QAQC involves the use of internal lab standards and blanks using certified reference materials. Lab duplicates are also monitored to ensure the sample results are representative. IGO also provides reference samples and blanks that are inserted every 50 samples. 	
Verification of sampling and assaying	 Significant intersections were identified in the field by an IGO geologist and were selected for one metre sampling. No twinned holes were completed. Primary data was collected in Field Marshall files. Data are imported directly to the database with importers that have built in validation rules. Assay data are imported directly from digital assay files 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. Data is reviewed and manually validated upon completion of drilling. From time to time assays will be repeated if they fail the company QAQC protocols, however no adjustments are made to assay data once accepted into the database. 	
Location of data points	 Hole collars were located using handheld Garmin GPS equipment using a read time of ~90s. The expected precision is ±3m in easting and northing. The plunge of the drill holes was determine using a compass and clinometer at the drill collar, with down hole paths surveyed using the Relex Ex-trac collected readings every 30m down hole during the drilling process. The grid system is MGA Zone 52 using the GDA94 elevation datum 	

SECTION 1 – LAKE MACKAY PROJECT – SAMPLING TECHNIQUES AND DATA		
JORC Criteria	Explanation	
Data spacing and distribution	 The drilling spacing used was not intended to support Mineral Resource estimation work. This drilling is not used for resource estimation, it was intended to attempt to identify bedrock sources of multi-element soil and rock chip geochemical anomalies associated with gold mineralised systems and to test conductors that were identified from moving loop electromagnetic surveys. The down hole sampling interval was a four-metre composite except in zone of interest where the interval was reduced to one metre. 	
Orientation of data in relation to geological structure	 The drill lines were designed to be perpendicular to the soil anomalies and the EM conductor. No sampling bias is considered to have been introduced due to orientation. 	
Sample security	 The RC drill samples were collected in pre-numbered calico bags and then placed in polyweave bags. They were transported from the field to the sample preparation laboratory in Alice Springs by XM Logistics and IGO personnel. Once the sample preparation is completed in Alice Springs the samples are transported to Perth for analysis using the laboratories standard chain of custody procedure. 	
Audits or reviews	No external audits or review have been completed on the exploration results.	

Section 2 – Lake Mackay – Exploration Results		
JORC Criteria	Explanation	
Mineral tenement and land tenure	 The Lake Mackay Project currently consists of multiple tenements with the results reported from Norther Territory exploration licences (ELs) EL31794 IGO 59.2%/Prodigy Gold 25.4% and /Castile 15.4%. EL30731, El24915 and EL31234 IGO 70%, Prodigy Gold 30%. 	
status	• At the time of reporting these tenements are in good standing and no known impediments exist in obtaining a licence to operation and conduct exploration.	
	Prodigy Gold NL and IGO entered into a multi-phase agreement covering the Lake Mackay Project on 21 August 2013.	
	 In October 2018 completed Phase 2 of the agreement to earn a 70% interest in the project. This involved subscribing for \$1.5M ABM shares in placement with a 6-month escrow period and spending \$6M on exploration on the project over four years. 	
	 IGO and Prodigy Gold are now funding their share of expenditure to maintain 70% and 30% respectively, including in the Castile JV where Castile has elected not to contribute and are diluting down to a 1% NSR. 	
Exploration done by other parties	 EL24915 was previously explored by BHP in the South Tanami JV. BHP flew a Geotem survey in 1999 and did ground EM and drilling in 2004 targeting nickel sulphide mineralisation. Sporadic soil and rock chip sampling were undertaken by Teck over parts of EL31794 and EL29747 but this work was inconclusive. 	
Geology	The Lake Mackay Project is a belt-scale project covering the margin of the Palaeoproterozic Southwestern Aileron and Warumpi Provinces of the North Australian Craton.	
	 IGO and JV partners are the first movers in this belt to systematically explore the area. 	
	 The region is considered to have potential for the discovery of deposits having several mineralisation styles including Iron-oxide- copper-gold (IOCG) deposits, iron-sulphide-copper-gold (ISCG) deposits, Tanami-style orogenic shear hosted gold deposits and Ni-Co Laterite deposits. 	
Drill hole Information	• A table of drill hole information relating this Public Report is included in the body of the report.	
Data aggregation methods	• Significant drill hole intercepts are reported using threshold of >0.5g/t Au or >0.1% Co, 0.5% Cu or 0.5% Ni.	
Relationship between mineralisation widths and intercept lengths	• The mineralisation geometry is poorly understood so drill hole interception lengths may or may not be indicative of true widths.	

SECTION 2 – LAKE MACKAY – EXPLORATION RESULTS		
JORC Criteria	Explanation	
Diagrams	A section view of the Phreaker Prospect drilling is included in the body of this report.	
Balanced reporting	 Only significant intercepts in mineralised zones have been reported. These are reported to convey the prospectivity of the mineralised zones and are not intended to be indicative of average grade of mineralisation. 	
Other substantive exploration data	 Metallurgical testing of Grimlock surface samples has indicated that 97% of contained cobalt could be recovered from a high grade surface bulk sample. 	
Further work	 IGO plans to continue with soil sampling, survey geophysics on additional targets in WA tenements. Diamond drilling is planned to test a deeper MLEM conductors at Phreaker Prospect and two untested MLEM targets in the east of the project area. 	
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