



## SUPPLEMENT TO 3Q18 REPORT: JAGUAR OPERATION - BENTAYGA LENS UPDATE

Independence Group NL (IGO or the Company) (ASX:IGO) is pleased to provide this update on the progress of exploration and drill definition of the Bentayga Lens at the Bentley VHMS deposit at IGO's Jaguar Operation as part of IGO's Quarterly Report for the March 2018 Quarter (3Q18).

### Highlights

- Underground diamond drilling during 2018 has intersected significant new thicknesses of massive and stringer mineralisation through the Bentayga Lens including:

#### **18BUDD008**

- Estimated true thickness: 4.15m from 317.46 m down hole
- Average grades: 8.85% Zn, 3.92% Cu, 199g/t Ag and 0.96g/t Au

#### **18BUDD012**

- Estimated true thickness: 4.10m from 432.8 m down hole
- Average grades: 8.81% Zn, 6.34% Cu, 492g/t Ag and 1.40g/t Au

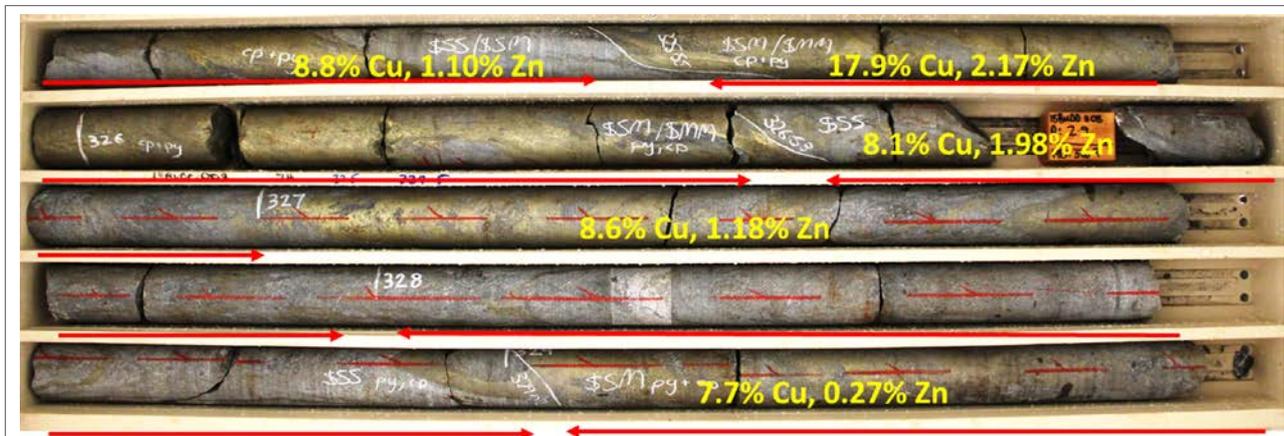
- A 240m long underground development drive from the Bentley Decline, which will provide a drill position to best define the extents of a likely Mineral Resource for the Bentayga Lens, commenced in 3Q18 and is 60-70% complete. This drill drive will readily convert to a mining access should an Ore Reserve be defined.
- The decision to commit to the drill drive has been supported by recent underground diamond drilling exploration results. These results have significantly extended the up-plunge extent of the Bentayga Lens, with the mineralisation extents open in both up and down plunge directions.

### Bentayga Drilling Program Update

The Bentayga Lens was discovered in mid-2017, approximately 250m south of the Bentley Decline, by exploratory underground drill testing of a target south of the main Arnage Lens. Results from the eight holes drilled to define the initial Bentayga target were reported in July 2017 (see IGO's ASX release regarding Jaguar Value Enhancement Programs: 26/07/2017).

The mineralisation style of the Bentayga Lens is like the other massive sulphide lenses of the Bentley deposit, which have typical volcanic hosted massive sulphide (VHMS) assemblages of sphalerite, chalcopyrite, galena and pyrite (Figure 1).

