



# VENTURE FORWARD.

SUSTAINABILITY REPORT 2017



Independence Group NL ('IGO' or 'the Company') is a leading ASX-listed diversified mining, development and exploration company with a portfolio of high-quality gold and base metals mining operations in Western Australia, and a growing pipeline of belt-scale greenfield exploration projects.

The Company's wholly owned assets include the world-class Nova nickel-copper-cobalt operation, the Jaguar zinc-copper-silver operation and the Long nickel operation. IGO also produces gold from its 30% interest in the Tropicana Gold Mine, a joint venture with AngloGold Ashanti.

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Statistics related to hours worked as presented in this report include both permanent full-time and part-time Independence Group NL (IGO) employees and contractors. AngloGold Ashanti Australia Ltd (AngloGold Ashanti) report on a calendar year, and consequently some of the reported figures for the Tropicana Gold Mine, as noted in the text, are for the 2016 calendar year. All monetary amounts are in Australian dollars. Dollar amounts presented in this report are approximate and the reader is directed to IGO's 2017 Annual Report for further information. Quantitative parameters referred to in this report are summarised in the appendices. All numbers highlighted in the report's data dots relate to financial year 2017 (FY17). For supporting explanations and references please refer to the appendices.

A photograph of a sunset over a forest. The sky is a mix of orange, yellow, and blue, with the sun low on the horizon. The silhouettes of trees are visible against the bright sky.

**WE ARE CREATING  
LONG-TERM  
VALUE FOR OUR  
SHAREHOLDERS,  
OUR PEOPLE AND  
OUR COMMUNITY.  
THIS IS IGO.**

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# MESSAGE FROM CHAIRMAN & CEO



On behalf of the Board of Directors, we are pleased to present the 2017 IGO Sustainability Report.



**PETER BRADFORD**  
MANAGING  
DIRECTOR  
& CHIEF  
EXECUTIVE  
OFFICER

**PETER BILBE**  
CHAIRMAN

IGO has a set of publicly stated values that genuinely inform the decisions we make. It is our intent that consideration is always given to how things get done and the subsequent impacts of our actions. In this report we seek to quantify how IGO's business affects our people, our host communities, and the environment in which we operate. This report also serves as a means for us to address those environmental, social and governance matters that are of most concern to our stakeholders.

It was once the case that our stakeholders could be divided between those with a financial interest in our business and those concerned with our socio-environmental impacts. Increasingly, this is an artificial distinction. The public takes an ever-growing interest in circumstances where poor governance is demonstrated by any business of scale and what tax, if any, is being paid by corporate entities. Similarly, our institutional and private investors expect us to profit in a manner that serves the community well - with known, constrained, and regulated impacts.

Many mainstream institutions have taken unequivocal public positions on these matters. For example, in July 2017, the Australian Council of Superannuation Investors (ACSI), whose members purportedly manage over \$1.5 trillion in assets, stated its aspiration to 'achieve a genuine, measurable and permanent improvement in the Environment, Social and Governance (ESG) practices and performance of the companies in which they invest'. As of 2016, 92% of the top 200 ASX-

listed companies provide some level of sustainability reporting. The need to report is therefore no longer in question; rather the challenge is to provide the right information in terms of both quality and quantity.

At IGO, careful consideration has been given to this matter. In our previous two reports, we provided information in general conformance to the Global Reporting Initiative (GRI) methodology. This choice was in line with industry trends. In a 2015 survey of sustainability reporting across 45 countries, KPMG reported that 60% of all reporting entities were using the GRI guidelines, which we continue to follow.

The world is rapidly changing. It is anticipated that sustainability reporting will increasingly become more akin to financial reporting. The GRI, and comparable methodologies, will likely transition from producing guidelines to having prescriptive standards with an increasing emphasis on the validation of data. Further, the business community is anticipating the introduction of new disclosure requirements, and a move from voluntary to mandatory disclosure - particularly in the areas of tax and climate-related financial disclosures. Given these developments, IGO will explore how we and our stakeholders might be best-served by this change - a change that will likely see us move to more integrated reporting of both financial and environmental, social and governance matters. However, our choice of reporting method does not speak to our motivation to report. IGO produces a sustainability report, not because it



**\$240M  
CAPITAL  
INVESTED  
IN FY17**

is the expected norm, but because we believe that the interests of the business and our stakeholders are best served by transparent disclosure.

This financial year, IGO has continued to improve its business through a steadfast focus on leadership. We expect our people to deliver in accordance with our values. We act in the belief that our leaders, and in particular, our front-line leaders, define our business culture and drive our business performance. This year has seen the successful introduction of IGO's Leadership Development Program, an activity that is standard fare in large organisations, but is something genuinely special in a comparatively small organisation such as ours.

Invariably, mining and exploration processes have both environmental and social impacts. In the face of this reality, we are committed to understanding these impacts and working with our stakeholders to find mitigating measures and solutions. It is with considerable pride that we report that our business experienced no material environmental incidents in FY17 and made significant progress in cleaning-up parts of the historic Teutonic Bore mine; a site abandoned in the 1980s that falls within the domain of our Jaguar Operation. We have also gone from strength to strength in engaging our host communities. At Nova, we have achieved success by engaging in benefit sharing with the Ngadju Traditional Owners through job creation and royalty payments.

One of the ever-present issues for the industry is potential workplace injury. We measure our performance using industry-standard metrics that enable both internal and external performance comparisons. Based on these metrics we have seen improvements in some areas and declines in others. However, we remain ever mindful that these statistics reflect trauma suffered by our colleagues and friends. In FY17, IGO's people experienced three serious injuries where each injured person lost more than ten working days in recuperation. Importantly, beyond those incidents that resulted in injury, we continued to experience too many potentially serious incidents; the type of near misses where someone could have been seriously injured or killed. At IGO, safety is more than a priority; because priorities change, safety is a value. We put safety first. To this end, we continue to pursue an ongoing body of work to improve the safety of our workplace, our systems of work, and the culture to ensure the safety of our people and the community.

In the coming year, our Long Operation will transition to care and maintenance while we consider further exploration and value-adding options. We have been working with our employees and our host community at Kambalda to ensure that this process is transparent and enables everyone to plan for their future.

Beyond ensuring the day-to-day safe and cost-effective delivery of product from our existing mines, and the transparent planning for closure of mines at the end of mine

life, we are also working to maintain a pipeline of new projects to sustain and grow our business. In the mid-term, these opportunities may take the form of acquisitions, while in the longer term we will continue to strive for organic growth through exploration. To this end, in FY17, we consolidated an approximate 12,000km<sup>2</sup> tenement holding on the Fraser Range, in the region of our Nova Operation.

In the last twelve months, we have achieved much. We have strengthened our balance sheet and brought the Nova Operation to commercial production levels. We have achieved this while also improving the capacity and effectiveness of our teams and our business processes.

This report provides a complete overview of the significant non-financial aspects of our business to enable our stakeholders to more broadly assess IGO's performance during FY17. Again, we present our key activities and our material impacts, both positive and negative. We have sought to place our activities in the context of the wider industry, the environmental settings in which we operate, and the communities of which we are a part. It is our intention to be transparent in both our objectives and how they are delivered.

We encourage and welcome your feedback on this report and on our environment, safety and governance performance in general.

# ABOUT IGO



**\$17.6M**  
IN DIVIDENDS  
PAID TO  
SHAREHOLDERS  
IN FY17

## ABOUT IGO

Established as an Australian gold exploration and mining company in 2000, IGO has grown to be a significant mid-cap mining development and exploration company producing gold, nickel, copper, zinc, cobalt and silver.

### TAKING OWNERSHIP FOR WHAT WE DO

“Each individual and department must have a clear understanding of the boundaries and scope of their responsibility. This prevents blurred lines around accountability. It also ensures there are no gaps and grey areas so that safety and production deliverables have sufficient oversight.”

---

#### **Karika Martin**

Maintenance Manager, Jaguar Operation



# WHO WE ARE

## WHO WE ARE

Independence Group NL ('IGO' or 'the Company') is a leading ASX-listed diversified mining, development and exploration company, with a portfolio of high-quality gold and base metals mining operations in Western Australia and a growing pipeline of belt-scale greenfield exploration projects.

The Company's wholly owned assets include the world-class Nova nickel-copper-cobalt operation, the Jaguar zinc-copper-silver operation and the Long nickel operation. IGO also produces gold from its 30% interest in the Tropicana Gold Mine, a joint venture operation with AngloGold Ashanti Australia Ltd (AngloGold Ashanti).

We continue to grow our business based on the central strategy of maintaining an asset portfolio that gives shareholders exposure to a diversity of high-margin mineral resources. However, long-term success requires more than world-class assets. It is achieved by highly skilled and motivated people, continuous improvements, uniform processes, high standards of ethical conduct, responsible environmental and safety management, and strong community partnerships.

## THE IGO PURPOSE

IGO's purpose is the creation of long-term shareholder value through discovery, acquisitions, development and operation of high-margin, long-life mining projects diversified by commodity and geography.

## THE IGO WAY

IGO strives to be a partner and employer of choice to all stakeholders including shareholders, traditional landowners, government, local communities and our employees.

IGO has a great team of people focused on optimising and maximising the value generated by the business. The way we do business is behaviour and values driven: 'The IGO Way'.



# OUR VALUES OUR PEOPLE ARE EXPECTED TO MODEL THE IGO VALUES

## SUSTAINABILITY

Putting health and safety first, being environmentally responsible, and supporting our communities.



## TEAMWORK

Working together to achieve shared goals.



## DILIGENCE

Careful and persistent effort.



## INTEGRITY

Doing what is right and doing what we say we will do.



## ACCOUNTABILITY

Taking ownership for what we do and responsibility for others.



## RESPECT

Valuing the views of others and accepting people for who they are.



## OUR CODE OF CONDUCT

The IGO Code of Conduct applies to everyone who works for, or on behalf of, IGO. Our Code of Conduct is more than a statement of our expectations; it reflects the values that have served the business well from its inception. It is communicated to all our people and to those we do business with. Our people, contractors and directors are all expected to behave in accordance with our Code of Conduct.

IGO's Code of Conduct provides guidance on how our values are to be put into practice. The key elements are summarised below:

- IGO is committed to providing a safe, fair, and dynamic work environment.
- IGO is committed to providing a workplace free of harassment, hostility and offensive behaviour.
- We strive for diversity and inclusion in the workplace in terms of gender, age, cultural and ethnic background, religion, sexual orientation and physical ability.
- We work to provide our people with access to the information and knowledge they need to perform well.
- We encourage open and honest expression and facilitate participation.
- We are committed to providing learning and developmental opportunities consistent with the needs of the business.
- We are committed to providing a work environment that protects whistleblowers who, in good faith, report unacceptable conduct.
- We celebrate the success of our business and our people.
- We respect the law and act accordingly.
- We are fair and honest in our dealings.
- We use IGO's property responsibly.

Our people have reciprocal duties to our business and to each other and we expect them to be accountable for both their actions and consequences. We treat each other and our stakeholders with respect and dignity.

IGO's Code of Conduct is publicly available on our website: [www.igo.com.au](http://www.igo.com.au).

## GOVERNANCE

### The Board

Responsibility for our strategic approach to sustainability lies with IGO's Board and Executive Committee. One component of this approach is governance. IGO's Board defines, approves and monitors a documented governance framework. This framework establishes accountabilities, regulating activities, risk management, monitoring, and processes for optimising the Company's performance. The Board recognises the need to regularly review the framework as best practice evolves over time.

Four committees assist the Board in these activities:

- Sustainability and Risk Committee
- Remuneration Committee
- Audit Committee
- Nomination and Governance Committee

The Board and each committee has a defined charter, which can be found on the IGO website: [www.igo.com.au](http://www.igo.com.au).

The Board's Sustainability and Risk Committee has oversight responsibilities for safety, health, environment, community, risk management and internal audit. Sustainability related initiatives, performance measures against key performance indicators (KPIs), operational matters, and issues relating to stakeholders are brought to the attention of the Sustainability and Risk Committee through quarterly meetings held with the Executive Committee.

IGO completes an annual review of governance documents to ensure they are kept up to date and in line with best practice. These documents include:

- Code of Conduct
- Dealing in Securities Standard
- Continuous Disclosure and Communication Standard
- Whistleblower Standard
- Anti-Bribery and Corruption Standard
- Diversity and Equal Opportunity Standard
- Privacy Standard

IGO's Group Governance Standards can be found on the IGO website: [www.igo.com.au](http://www.igo.com.au).

Annually, IGO issues a Corporate Governance Statement to ASX outlining the Company's current corporate governance framework. The statement provides comparative reference to the Corporate Governance, Principles and Recommendations of the ASX Corporate Governance Council (ASX Recommendations). This Statement can be found on IGO's website at: <http://www.igo.com.au/irm/content/governance.aspx?RID=295>.

During the FY17 reporting period, the Company's corporate governance practices have complied with the ASX Recommendations in their entirety and the Board has made appropriate statements and reported on the adoption of each of the recommendations.

### Executive

Responsibility for IGO's business processes and sustainability performance lies with the Managing Director and Chief Executive Officer, Mr Peter Bradford, and IGO's Executive Committee. The Board and Executive Committee structure is shown in Figure 1.

The Managing Director and Chief Executive Officer's performance is measured against metrics relating to financial and operational performance, the execution of our growth strategy, and the sustainability of our performance. Comparable and related remuneration arrangements including incentive payments are variously applied to all IGO employees. In FY17, IGO revised its remuneration and performance standards to further improve the transparency of how both IGO's short-term and long-term incentive schemes work for all levels of the organisation.

All IGO employees are accountable for contributing to the creation of value and enhancing our sustainability within their particular area of responsibility.

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### Listing

Independence Group NL is a company listed on the Australian Securities Exchange (ASX: IGO). The Company has been listed since 17 January 2002, having traded as Independence Gold NL from 17 January 2002 to 19 December 2003.

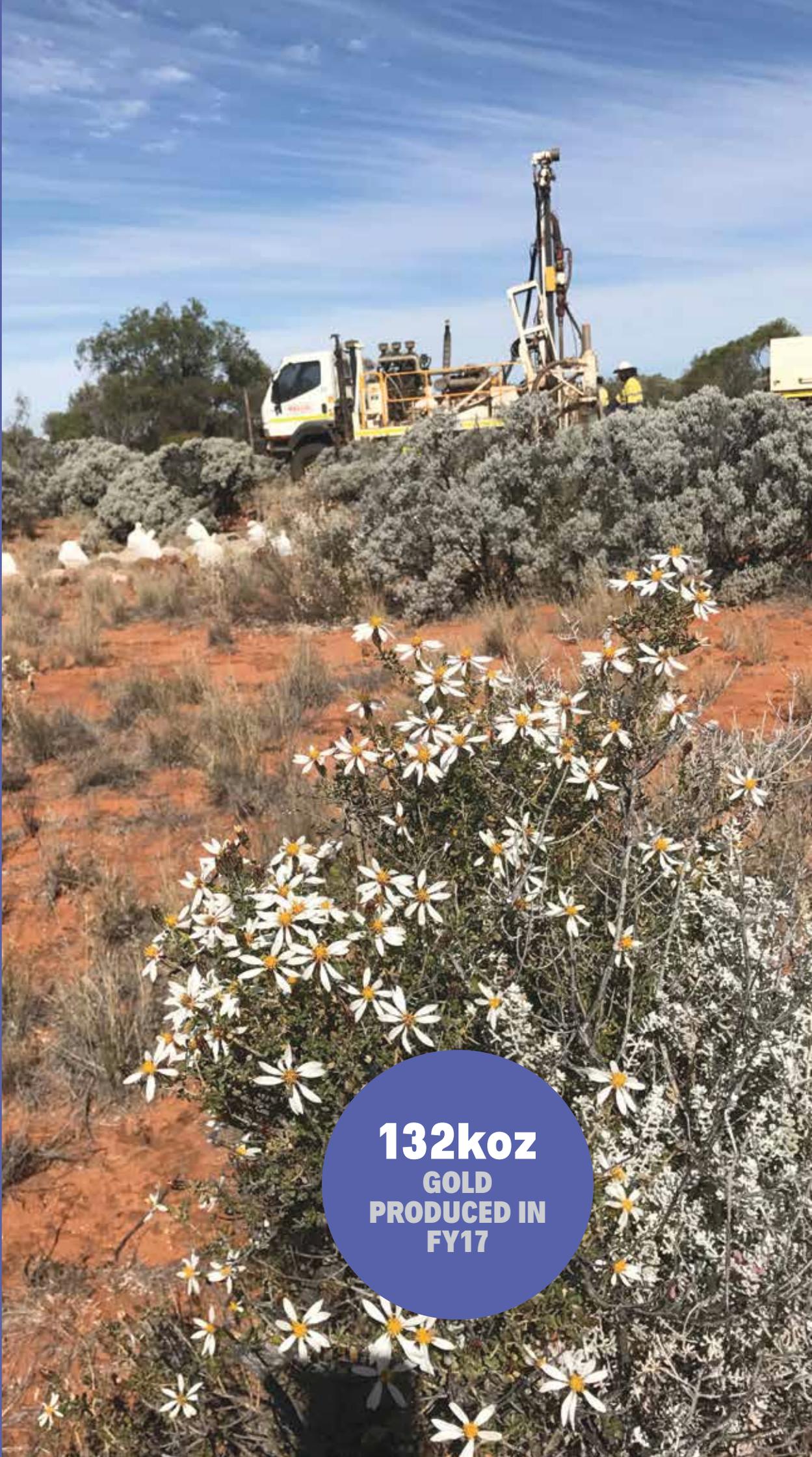


FIGURE 1

# ORGANISATIONAL STRUCTURE



# APPROACH TO SUSTAINABILITY



**132koz**  
GOLD  
PRODUCED IN  
FY17



## APPROACH TO SUSTAINABILITY

To fulfill our purpose, we at IGO focus on both the sustainability of our business and the manner in which we do business. By consistently applying our values, we endeavour to create an organisation that generates superior long-term returns for our investors and improves the socio-economic conditions of the areas in which we operate, while eliminating or mitigating any negative impacts.

Our starting point is our adherence to the International Council on Mining and Metals (ICMM) Sustainable Development Principles (refer to [www.icmm.com](http://www.icmm.com)).

### CAREFUL AND PERSISTENT EFFORT

“We are often faced with tasks that are not part of our regular scope of work, which require us to think outside the box and come up with a solution that is effective, timely and, most importantly, safe.”

---

**Lee Horan**

Surface Plant Maintenance, Long Operation



# CONTINUAL IMPROVEMENT



A sustainable business is an adaptive and resilient business. Our resilience and capacity to adapt are determined by many factors; some are external, but most remain within our control. We do not settle for the status quo. We continually seek to improve how we do things and how we might prepare ourselves for change.

So how do we measure success? For our incremental and continuous improvement work, we look to our performance metrics, many of which are published in this report and in our 2017 Annual Report. But the greater measure of our success is the test of time. IGO has been operating for nearly 17 years. We have grown from strength to strength and have every confidence that we will continue to do so.

This year we have again made significant progress on many fronts. Our most notable improvements have been to:

- strengthen our team through the targeted recruitment of great people;
- grow our business with the Nova Operation reaching commercial production;
- significantly expand our exploration landholding in the Fraser Range;
- progress our efforts to create an IGO culture with 'The IGO Way';
- increase our corporate giving, deliver shared value and make a positive impact in our host communities; and
- continue ongoing system improvements - our business is increasingly efficient while adopting a more rigorous governance process.

Measuring the sustainability of our business, as it is in any enterprise, is unavoidably subjective. Internally, we assess performance based on a range of metrics including

external stakeholder opinion. In our previous two reports, we have presented a diagram to illustrate our conceptual pathway to sustainable development and its four key milestones, and we do so again in this report (refer to Figure 2).

Our Executive Committee have assessed that IGO is currently positioned between Phase 2 and Phase 3 on our pathway to sustainable development, having made important incremental improvements in FY17. IGO's Executive Committee is committed to making key business decisions in full consideration of the social, environmental and inter-generational consequences. It remains IGO's aspiration that our ongoing effort will culminate in our organisation embracing full and open accountability for the economic, social and environmental aspects of our business activities while operating in accordance with our Code of Conduct.

Self-assessment aside, it is also important to note that there are at least 20 sustainability ratings agencies of note. Many larger companies provide data to a suite of these agencies. After consideration by the Executive Committee, IGO now only provides data to one: CDP (refer to [www.cdp.net](http://www.cdp.net)) the global disclosure system that enables businesses to measure and manage their environmental impacts. We have made this decision for two reasons: 1) CDP is one of the most widely used agencies with approximately 4,000 participating businesses around the world, and 2) CDP is a not-for-profit registered charity. Sustainability ratings agencies typically encourage reporting (data donation), assess sustainability performance, sell the comparative data, and then offer consultancy services to aid improvement in

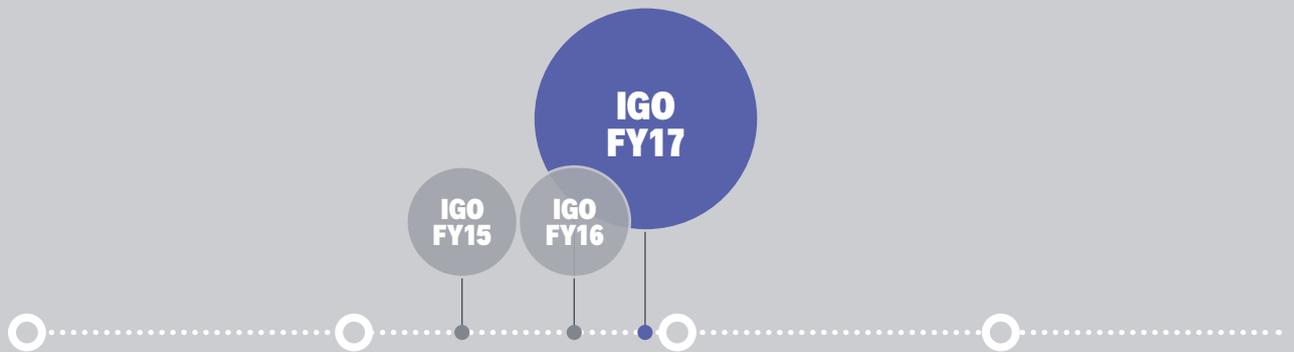
performance. As the reporting effort is non-trivial and comes at a cost, the value created for IGO by engaging with additional agencies is marginal at best. Notwithstanding this, IGO will continue to monitor developments and may consider modifying our methodology in the future.

The CDP methodology ranks IGO at disclosure level, benchmarked against our peer companies in the mining sector. The ranking indicates CDP's assessment of IGO's position on integrating climate change into its business practices - currently in the early stages of development. IGO reports all Scope 1 and Scope 2 emissions under requirements of the *National Greenhouse and Energy Reporting Act 2007* (NGER Act 2007), however, it is yet to implement targets. In FY18, IGO will independently verify its greenhouse gas emissions and will include climate change impacts in the group risk management assessments.

Sustainability performance assessments are also completed by various non-government organisations and investment bodies and some place these assessments in the public domain. For example, the Australian Council of Superannuation Investors (ACSI) recently completed a review entitled 'Corporate Sustainability Reporting in Australia: An analysis of ASX200 disclosure' (refer to <https://acsi.org.au/publications-1/research-reports.html>). This year, for the second year in a row, ACSI rated IGO's sustainability reporting as sector 'Leading'. On this basis, ACSI advise investors that IGO is 'assessing, monitoring and seeking to improve performance regarding material sustainability risks in a measurable way over a specific time period'.

FIGURE 2

# IGO'S PATHWAY TO SUSTAINABLE DEVELOPMENT



CONTINUUM IN WHICH ALL MINING AND EXPLORATION COMPANIES FIT

## PHASE 1

A company in which financial and technical issues predominate.

Governance issues focus on legislative compliance.

Senior management's focus is on minimising liabilities and responding to those external pressures that have the potential to damage company reputation.

A closed culture.

## PHASE 2

A company whose management starts to view environmental and social aspects as more than just adjuncts to business.

Moving towards the triple-bottom-line: accounting for economic, environmental and social factors.

Developing systematic approaches to managing community, environmental, and health and safety. Approaches include policies, standards and performance measures.

Emergence of an open and transparent culture, including non-financial public reporting.

## PHASE 3

A company that has successfully extended triple-bottom-line considerations beyond corporate management into its operational areas.

A commitment to a sustainable development strategy and continuous disclosure of sustainability performance.

A company where values and the corporate code of conduct underpin decision-making.

Adopting integrated risk-management approaches. Setting stretch performance targets to minimise environmental impacts, reduce waste, and strengthen community partnership and trust through engagement and openness.

## PHASE 4

A company that understands that environmental and social aspects of business underwrite growth in the drive to sustain long-term stakeholder value.

A company that addresses sustainability challenges through innovative solutions and is responsive to changing community expectations.

Environmental and social considerations are fully integrated into day-to-day business decision-making.

# ABOUT THIS REPORT

This is IGO's third Sustainability Report. It addresses IGO's sustainability performance for the financial year ending 30 June 2017 (FY17). It covers all the activities for IGO and its related entities, including the Tropicana Gold Mine, Long nickel mine (known as the Long Operation), Jaguar zinc-copper mine (known as the Jaguar Operation), the Nova nickel-copper-cobalt mine (known as the Nova Operation), the Stockman Project (currently subject to a divestment process), and our various exploration activities including joint ventures.

IGO is a 30% owner of the Tropicana Gold Mine. AngloGold Ashanti is the majority owner in this joint venture and manages all aspects of the mine. This report addresses only those limited aspects that are deemed material to IGO and our stakeholders.

For additional information refer to AngloGold Ashanti's assessment of the sustainability of its broader activities (refer to [www.anglogoldashanti.com/en/sus](http://www.anglogoldashanti.com/en/sus)).

It is anticipated that the scope and sophistication of our reporting will grow and improve in proportion to the size of our business and with regard to the environment in which we operate. While it is appropriate that our Sustainability Report evolves, it is also our explicit intention that the structure and nature of the content is materially similar from one year to the next to better enable our stakeholders to analyse changes in IGO's performance, and therefore make relative comparisons to other organisations.

Our 2017 Sustainability Report has been prepared in general accordance with the GRI G4 Sustainability Reporting Guidelines. These guidelines have been applied where they are appropriate to the size of our organisation and the nature and location of our activities. While we have focused on the G4 'Core' indicators, we have also included some additional indicators where they refer to a material aspect of our business. We have also reported against some

metrics described in the GRI G3.1 Mining and Metals Sector Supplement as they are of interest to our stakeholders. Our methodology in determining what is included in this report is addressed in Stakeholders and Materiality.

To aid the cross-referencing of this report's discussions on IGO's material aspects to elements of the GRI G4 Sustainability Reporting Guidelines, a separate GRI Content Index has been prepared (refer to Appendix, page 92).

There are clearly merits to producing a single integrated annual report incorporating both financial and sustainability reports. However, Australian federal law currently requires hard copies of annual reports to be posted to shareholders who request them. For IGO, this cost is prohibitive and precludes this option. Until such requirements change, it is IGO's intention to produce its annual Sustainability Report as a stand-alone document.

## INFORMATION INTEGRITY AND REPORT AUDIT

IGO seeks to gather, record, compile, analyse, and disclose information and processes used in the preparation of its sustainability reports in a way that is readily subject to examination and that establishes the quality and materiality of the information.

IGO completes assurance reporting on its National Pollutant Inventory (NPI) and GHG emissions as part of our submission to NERS. IGO also uses the services of various expert consultants to complete a range of internal audit processes.

IGO is pleased to advise that, for the first time, key data in the 2017 Sustainability Report has been subject to an independent third-party limited assurance review by BDO Australia Pty Ltd (CAN 133 657 833).

Refer to page 90 and 91, which present a letter from our Auditor.

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# STAKEHOLDERS AND MATERIALITY

IGO has an ongoing process to identify matters that are material to our stakeholders. These include both socio-economic and environmental risks and opportunities with the potential to have a significant negative or positive impact on our business and our stakeholders.

Central to this assessment are the views of our stakeholders. We have identified our stakeholders and have sought to understand the matters of interest and/or concern to them. This process included reviewing:

- direct surveys of our listed external stakeholders;
- community feedback from individual groups and 'town hall' meetings;
- significant events during the year that related to both IGO specifically and the industry in general;
- current public IGO commitments and obligations;
- supplier and customer stakeholder research;

- analyst and media calls as part of the financial reporting cycle;
- approaches from industry watch groups;
- peer company reports, daily media monitoring and workforce feedback; and
- international sustainability reporting initiatives and sustainability topics raised by key stakeholders, including government and local communities.

The materiality assessment process identified 24 material issues, with the top six presented in Figure 3. Following the ranking process, the issues were plotted according to their potential business impact and importance to stakeholders.

The IGO Executive Committee and the Board reviewed and approved the ranking of the material issues listed. In turn, the list of material issues has informed our strategic thinking on priorities for business improvement, reflected in the structure and content of this report.

FIGURE 3

# RANKING OF TOP MATERIAL ISSUES FOR 2017

|   |  |
|---|--|
| ● | 1. Employee safety and occupational health management  |
| ● | 2. Long-term environmental legacies  |
| ● | 3. Community safety (in so far as IGO has the potential to impact community health and safety) |
| ● | 4. IGO's environmental impacts generally   |
| ● | 5. Transparency in IGO's activities and performance  |
| ● | 6. Employment IGO creates  |



**NOTE**

IGO's survey of stakeholders has identified a set of 24 different types of stakeholder interest. The graphic above highlights our top six material issues.

# STAKEHOLDER ENGAGEMENT

| Stakeholder type                          | Specific stakeholders   | Area of interest   | Nature of interactions   |
|---|---|--|--|
| <b>Shareholder</b>                        | Retail and institutional shareholders.  | Share price, dividends, financial returns, governance, risk management, operating performance and business strategy.   | Annual General Meeting, Annual and Sustainability reports, ASX announcements, quarterly reports and webcasts, website (where all releases and other information on IGO is maintained and regularly updated), one-on-one meetings, conference presentations, broker presentations, direct phone contact with investor relations and share registry. |
| <b>IGO customers</b>                      | All gold production from the Tropicana Gold Mine is sold to financiers and the Perth Mint. All nickel ore from the Long Operation is sold to BHP Nickel West. All concentrate from Nova is sold to either Glencore, Trafigura Pte Ltd (Trafigura) or BHP Nickel West. All concentrates from Jaguar are sold to Trafigura. | Quality of product and reliability of supply, financial management of business.  | Regular meetings and interactions.   |
| <b>Employees</b>                          | Both IGO staff and contractor's employees working on site.  | Job security, employee remuneration, industrial relations in general, drive-in-drive-out (DIDO) and fly-in-fly-out (FIFO) in particular. Safety and occupational health. Investment in our people. | Continuous direct interaction.   |
| <b>Traditional Owners</b>                 | IGO's operations affect the lands of many Traditional Owners. To name a few, these include: Ngadju, Wongatha, Koara, Ngalia, Wutha and Sami.  | Land use, access and management. Socio-economic impacts and environmental impacts generally. Cultural heritage and biodiversity management.  | Engagement with representative bodies, community meetings, and in response to public enquiries.  |
| <b>Local communities</b>                  | Individuals and groups local to our operations, including pastoralists, development groups, local businesses and not-for-profit organisations and other exploration and mining companies.   | Employment, business development, infrastructure, land access, cultural heritage, sponsorship and donations, environmental performance and transparency. Transport impacts. Mine closure planning. | Location-specific community relations' personnel, community meetings, formal and informal communication.   |
| <b>Government and government agencies</b> | Federal and state governments, local government, state government agencies including the Government of Western Australia Department of Mines, Industry Regulation and Safety (DMIRS), Department of Water and Environmental Regulation (DWER), which includes the Environmental Protection Authority (EPA).               | Socio-economic impacts (including taxes and royalties) and environmental impacts generally, and specifically FIFO and employment.  | Meeting with agency representatives during site inspections and ad hoc meetings.   |

| Stakeholder type   | Specific stakeholders   | Area of interest   | Nature of interactions  |
|--|---|--|---|
| <b>Non-government social responsibility and sustainability organisations</b> | A range of organisations have general interest. Specific enquiries have come from CDP (formerly the Carbon Disclosure Project). | Monitoring of socio-economic and environmental impacts for the purpose of information sharing, encouraging transparency and in some instances, shareholder advocacy or lobbying. Specific environmental impacts include: waste, water, energy consumption and greenhouse gas emissions. Workforce diversity and inclusion. | Response to enquiries. Regular meetings with organisations to ensure mutual obligation and positive impact on the ground. IGO Board members and management engage in key stakeholder and community events.                      |
| <b>IGO suppliers and contributors</b>  | IGO's suppliers are listed on page 53.  | Ongoing purchases, or credit worthiness, buying local, contractor management.  | Regular meetings and interactions.  |
| <b>Financiers</b>  | Various banks and financial institutions.   | Share price, financial returns, governance, asset management, risk management, operating performance and business strategy.  | Regular meetings and interactions.  |
| <b>Media</b>   | Print, radio, TV and interactive.   | Financial and operational related queries, ASX announcements, periodical reports and publicly stated business strategy.  | Dedicated media relations' function. Regular engagement with business and regional media through six teleconferences per year, regular ad hoc one-on-one discussions, interviews, ASX releases, media releases and site visits. |
| <b>Institutions</b>  | Universities, TAFEs and local schools.  | Financial and in-kind support. Placement opportunities. Research and Development.  | Interactions with institutional representatives, apprentices, and students, scholarship sponsorship, vacation work and research and collaboration.  |
| <b>Industry associations</b>   | WA Mining Club, Association of Mining and Exploration Companies (AMEC) and AMPLA.   | Represents industry interests. Industry and promotion.   | Participation in meetings and forums.   |

# ORGANISATIONAL PROFILE



**3.2Mt**  
**ORE PROCESSED**  
**FROM OUR**  
**OPERATIONS**  
**IN FY17**



## ORGANISATIONAL PROFILE

IGO is a diversified mining, development and exploration company, with high-quality gold and base metal mining operations in Western Australia and a portfolio of belt-scale greenfield exploration projects.

### WORKING TOGETHER

“Together with our combined focus we shall achieve greater goals.”

---

#### Neil Curran

Condition Monitoring Technician, Nova Operation



# OUR ORGANISATION

Figure 4 illustrates the locations of IGO's operations and projects. The fundamental elements of the mining and exploration process are described on page 25.

IGO's gold production comes from its 30% interest in the Tropicana Gold Mine, a joint venture with AngloGold Ashanti, which is 70% owner and manager, in Western Australia.

IGO produces nickel from our 100% owned Long Operation in Kambalda in Western Australia, copper, zinc and silver from our 100% owned Jaguar Operation, 60km north of Leonora in

Western Australia, and nickel, copper and cobalt from our 100% owned Nova Operation located 140km east-north-east of Norseman in Western Australia.

IGO is engaged in various exploration projects, consolidating our tenure in the Fraser Range belt in particular during FY17. In June 2017, IGO announced our intention to divest the Stockman Project in Victoria to CopperChem Limited (CopperChem).

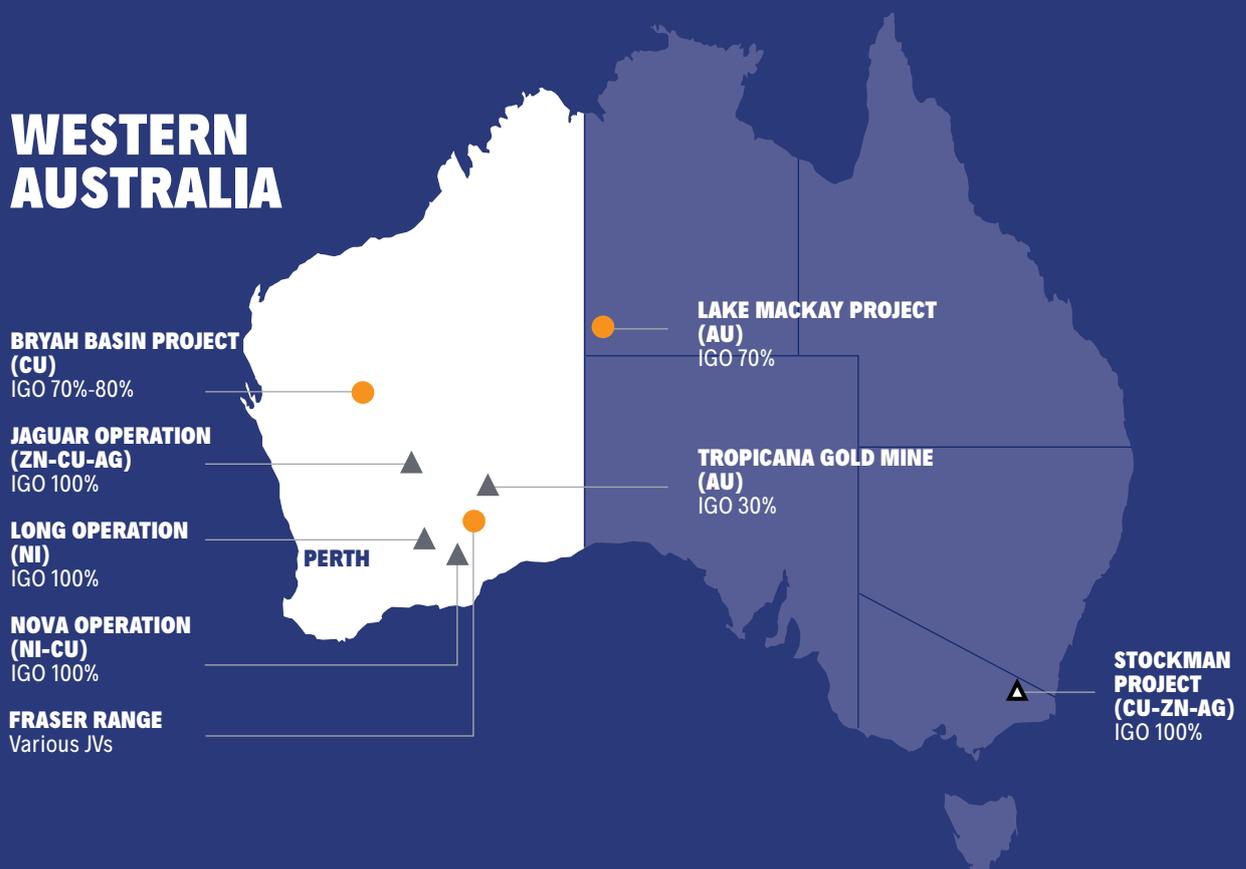
The structure of our business is presented in Figure 5. IGO's inputs and outputs are presented in Figure 8.

**33kt**  
**ZINC**  
**PRODUCED**  
**IN FY17**



FIGURE 4

# LOCATIONS OF IGO OPERATIONS AND PROJECTS



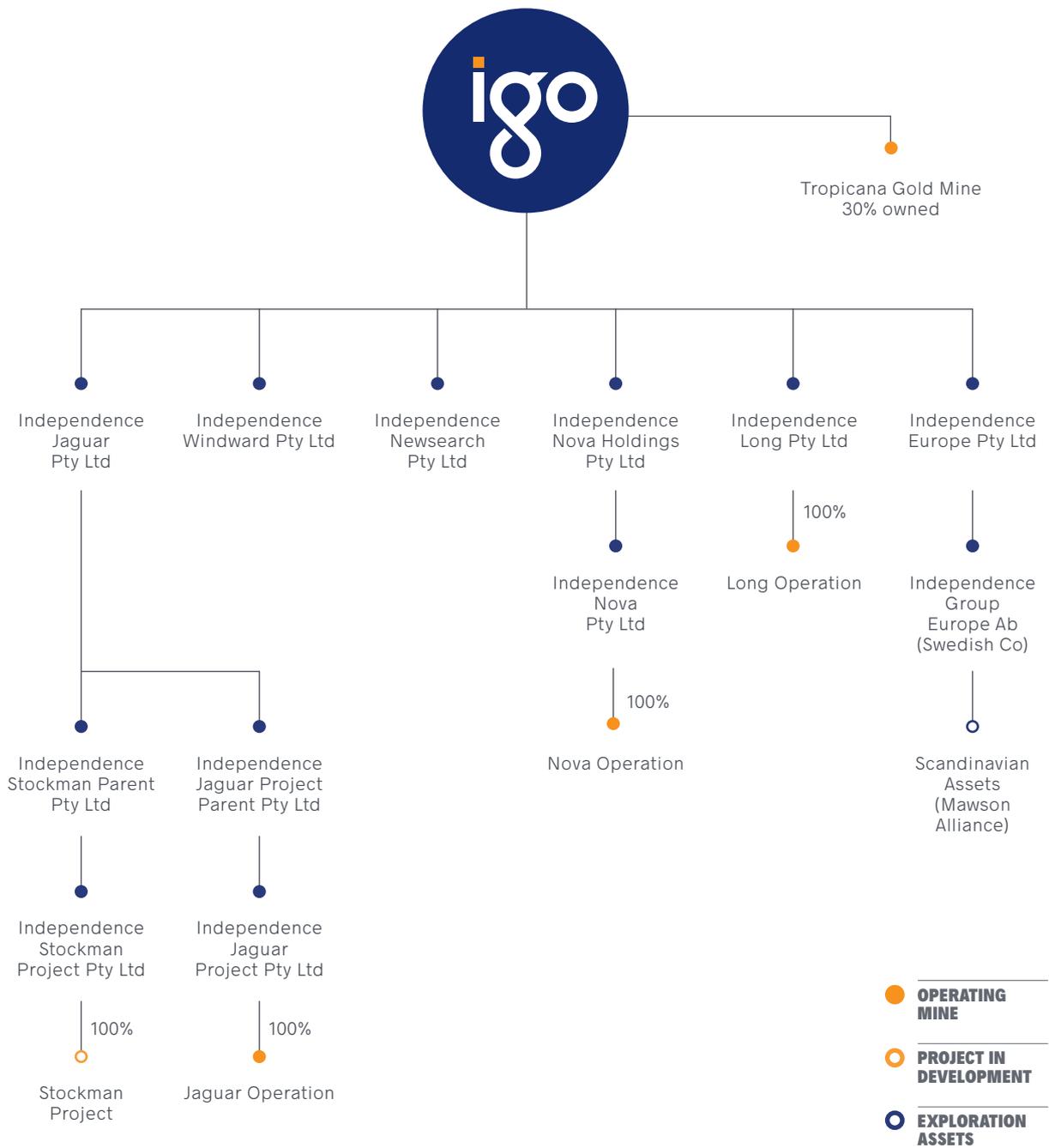
▲ MINES

● EXPLORATION PROJECTS

▲ DEVELOPMENT PROJECTS

FIGURE 5

# IGO BUSINESS STRUCTURE





## PROFILE – DEBRA BAKKER



**The appointment of Debra Bakker to IGO’s Board of Directors in late 2016 could be considered a look to the past as well as a confident look into the Company’s future as it was Debra’s persistence – and ultimate success – in persuading her colleagues at Commonwealth Bank of Australia in 2002 to take on the \$15 million loan IGO needed to purchase the Long nickel mine.**

Debra grew up in Perth and completed her Bachelor of Business at Edith Cowan University before moving to Sydney for eight years, firstly for Barclays Bank as a credit analyst before moving into project finance four years later, where she realised that working with the mining industry was where she wanted to be. At a relatively young age, she told her bosses she wanted to move to the Big Smoke of London “and that was the start of my serious mining career” says Debra, who remained there for five years before joining Standard Bank in Chicago, with the proviso that Standard would let her return to Australia after two years. Standard Bank honoured this and Debra returned to Sydney, after which she was lured to New York to work in energy derivatives.

Like every member of the IGO Board, Debra brings a diverse skillset to the boardroom. Debra comes to IGO with extensive global experience and has worked with some of the world’s most trusted mining industry leaders. She sees her role on the IGO board as someone who understands corporate finance matters. “Each of our Board members has different skillsets but they bring these to the Board in a holistic and collaborative way. We work as a team and are stronger for our differences.”

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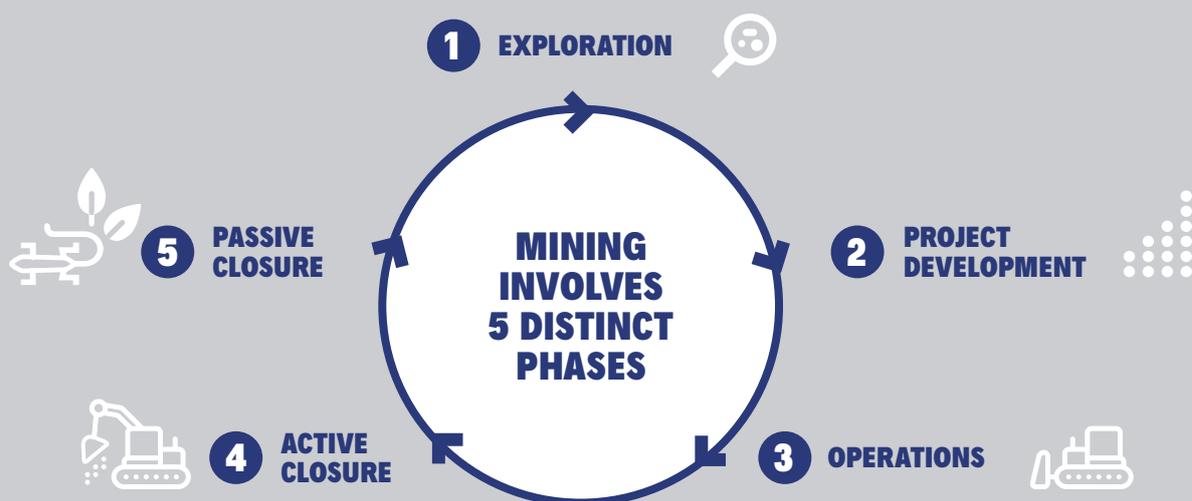
### **Debra Bakker**

Non-Executive Board Member

**1.1Moz**  
**GOLD**  
**RESERVES**



# THE MINING AND EXPLORATION PROCESS



## 1 EXPLORATION

IGO is passionate about discovery through innovative exploration both in near-mine areas and on regional belt-scale opportunities.

## 2 PROJECT DEVELOPMENT

Project development involves the definition of economically mineable resources, either as the product of our exploration efforts or through the purchase of prospective ground from other parties. It also involves a number of key steps including undertaking feasibility studies and obtaining environmental approvals.

## 3 OPERATIONS

Operations involve the extraction of ore from the mine and its beneficiation to produce our saleable products: concentrates that contain gold, nickel, zinc, copper, and cobalt. Operations involve ongoing exploration and resource definition, and ongoing mine design and processing optimisation.

## 4 ACTIVE CLOSURE

Where practical, rehabilitation works commence during operations and occur progressively until the end of a mine's economic life. Mine closure planning is completed in consultation with our stakeholders and results in the development of a 'basis of design' and 'mine closure criteria'. Earthworks are completed to reshape the landforms created by our mining activity to ensure they are both safe, stable and suitable for the intended post-closure land use.

## 5 PASSIVE CLOSURE

Following the completion of closure earthworks, demolition work and revegetation, mine sites are subject to ongoing environmental monitoring to assess their progress against the agreed closure criteria. Typically this includes monitoring of water quality, revegetation, successional processes, and rates of erosion.

# BUSINESS STRATEGY

The sustainability of our business is dependent on having a clear business strategy.

Strategic planning is not a periodic exercise for IGO's Board and Executive Committee. Rather, it is a continuous process that ensures alignment of our corporate priorities and the creation of a common focus across the entire organisation. We recognise that delivery on our Strategic Plan will lead to competitive advantage and true value creation for all of our stakeholders.

Our winning aspiration is to grow a leading diversified mid-tier Australian mining company that measures success in terms of:

- People - Our people want to come to work, know what to do, and can and want to be our best.
- Health Safety and Environment (HS&E) - Our people take care and responsibility for our safety, well-being and environmental management, and that of others.

- Operations - We have optimised and maximised the value of our operations with empowered leadership teams.
- Financial - Our financial strength and capital management enables consistent investment in growth and payment of dividends.
- Growth - We deliver a step change to our asset portfolio through discovery or accretive mergers and acquisitions.
- Business Support - We develop and implement robust 'fit-for-purpose' and transparent processes and systems to support our business.
- External Stakeholders - Our communities, customers and suppliers value their relationships with us.
- Shareholders - Our shareholders receive a superior long-term return on their investment.

We made significant progress in delivering on our Strategic Plan during FY17.

## MANAGEMENT SYSTEMS

The framework for IGO's Management System is based on the well-recognised 'Plan-Do-Check-Act' (PDCA) methodology and the International Organisation for Standardisation (ISO) guidelines. Our approach is firmly rooted in risk management and continuous improvement (refer to Figure 6). As IGO's business grows and evolves, so too will our management systems.

IGO's management system is documented (refer to Figure 7). The Health, Safety, Environment and Community (HSEC) and governance elements are publicly available on our website: [www.igo.com.au](http://www.igo.com.au).

In FY17, IGO finalised the development and release of 39 IGO Group Safety Standards and commenced the development and rollout of our IGO Group Rehabilitation and Mine Closure Standard. We invite people to review and comment on any of these documents, which are available in the public domain.

FIGURE 6

# BUSINESS IMPROVEMENT

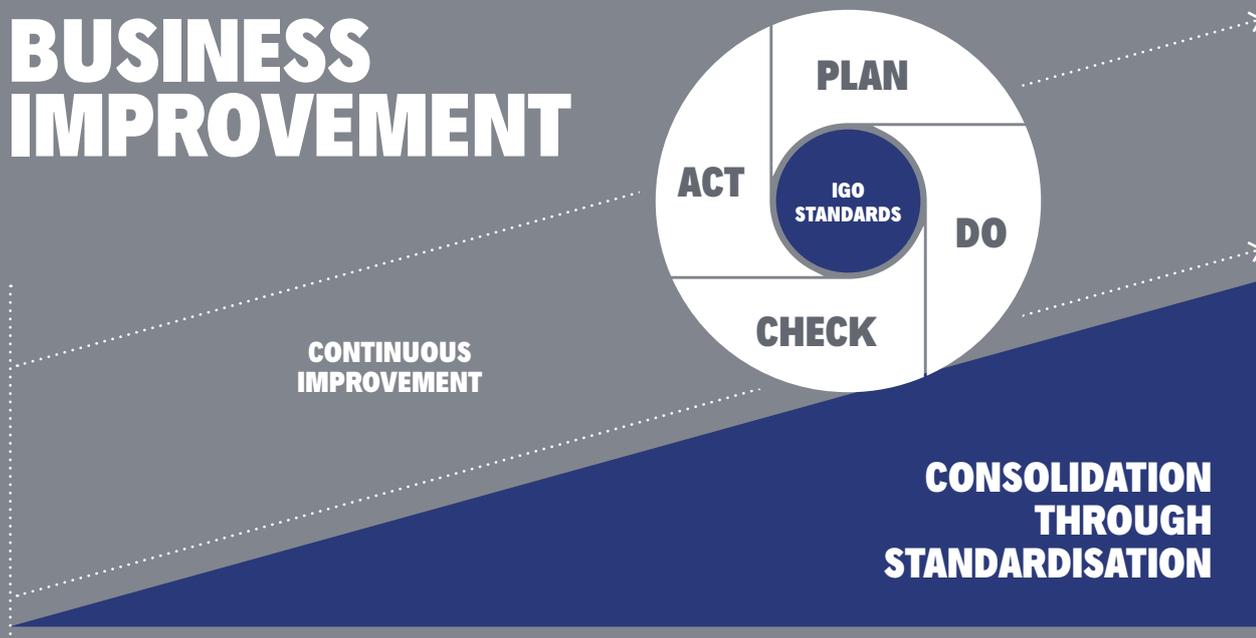
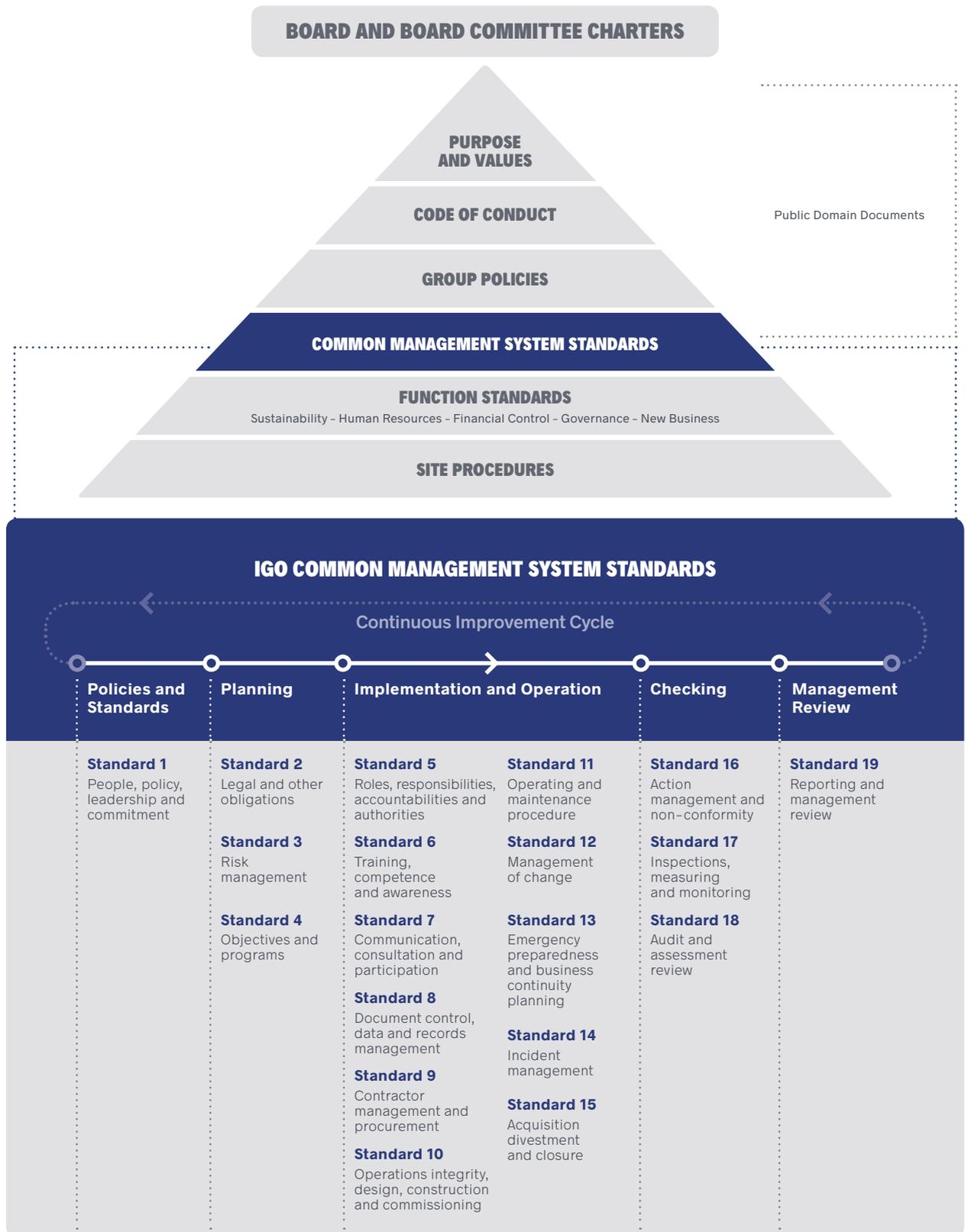


FIGURE 7

# IGO MANAGEMENT SYSTEM STRUCTURE





# TASKFORCE ON CLIMATE- RELATED FINANCIAL DISCLOSURES

The Task Force on Climate-related Financial Disclosure (TCFD) was established to develop voluntary, consistent climate-related financial risk disclosures to enable companies to provide information to investors, lenders, insurers, and other stakeholders. The TCFD is led by a range of industry leaders. In June 2017, the task force released a report on the recommendations pertaining to climate-related financial disclosures (refer to <https://www.fsb-tcf.org/wp-content/uploads/2017/06/FINAL-TCFD-Report-062817.pdf>). In response, a significant number of major businesses have made explicit statements of support for the recommendations (refer to <https://www.fsb-tcf.org/statement-support-supporting-companies>).

IGO continues to consider its position in this matter. IGO accepts the position expressed by the Intergovernmental Panel on Climate Change, in its Fifth Assessment Report (Cambridge University Press 2014) that continued emission of greenhouse gases will cause further warming of Earth and that warming above 2°C, relative to the pre-industrial period, could lead to catastrophic economic and social consequences.

As evidence of the growing recognition of the risks posed by climate change, in December 2015, nearly 200 governments agreed to strengthen the global response to the threat of climate change by 'holding the increase in the global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels (referred to as the Paris Agreement). The large-scale and long-term nature of the problem makes it uniquely challenging, especially in the context of economic decision-making. Moreover, the current understanding of the potential financial risks posed by climate change - to companies, investors, and the financial system as a whole - is still at an early stage.

As a consequence, IGO accepts that there is a growing demand for decision-useful, climate-related information by a range of participants in the financial markets. In the coming year, IGO will develop a formal position on Climate-Related Financial Disclosures and will, at the time of the release of our next sustainability report, disclose our intentions.

FIGURE 8

# IGO INPUTS AND OUTPUTS

| Inputs                     | 2016      | 2017       | Units | Change from FY16 |
|----------------------------|-----------|------------|-------|------------------|
| Labour                     | 1,540,290 | 1,781,234  | hours | 240,944 ↗        |
| Ore mined*                 | 725,089   | 3,220,000  | t     | 2,494,911 ↗      |
| Electricity                | 75,601    | 105,158    | MWh   | 29,557 ↗         |
| Gas                        | 476,153   | 521,795    | GJ    | 45,642 ↗         |
| Diesel                     | 9,228,808 | 17,692,448 | L     | 8,463,640 ↗      |
| Ground support (steel)     | 1,382     | 2,443      | t     | 1,061 ↗          |
| Explosives                 | 1,338     | 1,446      | t     | 108 ↗            |
| Cement**                   | 10,531    | 5,775      | t     | -4,756 ↘         |
| Grinding media             | 551       | 1,286      | t     | 735 ↗            |
| Water                      | 1,918,122 | 2,719,686  | kL    | 802,564 ↗        |
| Reagents - copper sulphate | 1,558     | 410        | t     | -1,148 ↘         |
| Lubricants and oils        | 314,124   | 337,000    | L     | 22,876 ↗         |

| Emission                   | 2016    | 2017    | Units                | Change from FY16 |
|----------------------------|---------|---------|----------------------|------------------|
| Carbon dioxide***          | 65,220  | 162,183 | CO <sub>2</sub> -e t | 96,963 ↗         |
| Carbon monoxide            | 49,621  | 76,490  | CO <sub>2</sub> -e t | 26,869 ↗         |
| Oxides of nitrogen         | 15,559  | 13,743  | CO <sub>2</sub> -e t | -1,816 ↘         |
| Sulphur dioxide            | 140,132 | 245,616 | kg                   | 105,484 ↗        |
| Volatile organic compounds | 356,208 | 547,603 | kg                   | 191,395 ↗        |
| Particular matter 10       | 262     | 401     | kg                   | 139 ↗            |
| Particulate matter 2.5     | 22,572  | 27,018  | kg                   | 4,446 ↗          |

| Waste                 | 2016      | 2017      | Units | Change from FY16 |
|-----------------------|-----------|-----------|-------|------------------|
| Tailings (wet tonnes) | 2,062,829 | 2,736,390 | t     | 673,561 ↗        |
| Waste rock            | 726,018   | 1,050,059 | t     | 324,041 ↗        |
| Materials to landfill | 1,668     | 2,019     | t     | 351              |

| Products            | 2016      | 2017      | Units | Change from FY16 |
|---------------------|-----------|-----------|-------|------------------|
| Ni in ore delivered | 8,493     | 8,433     | t     | -60 ↘            |
| Ni in concentrate   | 0         | 3,502     | t     | 3,502 ↗          |
| Cu in ore delivered | 610       | 592       | t     | -18 ↘            |
| Cu in concentrate   | 7,412     | 6,671     | t     | -741 ↘           |
| Zn in concentrate   | 39,335    | 32,638    | t     | -6,697 ↘         |
| Ag in concentrate   | 1,603,565 | 1,376,521 | oz    | -227,044 ↘       |
| Au in concentrate   | 4,543     | 2,532     | oz    | -2,011 ↘         |
| Au in bullion       | 134,435   | 129,487   | oz    | -4,948 ↘         |

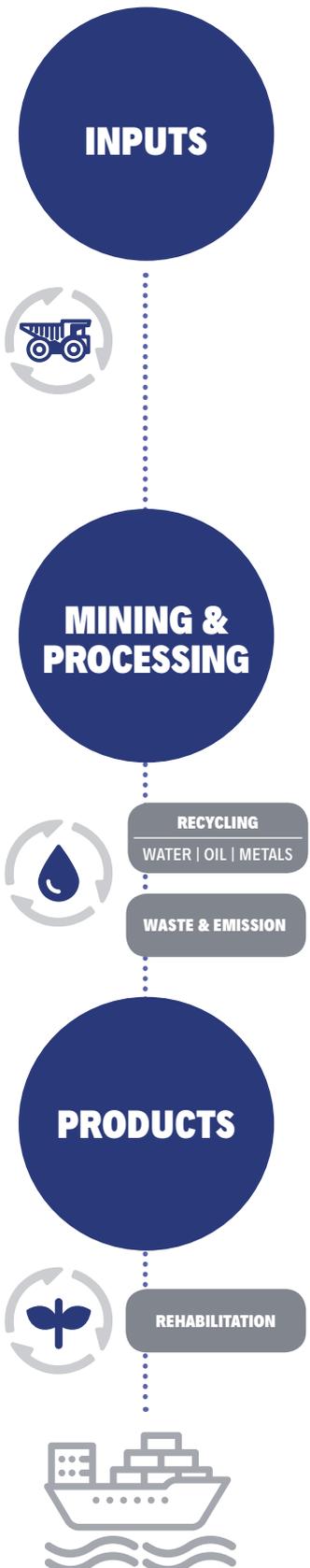
**NOTE**

These figures do not include inputs and outputs from Tropicana Gold Mine, with the exception of gold output which is included. Additional information on IGO's emissions can be found on the National Pollutant Inventory website.

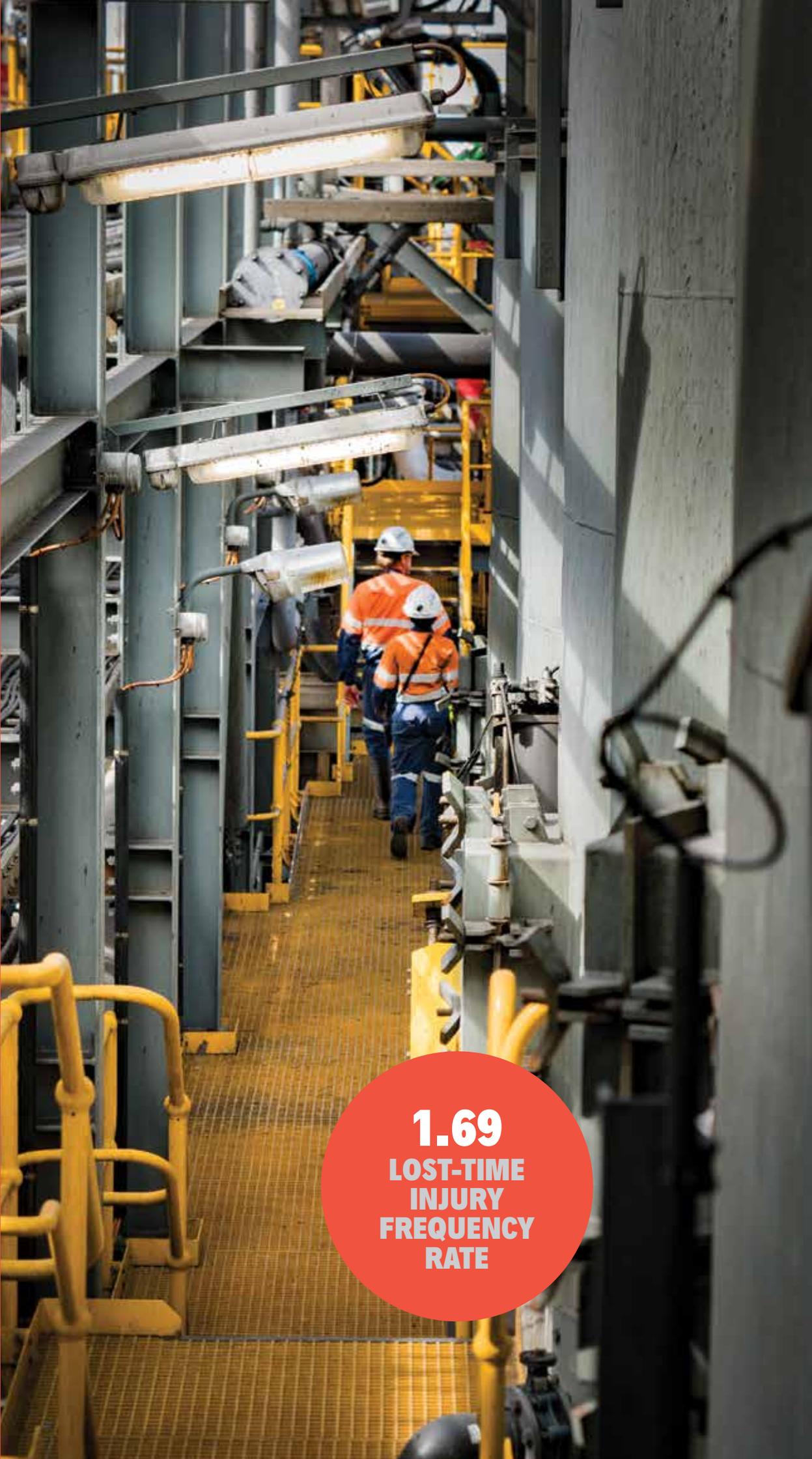
\* Figures for 2017 are inclusive of our 30% share of ore mined at the Tropicana Gold Mine.

\*\* Cement use has significantly decreased as we are no longer using the cement aggregate fill plant at our Jaguar Operation.

\*\*\* Carbon dioxide has significantly increased due to the inclusion of emissions from the Tropicana Gold Mine in 2017.



# OPERATIONS



**1.69**  
**LOST-TIME**  
**INJURY**  
**FREQUENCY**  
**RATE**

## OPERATIONS

IGO's 100% wholly owned assets include the world-class Nova nickel-copper-cobalt operation, the Jaguar zinc-copper-silver operation and the Long nickel operation.

IGO also produces gold from its 30% interest in the Tropicana Gold Mine, a joint venture operation with AngloGold Ashanti.

### PUTTING HEALTH AND SAFETY FIRST

"Safety is cultural and it begins with leadership. It's as simple as tapping someone on the shoulder to intervene with a safety concern that could result in saving their life."

---

**Ben O'Shea**

Safety and Training Adviser, Jaguar Operation



# NOVA OPERATION

---

## MINING METHOD

Underground - stoping

---

## FY17 PRODUCTION

Ni in concentrate - 3,502t

Cu in concentrate - 2,106t

---

## AREA DISTURBED

439ha

---

## AREA REHABILITATED

107ha

---

## WORKFORCE

93% FIFO

7% DIDO

---

## NATIVE TITLE

Ngadju

---

## LIFE OF MINE

9 years

FIGURE 9

## WESTERN AUSTRALIA

PERTH

NOVA  
OPERATION  
(NI-CU)  
IGO 100%



The Nova Operation is a high-grade nickel-copper-cobalt deposit located in the Fraser Range, approximately 140km east-north-east of Norseman and 35km north of the Eyre Highway in Western Australia.

The Nova Operation consists of one mining lease and three miscellaneous licences. The mining lease extends into pastoral leases of the Fraser Range and Southern Hills stations in some parts.

The Nova Operation comprises an underground mine consisting of two orebodies, Nova and Bollinger, as well as a 1.5Mtpa processing facility that produces a nickel concentrate and a copper concentrate, and associated infrastructure.

The native title holders for the area in which the Nova Operation is located are the Ngadju people.

## BACKGROUND

The Nova Operation, 100% owned by IGO, was acquired through IGO's acquisition of Sirius Resources NL (Sirius) in September 2015. Sirius, an ASX-listed minerals exploration and development company, first announced the discovery of the Nova nickel-copper-cobalt deposit in July 2012. Following IGO's acquisition, an Optimisation Study to a bankable feasibility level was completed in the December 2015 quarter, followed by the decision to accelerate development of the Bollinger orebody in mid 2016.

The construction of the processing plant and associated infrastructure, including the tailings storage facility, village, access road and aerodrome were all completed on time and on budget resulting in the first delivery of concentrate being achieved by December 2016.

At the end of FY17, the paste fill plant was commissioned and ore production is now taking place over three levels to enable consistent ore feed to the processing plant. Ore is processed using conventional flotation techniques to produce two concentrates (nickel/cobalt sulfide and copper sulfide). Concentrate is stored on site in an enclosed shed prior to being placed in sealed containers for transportation off-site along a private access road to the Eyre Highway. The concentrates are transported south along public roads to the Port of Esperance, or north to the Kalgoorlie Nickel Smelter via Kambalda. The Nova Operation successfully completed the first export of copper and nickel concentrate from the Port of Esperance in June 2017.

The Nova Operation achieved commercial production on 1 July 2017.

The time between Nova's discovery and achievement of commercial production was five years. Few projects of Nova's scale have been developed as fast.

## CONSUMABLES

The main consumables used at Nova in FY17 were diesel, grinding media, lime and explosives.

Electricity for the Nova Operation is produced by a 20MW power station, operated by Zenith Pacific, under a build, own and operate contract. The power station is fuelled by diesel. As part of the power station development, a concept 6.7MW solar power station was also considered. Zenith Pacific are currently negotiating with the Australian Renewable Energy Agency (ARENA) to assist in funding this project, which will determine its viability.

Raw water is supplied from mine dewatering and several purpose-built water supply bores around the operation. Water sourced from mine dewatering and production bores is pumped to a lined pond for distribution around the site. Water for domestic use is treated at the reverse osmosis plant. Another reverse osmosis plant provides higher quality water for concentrate washing. Surplus water is transferred to the lined tailings storage facility from where it is recycled for use in the process circuit.

## WASTE

The Nova Operation's principal waste streams are tailings and waste rock. It is anticipated that much of the waste rock will be used for the closure of the tailings storage facility, however a residual waste rock dump may remain, subject to approval.

A purpose-built, paddock style, plastic-lined tailings storage facility has been constructed for long-term disposal of tailings. The design incorporates a single main embankment surrounding the facility, with a multi spigot discharge and a composite liner system. Underdrainage has also been installed to aid in consolidating tailings and maximise water recovery and reuse.

An on-site landfill facility is used for the disposal of both putrescible and inert waste.

## CASE STUDY /

### COMMUNITY NGADJU ENGAGEMENT

The Nova Mining Agreement, signed on 4 August 2014 with the Ngadju Traditional Owners, enabled the granting of the Nova Mining Lease. Since that time, the Nova Operation has diligently sought to deliver on its commitments to the Ngadju people. These include the provision of employment, education and business opportunities, and the protection of culturally significant sites within the operational area. Central to this collaboration has been a joint IGO and Ngadju representative committee, known as the Implementation Committee.

In recognition of the Nova Operation's location on Ngadju land, IGO has sought to showcase the rich cultural history of the area. This has included renaming the Nova site's access road to 'Pugarn Road' (pronounced 'Bugarn'). The Pugarn tree, known locally as the 'tea tree' is common in the area and was the preferred tree for shelter by the Ngadju people.

In late 2016, the Ngadju community commissioned the Ngadju artist Valma Wicker Schultz to create a locally inspired artwork, which is now proudly displayed on the Nova Concentrate Shed. The painting depicts the various seasons, landscapes, and the flora and fauna of the Fraser Range - all important to the Ngadju people.

In March 2017, the Nova Operation welcomed a group of Ngadju Elders to tour the site and see the new road signage and artwork. The Nova General Manager and site management team provided an overview of the operations and a tour of the site. This was followed by an overnight stay on the neighbouring Fraser Range Station (i.e. a station familiar to many of the Elders), which brought back fond memories of their childhoods.

In FY17, IGO supported a number of Ngadju groups including the Ngadju Dancers on their trip to the Sydney Opera House where they performed in front of a huge crowd. The Ngadju Rangers, established to teach young Ngadju people land management and bush survival skills, also received field and office equipment from the Nova Operation.

# TROPICANA GOLD MINE

FIGURE 10  
WESTERN AUSTRALIA

PERTH

TROPICANA GOLD MINE (AU)  
IGO 30%

---

## MINING METHOD

Open pit

---

## FY17 PRODUCTION

Au in bullion:  
129,487oz (IGO's share)

---

## AREA DISTURBED

2,457ha

---

## AREA REHABILITATED

0ha

---

## WORKFORCE

100% FIFO

---

## LIFE OF MINE

7-10 years



The Tropicana Gold Mine is an unincorporated joint venture managed by AngloGold Ashanti. IGO holds a 30% interest. While IGO has no direct management of the mine, members of IGO's Executive Committee meet formally at least twice quarterly with AngloGold Ashanti's site and corporate management to review both the joint venture's performance and the risk management processes. These reviews address any occupational health and safety issues, environmental management performance, community engagement, and the mine's physical and financial performance. Additionally, IGO receives daily performance reports on production and safety outcomes.

## LOCATION

The Tropicana Gold Mine is located 230km east of Laverton and 330km east-north-east of Kalgoorlie. Tropicana comprises approximately 4,100km<sup>2</sup> of tenements that stretch over more than 180km in strike length along the Yilgarn Craton and Fraser Range Mobile Belt Collision Zone. The mine sits within traditional lands variously overseen by the Central Desert Native Title Services, the Goldfields Land and Sea Council, and the Wongatha claimant's North East Independent Body representatives.

## BACKGROUND

The area containing the current gold reserves was identified and pegged by IGO in 2001. A joint venture with AngloGold Ashanti was entered into in 2002, and thereafter Tropicana, Havana and Boston Shaker gold deposits were discovered in 2005, 2006 and 2010, respectively. The deposits occur over a 5km strike-length with gold mineralisation intersected over a vertical depth of 1km beneath the natural surface.

Construction of the 220km access road commenced, following Western Australian and Federal Government approvals in early 2011. The development of site infrastructure including an aerodrome, accommodation village, borefields and a processing plant was then completed. In June 2017, an Audit Team Leader and a Technical Specialist

completed their verification audit of the operation for compliance to the International Cyanide Management Code in accordance with the 'International Cyanide Management Code Verification Protocol for Gold Mine Operations' and using standard and accepted practices for health, safety and environmental audits. The auditors recommended full compliance to the International Cyanide Management Institute (ICMI).

Mining of the Havana deposit commenced in 2012, with the first gold produced in September 2013, and post-commissioning, nameplate capacity of 5.8Mtpa was achieved in March 2014. The Tropicana Gold Mine employs open pit mining techniques of ore and waste rock using conventional blast, excavator and truck bulk mining methods. Gold-bearing ore is processed on site. Processing involves primary and secondary crushers, grinding in a high-pressure grinder and ball mill, thickening (followed by cyanide leaching and carbon adsorption), carbon elution and regeneration, tails thickening and disposal, and tailings water recovery.

## CONSUMABLES

The main consumables at the mine are gas, diesel, lime, cyanide and carbon.

Electricity is generated by a gas fired power station, supplied by a buried gas pipeline, which was completed in February 2016. The power station consists of 17 gas generators, which have replaced the old diesel generators but have the capability to run on diesel if required. The improved efficiency of the gas generators improves the new power station's energy reliability and reduces greenhouse gas emissions.

The Tropicana Gold Mine operates a fleet of open pit mining equipment – the primary consumer of diesel on site.

**129koz**  
**GOLD PRODUCED**  
**(IGO'S SHARE)**  
**IN FY17**

## WASTE

The key waste streams from the mine are waste rock and tailings. Waste rock, in addition to the gold-bearing ore is extracted from the various pits. The waste rock contains some material that is classified as potentially acid-forming, which if left unmanaged and exposed to the elements, has the potential to generate an acidic discharge with potential negative downstream consequences to biota and groundwater.

To mitigate this potential risk, the waste rock dumps have been designed and are being constructed to ensure that any potentially acid-forming material is encapsulated within benign waste rock material, located well within the dumps and specifically avoiding the outer slopes of the waste rock landforms. Mine scheduling of waste rock ensures compliance to this risk mitigation strategy.

Tailings, water-based suspended fine crushed rock, sand, and clay produced from the processing plant once the gold has been recovered are pumped into the engineered designed and purpose built tailings storage facility. The design of the facility allows the tailings to settle and form a 'beach' that drains to a central pond, where tailings liquor is recovered and returned to the processing plant. Key environmental consideration in this part of the process is the presence of weak acid dissociable cyanide in the tailings liquor.

The development of Tropicana has required the clearance of 5,787ha of vegetation. This includes both mining and exploration and open pit disturbance.

Both putrescible and inert waste is disposed of in the on-site landfill.

# JAGUAR OPERATION

## MINING METHOD

Underground - stoping

## FY17 PRODUCTION

Cu in concentrate - 4,565t

Zn in concentrate - 32,638t

Ag in concentrate - 1,376,521oz

## AREA DISTURBED

246ha

## AREA REHABILITATED

26ha

## WORKFORCE

95% FIFO

## NATIVE TITLE

No claim

## LIFE OF MINE

3-5 years

FIGURE 11

## WESTERN AUSTRALIA

PERTH

JAGUAR OPERATION  
(ZN-CU-AG)  
IGO 100%



The Jaguar Operation, located in the north-eastern goldfields, is approximately 60km north of Leonora and comprises mining and exploration leases. It sits in a region that has been, and continues to be, subject to extensive exploration, mining and ore processing activities. The area has historically hosted a number of economically viable underground mines; the first discovered was the Teutonic Bore. The Jaguar deposit (discovered in February 2002, approximately 4km south of the Teutonic Bore) was followed by the Bentley deposit, which was discovered in 2008. The most recent, Triumph, was discovered in 2014 and during this financial

year, IGO made an application to the DMIRS to develop it.

The Jaguar Operation is comprised of state mining, exploration and miscellaneous leases, totalling approximately 395,000ha. The nearest towns to the Jaguar Operation are Leonora and Leinster. The Jaguar Operation also overlays two existing pastoral leases: Tarmoola and Weebo stations.

Given the 35-year history of mining activities within the Jaguar Operation's mining leases, the area has been heavily impacted. The surrounding bushland has also been severely degraded as a result of prolonged grazing by goats and

cattle within the surrounding pastoral leases. The most significant historic feature is the abandoned Teutonic Bore open pit mine (refer to the Environmental Impacts section of this report page 72).

## BACKGROUND

The Jaguar Operation was acquired by IGO in 2011 as part of its takeover of Jabiru Metals Ltd. The operation consisted of two underground deposits, Jaguar and Bentley. Operations at the Jaguar underground mine ended at the start of FY14 and, as a result, all FY17 mill production ore was, and continues to be, sourced from the Bentley underground mine. Additional potential ore sources have been identified below the existing Bentley deposit, as well as the new deposit known as Triumph.

The Jaguar Operation employs predominantly long-hole stope mining methods, with ore brought to the surface for crushing and further processing. The processing plant has been designed to recover copper and zinc by milling, flotation, thickening, and concentrate filtration. Copper and zinc concentrates are transferred into sealed containers and transported from site to the Geraldton Port for export.

The mining process at the Jaguar Operation results in the creation of underground voids. Voids must be backfilled where surrounding rock is to be mined to prevent the collapse of the new mining areas. This is achieved by backfilling voids with waste rock and cement aggregate fill.

## CONSUMABLES

The main consumables used at Jaguar in FY17 were natural gas, diesel, grinding media (steel balls) and explosives.

The Jaguar power station, fuelled by compressed natural gas (CNG), produces the majority of Jaguar's power demand. However, some areas (e.g. the Jaguar accommodation village) are powered by local diesel-fuelled generators where power lines have not been installed.

Groundwater is recovered from the Bentley underground mine, pumped to surface settling

dams before reaching the Jaguar process water dam. This water is used in the processing plant, and reused underground, and for exploration activities. Any surplus water is discharged into the historic Teutonic Bore open pit mine. Water is also recovered from the tailings dam and reused in the processing plant as required.

## WASTE

The key waste streams from the mine are waste rock and tailings. Waste rock is extracted from underground and placed in above ground waste rock dumps. Some of this material is classified as potentially acid-forming (PAF).

Waste rock brought to the surface, both non acid-forming and PAF, is blended and placed in waste rock dumps. As the majority of waste rock is non acid-forming, it creates a neutralising environment for any PAF waste. The blended PAF rock is then progressively encapsulated within non-PAF material and rehabilitated. Annual photo-monitoring records vegetation health surrounding the waste rock dumps to detect the presence or absence of acid mine drainage.

The Jaguar Operation, as a result of the mining method used, also requires waste rock to backfill open stopes as it undertakes the bottom up mining method. As a result of this, a significant portion of the waste currently mined is left underground due to the loose rock backfill requirement.

Tailings are generated by the metal recovery process and are pumped to the tailings storage facility for disposal. The tailings are radially deposited within the facility to allow them to settle, forming a 'beach' that drains to a central pond. Tailings are cyclically deposited and the beaches dry evaporatively, which enables the dried tailings to be progressively stacked higher. During FY17 the Jaguar Operation extended the height of the existing containment structure to accommodate additional tailings.

A small volume of both putrescible and inert waste is disposed of in the on-site landfill.

## CASE STUDY /

### SAFETY PERMIT TO WORK

'Permit to Work' systems are an industry standard approach to managing workplace hazards. In essence, a permit to work is a written approval to complete a task subject to various precautions being taken. At our Jaguar Operation, we successfully implemented a new Permit to Work system for the whole of the Jaguar Operation to improve both the safety and efficiency of potentially hazardous task completion.

Development of the system commenced in mid-2016 and involved the preparation of procedures, training packages and an overarching Permit to Work linked to twelve sub-permits. Designed for the whole of the Jaguar Operation, the system covers all activities including maintenance, processing, underground mining and the camp, with sub-permits including Level 2 Isolation, Hot Work, Confined Space Entry, Excavation, Work at Heights, Lifting, Gridmesh/Barrier Removal, Land Clearing, High Voltage Vicinity and High Voltage Access.

A training program was rolled out before the system went live across the site in October 2016, which was put to the test during one of our biggest maintenance shutdowns at Jaguar. Feedback was sought from employees and contractors to ensure the system was practical and effective, with comments indicating the system exceeded performance expectations, particularly under pressure.

Through the dedication of over 600 man-hours, the centralised Permit to Work system was fully implemented in January 2017, resulting in noteworthy improvements to safety performance at Jaguar. Site personnel are now trained to stop and assess hazards and prompted to carry out risk assessments before undertaking tasks, enabling safety risk to be reduced as low as reasonably practicable. Processing of permits occurs at a purpose-built permit hut, emphasising the importance of the Permit to Work system and the value of safety embedded across our operations.

# LONG OPERATION

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## MINING METHOD

Underground - stoping

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## FY17 PRODUCTION

Ni in ore - 8,433t  
Cu in ore - 592t

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## AREA DISTURBED

103ha

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## AREA REHABILITATED

4ha

---

## WORKFORCE

13% FIFO  
87% Residential/DIDO

---

## NATIVE TITLE

Ngadju

---

## LIFE OF MINE

<1 year

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Mining operations will be suspended in the June Quarter 2018 and the mine will be placed into care and maintenance.

FIGURE 12  
WESTERN  
AUSTRALIA

PERTH

LONG  
OPERATION  
(NI)  
IGO 100%



**8,433t**  
**NICKEL METAL**  
**MINED IN FY17**

The Long Operation is located on the shores of Lake Lefroy approximately 3km east of Kambalda and 50km south-south-east of Kalgoorlie. The area has long been disturbed by mining and mineral processing activities with a BHP Nickel West operation to the north, west and south, Mincor Resources to the north, and Gold Fields' St Ives Gold Mine further south. The Long Operation is comprised of both freehold land and mining leases.

## BACKGROUND

In September 2002, IGO purchased the Long Nickel Operation, including both freehold land and tenements from WMC. It began a staged recommencement of nickel mining from October 2002 and has been operating successfully since.

The Long Operation involves the underground mining of ore and waste rock. Ore is then transported off-site for processing by BHP Nickel West at their adjacent concentrator facility under an offtake agreement.

Traditional stope and air leg mining methods are employed, which create voids that are mostly backfilled to prevent ground collapse, and allow access to neighbouring mining areas. The backfill used is a paste fill made from cement and tailings sourced from the St Ives Gold Mine, reducing the total tailings material on the

surface to be rehabilitated. This backfill material is manufactured on site at our paste plant and flows through a pipe network underground.

One of the noteworthy aspects of the Long Operation is the presence of third-party assets on the IGO property (e.g. tailings lines run from BHP Nickel West concentrator facility to the west of the Long Operation to the BHP Nickel West tailings storage facilities located to the north-east of the Long Operation).

## CONSUMABLES

The main consumables (in order of dollar value) at Long Operation in FY17 were electricity, water, backfill (tailings), shotcrete and explosives.

The Long Operation sources electricity from BHP Nickel West, which generates electricity from gas turbines located at the BHP Nickel West concentrator facility.

Despite the mine extending under the western edge of Lake Lefroy, the mine itself is relatively dry. The majority of the groundwater captured underground is recycled in the mining activity. Recovered groundwater is also used in the backfill manufacturing process and the remainder is discharged (subject to license conditions) onto the saltpan of Lake Lefroy.

## WASTE

The relatively small mass of extracted waste rock is placed in a single waste rock dump. A proportion of this material is classified as potentially acid-forming. During FY17 the Long Operation undertook two geochemical characterisation studies to increase its understanding of waste materials for waste rock and tailings.

A small volume of both putrescible and hard waste is disposed off-site in the Kambalda East landfill.

## CASE STUDY /

### SAFETY EMERGENCY RESPONSE TEAM PUT TO THE TEST

Our Long Operation centres on an underground mine over 1km deep. To ensure the safety of our people, the site implements and continually updates its safety and evacuation procedures and installs mine emergency evacuation points throughout the underground workings. Emergency safety drills and emergency response support from neighbouring mines all contribute to ensuring a safe working environment for our people.

In May 2017, following an underground truck fire, IGO's procedures and people were put to the test. The fire caused the evacuation of 17 underground workers through the mine's Emergency Egress System, successfully coordinated by our Emergency Response (ER) team. The ER team ensured that our people were evacuated quickly and without injury.

Following this incident, the Long Operation initiated a major investigation into the cause of the fire. Investigators determined that the fire was caused by failure of the truck's drive shaft, which resulted in a burst hydraulic hose spraying oil onto a hot exhaust.

Although all underground trucks are fitted with an automatic fire suppression system in the engine bay, the investigation found that the truck's transmission area was not protected. The information was captured by our safety and maintenance departments to determine if any appropriate system upgrades may be necessary on our other vehicles.

IGO captured the findings and implemented a preventative maintenance review of all similar trucks in operation across our business. The investigation findings were also provided to the truck manufacturer and other mining companies, as well as the Department of Mines, Industry Regulation and Safety (DMIRS).

**GROWTH**



**41.9Mt**  
**TOTAL**  
**MINERAL**  
**RESOURCES**



## GROWTH

As mines have a finite life, new projects must be added to IGO's asset portfolio to ensure our sustainability and strengthen our business. We target opportunities that have scale and the ability to generate high margins over a long mine life. This will be delivered through both discovery and accretive mergers and acquisitions.

### **DOING WHAT IS RIGHT AND DOING WHAT WE SAY WE WILL DO**

"We all want a fair go but sometimes we've got to act to make sure this happens for someone else. Often it takes real effort to deliver on a promise."

---

**Struan Richards**  
Group Finance Manager, Corporate



# OVERVIEW

The discovery of new resources creates the greatest value for IGO and, in turn, our stakeholders. As a result, IGO's primary focus is on exploration. However, the period between discovery and mine production is rarely quick. Nova was an exception with only five years between the two events. Often the process takes much longer. As a consequence, IGO also looks to accretive mergers and acquisitions. Typically, mergers and acquisitions create lesser overall value. However, they do provide relatively quick access to cashflow. As a result, IGO has and will continue to explore both options to grow the business.

In FY17 our new business activities were focused on the consolidation and growth of our exploration landholdings in the Fraser Range and Lake Mackay regions. Both regions are relatively under-explored and are highly prospective. In December 2016, IGO acquired Windward Resources Ltd (Windward) by way of an off-market takeover. Windward was a listed public company holding several tenements in the Fraser Range region. In FY17, IGO also entered into a number of joint venture arrangements with exploration companies including Sheffield Resources Limited (Sheffield Resources), Buxton Resources Limited (Buxton Resources) and Orion Gold NL (Orion Gold).



**FOCUSED ON  
AREA SELECTION  
AND GROWTH**

# EXPLORATION

Exploration is core to IGO's business development strategy. We remain committed to our search for opportunities to increase our portfolio. To this end, IGO continues innovative studies on prospectivity designed to increase IGO's probability of delivering exploration success.

## MINERAL TITLES

In FY17 IGO's total landholding under tenements increased from approximately 1,304,000ha to 1,936,000ha. The significant increase in land tenure was through the acquisition of Windward Resources and joint venture agreements with Orion Gold, Buxton Resources and Sheffield Resources within the reporting period.

At the end of FY17, exploration licences represented the majority of mineral tenements held by IGO, followed by miscellaneous licences (which includes general purpose leases). The number of exploration licences held by IGO for FY17 represents an increase of 66% on FY16, with no significant increases to mining leases or miscellaneous licences. A breakdown of total landholdings for FY16 and FY17 is presented below.

| IGO Mineral Tenements            | Units | 2016      | 2017      |
|----------------------------------|-------|-----------|-----------|
| Prospecting licences             | ha    | 2,945     | 2,480     |
| Exploration licences             | ha    | 964,100   | 1,596,600 |
| Mining leases                    | ha    | 49,404    | 49,254    |
| Miscellaneous and other licences | ha    | 286,969   | 286,969   |
| Freehold                         | ha    | 569       | 1,329     |
| Total*                           | ha    | 1,303,987 | 1,936,632 |

\* Including joint venture landholdings.

## ANNUAL EXPENDITURE COMMITMENT

All types of mining tenure in Australia, other than ancillary, requires the tenement holders to ensure that a minimum level of qualifying expenditure is made in connection with exploration or production activities on the relevant tenement. In this way, governments ensure that the right to ongoing land tenure is conditional on the requisite investment. With some minor exceptions, IGO has met all of its expenditure obligations.

Expenditure is generally required to be made in connection with mining and exploration, and would typically include costs associated with drilling, travel to and from site, purchase of plant and equipment, and wages and administrative overheads among others. Notably, expenses incurred in handling recovered minerals (such as marketing or freight) cannot generally be counted towards satisfaction of an expenditure condition. In some cases, exemptions from this condition may be granted for a set period of time.

## ACCESSING LAND AND EARLY STAGE PROJECTS

An investment in the mining sector generally involves either the acquisition of a direct interest in the assets of a mining project (including its tenements), earning an interest in a mining project, or the acquisition of shares in a company that owns an interest in a mining project.

A typical means of acquiring a direct interest is through 'farm-in' agreements. Such agreements are commonly used in the Australian mining industry, particularly where an investor is seeking to earn an interest in a mining project during its exploration phase - an approach commonly used by IGO. Under a farm-in agreement, the investor typically agrees to fund particular exploration costs or make a capital contribution in order to earn an interest in the tenement.

Generally, once the investor earns this interest, it will form an unincorporated joint venture with the initial owner for the further exploration of the tenement and consequent mining and production of minerals.

## EXPLORATION INCENTIVE SCHEME

In 2009, the Western Australian Government announced an Exploration Incentive Scheme (EIS), an initiative that aims to encourage exploration in under-explored greenfield regions of the state. In August 2017, the state government announced its continued support providing \$10 million a year for the next two years.

**In FY17 IGO received grants totalling \$269,880.**

# FRASER RANGE PROJECT



The Fraser Range Project comprises 100% owned exploration licences, and several joint ventures, including those with AngloGold Ashanti, Buxton Resources, Creasy Group, Orion Gold, Sheffield Resources, TasEx Geological Services and Rumble Resources. In most of the joint ventures IGO owns or is earning a minimum 70% interest in the tenements. The Fraser Range Project area is located approximately 110km east of Norseman and covers over 430km strike length along the Albany-Fraser Belt.

This emerging belt is considered highly prospective for both Tropicana-style gold deposits as well as Nova-style magmatic, nickel-copper deposits. While many exploration companies have taken up exploration licences in the Fraser Range, IGO has a competitive advantage derived from our knowledge gained during the exploration, discovery and development of the Nova-Bollinger deposit.

Exploration activities over the past year have included surface geochemical sampling, ground-based gravity and moving loop electromagnetic surveys, and drilling to generate and test targets.

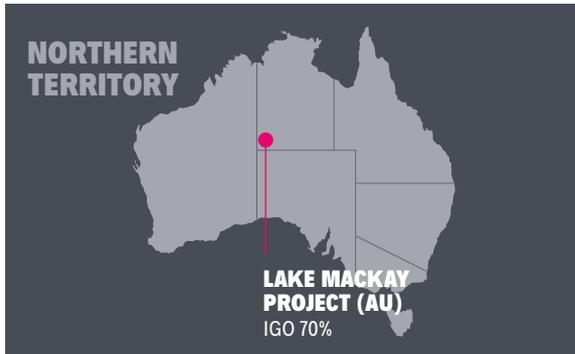
Parts of IGO's Fraser Range Project area cover the Boonderoo, Fraser Range, Kanandah, and Southern Hills pastoral leases, which are actively being farmed.

Northern parts of the project area fall within the proposed Lake Harris Nature Reserve and the Plumridge Lakes Nature Reserve. Several tenements in the southern part of the project are located within the Dundas Nature Reserve. IGO is required to operate under an approved Conservation Management Plan (CMP) when working in these Class A and B nature reserves. The CMP is designed to provide a framework for environmental management of exploration activities in accordance with Western Australian and Australian Government legislation.

One project area in the greater Fraser Range is a joint venture with AngloGold Ashanti, known as Salt Creek. The south-western portion of the Salt Creek Project's tenure falls under the *Environment Protection and Biodiversity Conservation Act (EPBC) Act 1999* as a 'referral area'. Exploration activities within the area are classified as a 'controlled action' and require adherence to an Environmental and Conservation Management Plan (ECMP).



# LAKE MACKAY PROJECT



Early in FY14, IGO entered into an exploration joint venture with ABM Resources NL (ABM). The project includes a 520km<sup>2</sup> exploration licence and a further 6,600km<sup>2</sup> of exploration licence applications. In addition to this, a joint venture with Castile Resources and ABM covering adjacent exploration licence applications of 900km<sup>2</sup> was completed.

The Lake Mackay Project area is 450km west-north-west of Alice Springs and is accessed by the Gary Junction Road. The project is within the Great Sandy Desert Bioregion, which is comprised predominantly of semi-arid sand plains and sand dunes.

Follow-up drilling of soil anomalies has confirmed primary gold and massive sulphide base metal mineralisation. These encouraging results confirmed the area as a new belt-scale opportunity and led to IGO triggering Phase 2 of its option agreement with ABM in May 2016. By spending \$6 million on the project, IGO can earn a 70% interest by May 2020. In October 2016 base metal mineralisation was confirmed during the first drilling program at the Grapple Prospect.

The land tenure falls within areas covered by the *Aboriginal Land Rights (NT) Act 2006* and access by explorers is covered under various deeds for Exploration with the Central Land Council. All work programs must be submitted to the Central Land Council for approval and meetings are held with Traditional Owners to discuss the proposed activities. Sacred site clearance surveys are also completed by the Central Land Council prior to any on-ground exploration being undertaken.



# BRYAH BASIN PROJECT



IGO's exploration joint venture with Alchemy Resources Ltd (Alchemy) entitles IGO to earn a 70% to 80% interest in the Bryah Basin Project.

The Bryah Basin Project is 100km north of Meekatharra in Western Australia, north-west of the Great Northern Highway. Following the discovery of the high-grade DeGrussa volcanogenic massive sulphide (VMS) copper-gold deposit in 2009, the area has become an exploration hotspot as VMS-style ore bodies often occur in clusters.

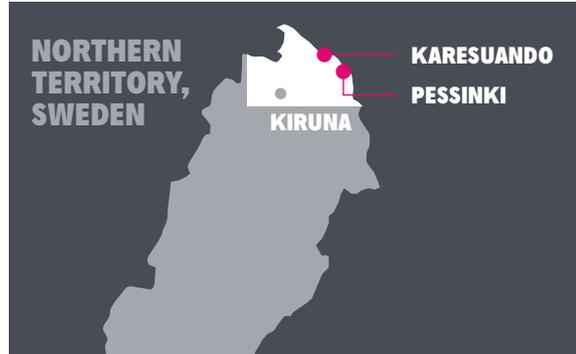
IGO's activities over the past year have been comprised of reverse circulation and diamond drilling.

Numerous geochemical anomalies have been defined through air core drill-testing of favourable stratigraphic horizons.

The southern and eastern portions of the project area fall within the former Doolgunna Pastoral Lease, which is now designated as a Proposed Conservation Area under the control of the Department of Biodiversity Conservation and Attractions.

The project operates under an approved ECMP developed by Alchemy for those areas that fall within the former Doolgunna Pastoral Lease. The ECMP includes a risk assessment and protocols for proactive environmental management and rehabilitation.

# SCANDINAVIAN PROJECT



IGO has been undertaking exploration activities in Scandinavia since 2007, under a number of nickel-copper focused joint ventures with the Toronto Stock Exchange (TSX)-listed company Mawson Resources Ltd (MAW), based in Finland. Project exploration activities to date have included regional prospecting, geochemical and geophysical surveys and drilling. In FY17 our activities were systematic ground-based geochemical and geophysical surveying. In FY18 the planned works will include on-ground geochemical follow-up sampling and airborne geophysical surveying. Subject to the success of this preliminary work, further ground-based surveys may be required, including drilling.

IGO currently has one active project located in Northern Norrbotten County, namely Pessinki (13,452ha). The Pessinki Project intersects part of the Pessinki Nature Reserve (SE0820257, Natura 2000).

The Scandinavian Project continues to regularly engage various stakeholders including individual landowners, the Inspectorate of Mines, the County Administration Board, and the Sami Traditional Owners. As noted in our 2016 Sustainability Report, some of those consulted parties had previously raised concerns. These concerns persist. The most common is a general concern about the scale and potential for widespread impact associated with mining: a concern that arises from the fact that, for many people, their only experience of mining in the region has been large-scale open-pit iron ore mining. Other concerns include the industry's potential impacts on communities and individual's lifestyles. Of specific and consistent concern is the potential to impact on traditional reindeer herding practices and water contamination.

IGO, in association with its joint venture partners, is clearly an advocate for the benefits of mining. We are proud of our track record in best practice, safe and sustainable mining in Australia and being a valued member of the community. In this light, we have sought to pursue our interests in exploration while engaging with the community to address their concerns. We have employed a range of mitigation measures such as planning our activities in winter, where possible, to avoid the calving season of reindeer and the nesting season of bird life and, similarly, to avoid important traditions like the annual moose hunt, which begins 1 September every year. There have been no reported environmental incidents or community complaints in the reporting period.

# STOCKMAN PROJECT



The Stockman Project, located in the East Gippsland region of north-eastern Victoria, approximately 460km by road from Melbourne, was acquired as part of IGO's 2011 acquisition of Jabiru Metals Ltd.

The Stockman Project encompasses two defined copper-zinc-silver-gold deposits, Wilga and Currawong, and various prospects and exploration targets. A core of copper rich ore from the Wilga deposit was previously mined between 1992 and 1996. The larger Currawong deposit is fully intact.

In June 2017, IGO announced the divestment of the Stockman Project to CopperChem. CopperChem is a wholly owned subsidiary of Washington H Soul Pattinson and Company Limited, which like IGO, is a publicly listed Australian company. Notwithstanding the sale, IGO will retain a financial interest in the project.

The sale of Stockman is consistent with IGO's strategy of focusing on assets of scale. Further, the project is not geographically proximal to IGO's existing activities and is not of sufficient scale to be a core asset in the IGO portfolio. As part of this strategic direction we sought an owner better-suited to its size and scale and therefore best-equipped to realise the project's value.

IGO, in collaboration with CopperChem, continues to seek the necessary approvals to finalise the sale transaction and develop an operation that would see the concurrent underground mining of Wilga and Currawong. A 1.0Mtpa differential flotation concentrator will process the resulting ore to produce approximately 150,000tpa of copper and zinc concentrates over a project life of approximately ten years. The concentrate would be sold to custom smelters (most probably in the southern Asia region).

The Environmental Effects Statement (EES) for the Stockman Project, the overarching permitting instrument for the project under the *Victorian Environment Effects Act 1978*, received a positive approval from the Federal Government, subject to conditions, in November 2014.

Approvals efforts in the last 12 months have focused on the preparation of a Project Work Plan (and associated management and monitoring plans). A number of minor approvals were received in FY17, including the Planning Scheme Amendment to allow the construction of the mining camp outside the current tenure footprint.

## PROFILE - JACOB CICHOSZ



**My unexpected and remarkable journey with IGO started almost as unpredictably as it possibly could - by winning the WA Mining Club Geology Scholarship sponsored by IGO.**

I was a mature age student that migrated to Australia several years before, in my second year of studies, with my wife and a baby on the way. This description is an explosive mixture of big dreams and a willingness to go beyond my safe zone to achieve greatness in life. Why explosive? Because it involved many years of hard work, sacrifices and tremendous support from my lovely wife. IGO and the WA Mining Club allowed my potential to be realised.

Nevertheless, one wonderful action led to another, and later I was invited to work as a casual administration assistant with IGO in the New Business team, with openness and flexibility to fit around my University timetable. During my time working in the office, helping people and working along exceptional and inspiring professionals from IGO, I have grown both professionally and personally. IGO did not stop there and, during my University winter break for six weeks, I worked as part of the Air Core Exploration Team in the Fraser Range as a Field Geological Assistant. Experience and confidence earned in the field is unimaginably big for a student like me, and it allowed me to work and try even harder to achieve my career goals. I would like to express my deep and genuine gratitude and appreciations to all IGO people who have seen my potential and allowed me to grow - you have changed my life.

---

### Jacob Cichosz

Administration Assistant/  
Geology Student

# ECONOMIC IMPACT



**\$422M**  
**REVENUE**  
**FROM OUR**  
**OPERATIONS**  
**IN FY17**

**IMAGE**  
Painting by Valma Wicker Schultz, a Ngadju Traditional Owner of the lands surrounding the Nova Operation.



## ECONOMIC IMPACT

FY17 was again challenging for many in Western Australia's mineral industry.

However, IGO continues to make an important contribution to the communities in which we operate, to our employees and shareholders.

### SUPPORTING OUR COMMUNITIES

"The working relationship between IGO and the Ngadju Community is positive and progressive. A genuine intent to honour commitments exists and by building on this, our relationships can only lead to further success."

---

#### Carmel Jones

Aboriginal Relations Officer, Nova Operation



# OUR CONTRIBUTION IN CONTEXT



**FIRST NICKEL CONCENTRATE PRODUCED FROM NOVA IN DECEMBER 2016**

West Australian mining investment has declined considerably since FY13 as resource projects have gradually been completed and few new projects have commenced. However, growth in the average Gross State Product (GSP) after the peak in investment activity remained firm in Western Australia due to the large increase in mining production and commodity exports brought about by this investment. Growth in GSP in Western Australia was 2% in 2015/16, its slowest pace in 15 years, while state final demand (which does not capture exports) declined by around 8% over 2016.

As of March 2017, the latest figures from the Government of Western Australia, suggest the total value of the Western Australian minerals industry exports was \$95.3 billion (refer to [www.dmp.wa.gov.au/Documents/2016\\_Economic\\_indicators\\_resources\\_data](http://www.dmp.wa.gov.au/Documents/2016_Economic_indicators_resources_data)).

The value of IGO's revenues and other income in FY17, including Tropicana, was approximately \$422 million.

Based on the most recently available data, the gold sector defied trends and increased in value for the third consecutive year. The value of the sector rose more than 10% in FY16 to reach a record \$10 billion. This was largely attributable to the Australian dollar price of gold continuing to rise from an average of \$1,602/oz in FY16 to an average of \$1,666 in FY17. Sales volumes rose marginally during the period from 6.2Moz to 6.3Moz. In comparison, Tropicana sales revenue for the period was 1% lower than the previous period due to 5% lower gold sold as a result of lower grade milled, following the

cessation of grade streaming in mid-FY16. This was mostly offset by a 12% increase in ore milled for the year, following the process plant optimisation project, and an increase in the Australian dollar gold price in FY17. IGO's share of gold sales for FY17 were 128,601oz in FY17 and a total revenue<sup>1</sup> of \$211.9 million, compared to FY16 of 135,864oz and total revenue of \$215.0 million.

For FY16, Western Australia's nickel sector was valued at \$2.2 billion. Globally, the nickel market has been in oversupply for several years and this has placed downward pressure on nickel prices. Some local supply has dropped out of the market, with Western Australian production decreasing more than 4% for the year, from 183,000t to 176,000t. Revenue for the Long Operation increased by 10% in FY17 compared to the prior year, due to higher than average realised Australian dollar nickel price offset by marginally lower nickel sold. Nickel sales from IGO's Long Operation totalled 5,098 payable nickel tonnes in FY17 and total revenue was \$70.5 million, compared to 5,125 payable nickel tonnes in FY16 and a total revenue of \$63.9 million.

In addition, during FY17 the construction of the Nova Operation was completed, with ore commissioning commenced in October 2016. First deliveries of nickel concentrate were delivered to BHP Nickel West in December 2016 and the first offshore shipments from the Port of Esperance were shipped in June 2017. Commercial production at Nova was declared with effect from 1 July 2017.

<sup>1</sup> Total revenue includes sales of by-products.

In Western Australia, the overall value of base metals (copper, lead and zinc) decreased by close to 16% to just below \$1.4 billion in FY16. Copper dominated this group with sales of \$1.2 billion, down 9% on the previous financial year. In comparison, revenue from the Jaguar Operation increased by 3% during the year with lower sales volumes more than offset by higher metal prices. Key price variances (net of treatment and refining charges) were 69% higher than the Australian dollar realised zinc price and 15% higher than the Australian dollar realised copper price. IGO's payable zinc and copper production from Jaguar operation for FY17 were 27,067t and 4,377t respectively, resulting in a total revenue of \$137.5 million. This is an increase on the FY16 total revenue of \$133.0 million, and payable metal of 32,634t of zinc and 7,122t of copper.

**\$366M**  
**CONTRACTOR**  
**AND SUPPLIER**  
**SPEND IN FY17**

**OPERATING PERFORMANCE**

In FY17, with one minor exception, IGO succeeded in meeting or exceeding all of its production and cash cost guidance statements. The exception was Jaguar, which was below production guidance. Tropicana Gold Mine produced a total of 431,625oz of gold (129,487oz being IGO's share), milling 7,326Mt of ore at an average gold grade of 2.05g/t. The Long Operation generated 8,433t of nickel in concentrate and 592t of copper in concentrate, mining a total of 205,372t of ore at a head grade of 4.11% and 0.29%, respectively. The Jaguar Operation produced 4,565t of copper in concentrate and 32,638t of zinc in concentrate. A total of 444,700t of ore was milled with a copper and zinc head grade of 1.3% and 8.3%.

**FY17 FINANCIAL PERFORMANCE**

- Revenue from operations of \$421.9 million was a good result.
- Underlying earnings before interest, taxes, depreciation and amortisation (EBITDA\*) of \$150.5 million.

- Net profit/loss after tax for FY17 was \$17 million, compared to a loss of \$58.8 million in the previous financial year.
- Cashflows from operating activities for IGO were \$77.7 million, a result of lower production costs at Tropicana, combined with sound operating cashflows from Long and Jaguar.
- At the end of the financial year, the Company had cash totalling \$35.8 million and marketable securities of \$15.3 million (2016: \$46.3 million and \$5.0 million, respectively).
- Total fully franked dividends paid during FY17 were \$17.6 million. The total amount the Company has returned to shareholders since incorporation in 2002 is in excess of \$164.2 million by way of a combination of \$154.5 million fully franked dividends and a \$9.7 million share buyback in 2009.
- During the reporting period, the Company conducted an equity raise of \$274 million.
- The Company repaid \$71 million of debt, reducing the Company's outstanding debt to \$200 million, and cancelled a further \$79 million of its Term Loan Facility. As at 30 June 2017, the Company's facilities comprise \$200 million in drawn term debt and a \$200 million revolving credit facility, which remains undrawn at the end of the financial year.

\* Underlying EBITDA excludes impairments (A\$25.0M), redundancy and retention costs (A\$6.4M) and acquisition costs (A\$3.9M).



# SOCIO-ECONOMIC CONTRIBUTIONS

IGO's socio-economic contributions can be measured by the dividends we pay, the salaries and other employment benefits we provide to our staff, the money we spend on contractors and consultants, the money we pay in taxes and royalties, and through our Corporate Giving.

IGO's royalty payments form a part of the Western Australian Government's Royalty for Regions program, with the remainder going to general revenue to fund services such as law enforcement, education, health, roads and community development programs.

The Western Australian Government received royalties from the State's mineral and petroleum producers totalling \$4.6 billion in FY16, a decline of 21% on FY15. Royalties from gold increased from \$218 million in FY15 to \$239 million in FY16, or 9.6%. Royalties from nickel decreased from \$83 million in FY15 to \$54 million in FY16, or -34.7%.

In addition to rent, a tenement holder must generally pay royalties in respect of certain minerals obtained from land that is subject to a mining tenement. Royalties are payable in arrears as they are calculated on the basis of the quantity of minerals recovered in a given year. Royalties payable over the life of a tenement will vary depending on the rate of production. Royalty rates are set by state and territory regulatory bodies for each mineral or metal type.

In FY17, IGO spent a total of \$438,817 on community development and related projects and activities (Corporate Giving). This equates to approximately 0.10% of total revenue, which is substantially more than IGO's Corporate Giving target of 0.06% of total revenue.

IGO has a land access agreement with the Ngadju people; the native title holders of the land on which the Nova Project is located. In compliance with this agreement, up until the completion of the sale transaction, Sirius made payments to the Ngadju totalling \$1,462,944. As noted in the Scheme of Arrangement that gave rise to IGO's acquisition of Sirius, the transaction resulted in the conversion of the 400,000 Sirius shares to 264,000 ordinary fully paid IGO shares that were allocated to the Ngadju Trust. In FY17, IGO accrued \$327,000 which will become payable to the Ngadju prescribed body corporation once they have finalised their trust arrangements.

Tropicana's current budget for community donations/support programs in 2017 was \$160,000, excluding the \$60,000 cost of cross-cultural awareness programs.

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## PROCUREMENT

IGO supports economic development in the communities where we operate by seeking to invest first locally and then regionally within Western Australia, then nationally and finally internationally.

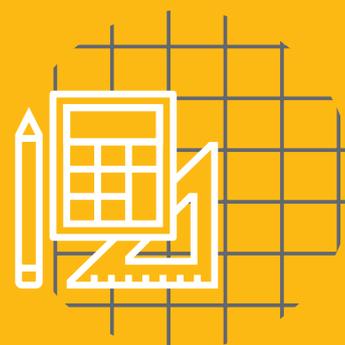
At the Long Operation, our highest value contracts are our off-take agreements with BHP Nickel West (which processes IGO ore), diamond drilling and fuel.

At the Jaguar Operation our highest value procurement contracts are our transport contracts, underground mining and drilling services, fuel, gas and catering services. These services and materials are sourced from large, reputable organisations with operations throughout Australia.

During the construction of Nova, the highest value contract was for the construction of the processing plant, followed by underground mining and drilling services, fuel and catering services. Construction was completed using Australian-sourced labour, except for those modular components of the processing plant, which were fabricated offshore. During operations our highest value contracts were for underground mining and drilling services.



# CONTRACTS AND PROCUREMENT A CONSOLIDATED APPROACH



**IN FY17 OUR TOP TEN SUPPLIERS OR SERVICE PROVIDERS BY EXPENDITURE WERE:**

## NOVA PROJECT

|    |                                |
|----|--------------------------------|
| 1  | BARMINCO LIMITED               |
| 2  | GR ENGINEERING SERVICES LTD    |
| 3  | BP AUSTRALIA PTY LTD           |
| 4  | SWICK MINING SER (SMS OPS P/L) |
| 5  | CV LOMAG JV                    |
| 6  | CATER CARE SERVICES PTY LTD    |
| 7  | SKIPPERS AVIATION PTY LTD      |
| 8  | BUREAU VERITAS MINERALS P/L    |
| 9  | ZENITH PACIFIC PTY LTD         |
| 10 | CPC GOLDFIELDS PTY LTD         |

## TROPICANA GOLD MINE

|    |                                   |
|----|-----------------------------------|
| 1  | MACMAHON CONTRACTORS PTY LTD      |
| 2  | CALTEX AUSTRALIA                  |
| 3  | APA OPERATIONS PTY LTD            |
| 4  | CIVMEC CONSTRUCTION & ENG PTY LTD |
| 5  | BLUE SPEC DRILLING PTY LTD        |
| 6  | COMPASS GROUP (AUST) PTY LTD      |
| 7  | PACIFIC ENERGY (KPS) PTY LTD      |
| 8  | CSBP LIMITED                      |
| 9  | MOLY-COP AUSTRALIA                |
| 10 | FLSMIDTH PTY LTD                  |

## JAGUAR OPERATION

|    |                                     |
|----|-------------------------------------|
| 1  | QUBE BULK PTY LTD                   |
| 2  | PREMIUM MINING PERSONNEL P/L        |
| 3  | BP AUSTRALIA PTY LTD                |
| 4  | QUBE PORTS PTY LTD                  |
| 5  | WESTRAC EQUIPMENT PTY LTD           |
| 6  | ACTION INDUSTRIAL CATERING P/L      |
| 7  | SANDVIK MINING                      |
| 8  | BUNDARRA CONTRACTING                |
| 9  | SWICK MINING SERVICES               |
| 10 | GOLDFIELDS GAS TRANSMISSION PTY LTD |

## LONG OPERATION

|    |                             |
|----|-----------------------------|
| 1  | BHP NICKEL WEST PTY LTD     |
| 2  | LITTLE INDUSTRIES           |
| 3  | BP AUSTRALIA PTY LTD        |
| 4  | BGC CEMENT                  |
| 5  | WESTRAC EQUIPMENT           |
| 6  | MURRAY ENGINEERING PTY LTD  |
| 7  | ORICA AUSTRALIA PTY LTD     |
| 8  | LHS ROCKTOOLS AUST PTY LTD  |
| 9  | PIT N PORTAL PLANT SERVICES |
| 10 | MINING PEOPLE INTERNATIONAL |

## CONTRACTOR MANAGEMENT

From time-to-time, IGO engages contractors (as both businesses and individuals) to provide various services at our mine sites, exploration projects, warehouses and offices. When contractors are at an IGO site, their safety and welfare is IGO's responsibility.

IGO expects that our contractors provide their workforce with a safe system of work and a safe place of work. We expect our contractors to monitor and report on their performance, and that we see improved trends in measured outcomes. Put simply, we expect to see the same high standards that we expect of our direct employees, with no serious workplace injuries and a declining trend in minor injuries.

Our major contractors have requirements in their contracts requiring their behaviour, and that of their employees, be consistent with the IGO Code of Conduct and Sustainability Standards. Our contractors are required to undertake a comprehensive program of IGO and work site inductions in order to develop a clear understanding of the requirements for working at our sites.

All contractors working at IGO sites are provided with an IGO representative to manage their contract. This provides IGO with a direct opportunity to manage contractor performance.

## CUSTOMERS

In FY17, IGO's key customers were:

- Perth Mint, ANZ, CBA and NAB, which bought gold produced from the Tropicana Gold Mine;
- BHP Nickel West bought nickel ore produced from the Long Operation;
- MRI Trading AG (MRI) and Trafigura bought both zinc and copper concentrate produced from the Jaguar Operation; and
- Trafigura, Glencore and BHP Nickel West bought nickel concentrate from the Nova Operation.



**\$8M**  
**CONTRACT WITH**  
**BUNDARRA**

## CASE STUDY /

# ECONOMIC BENEFIT ABORIGINAL BUSINESS

IGO is committed to providing pathways to employment for Aboriginal people, many who are Traditional Owners of the land on which IGO operates. To this end, IGO has developed a Community Policy and a Group Community Standard – Aboriginal Employment and Business Development (refer to the IGO website: [www.igo.com.au](http://www.igo.com.au)) that drives the creation of Aboriginal employment opportunities across our business.

The Standard defines IGO's approach to supporting education, vocational and job readiness training and supports applicants in the pre-employment process. IGO also promotes a culturally sensitive workplace and imposes these requirements on our major contractors.



At our Jaguar Operation, IGO has awarded a three-year, \$8 million contract with Bundarra Contracting Pty Ltd, an Aboriginal-owned company operating locally in Western Australia's Northern Goldfields. The award of the three-year contract continues the positive stakeholder relationship between IGO and Bundarra at our Jaguar Operation.

Bundarra is responsible for surface ore haulage, processing crusher feed, and surface works that include road maintenance, environmental rehabilitation and earth works. The renewal and increased scopes of work have provided greater certainty for its approximate 25 employees and has enabled an upgrade of Bundarra's vehicle fleet.

In FY17, Bundarra took ownership of a new fit for purpose workshop facility adjacent to the Jaguar processing facility. This is to improve collaboration and optimise delivery of the ore supply to the Jaguar processing facility.

At our Nova Operation, the movement of ore into the primary crusher is completed by CV LOMAG, a joint venture with a Ngadju business. CV LOMAG also provide miscellaneous earthmoving services. Another joint venture between Qube and the Ngadju business TOMAC transport our product from the Nova Operation to the Esperance Port.



# SOCIAL IMPACT

**\$289K**  
**DONATED TO**  
**COMMUNITIES**  
**IN FY17**





## SOCIAL IMPACT

IGO is a significant mid-cap mining company in the Australian mining industry. The nature of both our positive and negative impacts are comparable to other miners in the industry and the magnitude of our social impact is proportionate to our size.

Notwithstanding the commonality of these issues to most industry participants, we believe we have six social impact-related material issues worthy of active management (refer to page 15). This section of the report provides commentary on the material issues that IGO regards as most significant to our employees and host communities.

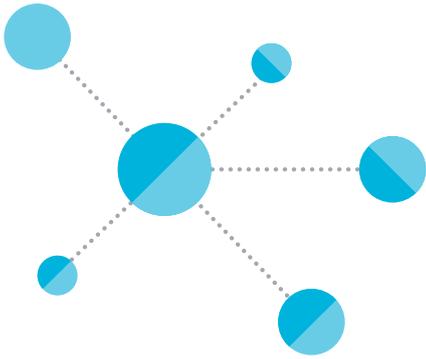
### VALUING THE VIEWS OF OTHERS AND ACCEPTING PEOPLE FOR WHO THEY ARE

“Respect is earned, it cannot be commanded. My experience has shown me that high functioning teams are those run by leaders who earn respect by walking the talk and listening, and then acting upon the concerns of their team.”

---

**Paul Polito**  
Fraser Range Project Manager, Exploration





# OUR PEOPLE

## WORKFORCE COMPOSITION AND TURNOVER

IGO remains a proud Western Australian employer and as at the end of FY17, our workforce continued to be located mainly at four Western Australian locations: our Corporate Head Office in Perth and our three mine sites: Long Operation in Kambalda; Jaguar Operation, 60km north of Leonora; and our Nova Operation, 120km east of Norseman.

The Jaguar Operation and the Nova Operation operate predominantly as fly-in fly-out (FIFO) sites, while the Long Operation combines a majority of residential roles with some FIFO roles. A small number of our team continues to work on our regional exploration projects in Western Australia, Northern Territory and Victoria.

At the end of FY17, IGO had a workforce of 445 direct employees and 351 contractors, excluding the Tropicana Gold Mine. This reflected a 27.5% year on year increase in the number of direct employees due to the finalisation of the recruitment program at our Nova Operation and an overall decrease in the annual employee turnover rate to 33% (from 40% in FY16).

Further, at the completion of FY17, IGO's overall workforce was 80% male and 20% female. This result was a slight decrease from FY16 when 21.3% of our workforce was female. This is the direct result of a trade and technical role recruitment campaign undertaken for Nova, which highlighted the universally low female participation rate in such professions. IGO remains firmly committed to diversity in our business. We will continue to identify and encourage greater female representation within our business by actively encouraging female graduates and apprentices to join our

business, as well as several other new diversity initiatives in FY18.

In FY17, IGO also conducted our fourth Workplace Gender Equality Report, which is available for viewing on our website [www.igo.com.au](http://www.igo.com.au).

## BUILDING A STRONG CULTURE

At IGO, we believe it is the people in an organisation that make it strong. The creation of a commonly shared culture provides IGO with a clear and consistent vision to pursue our Strategic Plan and achieve our Purpose. We want our people to share a common purpose and a connection established through a common set of values. We call this 'The IGO Way'.

'The IGO Way' is about encouraging and promoting behaviour among our people that is driven by our shared values while supporting a work environment that is both diverse and inclusive. We want this shared connection to be present with our people no matter where they work - at any of our three operations, in our Exploration, New Business or Corporate teams - or working from home or in another part of the world.

'The IGO Way' creates a platform that supports growth and performance. Consciously building this culture has been a focus for the organisation in FY17 and has involved a culture mapping exercise enabling the creation of a plan that defines IGO's pathway to the development of a shared cultural understanding amongst our people.

Reflecting our efforts in building a constructive and open workplace culture, encouraging positive, two-way communication, no time was lost due to industrial issues involving an IGO employee in FY17.



**THE IGO WAY  
CREATES A PLATFORM  
THAT SUPPORTS  
GROWTH AND  
PERFORMANCE**



## DRIVING DIVERSITY

IGO has continued to make progress with our employment program for Aboriginal people. The program provides support and training for Aboriginal people in roles with both IGO and our major contractors. Throughout FY17 our Aboriginal employment and traineeships have been well supported and clearly demonstrate our commitment to support the creation of education, employment and business opportunities for Aboriginal people, many of whom are Traditional Owners on the lands where IGO operates. Our Aboriginal liaison officer at the Nova Operation has done particularly well this year working with our business leaders to identify opportunities for employment and development, and to build capacity and support for our local communities.

The completion of the Nova Operation has allowed us to enrich our relationships with the local community and to support and create new opportunities for Indigenous employment, jobs and training for all sectors of the community.

We have also had success with our focus on facilitating training and support which has reinforced our view that education is the key to improving the socio-economic standing of our host communities.

## EMPLOYEE ENGAGEMENT

Employee engagement is important to IGO and we want to foster a workplace where people are encouraged to express their ideas, opinions and concerns. We know that engagement based on respect, integrity, teamwork and a respectful connection to each other promotes individual productivity, performance and well-being.

Our inaugural employee engagement survey was conducted in FY17 and generated some encouraging results. It was pleasing to find that many of our employees support our safe work culture, speak positively about the organisation and would recommend IGO as a place to work. The survey also identified opportunities for IGO to improve. Ensuring our people have the necessary resources, family friendly rosters and better internal communications were all seen as opportunities to improve our organisation and enhance its external reputation.

Along with a number of other measures to build engagement, the Company introduced an Employee Share Ownership Plan to provide our people with an opportunity to have real ownership of the Company and foster a strong shared purpose between our employees and shareholders. It is our intention to ensure all IGO people have the opportunity to be owners of the business, and that through shared ownership we can all be empowered by the value we create.

# THE FUTURE OF MINING

**796**  
**PEOPLE**  
**EMPLOYED**  
**AT IGO**

## **INVESTING IN OUR WORKFORCE AND THE FUTURE OF MINING**

IGO has always supported growth through innovation and we continue to recognise the value of encouraging people to achieve their potential. We know that investing in the education, training and development of our people helps us to shape a flexible and cohesive organisation with a competitive advantage.

Over the past year, we continued to implement our strategy to build our internal capacity and support our long-term growth aspirations. Our Frontline Management Program was implemented across the organisation and is based on Certificate IV in Leadership and Management. We regard this business-wide focus on professional learning and development as a critical element in the continued development of IGO's corporate culture. Our structured Leadership Development Program has also built on



the succession planning and performance feedback programs we began in FY16, and we plan to continue the very successful in-house courses that we have run from our South Perth office. They have proven to be a fantastic catalyst bringing our people together to learn and build new networks.

IGO has been proudly supporting future generations of professionals for many years. We know that this support makes good commercial sense and we believe it can also fundamentally change the lives of people in the communities in which we work. Our Graduate, Vacation and Apprenticeship programs continue to receive strong support with a record number of applicants across all disciplines.

In FY17, we employed graduates in the disciplines of geology, mining engineering, finance, occupational health and safety, and environmental science. In FY18, we plan to increase the number of new graduates to eight and the number of vacation students to fourteen. These students will join our growing alumni of graduates in the organisation and vacation students in the broader community.



IGO also acknowledges the shortfall of students choosing to study science, technology, engineering and mathematics (STEM) and we are committed to identifying opportunities to encourage participation and develop excellence in students of all ages, gender and ethnicity in these fields.

In FY17, we established an Independence Group Scholarship, in conjunction with Curtin University, which is to be awarded annually to a second-year student who demonstrates academic achievement and financial need. We also participated in the 'Get into Resources' program for secondary students and hosted primary students to our mine sites to introduce them to the range of possibilities for career choices in the mining sector. In FY18, IGO intends to expand the program in the belief that these programs are essential to building our succession plans and the resilience of our organisation, along with the sustainability of the resources sector more broadly.

Similarly, in FY17 we have continued our partnership with the Western Australian Mining Club (WAMC), to provide support for tertiary students in the form of a Geology Scholarship and an Indigenous Scholarship to assist a Geology student and an Aboriginal student in the completion of their degree and entry into Mining, Resources and STEM disciplines.

## CASE STUDY /

# SAFETY THE NEXT GENERATION OF SAFETY LEADERS



Graduates provide significant opportunity for succession planning in our industry, enabling organisations to identify leaders at an early stage in their career and ensure successful development and growth of young professionals to create the leaders of tomorrow.

IGO's graduate employee, Jade Pratt, joined the Occupational Health and Safety team as part of IGO's graduate program during the project development phase. Jade was able to observe first-hand the completion of the processing facility construction before experiencing commissioning and handover of the plant. Together with our mining contractor Barmenco, a rare opportunity evolved for Jade to operate a dump truck as she continued her journey into experiencing underground mining operations.

During the course of their graduate program, all graduates complete a project within given milestones to demonstrate their practical application of project management in their discipline. Jade's first project was hearing conservation, which subsequently led to a broader-scale project across the organisation resulting in a consistent approach to the management of hearing loss prevention for IGO. Jade was also exposed to other facets of mining and exploration operations including hydro-drilling and maintenance shutdowns. Jade also took the opportunity to complete a majority of her Certificate III in Public Safety.

For the team at Nova, it was a privilege and a great responsibility to coach and guide a young professional in becoming a leader of tomorrow during Jade's time at Nova, enabling her to realise her potential and add value to the Nova Operation and the IGO business as a whole.

# SAFETY

The safety of our people in the workplace is determined by four key factors: the safety of the physical workplace; the systems of work employed to ensure work is done safely; the behaviours of those doing the work; and the safety leadership provided within the business (i.e. the safety culture). IGO is constantly seeking to improve all four factors.

At IGO we track and assess our safety performance based on 'lag' and 'lead' metrics that are common to the industry. The lag metrics are those metrics that measure injuries or near-misses. The lead metrics are those measures that provide insight into the potential for incidents or injuries to occur, measures of behavior and culture. IGO sets internal targets to drive performance improvement and, where possible, we benchmark our results against other industry participants.

In FY17, IGO's safety results were mixed.

Most importantly, none of our people (i.e. IGO employees and contractors) suffered life changing injuries or worse. In FY17, our lost-time injury frequency rate (LTIFR) was 1.69 injuries per million hours worked by our people. This result is lower than the most recently published averages for the Western Australian gold mining and nickel mining sectors which have a reported LTIFRs of 2.3 and 3.0 respectively (refer to [www.dmp.wa.gov.au/Documents/Safety/MSH\\_Stats\\_Reports\\_SafetyPerfWA\\_2015-16.pdf](http://www.dmp.wa.gov.au/Documents/Safety/MSH_Stats_Reports_SafetyPerfWA_2015-16.pdf)). This is a good result.

However, whilst most of the injuries experienced by our people were minor, a total of 180 people sustained injuries requiring some type of treatment. This is 30.6% higher than the 125

injuries that occurred in FY16. We experienced a similar result at Tropicana, with a total of 164 people sustaining injuries that required some type of treatment. This is 8% higher than the 151 injuries that were recorded during FY16. Further, some of the injuries that occurred were more substantial. During FY17, at IGO managed sites, 35 of our people suffered injuries that required medical treatment, time off work or people being assigned to alternate duties – up from 33 in FY16.

In FY17, IGO had 28 new workers' compensation claims, compared to 16 in FY16. Twenty-four were unresolved as of 1 July 2017.

IGO also records and investigates near misses. These range in potential severity from the relatively minor to the potentially catastrophic. At IGO this latter category of near-miss incident is known as a Serious Potential Incident (SPIs). We define SPIs as incidents that are deemed to have had the potential to kill or permanently and substantially disable someone. In FY17, the frequency rate of serious potential incidents within IGO dropped to 6.76.

We are not satisfied with our overall safety performance. IGO acknowledges that the significant injuries were painful and caused distress to the injured people, their workmates and their families. Our clear objective is to improve, and significant organisational effort is being applied to this end. Our goal is to have no significant injuries (defined as any injury requiring medical treatment or time off work) and no serious potential incidents.

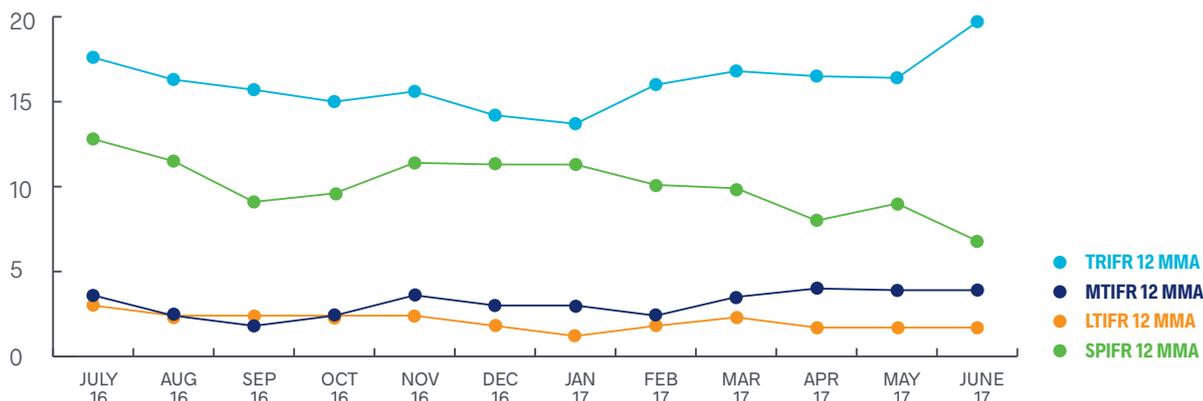
| Site                | New Workers' Compensation Claims | LTIs | RWIs | MTIs | First Aid Treatment Injuries | Totals (excluding Workers' Compensation Claims) |
|---------------------|----------------------------------|------|------|------|------------------------------|---|
| Long Operation      | 8                                | 1    | 6    | 0    | 3                            | 10  |
| Jaguar Operation    | 12                               | 2    | 7    | 2    | 57                           | 68  |
| Nova Operation      | 5                                | 0    | 10   | 5    | 81                           | 96  |
| All other           | 3                                | 0    | 2    | 0    | 2                            | 4   |
| Total for IGO       | 28                               | 3    | 25   | 7    | 143                          | 178   |
| Tropicana Gold Mine | 7                                | 1    | 9    | 9    | 145                          | 164   |
| Total               | 35                               | 4    | 34   | 16   | 288                          | 342   |

**LTi - Lost-Time Injury**  
Injuries that result in individuals not being able to work for a time.

**RWi - Restricted Work Injuries**  
Injuries that require an individual to do something other than their normal job.

**MTI - Medically Treated Injuries**  
An injury requiring medical treatment.

**FIGURE 13**  
**INJURY FREQUENCY RATES - 12 MONTH MOVING AVERAGES**



# OCCUPATIONAL HEALTH



Occupational health management has many facets. Our intention is to manage our work environment in a way that effectively minimises the exposure of our people to hazards that may cause long-term or chronic health impacts.

Some hazards are readily managed while some are intrinsically difficult to manage.

At IGO we:

- determine what our people are actually and potentially exposed to, and assess the risk that these exposures create;
- determine how best to protect our people from these exposures (known as 'controls');
- confirm whether or not the controls have been implemented and are effective, and if they are not, take remedial action; and
- document the above activities in a Hygiene Management Plan, execute the plan, review the results achieved, and update the plan accordingly.

During FY17, IGO completed various tasks defined in its Occupational Exposure Monitoring Program (known as CONTAM in Western Australia). No material excess exposures of any type were identified. In FY16, IGO had no claims for industrial disease.

IGO has commenced an occupational hygiene improvement program which will continue into FY18.

# TAX TRANSPARENCY CODE

The Australian Government's Voluntary Tax Transparency Code (TTC) is a set of principles and minimum standards to guide disclosure of tax information by businesses. The TTC was developed by the Board of Taxation to encourage large and medium-sized businesses to publicly disclose their tax affairs. The intention of the reporting requirements is to highlight those that are paying their fair share of tax and to encourage all businesses not to engage in aggressive tax avoidance. The TTC places a specific onus on large businesses to take the lead, to become more transparent, and help educate the public about their compliance with Australia's tax laws.

As defined by the TTC, IGO is currently categorised as a medium-sized business (i.e. a business with an aggregated turnover of at least A\$100 million but less than A\$500 million). In both our FY16 and FY17 annual reports, IGO has published all of the requisite information for a medium-sized business (known as a Part A disclosure). This includes:

- a reconciliation of accounting profit to tax expense and income tax paid or income tax payable;
- identification of material temporary and non-temporary differences; and
- accounting effective company tax rates for Australian and global operations (pursuant to AASB guidance).

The Australian Tax Office maintains a published registry of signatories and IGO intends becoming a signatory to the code in FY18.

## CASE STUDY /

# HEALTH MENTAL HEALTH



It is widely recognised that fly-in fly-out (FIFO) workers can have a heightened risk of mental health issues, including depression and anxiety. In September of each year, coinciding with 'R U OK Day', the Health and Safety department at the Nova Operation takes the opportunity to promote good mental health among its employees and contractors, allowing a forum for people to share experiences and encourage those who need it to ask for help.

Our sites also run initiatives throughout the year, including presentations on maintaining good mental health and education through its medical centre. In the longer term, the Nova Operation is partnering

with the employee assistance provider BSS to provide training sessions for supervisors and managers to support their people with mental health issues. Mental health awareness sessions will also be delivered to employees and contractors on site in the coming year.

In February 2017, Nova's OHS Manager, Ross Jennings, supported by IGO and SWICK mining services, spoke at the Blue Tie Gala event to raise money for both Suicide Prevention Australia and Beyondblue. The successful event demonstrated the importance of promoting good mental health within the mining industry and the broader community.

**OUR NOVA  
OPERATION IS PARTNERING  
WITH OUR EMPLOYEE  
ASSISTANCE PROVIDER TO  
PROVIDE TRAINING SESSIONS  
TO SUPPORT PEOPLE WITH  
MENTAL HEALTH ISSUES.**

## CASE STUDY /

# COMMUNITY LEONORA COMMUNITY CONSULTATION PROCESS



The Jaguar Operation, acquired by IGO in 2011, has been actively mined since 2007. In the current mine plan operations at Jaguar are expected to continue until 2022. Mine closure planning is an integral part of IGO's operational planning process and it is best practice to develop mine closure strategies early in the planning cycle.

In FY17, IGO undertook a closure planning review of the Jaguar Operation, including completion criteria refinement, landform design updated and a geochemical characterisation study, in order to update the existing Mine Closure Plan (MCP).

As part of the closure planning review and in accordance with IGO's Community Policy and Mine Closure Standard, the operation has also increased its engagement with local communities.

In January 2017, a stakeholder mapping exercise was undertaken and subsequently an engagement strategy developed. The exercise identified Traditional Owners and local community members as well as regulatory agencies as important stakeholders in future closure planning processes.

Therefore, in collaboration with the local shire, in May 2017 a community meeting was held in Leonora (located 60km south of the Jaguar Operation) where IGO's General Manager of the Jaguar Operation presented to a group of approximately 40 community members. The meeting provided an overview of the operation's performance, current mine life, future plans and proposed closure strategies.

This provided an opportunity for local stakeholders to understand the proposed strategies and provide input. Their feedback was recorded and will be incorporated into future revisions of the Jaguar MCP.

Good stakeholder engagement is an iterative and inclusive process and IGO is committed to further engaging with our local stakeholders and the community as mine closure strategies are refined.

Furthermore, similar meetings were also held for both Long and Nova operations.

# IGO CORPORATE GIVING

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To support the communities in which we operate, IGO has implemented a Corporate Giving program. The Group Community Standard 1 – Corporate Giving (refer to [www.igo.com.au](http://www.igo.com.au)) has been developed to guide the program. The nature of IGO's Corporate Giving takes two general forms: cash and 'in-kind' donations.

In general, IGO's Corporate Giving is deliberately focused on targeting beneficiaries in, or connected to, our host communities, such as organisations that improve the quality of life of their beneficiaries. IGO's Corporate Giving is deliberately focused on targeting beneficiaries in our host communities, such as organisations that:

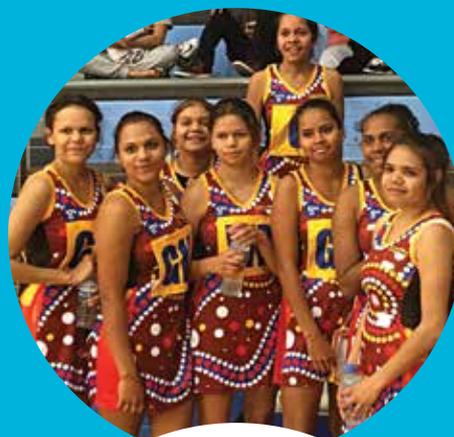
- support and improve the education of children;
- support and improve health and well-being; and
- enhance, protect or rehabilitate the environment.

IGO's host communities include those towns close to our operating mines and major exploration projects. In FY17 IGO proudly supported over 60 applicants.

# COMMUNITY DEVELOPMENT AND ASSISTANCE PROGRAM

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IGO has a Community Development and Assistance Program (CDAP) funded through IGO's Corporate Giving fund. The Community Development and Assistance Program includes those charitable projects where IGO has made a multi-year support commitment. IGO's current CDAP projects are described on page 67.



**IGO PROUDLY SUPPORTS  
THE GIRLS ACADEMY PROGRAM,  
WHICH HAS HELPED THOUSANDS  
OF AT-RISK ABORIGINAL GIRLS  
OVERCOME SOME OF THE  
COMMON BARRIERS KEEPING  
THEM FROM ATTENDING  
SCHOOL.**



## MILLENNIUM KIDS

The Kids on Country program was developed in answer to the Indigenous community in Coolgardie requesting culturally appropriate training experiences for their children and young people in a community education program. Driven by the concerns of Indigenous Elders that young people didn't have access to experiences on Country, the program was co-designed by Elders, young people and the Millennium Kids team.

## GIRLS ACADEMY

The Girls Academy program, founded in 2004 by Olympian and champion basketballer Ricky Grace, has helped thousands of at-risk Aboriginal girls overcome some of the common barriers which keep them from attending school including poverty, teen pregnancy, drugs, alcoholism, violence, abuse, and a disconnectedness with their culture and community.

The Girls Academy work within the school system to drive community-led solutions aimed at reducing these barriers that prevent Indigenous girls from completing their education and reaching their full potential.

## TEACH, LEARN, GROW

TLG is a not-for-profit charity that addresses educational inequity by providing rural and Indigenous Western Australian students with free one-on-one tuition and mentoring. The TLG vision is for every Western Australian child to have an equal opportunity in education, regardless of background, location or circumstance and to overcome poverty and disadvantage through education. TLG is a youth-led organisation in which university students give up their vacation time to spend one or two weeks, twice a year, in rural and remote schools throughout WA.

IGO has been a proud supporter of TLG since 2012, and during that time the partnership has grown with IGO adding schools to the Rural Tutoring Program as our Western Australian footprint has expanded.

## KAMBALDA CULTURAL AND ARTS GROUP

IGO has supported the Kambalda Cultural and Arts Group for a number of years. The group's objectives are to build and maintain a network with community groups in order to create cultural activities, promote the town as an integral part of the Goldfields-Esperance region. To stimulate ongoing interests in the community through such events as festivals, innovative projects and art and craft activities.

## THE NORSEMAN DISTRICT HIGH SCHOOL YOUTH LEADERSHIP PROGRAM

In FY17, IGO continued its support of the youth leadership skills program at Norseman District High School. The Youth Leadership Program promotes school attendance and achievement and encourages students to explore their vocational options. It also supports the liaison with community groups and the local shire to plan community improvement projects and social events.



# NATIVE TITLE RESPECTING TRADITIONAL OWNERS

## TRADITIONAL LAND USE

IGO's activities are predominantly located in Australia and specifically within Western Australia. While our exploration activities do extend overseas, the scale and impact there is relatively small. Irrespective of where we work, we are mindful of our responsibilities in respect of the Traditional Owners on whose land we seek to operate.

Our existing operations are located on lands with either claimed or determined native title by various Aboriginal groups including the Koara, Ngalia, Wutha, Wongatha, and Ngadju peoples.

In the Northern Territory, IGO's exploration activities occur in the lands of the Walpiri, Luritja and Pintupi people, as represented by the Central Land Council.

Figure 14 illustrates the locations of our operating mines relative to traditionally owned lands.

As noted previously, our joint venture exploration activities in Scandinavia are situated on lands owned by the Sami people.

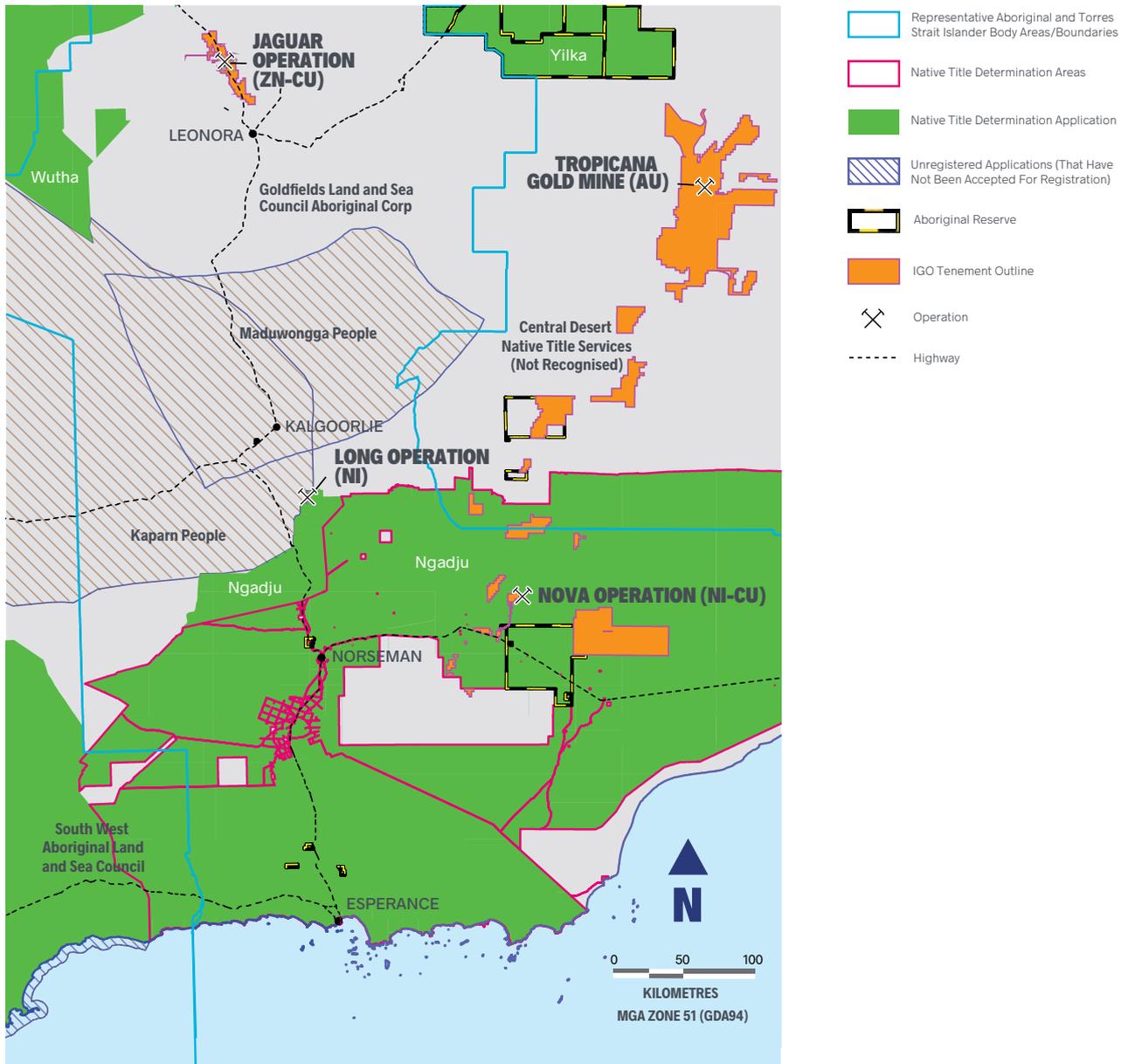
Irrespective of the nature of the title, IGO seeks to operate with due regard and respect for Traditional Owners. In circumstances where our activities progress to the point where a mine is established, IGO seeks to ensure the socio-economic benefits of the mine are shared by the Traditional Owners and negative impacts are minimised.

---

**IRRESPECTIVE OF WHERE WE WORK, WE  
ARE MINDFUL OF OUR RESPONSIBILITIES  
IN RESPECT OF THE TRADITIONAL OWNERS  
ON WHOSE LAND WE SEEK TO OPERATE.**

FIGURE 14

# NATIVE TITLE AREAS



# BEYOND COMPLIANCE LIVING OUR VALUES

## NATIVE TITLE

In accordance with the *Native Title Act 1993*, various lands are subject to native title claims and determinations. IGO operates in accordance with the law and in close collaboration with our stakeholders, some of whom are Traditional Owners. The following outlines the status of claims as they affect IGO operations.

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### NOVA OPERATION

As part of the Nova Project's development, a land access agreement over the mining and related tenements was secured with the Traditional Owners, the Ngadju people in August 2014. This agreement contains an acknowledgment that the Ngadju are the Traditional Owners of their determination area. It also sets forth a range of benefits that IGO will provide to the Ngadju people in return for which the Ngadju have granted various consents to enable approval of the mine. Subsequent to signing this agreement, in November 2014, the Federal Court of Australia handed down a determination that native title exists over an area that includes the Nova Operation.

The success of IGO's relationship with the Ngadju can be attributed to, in large part, the efforts of the joint Ngadju and IGO consultative committee, known as the Interpretation Committee, which meets three or four times annually.

### LONG OPERATION

The High Court has recently confirmed that the Ngadju people have native title rights over an area comprising the Long Operation. However, while native title rights and interests survive over the Long tenements those rights and interests have no impact on, nor do they prevent any mining activities being carried out at the Long Operation.

### TROPICANA GOLD MINE

The Tropicana Gold Mine is wholly within the area of the former Wongatha Native Title Claim (WC99/001). This claim was dismissed by the Federal Court in 2007. Notwithstanding this, Tropicana continues to work constructively with the Traditional Owners.

### JAGUAR OPERATION

At present, there are no registered native title claims over the tenure on which the Jaguar Operation is located.

However, various parties have a connection with that country, including the Koara, Ngalia, Wutha, and Wongatha peoples.



### HERITAGE PROTECTION

At each of our operating mines, our projects and our various exploration sites, sites of historical or heritage significance have been identified. Over time, other new sites may be identified. IGO has clear protocols around land disturbance and acts in accordance with the law. IGO seeks to engage Traditional Owners to ensure the effective and culturally sensitive management of significant sites.

In FY17, no significant sites were disturbed accidentally or otherwise.

In FY17, IGO did not enter into any new land access agreements.

Importantly in early FY18, IGO reached agreement with the Northern Territories Central Land Council to enable exploration in the Lake Mackay project area (refer to page 45).

### STATUTORY COMPLIANCE

IGO has a governance process for identifying statutory non-compliance as well as non-conformance with IGO policies and procedures. This process includes systematic audits to objectively verify conformance with our sustainability standards and legal requirements, as well as to provide recommendations to improve our sustainability performance. Our operations are continuing to update legal compliance registers in FY18 to improve this process.

In FY17, IGO received no fines or non-monetary sanctions.

In FY17, IGO received seven notices from the Western Australian Department of Mines and Petroleum Resource Safety Branch. These required various modifications to our systems to further improve workforce safety. All corrective actions associated with these improvement notices are either complete or on target for completion by the due date.

In FY17, IGO received one improvement notice in respect of environmental performance at our Long Operation.

In FY17, IGO's internal processes identified a range of minor non-compliances with our policies and procedures. While these are important to the effective management of our business at an operational level (and corrective actions are pursued to completion), none were regarded as material from the perspective of IGO as a whole, nor were any material to our external stakeholders beyond those addressed above.

### STAKEHOLDER FEEDBACK

In FY17, IGO received no material or re-occurring complaints from any of our stakeholders in respect of nuisance or harm that we were seen to have caused.

The public stakeholders with which we continue to be most actively involved, and those that provide IGO with most feedback, are the Traditional Owners of the land on which we operate and our host pastoralists. IGO endeavors to be responsive to concerns raised, and we are confident that we have established positive and effective working relationships.

# ENVIRONMENTAL IMPACT



**61kt**  
**OF TAILINGS**  
**REUSED**  
**IN FY17**



## ENVIRONMENTAL IMPACT

This section covers environmental aspects that are deemed to be of material significance to IGO's sustainability performance.

IGO identifies these material aspects on an ongoing basis by means of environmental monitoring, risk assessments, environmental reporting (both internal and external), and annual compliance reviews.

### BEING ENVIRONMENTALLY RESPONSIBLE

"To be environmentally responsible implies doing what is right and encouraging others to operate with respect and accountability. We are making decisions while thinking about the future we want to build, and working with stakeholders to minimise our impacts.

The Esperance shipping trials have been an important part of my role, ensuring we mitigate any credible risk to the environment. As an Esperance local, it's great to be involved and see the importance IGO places on the wider environment and community."

---

**Tess Lewis**

Environment Graduate, Nova Operation



**41ha  
NEW LAND  
REHABILITATED  
IN FY17**



# PROGRESSIVE REHABILITATION MINIMISING OUR DISTURBANCE

## ENVIRONMENTAL CONDITIONS

Australian jurisdictions will generally impose conditions on any mining tenement for the purpose of preventing or rectifying environmental harm. These conditions operate concurrently with the terms of any relevant environmental approvals issued under relevant federal, state or territory environmental laws.

In FY17, IGO continued to populate and update the Group Obligations Register; a tool used to systematically capture the environmental conditions associated with both our tenements, obligations arising from environmental approvals and other public commitments. This activity was largely completed in FY17 and efforts will now focus on removing historical and duplicated obligations through engagement with the appropriate regulatory authority.



# LAND AND BIODIVERSITY MANAGEMENT



Following the Western Australian Department of Mines and Petroleum release of a new guideline for mining proposal development in late 2016, additional information was provided through interactive workshops in FY17. The most significant change is the development of a whole-of-site mining proposal, which is required to be progressively updated as operations are modified. The move to a risk based mining proposal aligns with IGO's internal risk management process. IGO is also committed to contributing to the conservation of biodiversity within its operating areas. In FY18 IGO will develop a land and biodiversity management standard that will provide our operations with clarity on the required land management practices, aligned to accepted best practice industry guidelines.

## NOVA PROJECT

The majority of land disturbance at the Nova Operation occurred in FY15 for the construction of the processing plant, tailings dam, boxcut and other associated infrastructure. In FY17, 18.14ha of land was disturbed. A total of 38.39ha was rehabilitated in the reporting period.

## JAGUAR OPERATION

At the Jaguar Operation, during FY17, 2.5ha land was disturbed. Further to this, rehabilitation of 2.2ha was completed in FY17.

Exploration efforts surrounding the Jaguar Operation, including diamond drilling, resulted in clearing of 10.57ha.

## TROPICANA GOLD MINE

During the 2017 calendar year, 2,457ha of land was cleared at the Tropicana Gold Mine, primarily for the expansion of the waste rock dump, open pits, growth medium stockpiles, haul roads and marginal ore stockpiles. During the same period, no rehabilitation was completed.

## LONG OPERATION

During the FY17, 1.05ha of land was disturbed at the Long Operation. During the same period, no rehabilitation was completed.

### EXPLORATION

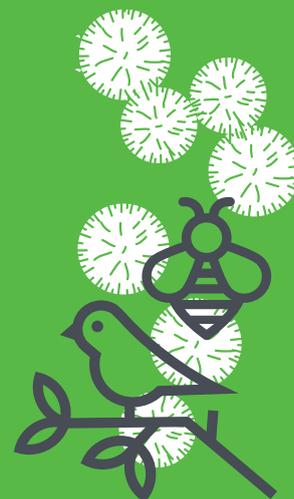
As IGO's Stockman Project is currently in the approvals stage, no land clearing has occurred.

IGO's regional exploration operations around Australia created a disturbance footprint of 47.52ha. Generally, all land disturbance is rehabilitated within six months of the initial disturbance occurring.

| Exploration project           | Land disturbed FY17 (ha) | Land rehabilitated FY17 (ha) |
|-------------------------------|--------------------------|------------------------------|
| Lake Mackay                   | 0.36                     | 5.35                         |
| Alchemy/Bryah Basin           | 4.095                    | 2.725                        |
| Salt Creek                    | 11.64                    | 60.35                        |
| Fraser Range (incl. Windward) | 31.429                   | 0                            |
| <b>Total</b>                  | <b>47.524</b>            | <b>68.425</b>                |

# FLORA AND FAUNA

In accordance with our Environmental Policy, IGO is committed to understanding and protecting the flora and fauna communities at each of our operations and project sites. Impact monitoring is currently undertaken to understand the ongoing impact of mining activity through comparative photography at pre-defined photo-monitoring survey points. Periodic surveys are employed to measure impacts to fauna, triggered by the different stages of a project or a proposed modification to an existing operation.



## NOVA OPERATION

The Nova Operation is within the Great Western Woodlands, an area of high biological richness that comprises almost 16Mha, extending from the edge of the wheatbelt to Kalgoorlie-Boulder in the north, to the inland deserts and the Nullarbor Plain to the east. The operation is situated approximately 80km from the eastern edge of the Great Western Woodlands, covering only 0.03% of the total woodland area.

A number of field surveys were conducted during the feasibility phase of the project to inform the approval process and assist with protecting the flora and fauna within the Operation's footprint. A total of 45 vegetation communities were mapped in the study area, comprising 28 Eucalypt woodland communities, 13 mixed shrublands and scrub communities and four hummock grassland communities. A total of 142 vertebrate fauna species including 40 reptile, 82 bird and 20 mammal species were recorded during the field surveys during the feasibility phase of the Nova Operation.

## TROPICANA GOLD MINE

The Tropicana Gold Mine, located on the western edge of the Great Victoria Desert, is a region dominated by sand plains, sand hills and sand dunes covered with Marble Gum (*Eucalyptus gongylocarpa*), Mallee (*Eucalyptus youngiana*) and Spinifex (*Triodia basedowii*).

The sand plain communities surrounding the Tropicana Gold Mine have an extremely high small-vertebrate diversity with more species of terrestrial reptiles and mammals per hectare than anywhere else in Western Australia.

Monitoring vegetation condition and abundance is required on an annual basis at Tropicana in accordance with the mine's approval conditions. The results are reported in the Tropicana Gold Mine annual environmental report.

Tropicana Gold Mine also completes an extensive fauna monitoring program and supports regional fauna research. The program includes monitoring at both the site's six artificial water ponds and the tailings storage facility. The artificial water ponds were established to provide preferential water sources to the site's tailings storage facility to minimise fauna deaths that could occur if fauna use the tailings liquor as a water source. The liquor poses a hazard to fauna because it contains low concentrations of a toxic processing reagent (weak acid dissociable cyanide).

In FY17, there were no material losses of wildlife associated with Tropicana's tailings storage facility.

## JAGUAR OPERATION

The Jaguar Operation has a long history of mining activities, which have impacted the vegetation within the mining leases. The area is surrounded by pastoral properties and cattle grazing, which together with feral animals and introduced weeds, have also had an impact on the native vegetation. Of note are the large populations of introduced goats, dogs, cats and rabbits. Mulga woodlands and flora typical of the region's ephemeral creek lines dominate the land surrounding the Jaguar Operation.

Field fauna surveys, conducted at the Jaguar Operation recorded 57 bird species, eight native and four introduced mammals, 23 reptiles and four amphibians. A desktop analysis of potential fauna distributions identified three mammal, one reptile and one bird species of conservation significance that could be present in the area due to the presence of suitable habitat. It should be noted that none of these species have been sighted since the early 1980s and it is now considered that they are locally extinct. Conversely, anecdotal evidence (increased sightings of breeding pairs) suggests there has been an increase in the population of birds of prey around Jaguar.

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## LONG OPERATION

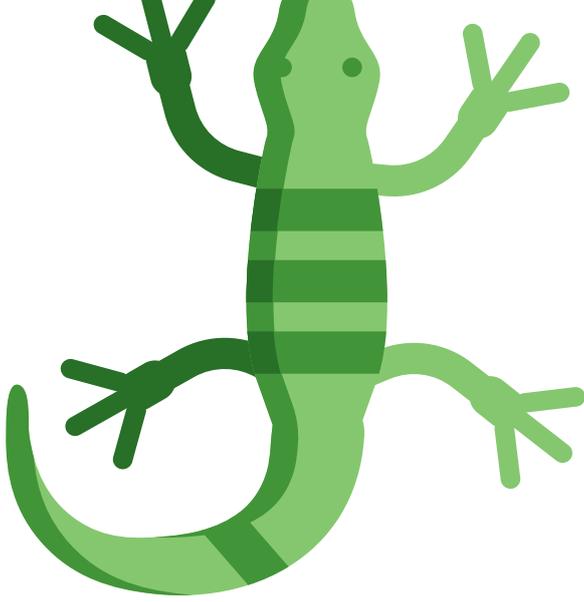
The land surrounding the Long Operation, located on the shore of Lake Lefroy, is dominated by Eucalyptus woodlands and halophytic low shrublands. The Long Operation sits within the Goldfields region of Western Australia and is subject to extreme temperatures and periodic rainfall, predominantly in the summer months.

Exploration and mining activities have taken place for over 40 years at the Long Operation and the surrounding area. This has resulted in clearing for the construction of infrastructure, waste rock dumps, tailings storage facilities, processing plants, open pits and underground mines. Neighbouring mines and the Long Operation's proximity to the town of Kambalda, coupled with the historic public land use of the surrounding area has also contributed to the local environment being degraded.



**IGO IS COMMITTED TO UNDERSTANDING AND PROTECTING FLORA AND FAUNA COMMUNITIES AT EACH OF OUR OPERATIONS.**





# MANAGING OUR IMPACTS

## ENVIRONMENTAL MANAGEMENT PLANS

The IGO Environmental Management System, based on ISO14001, sets out the requirements for site-specific Environmental Management Plans (EMPs) that define and direct environmental management activity at our operations. This includes environmental statutory compliance, the identification of environmental aspects, implementation of appropriate controls and the monitoring of environmental impacts. Environmental performance is reported each year to the respective government departments in the operation-specific annual environmental reports.

During FY17 a number of our operations updated the current EMPs, as well as supporting management plans and procedures as part of our continuous improvement process. This ensures that IGO's land and biodiversity management practices are compliant with the law and in line with that of other mining companies. IGO's impacts represent a small percentage of the cumulative impacts associated with the mining industry as a whole. However, we have both the capacity and intention to improve our performance - particularly in the area of mine closure planning and ongoing impact assessments on flora and fauna.

## TRANSPORT

The remote location of our operations necessitates truck transport for the supply of materials and exportation of our saleable products. The impact of truck traffic on regional roads is a matter of reoccurring public comment. We continue to take our feedback from our stakeholders seriously and investigate and monitor transport impacts as required.

Lower production at our Long Operation has reduced truck deliveries to approximately 240 a year, the majority from Kalgoorlie, located 57km north. The trucks pass close to Kambalda east and west, however they do not transit through the town's residential areas. The area has been mined for more than 40 years, with no homes in the vicinity of our operation. As such the impact of dust and fuel emissions is minor.

The Jaguar Operation receives a minimum of 300 trucks per year, which travel approximately 900km from Perth to site, passing through several towns including Northam, Southern Cross, Kalgoorlie, Menzies and Leonora. Our contribution to the impacts created by vehicle movements through these towns is minimal.

The Nova Operation was still in construction and ramp up for a large part of FY17, receiving an average of 110 truck deliveries per month. This is expected to reduce in FY18 now that the operation is in production.

It is noteworthy that Tropicana now receives only approximately 140 trucks a month (reducing the number from approximately 160 required before completion of a gas pipeline). The majority of trucks travelling to Tropicana come from Perth or Kalgoorlie resulting in distances driven ranging from 350km to 1,250km.

**WE HAVE THE CAPACITY AND THE INTENTION TO IMPROVE OUR PERFORMANCE, PARTICULARLY WITH MINE CLOSURE PLANNING.**



## CASE STUDY /

# ENVIRONMENTAL ESPERANCE PORT SHIPPING

This year, IGO reached an important milestone with the first export shipment of nickel and copper concentrate from Esperance Port in June 2017. The success in transporting our concentrate safely through the Esperance Port is attributable to several years of planning and engagement with stakeholders and the community since 2013.

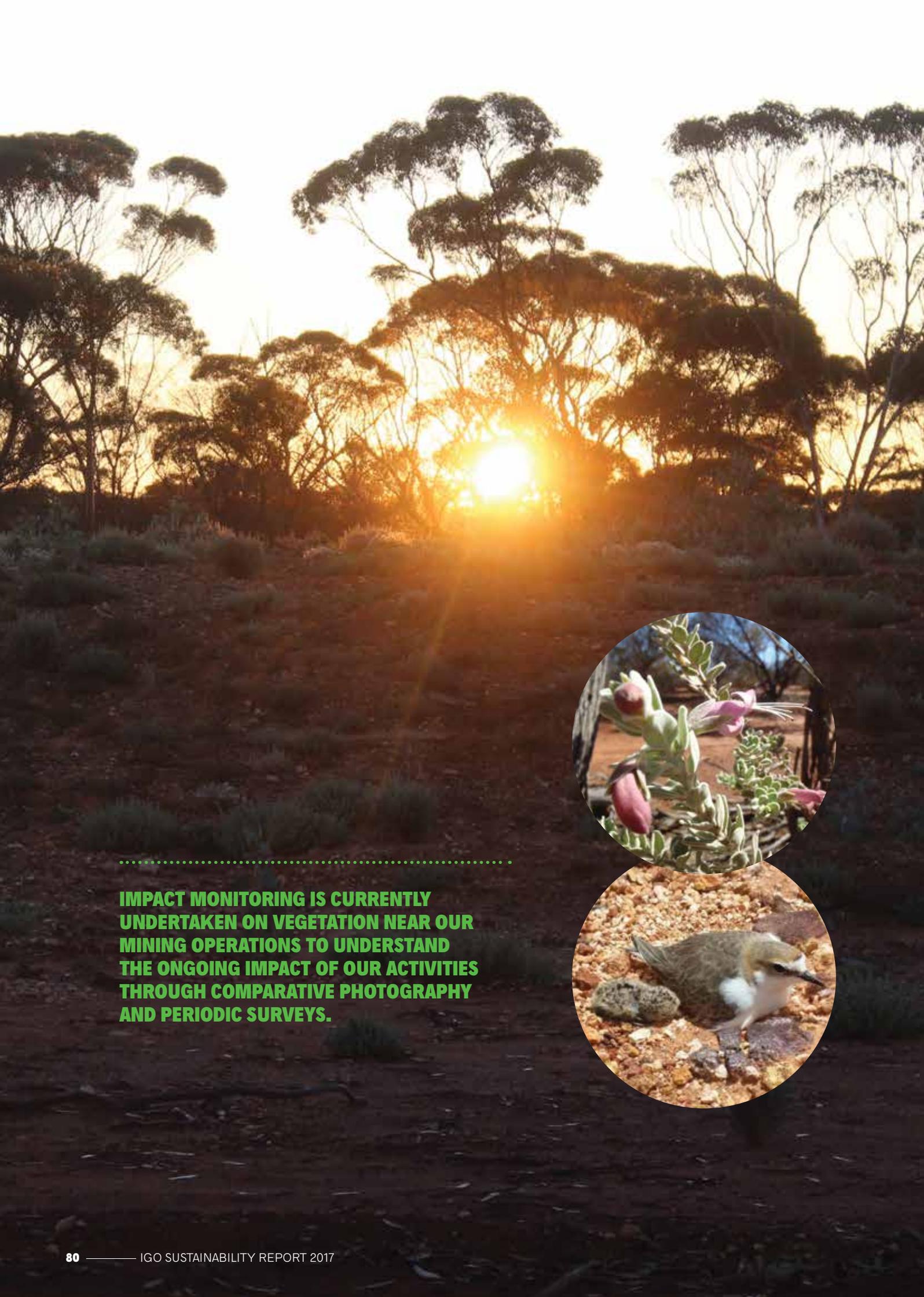
Historically, noise and dust generated from the transport and bulk handling of heavy metals through the Esperance Port has impacted the environment and the local community. In the lead up to our first shipment through the Esperance Port, our focus has been to establish industry leading best practice methods for ship loading to ensure negligible dust impacts to the surrounding environment. We've carried out baseline soil contamination assessments along our transportation route and implemented noise, dust, odour and weather monitoring at Esperance Port in an effort to mitigate any potential impacts.

Most noteworthy is the innovative technology that our stevedoring partner, Qube, employs at the Esperance Port to ensure zero fugitive dust emissions during transport and ship loading. The purpose designed and built Rotabox™ technology combines the use of a rotating frame and bulk containers with lockable lids to trap dust during loading and eliminate dust emissions to the environment. Together with extensive environmental monitoring, and with the advantage of the Rotabox™ technology, IGO can maintain sustainable, low impact ship loading operations at the Esperance Port, and additionally meet the expectations of the community.



**OUR FOCUS  
HAS BEEN  
ESTABLISHING  
INDUSTRY LEADING  
BEST PRACTICE  
METHODS FOR  
SHIPLOADING.**





.....

**IMPACT MONITORING IS CURRENTLY UNDERTAKEN ON VEGETATION NEAR OUR MINING OPERATIONS TO UNDERSTAND THE ONGOING IMPACT OF OUR ACTIVITIES THROUGH COMPARATIVE PHOTOGRAPHY AND PERIODIC SURVEYS.**



## WASTE MANAGEMENT

The two largest waste streams produced at IGO's operations are waste rock and tailings. The Tropicana Gold Mine and our Jaguar and Nova operations produced both, whereas the Long Operation produces only waste rock. The waste rock is stored and managed in accordance with DMIRS guidelines to minimise its potential to cause environmental impact and ensure the effective rehabilitation of our mine sites both progressively and at closure.

## WASTE ROCK

During the 2016 calendar year, the Tropicana Gold Mine produced 47.7Mt of waste rock.

At the Long Operation the main waste product is waste rock, with 49,830t brought to the surface. A geochemical characterisation study was undertaken in FY17 to confirm that the rock can be used during mine closure efforts, with remaining material available for BHP Nickel West and the rehabilitation of their tailings storage facility on our tenement.

A total of 187,703t of waste rock was mined from the Jaguar Operation's Bentley Mine in FY17. Most waste rock was re-used underground as backfill.

Nova generated 857,825t of waste rock in FY17, with the majority of this material placed in a waste rock dump surrounding the tailings dam consistent with final closure designs. The decision to develop the Bollinger deposit in conjunction with the Nova deposit generated additional waste rock that was stored in a temporary waste rock stockpile. Geochemical characterisation studies of waste rock at Nova were initiated in FY17 and will continue in FY18.

At each of the sites, a small quantity of waste rock that is known to be non-acid forming is crushed for use as road base, bunding and for other operational purposes.

## TAILINGS

All IGO tailings storage facilities undergo an annual audit to ensure they are operated in accordance with the mine's operating strategy, safety conditions, prescribed premises conditions, and mining tenement conditions. In addition to the annual audit process, IGO undertook a group tailings dam risk review, involving an international recognised specialist consultancy.

The Tropicana Gold Mine has a single cell tailing storage facility where all tailings from the Tropicana processing plant are deposited. In the 2016 calendar year, Tropicana deposited 6.6Mt (dry) of tailings into its storage facility.

The Long Operation uses tailings from St Ives Gold Mine to produce a paste backfill material that is used to re-fill mined underground voids. In FY17, Long Operation used 69,859t of tailings to produce 72,020t of paste; an increase from the 63,711t of tailings used in FY16.

The Jaguar processing plant produced 393,640t of dry tailings that were deposited into TSF2 in FY17. As required by tenement conditions, both the disused TSF1 and the operational TSF2 were inspected and a qualified engineer produced an audit report. The recommendations for both tailing storage facilities included preventative maintenance measures were completed in the last 12 months.

A small amount of tailings (447,000t) was deposited in the Nova tailings storage facility in FY17 following commissioning in December 2016.

# WATER MANAGEMENT

## WATER MANAGEMENT

Water is an important resource in IGO's mining activities. It is used in exploration drilling, the mining process, ore processing, dust suppression, and in our camps. Water is variously extracted from underground mines and dedicated borefields. The uncontrolled release of water and process solutions can have unintended safety and environmental impacts, particularly where salinity is elevated. Consequently, the management of water is central to the sustainability of our operations.

## NOVA OPERATION

The Nova Operation is located at the southerly end of the Fraser Range belt of Western Australia. All groundwater at our Nova Operation is sourced from production and dewatering bores and the underground mine. In FY17 a total of 1,814ML was abstracted from groundwater sources. This water is used in our mining operations for construction activities, ore processing and dust suppression.

All groundwater abstraction is controlled under a groundwater licenced issued by the Department of Water and Environmental Regulation. This licence prescribes our annual water entitlement and the conditions we must meet to manage and maintain our abstraction over the life of our mining activities. To meet these requirements, abstraction volumes and groundwater levels are monitored monthly, groundwater quality is assessed quarterly and annually, and vegetation assessments are undertaken annually to determine whether our abstraction is impacting the surrounding environment. Water is recycled through the processing operations wherever possible to reduce the use of raw groundwater in the processing circuit. Our bores are fitted with leak detection systems that are

designed to alert personnel of any significant drop in water pressure, and weekly visual inspections are undertaken of all bores and pipeline corridors to maximize water efficiency across the operation.

Each year, a report is submitted to the Department of Water and Environmental Regulation outlining our water abstraction activities and monitoring results as required by our groundwater licence. Given that operations at Nova are now in full swing, abstraction into the 2017 year has significantly increased in comparison to FY16. Vegetation monitoring has demonstrated that vegetation is maintaining healthy growth, which indicates that impact from groundwater abstraction to date is not occurring.

Our Nova Operation also operates a recycled water scheme to manage its wastewater. With the approval of the Department of Health and Local Government, a Submerged Aerated Filtration wastewater treatment plant has been installed to recycle water produced by the village, power plant, paste plant and other non-process infrastructure on site. This system is an efficient biological treatment process that is custom designed for the Nova Operation. Once treated, the water is then available for various uses on site including industrial processing, dust

**THE MANAGEMENT OF WATER IS CENTRAL TO THE SUSTAINABILITY OF OUR OPERATIONS.**



.....

**OUR NOVA OPERATION OPERATES A RECYCLED WATER SCHEME TO MANAGE ITS WASTEWATER.**

suppression and effluent irrigation. Since commissioning, a majority of the recycled water has been directed to the licensed effluent irrigation area or stored in the tailings storage facility for use in the processing plant.

### **TROPICANA GOLD MINE**

The Tropicana Gold Mine has four groundwater licences, which permit abstraction of groundwater in the area. This is managed in accordance with an operating strategy approved by the Department of Water. During FY17, a total of 7.5GL of water was abstracted from operational bores and the process water supply borefield. The water is used for processing, road maintenance and dust suppression. A series of flow meters are installed to accurately monitor water use, all pipelines are bundled to prevent spills passing into the environment.

Groundwater monitoring programs are in place to measure the effect (if any) that abstraction is having on the surrounding water table (i.e. level and chemistry). During FY17, the standing water levels were variable but remained stable, although there were some exceptions which saw significant decreases in standing water level likely due to increased abstraction rates. No significant change in water quality was observed.

Surface water monitoring is also undertaken at Tropicana to determine the effectiveness of the site's surface water management infrastructure following significant rain events. The test results indicated that surface water management on site was effective.

### **JAGUAR OPERATION**

The Jaguar Operation is situated in a remote area and extracts all its required water from groundwater sources. Groundwater naturally seeps into our underground mines. The water is extracted from the mines to prevent them from flooding. Our water needs are supplemented by production bores situated throughout the mining tenement.

In FY17 a total of 1,111ML was abstracted from groundwater sources. This water is used in the processing plant, reused underground and for exploration activities. A significant amount of water is discharged into our active tailings dam.

Jaguar currently recovers a significant amount of water in tailings, which is reused in the processing plant. The remaining water is discharged into the historic Teutonic Bore pit.

All groundwater abstraction is controlled under a groundwater licence issued by the Department of Water. The licence defines a maximum abstraction volume from varying sources around the site. A series of flow meters have been installed to accurately measure the volume of water used. This ensures we operate within our licence limits. The standing water level of each of the production bores and surrounding pastoral bores are periodically measured to assess the degree to which the underlying aquifers are affected. Of particular importance is Jaguar Operation's effect on the water table and water quality within the surrounding pastoral leases.

IGO also carries out water chemistry analysis on samples taken on a quarterly basis at all production bores, pastoral bores and underground water reservoirs. The monitoring provides clear insight into the impacts of our activities on the areas' groundwater chemistry. Monitoring to date has demonstrated that our activities have not caused any material changes to water chemistry beyond that predicted. Communications with pastoralists have confirmed that they have experienced no adverse outcomes on their properties.

At our Jaguar Operation, as required by our groundwater abstraction licence, a Groundwater Monitoring Report was completed during FY17.

A reduction in groundwater level in the Wendy's Borefield, near the Bentley underground mine, had previously been identified and further study was completed on the significance of this in FY17. The study concluded that impact was

localised and that it was not impacting surface vegetation or the pastoralist ability to access water for his stock.

### **LONG OPERATION**

Long Operation's water abstraction is also controlled under a groundwater licence. Water extracted from the mine is used primarily for dust suppression and underground mining purposes. Excess water is pumped to the surface, held in settling dams to remove sediment, and then discharged onto Lake Lefroy. Water use and discharge volumes are accurately measured using a series of flow meters throughout the site to ensure authorised water abstraction entitlements are not breached.

The groundwater at the Long Operation is hypersaline and is toxic to plants. A relatively small percentage of the groundwater is incidentally extracted as water vapour and mist from underground to the surface by the mines ventilation fans. The hypersaline water vapour emitted from the vent fans has, and continues to, pose a threat to surrounding vegetation on a localised level. The Long Operation has redesigned the vent fans to capture the hypersaline mist, ensuring it does not impact local vegetation.

In FY17, a total of 218ML was abstracted from groundwater sources, with a further 86ML purchased from BHP Nickel West. This water is reused in underground mining activities and in the paste plant, with the remaining water discharged onto the saltpan of Lake Lefroy.

Standing water levels and water chemistry monitoring is periodically carried out and the data is submitted in an annual groundwater monitoring summary to the Department of Water. The Department of Water reviews the report and provides any feedback to IGO.

No concerns were identified by IGO nor were any raised by the Department in FY17.

# ENERGY CONSUMPTION

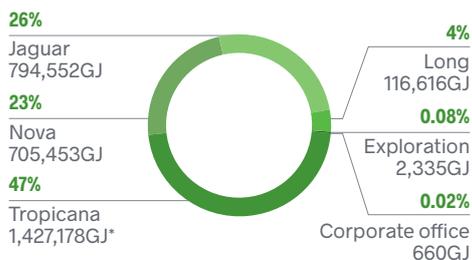
A total of 3,046,795GJ of energy was consumed across all IGO managed operations (including exploration and corporate) in FY17. Despite reducing energy consumption at our Long Operation by 12%, increases at Jaguar (5%) and the commissioning of the Nova Operation has increased our total energy consumption.

Energy consumption at our Long, Jaguar, Nova and Tropicana operations is predominantly associated with the use of diesel in the operation of heavy earthmoving machinery in mining and (with the exclusion of Long) the use of electricity in the operation of beneficiation plant for metal extraction or concentration. Electricity is produced on site at Jaguar, Nova and Tropicana, and purchased from a third-party at Long. Electricity is generated from diesel at Jaguar and Nova. Long's and Tropicana's electricity is generated from compressed natural gas (albeit the plant at Tropicana can use diesel).

IGO's Exploration Projects have relatively low energy consumption based on diesel use in vehicles and drill rigs.

Figure 15 shows the percentage contribution of each identified 'facility' to the total amount of energy consumed.

**FIGURE 15**  
**ENERGY CONSUMED: 3,046,795GJ**



(Energy consumed net: 2,507,238GJ)

(Energy produced: 539,557GJ)

\* Data provided for the Tropicana operation is 30% of the total energy consumption, representing IGOs 30% share in the project.

## GREENHOUSE GAS EMISSIONS

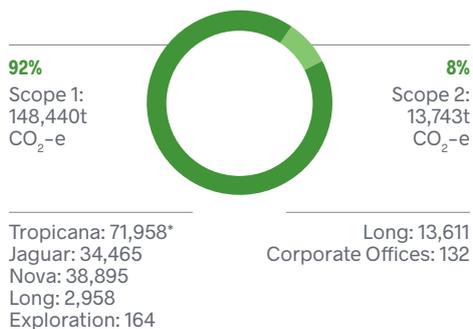
The generation of greenhouse gas (GHG) emissions and the impact on global climate change is considered a significant issue in Australia and the rest of the world. While relatively minor in comparison to other mining and industrial emitters, IGO understands that collectively the mining industry has a part to play. In FY17, IGO's total Scope 1 and Scope 2 GHG emissions for all IGO facilities was 162,183t (CO<sub>2</sub>-e), produced mainly through the consumption of diesel and compressed natural gas (CNG) at our Tropicana, Nova and Jaguar operations (refer to Figure 16).

In an effort to reduce GHG emissions, the Long Operation is using a 5% biodiesel blend for its mining fleet. The Nova Operation is also considering the installation of a solar farm pending a success request to ARENA for funding support. The use of CNG fuelled power stations at Jaguar and Tropicana was selected over diesel due to its improved efficiency and lower GHG generation.

## CARBON EMISSION EXCEEDANCE

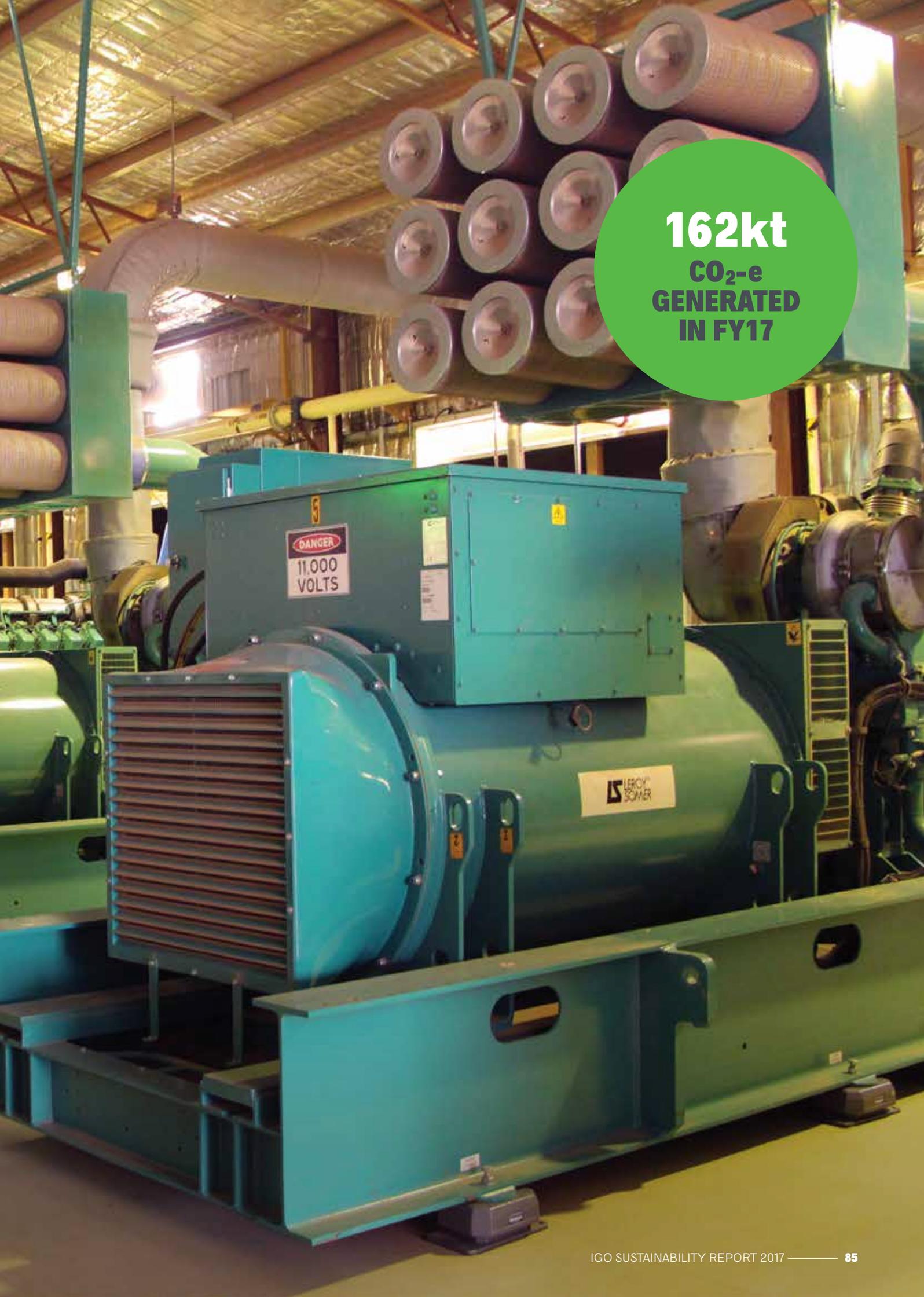
The Australian Government Clean Energy Regulator introduced a baseline determination requirement for all facilities that generate over 100,00t CO<sub>2</sub>e - (Scope 1) annually in 2015. This ruling requires emitters over this threshold to set a baseline, that if exceeded in a subsequent year, an appropriate carbon offset or credit must be obtained for emissions above the baseline. In FY17, the Tropicana Gold Mine was contacted by the Clean Energy Regulator as it exceeded this threshold and has qualified for a reported emissions baseline determination. During the reporting year, Tropicana Gold Mine has been developing an appropriate baseline for the operation that was submitted to the Clean Energy Regulator in March 2017. No response has been received from the regulator at this time. Further information will be provided in next year's sustainability report.

**FIGURE 16**  
**GREENHOUSE GAS EMISSIONS**



(Total Scope 1 and 2: 162,183t CO<sub>2</sub>-e)

\* Data provided for the Tropicana operation is 30% of the total greenhouse gas emissions representing IGOs 30% share in the project.



**162kt**  
**CO<sub>2</sub>-e**  
**GENERATED**  
**IN FY17**

# OTHER SIGNIFICANT EMISSIONS

IGO completes annual National Pollutant Inventory (NPI) reporting in accord with Australian law. The NPI is used to track pollution across Australia, and to ensure that the community has access to information about the emission and transfer of toxic substances which may affect them locally. The NPI contains data on 93 substances that have been identified as important due to their possible effect on human health and the environment.

In FY17, IGO key NPI reportable pollutants were:

| Carbon monoxide                  | kg             |
|----------------------------------|----------------|
| Jaguar - Air total               | 50,912         |
| Long - Air total                 | 9,892          |
| Nova - Air total                 | 184,811        |
| <b>IGO total</b>                 | <b>245,616</b> |
| <b>Oxides of nitrogen</b>        |                |
| Jaguar - Air total               | 130,856        |
| Long - Air total                 | 18,776         |
| Nova - Air total                 | 398,171        |
| <b>IGO total</b>                 | <b>547,803</b> |
| <b>Sulphur dioxide</b>           |                |
| Jaguar - Air total               | 154            |
| Long - Air total                 | 17.6           |
| Nova - Air total                 | 230            |
| <b>IGO total</b>                 | <b>401</b>     |
| <b>Volatile organic compound</b> |                |
| Jaguar - Air total               | 5,051          |
| Long - Air total                 | 1,404          |
| Nova - Air total                 | 20,563         |
| <b>IGO total</b>                 | <b>27,018</b>  |

## NOTE

This does not include emissions data for the Tropicana Operation.

# MINE CLOSURE PLANNING

Mine closure planning is a complex process, with the planning horizon typically measured in decades. Planning for mine closure must consider social, economic, physical and biological parameters that generally change over the life of a mine. Difficulties associated with mine closure are often the product of poor initial planning. Consequently, mine closure planning is a matter for consideration during all stages of operation and particularly during a project's feasibility phase.

The potential impacts of closure are an ongoing consideration in IGO's engagement with governments and local communities. Potential impacts of closure are also considered in regard to our support of community development initiatives and local business. Mindful of this, and in conformance with Western Australian law, IGO has approved Mine Closure Plans (MCPs) for its Jaguar, Long and Nova operations, with AngloGold Ashanti producing an MCP for the Tropicana Gold Mine.

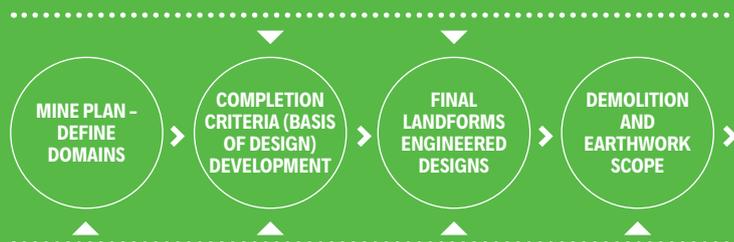
In accordance with IGO's regulatory obligations, a review of all our MCPs was completed in FY17, with updated versions for our operations submitted to the DMIRS. The MCP review process included a group-wide closure planning study that involved a multidisciplinary team of consultants. The study comprised a review of closure planning strategies at all sites, updated closure risk assessments and identification of potential gaps, enabling optimised closure planning activities to be developed.

IGO intends to grow its business, and given the likelihood that it may expand into new jurisdictions, IGO developed two closure standards in FY17. These include the IGO Group Environment Standard - Rehabilitation and Mine Closure, and the IGO Group Finance Standard - Provisions for Mine Closure, with both documents integrating relevant Australian and International closure planning guidelines, such as the ICMM Planning for Integrated Mine Closure: Toolkit (refer to [www.icmm.com/document/310](http://www.icmm.com/document/310)) where appropriate. Consequently, the revision of MCPs is now a structured approach, incorporating both external regulatory requirements as well as meeting internal standards to ensure adequate stakeholder engagement throughout the mine closure planning process. This is depicted in Figure 17 below.

Finally, the revised MCPs enabled provisions for the estimated cost of rehabilitation, decommissioning and restoration relating to areas disturbed during the mine's operation to be updated in FY17.

FIGURE 17

## REGULAR ENGAGEMENT



## NOVA OPERATION

An updated MCP, aligned to Western Australia's current mine closure guidelines, was submitted to the DMIRS in February 2017. Nova Operation completed the majority of construction during FY17 and the final footprint and final landform designs were incorporated into the updated MCP. The operation has an estimated nine year mine life, with the next MCP revision to occur in FY20.

In FY17, IGO's closure cost estimates were independently audited as part of the annual financial audit conducted by BDO. IGO's MCPs are not currently subject to independent audits. IGO anticipates its MCPs will be made publically available through the DMIRS's website following approval in FY18.

## JAGUAR OPERATION

The Jaguar Operation MCP was updated in FY17 and submitted to the Department of Mines and Petroleum in June 2017. The updated MCP included outcomes from a geochemistry analysis, landform and cover modelling, and a revision of the closure cost estimate. IGO also held a number of meetings with the DMIRS to discuss the identified closure liabilities associated with the historic Teutonic Bore pit, and the waste rock dump and tailings dam, located to the north of the Jaguar Operation. Remediation of this legacy site continued in FY17 and IGO is working with the DMIRS to facilitate additional rehabilitation in FY18 and beyond.

## LONG OPERATION

The Long Operation MCP was updated and submitted to the Department of Mines and Petroleum in March 2017, following a request by the Department in late 2016. The Long MCP was approved by the DMIRS on 25 May 2017. The updated MCP included updating aerial photography of operations, a comprehensive soil and geochemical analysis, conceptual cover modelling and closure cost breakdown. In addition to this, IGO completed an optimisation study of proposed closure strategy to revise the cost estimate for closure. IGO is currently working with BHP Nickel West regarding its closure planning for the Kambalda concentrator tailings dam located on IGO's mining lease.

In 2017, IGO has announced that operations at Long will cease and the mine will be placed into care and maintenance. IGO has and will continue to consult with the workforce and provide community updates.

## MINE REHABILITATION FUND

IGO, like many other mining companies, pays a Mining Rehabilitation Fund Levy to the Government of Western Australia (refer to [www.dmp.wa.gov.au/19344.aspx](http://www.dmp.wa.gov.au/19344.aspx)). In FY17, IGO's levy payments totalled \$217,183.

### Estimated cost of closure

|                            |                 |
|----------------------------|-----------------|
| <b>Nova Operation</b>      | <b>\$34.3M</b>  |
| <b>Tropicana Gold Mine</b> | <b>\$20.3M*</b> |
| <b>Jaguar Operation</b>    | <b>\$12.4M</b>  |
| <b>Long Operation</b>      | <b>\$5.5M</b>   |
| <b>Total</b>               | <b>\$72.6M</b>  |

\* The value reported in 2016 for Tropicana included 100% of closure costs. This figure represents IGO's 30% share.

## CASE STUDY /

# TEUTONIC BORE (JAGUAR OPERATION)

Once an open pit operation operated by Seltrust-MIM Joint Venture, the Teutonic Bore operations progressed to underground mining activities during the early 1980s. This comprised a tailings storage facility, a run-of-mine pad, a process plant, waste rock dump and residential camp. Rehabilitation was carried out by Mt Isa Mines on the waste rock dump, the process plant area, and a portion of the run-of-mine, which was signed off by the former Department of Mines and Petroleum in 1997.

IGO has committed to progressively rehabilitating the remaining areas of the historic Teutonic Bore facilities in conjunction with the development of the Triumph deposit, located 5km north of the existing Jaguar Operation. As part of the Teutonic Bore site is the responsibility of the Department of Mines, Industry Regulation and Safety, IGO has been discussing a collaborative rehabilitation effort with the department, to achieve the best possible rehabilitation outcomes.

Current plans for rehabilitation involve using waste from the decline and overburden from the Triumph box cut to cap the Teutonic Bore tailings storage facility. When the Triumph underground mine requires backfill, the preferred option will be to source fill material from the potentially acid generating low grade ore stockpiles and historically contaminated areas of the Teutonic Bore site, returning potentially acid generating material underground, thereby mitigating ongoing environmental risk.

In addition to rehabilitation planning, the clean-up of the Teutonic Bore scrap yard has been completed, with the removal of over 500t of disused waste material including steel, from site. An estimated 400t of waste has been sent off site for recycling via a local contractor, with the remaining waste being disposed to licenced landfill facilities.

The synchronous development of the proposed Triumph deposit and rehabilitation of the Teutonic Bore facilities has the potential to further reduce closure costs, which IGO will be exploring in the future.



# MATERIALS STEWARDSHIP

IGO supports the idea of materials stewardship, in accordance with our environmental policy. IGO has implemented an integrated strategy aimed at ensuring that our products, materials and processes associated with our business are produced, consumed and disposed of in an economically, socially and environmentally responsible manner. Materials stewardship includes three components: resource stewardship, process stewardship and product stewardship.

Resource stewardship is the process of maximising the benefits derived from the resource over its entire lifetime while minimising or mitigating the resultant negative impacts. The obvious focus of resource stewardship in the mining context is ore recovery and the avoidance of activities that will likely result in the 'sterilisation' of ore (i.e. doing something that is likely to permanently render an ore source as sub-economic to mine). However, resource stewardship extends over a wide range of materials including the natural resources on the lands surrounding and controlled by mining companies, the topsoil and biomass cleared from a site prior to the commencement of mining, the management of the waste rock extracted during mining, and the management of other wastes including tailings. Resource stewardship is central to IGO's day-to-day environmental management.

Process stewardship is the set of activities required to ensure that we maintain effective control over our mining-related activities to maximise socio-economic benefits while minimising or mitigating the negative impacts. Process stewardship specifically includes the way in which we manage process inputs such as water, power and other process consumables.

Product stewardship is the process by which the producer controls or seeks to influence how their product is used and ultimately disposed of. For mining companies like IGO, resource stewardship and process stewardship are directly within our control. In the case of product stewardship (as is true for most producers of gold, nickel and copper, zinc and silver), while we have some control in determining who the initial buyers of our products are, we effectively have no control over the materials once they enter the myriad of global manufacturing supply chains.

# IGO IMPACTS IN THE WIDER CONTEXT

The IGO portfolio includes four operating mines, all 100% owned, except for Tropicana (30%), within Western Australia. Within a state context IGO's socio-economic contribution and environmental impacts are not insignificant, however it is noteworthy that at the end of FY16 Western Australia had 111 principal mining projects in operation, with hundreds of smaller quarries and mines. These principal projects produced more than 99% of the mining industry's total sales volume (refer to [www.dmp.wa.gov.au](http://www.dmp.wa.gov.au)).

Western Australia is one of the most productive and diversified mineral regions in the world with more than 50 minerals being produced in commercial quantities. Consequently, the socio-economic contribution and environmental impacts of the industry as a whole are material both in a state and a national context.



**ASSURANCE REPORT ON LIMITED ASSURANCE ENGAGEMENT RELATING TO SUSTAINABILITY REPORTING**

To the Directors of Independence Group NL

**Conclusion**

We have undertaken a limited assurance engagement on the subject matter, as detailed below and presented in the Independence Group NL’s Sustainability Report (the report) for the year 1 July 2016 to 30 June 2017.

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that the subject matter, as detailed below and presented in the report for the year 1 July 2016 to 30 June 2017 is not presented fairly in accordance with the criteria as presented below.

**Subject matter and criteria**

The subject matter and criteria for our limited assurance engagement included the following for the year 1 July 2016 to 30 June 2017:

| Subject matter   | Criteria  |
|--|---|
| 1. Socio economic contributions - Corporate Giving, Expenditure to Ngadju and Scholarships.<br>2. Lost time injury frequency rate (LTIFR).<br>3. Estimated closure costs - Rehabilitation costs.<br>4. Greenhouse gas emissions - Scope 1 & Scope 2 Emissions. | <ul style="list-style-type: none"> <li>Independence Group NL’s assessment of general accordance with the Global Reporting Initiatives (‘GRI’) G4 Sustainability Reporting Guidelines, as a benchmark for the 2017 Sustainability Report.</li> <li>Independence Group NL’s own criteria for the non-financial performance metrics detailed within the report.</li> </ul> |

**Management’s responsibilities**

The management of Independence Group NL is responsible for the preparation of the sustainability report in accordance with criteria as set out by Independence Group NL and for the selection of the sustainability information to be assessed.

The responsibility of the company’s management includes the selection and application of appropriate methods to prepare the sustainability report as well as the use of assumptions and estimates for individual sustainability disclosures which are reasonable under the circumstances. Furthermore, the responsibility of management includes the maintenance of the system of internal controls for the preparation of the Sustainability report, which is free of material, intended or unintended, misstatements.

**Our independence and quality control**

We have complied with the independence and other relevant ethical requirements relating to assurance engagements, and apply Auditing Standard ASQC 1 *Quality Control for Firms that Perform*

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*Audits and Reviews of Financial Reports and Other Financial Information, and Other Assurance Engagements* in undertaking this assurance engagement.

**Assurance practitioner's responsibilities**

Our responsibility is to express a limited assurance conclusion based on our work performed on the Sustainability report of Independence Group NL.

We conducted our limited assurance engagement in accordance with the Standard on Assurance Engagements *ASAE 3000: Assurance Engagements Other than Audits or Reviews of Historical Financial Information*. That standard requires that we comply with ethical requirements, including independence requirements, apply Auditing Standard *ASQC 1 Quality Control for Firms that Perform Audits and Reviews of Financial Reports and Other Financial Information, and Other Assurance Engagements* and plan and perform our procedures to obtain limited assurance about whether any matters come to our attention that causes us to believe that the disclosures relating to the subject matter in the report of the company for the year 1 July 2016 to 30 June 2017 has not been prepared with reference to the Global Reporting Initiative ('GRI') G4. This does not mean that separate conclusions are expressed for each subject matter.

In a limited assurance engagement, the evidence gathering procedures are more limited than for a reasonable assurance engagement, and therefore significantly less assurance is obtained than in a reasonable assurance engagement. The procedures selected depend on our judgement.

In forming our conclusion on the subject matter, we performed, amongst others, the following procedures:

- Obtain an understanding of the structure of the sustainability organisation and of the stakeholder engagement;
- Make enquiries of personnel involved in the preparation of the sustainability report regarding the preparation process, the underlying internal control system and selected sustainability information;
- Analytical procedures on selected subject matter contained in the sustainability report;
- Agree Socio-Economic contributions to supporting documentation;
- Assess reasonableness of Lost Time Injury Frequency rate, including the underlying inputs;
- Comparison of selected sustainability information with corresponding data in the audited consolidated financial statements, the group management reports and other statutory reports; and
- Assessing the presentation of selected sustainability information regarding the sustainability performance.

**BDO Audit (WA) Pty Ltd**

BDO  


**Phillip Murdoch**

**Director**

Perth, 10 November 2017

# APPENDICES

## GRI CONTENT INDEX

The table below cross-references the general standard disclosure requirements of the GRI reporting guideline with the contents of this report.

### General standard disclosures

| General Standard Disclosures                      | Page Number (or Link)     |
|---|---------------------------|
| <b>STRATEGY AND ANALYSIS</b>                      |                           |
| G4-1  | pages 2-3                 |
| <b>ORGANISATIONAL PROFILE</b>                     |                           |
| G4-3  | page 1 and page 5         |
| G4-4  | pages 5, 20-21            |
| G4-5  | page 1                    |
| G4-6  | page 21                   |
| G4-7  | page 22                   |
| G4-8  | pages 50-55               |
| G4-9  | pages 20-21, 50-51, 58-59 |
| G4-10   | pages 58-59               |
| G4-13   | pages 20-22, 50-54        |
| <b>IDENTIFIED MATERIAL ASPECTS AND BOUNDARIES</b> |                           |
| G4-18   | pages 14-17               |
| G4-19   | pages 14-15               |
| <b>STAKEHOLDER ENGAGEMENT</b>                     |                           |
| G4-24   | pages 16-17               |
| G4-25   | pages 14-17               |
| G4-26   | pages 14-17               |
| <b>REPORT PROFILE</b>                             |                           |
| G4-28   | page 14                   |
| G4-29   | page 14                   |
| G4-30   | page 14                   |
| G4-31   | page 1                    |
| G4-32   | page 90                   |
| G4-33   | page 14                   |
| <b>GOVERNANCE</b>                                 |                           |
| G4-34   | page 22                   |
| <b>ETHICS AND INTEGRITY</b>                       |                           |
| G4-56   | pages 6-8                 |

The following table has been developed to aid the cross-referencing of IGO's material issues (as determined in this report) to GRI reporting guidelines.

### Specific standard disclosures

| DMA and Indicators                                     | Page Number (or Link) |
|--|-----------------------|
| <b>CATEGORY: ECONOMIC</b>                              |                       |
| <b>Material Aspect: Economic Performance</b>           |                       |
| G4-DMA   | pages 14-15, 50-51    |
| G4-EC1   | pages 50-51           |
| <b>Material Aspect: Indirect Economic Impacts</b>      |                       |
| G4-DMA   | pages 14-15, 50-55    |
| <b>Material Aspect: Procurement Practices</b>          |                       |
| G4-EC9   | pages 50-55           |
| <b>CATEGORY: ENVIRONMENTAL</b>                         |                       |
| <b>Material Aspect: Materials</b>                      |                       |
| G4-DMA   | pages 14-15, 72-87    |
| G4-EN1   | page 27               |
| <b>Material Aspect: Energy</b>                         |                       |
| G4-DMA   | pages 14-15, 84-85    |
| G4-EN3   | page 84               |
| G4-EN4   | page 84               |
| <b>Material Aspect: Water</b>                          |                       |
| G4-DMA   | pages 14-15, 82-83    |
| G4-EN8   | pages 82-83           |
| <b>Material Aspect: Biodiversity</b>                   |                       |
| G4-DMA   | pages 14-15, 76-77    |
| G4-EN12  | pages 72-81           |
| <b>Material Aspect: Emissions</b>                      |                       |
| G4-DMA   | pages 14-15, 84-87    |
| G4-EN15  | pages 84-87           |
| G4-EN16  | pages 84-87           |
| <b>Material Aspect: Effluents and Waste</b>            |                       |
| G4-DMA   | pages 14-15, 81       |
| G4-EN23  | page 81               |
| <b>Material Aspect: Transport</b>                      |                       |
| G4-DMA   | pages 14-15, 78       |
| G4-EN30  | page 78               |
| <b>CATEGORY: SOCIAL</b>                                |                       |
| <b>SUB-CATEGORY: LABOR PRACTICES AND DECENT WORK</b>   |                       |
| <b>Material Aspect: Employment</b>                     |                       |
| G4-DMA   | pages 14-15, 58-64    |
| G4-LA1   | pages 58-64           |
| <b>Material Aspect: Occupational Health and Safety</b> |                       |
| G4-DMA   | pages 14-15, 60-64    |
| G4-LA6   | pages 60-64           |
| <b>SUB-CATEGORY: SOCIETY</b>                           |                       |
| <b>Material Aspect: Local Communities</b>              |                       |
| G4-DMA   | pages 14-15, 66-69    |
| G4-SO1   | pages 66-67           |
| G4-SO2   | pages 68-69           |

# IGO PARAMETERS

| Parameter                                | Value      | Unit                 |
|--|------------|----------------------|
| <b>INDEPENDENCE GROUP (COMBINED)</b>     |            |                      |
| Size of IGO Workforce                    | 796        | count                |
| <b>INPUTS</b>                            |            |                      |
| Labour                                   | 1,781,234  | h                    |
| Ore Mined                                | 3,200,000  | t                    |
| Electricity                              | 105,158    | MWh                  |
| Gas                                      | 521,795    | GJ                   |
| Diesel                                   | 17,692,448 | L                    |
| Ground Support                           | 2,443      | t                    |
| Explosives                               | 1,446      | t                    |
| Cement                                   | 5,775      | t                    |
| Grinding Media                           | 1,286      | t                    |
| Water                                    | 2,719,686  | kL                   |
| Reagents - Copper Sulphate               | 410        | t                    |
| Lubricants and Oils                      | 337,000    | L                    |
| <b>EMISSIONS</b>                         |            |                      |
| IGO Carbon Dioxide (Scope 1 and Scope 2) | 162,183    | CO <sub>2</sub> -e t |
| IGO Scope 1 Emissions                    | 148,440    | CO <sub>2</sub> -e t |
| IGO Scope 2 Emissions                    | 13,743     | CO <sub>2</sub> -e t |
| Carbon Monoxide                          | 245,616    | kg                   |
| Oxides of Nitrogen                       | 547,803    | kg                   |
| Sulphur Dioxide                          | 401        | kg                   |
| Volatile Organic Compounds               | 27,018     | kg                   |
| Particulate Matter (<10um)               | 766,606    | kg                   |
| Particulate Matter (<2um)                | 28,906     | kg                   |
| <b>PRODUCTS</b>                          |            |                      |
| Ni in Ore Delivered                      | 8,433      | t                    |
| Cu in Ore Delivered                      | 592        | t                    |
| Ni in Concentrate                        | 3,502      | t                    |
| Cu in Concentrate                        | 6,671      | t                    |
| Zn in Concentrate                        | 32,638     | t                    |
| Ag in Concentrate                        | 1,376,521  | oz                   |
| Au in Concentrate                        | 2,532      | oz                   |
| Au in Bullion                            | 129,487    | oz                   |
| <b>REHABILITATION</b>                    |            |                      |
| New rehabilitation                       | 41         | ha                   |
| <b>WASTE</b>                             |            |                      |
| Tailings (wet)                           | 2,736,390  | t                    |
| Waste Rock                               | 1,050,059  | t                    |
| Materials to Landfill                    | 2,019      | t                    |

| Parameter  | Value     | Unit            |
|--|-----------|-----------------|
| <b>TROPICANA GOLD MINE</b>                                 |           |                 |
| Life of Mine   | 7-10      | years           |
| Tropicana Tenement Area                                    | 4,100     | km <sup>2</sup> |
| Total Cleared Area (FY17)                                  | 2,457     | ha              |
| Ore Mined (IGO's share)                                    | 2.2       | Mt              |
| Waste Mined (IGO's share)                                  | 22        | Mt              |
| Au   | 7.4       | Mt              |
| IGOs Gold Share  | 129,487   | oz              |
| Tropicana Tailings   | 7.4       | Mt              |
| <b>CONSUMABLES</b>   |           |                 |
| Water Abstraction From Operational and Process Water Bores | 6,960,000 | kL              |
| <b>LONG OPERATION</b>                                      |           |                 |
| Life of Mine   | <1        | year            |
| Total Cleared Area   | 103       | ha              |
| % FIFO Workforce   | 13        | %               |
| Ore Mined  | 205,372   | t               |
| <b>CONSUMABLES</b>   |           |                 |
| Dewatering Volume to Surface                               | 228,895   | kL              |
| Water Discharge to Lake Lefroy                             | 302,172   | kL              |
| <b>JAGUAR OPERATION</b>                                    |           |                 |
| Life of Mine   | 3-5       | years           |
| Total Cleared Area   | 246       | ha              |
| % FIFO Workforce   | 95        | %               |
| Waste Mined  | 172,282   | t               |
| Ore Mined  | 444,700   | t               |
| <b>CONSUMABLES</b>   |           |                 |
| Underground Dewatering                                     | 1,070,783 | kL              |
| Water Discharged into Teutonic Bore Pit                    | 393,992   | kL              |
| <b>NOVA OPERATION</b>                                      |           |                 |
| Life of Mine   | 9         | years           |
| Total Cleared Area   | 439       | ha              |
| Ore Mined  | 374,000   | t               |
| % FIFO Workforce   | 88        | %               |
| Tenement Area  | 6,059     | ha              |

# IGO PARAMETERS CONT'D

| Parameter   | Value           | Unit  |
|---|-----------------|-------|
| <b>ECONOMIC IMPACT</b>  |                 |       |
| Value of IGO's Products   | \$421.9 million | AUD   |
| IGO Exploration Expenditure   | \$40.8 million  | AUD   |
| IGO Gold Sales (FY17)   | \$217.9 million | AUD   |
| IGO Nickel Sales (FY17)   | \$68.1 million  | AUD   |
| <b>FINANCIAL PERFORMANCE</b>  |                 |       |
| Underlying Earnings (EBITDA*)   | \$150.5 million | AUD   |
| Net Profit (Loss) After Tax   | \$17 million    | AUD   |
| Net Cash and Cash Equivalents   | \$35.8 million  | AUD   |
| Final Dividend Paid (FY17)  | \$17.6 million  | AUD   |
| <b>SAFETY</b>   |                 |       |
| IGO Employee Hours Worked   | 1,781,234       | hours |
| No. of Injuries at IGO (including Tropicana)  | 342             | count |
| No. of Restricted Work Injuries   | 34              | count |
| LTI   | 4               | count |
| MTIs  | 16              | count |
| IGO Workers Compensation Claims   | 35              | count |
| <b>TRANSPORT</b>  |                 |       |
| Jaguar Operation - No. of Trucks Received Per Year                                    | 200-300         | count |
| Long Operation - No. of Trucks Received Per Year                                      | 240-260         | count |
| Nova Operation - No. of Trucks Received Per Year                                      | 1,415           | count |
| Tropicana Gold Mine - No. of Trucks Received Per Year                                 | 1,760           | count |
| <b>SOCIO-ECONOMIC CONTRIBUTIONS</b>   |                 |       |
| Salaries (Excluding Tropicana Gold Mine)  | \$58.7 million  | AUD   |
| Tax and State Royalties (Including IGO's Part of Tropicana Gold Mine)                 | \$16.3 million  | AUD   |
| Corporate Giving  | \$289,000       | AUD   |
| Ngadju's Community Development Project's Spending                                     | \$320,412       | AUD   |
| IGO Spending on Contractors and Suppliers   | \$366 million   | AUD   |
| <b>Statutory Compliance</b>   |                 |       |
| DMIRS Improvement Notices Received  | 7               | count |
| <b>SOCIAL IMPACT</b>  |                 |       |
| Material Issues   | 48              | count |
| Number of IGO Staff   | 445             | count |
| Number of Contractors   | 351             | count |
| Percentage of Female Employees  | 20              | %     |
| Percentage of Male Employees  | 80              | %     |
| IGO Spending on Local Indigenous Contractor (Bundarra Contracting) (Life of Contract) | \$8 million     | AUD   |
| <b>LAND AND BIODIVERSITY MANAGEMENT</b>   |                 |       |
| Long Land Disturbance (Total)   | 103             | ha    |
| Long Land Rehabilitation  | 4               | ha    |
| Jaguar Land Disturbance (Total)   | 246             | ha    |
| Jaguar Land Rehabilitation  | 26              | ha    |
| Jaguar Exploration Rehabilitation   | 0               | ha    |
| Tropicana Gold Mine Land Clearing (FY17)  | 2,457           | ha    |
| Nova Land Disturbance (Total)   | 440             | ha    |
| Nova Land Rehabilitation  | 107             | ha    |
| <b>ENERGY CONSUMPTION</b>   |                 |       |
| Jaguar Operation  | 794,552         | GJ    |
| Long Operation  | 116,616         | GJ    |
| Nova Operation  | 705,453         | GJ    |
| Tropicana Gold Mine   | 1,427,178       | GJ    |

\* Underlying EBITDA excludes impairments (A\$25.0M), redundancy and retention costs (A\$6.4M), acquisition costs (A\$3.9M) and gain/loss on investment sales (\$nil).

# DATA DOTS: EXPLANATIONS AND REFERENCES

| Number  | Reference   | Page No. |
|---|---|----------|
| \$240M capital invested                         | \$240 million spent on capital investment represents \$13,567,000 on property, plant and equipment, \$205,312,000 on mine properties, \$3,662,000 on exploration expenditure and \$17,823,000 on acquisition of Windward Resources Limited. Refer to the IGO Annual Report 2017 for further detail. | 3        |
| \$17.6M dividends paid to shareholders          | Full ordinary dividend for the year ending 30 June 2016 of 2.0 cents per fully paid share and interim dividend for the year ended 30 June 2017 of 1.0 cent. Reference IGO Financial Report 2017.  | 4        |
| 132koz gold produced from our operations        | Total gold metal payable at Tropicana (IGO's share - 129,489oz) and Jaguar (2,328oz). Reference IGO Annual Report 2017.   | 10       |
| 3.2Mt ore processed from our operations in FY17 | Total ore milled in tonnes at Tropicana Gold Mine (2,198,000t; IGO's 30% share), Nova Operation (374,000t), Jaguar Operation (443,000t) and Long Operation (205,000t). Reference IGO Annual Report 2017.  | 18       |
| 33kt zinc produced                              | Total zinc in concentrate (32,638t) produced from our Jaguar Operation in FY17. Reference IGO Annual Report 2017.   | 20       |
| 1.1Moz gold reserves                            | Total contained metal Au reserves at the Tropicana Gold Mine (1,100,000oz; IGO's 30% share) and Jaguar Operation (36,000oz). Reference IGO Annual Report 2017.  | 24       |
| 1.69 FY17 lost-time injury frequency            | The 12-month moving average frequency rate for lost-time injuries (LTIs) for the IGO group. LTIs are injuries that result in individuals not being able to work for a time represented as a frequency rate per 1,000,000 man hours. Reference IGO Sustainability Report 2017.                       | 30       |
| 129koz gold produced                            | Total gold metal payable at Tropicana (IGO's share - 129,487oz). Reference IGO Annual Report 2017.  | 35       |
| 8,433t nickel metal produced                    | Total nickel metal produced at Long Operation and delivered to BHP Nickel West's Kambalda Concentrator. Reference IGO Annual Report 2017.   | 39       |
| 41.9Mt mineral resources                        | IGO's total mineral resources in tonnes from all operations and projects. Reference IGO Annual Report 2017.   | 40       |
| \$422M revenue from operations                  | Revenue from sale of goods (\$421,926,000). Reference IGO Annual Report 2017.   | 48       |
| \$366M contractor spend                         | Total spend on contractors and suppliers for FY17 (\$365,845,000). Reference IGO Annual Report 2017.  | 51       |
| \$16M tax and state royalties paid              | Total money paid through tax and state royalties, including Tropicana. Reference IGO Sustainability Report 2017.  | 52       |
| \$8M contract with Bundarra                     | Total value of contract signed with Bundarra for three-year term at Jaguar Operation. Reference IGO Sustainability Report 2017.   | 54       |
| \$289k donations to communities                 | Total money donated through corporate giving committee to charities and other institutions that align with the IGO policy. Reference IGO Sustainability Report 2017.  | 56       |
| 796 people employed at IGO                      | Total employees and contractors employed at all IGO operations, projects, exploration and corporate sites as of 30 June 2017. Reference IGO Annual Report 2017.   | 60       |
| 61kt of tailing re-used                         | The Long Operation used 61,129t of tailing purchased from St Ives Gold Mine to produce a paste backfill material that was used to refill mine underground voids. Reference IGO Sustainability Report 2017.  | 72       |
| 41ha new land rehabilitation                    | Total land newly rehabilitated in the reporting year at Long, Jaguar and Nova. Reference IGO Sustainability Report 2017.  | 74       |
| 162kt CO <sub>2</sub> -e generated              | Total carbon dioxide equivalent emissions from all sites, including the Tropicana Gold Mine, Nova Operation, Jaguar Operation, Long Operation, Exploration and corporate office in South Perth. Reference IGO Sustainability Report 2017.   | 85       |

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