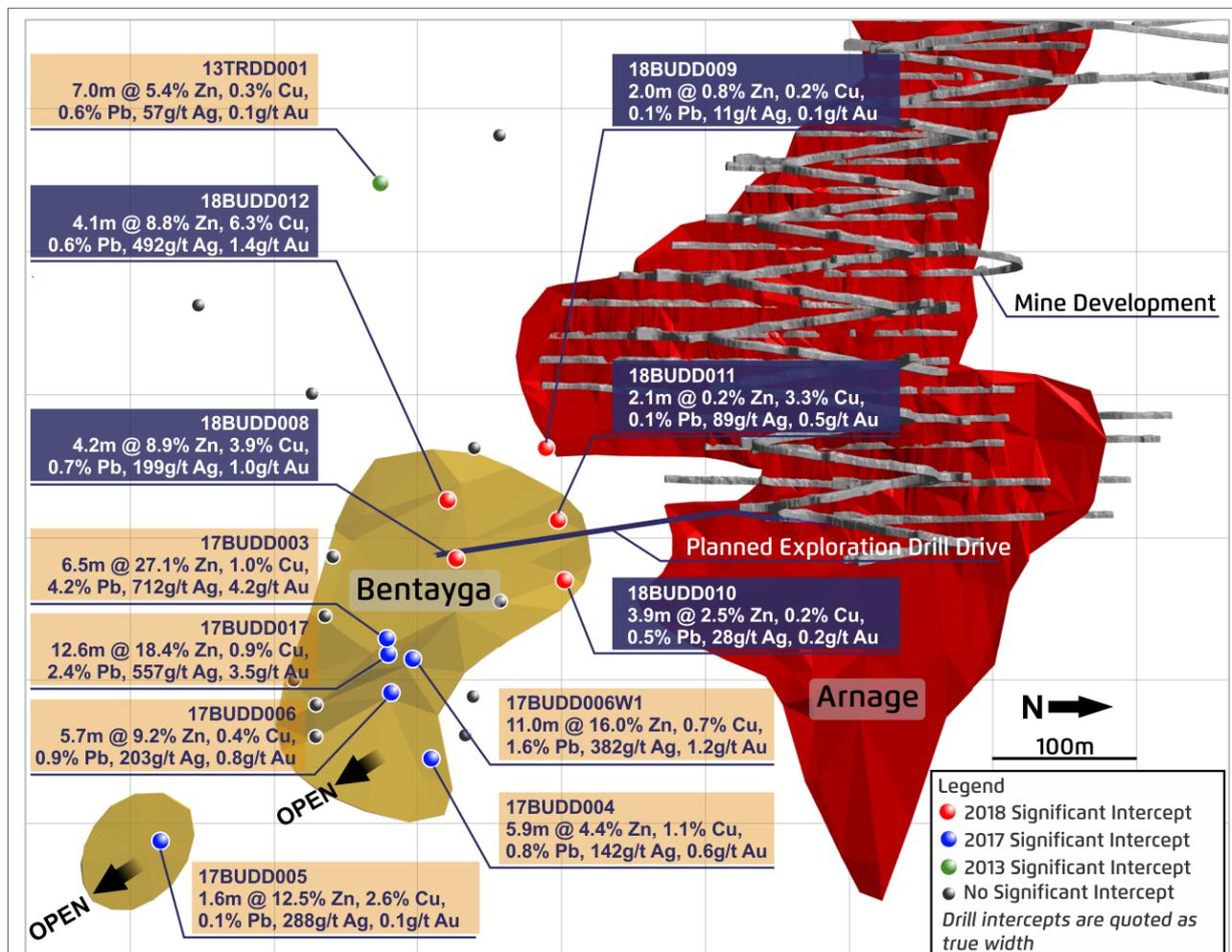
Figure 1: Drill hole 18BUDD008 – example of high grade copper mineralisation



Notes: Core from 18BUDD008 from 325m to 329.8m down hole. Yellow text indicates the assayed grades of the sample intervals denoted by the red arrows. High copper grades are associated with chalcopyrite with up to 17.9% Cu in one sample interval. Zinc grades in this copper zone average 0.30-1.98% Zn.

The 2018 underground diamond drilling program of the Bentayga Lens has involved the completion of six NQ drill holes (18BUDD008 to 013) for a total of 2,042m of drilling. Three of these holes (18BUDD008, 18BUDD00812 and 18BUDD00813) tested the up-plunge extents of the Bentayga Lens, and three holes (18BUDD009-011) tested the volume between the Bentayga and Arnage Lens, which is the major mineralised body in the Bentley deposit. Figure 1 is a long section projection of the drill results to date at Bentayga, including the 2018 significant intercepts listed in the highlights of this ASX report. Refer to the table in the appendix of this release for full location and intercept details of the six holes drilled in 2018.

Figure 2: Bentayga and Arnage Long Section – Looking West



Notes: Long section looking west at the wireframe projections of Bentayga Lens (light brown shading) and Arnage Lens (red shading). The Bentley Decline and associated development is plotted with grey shading. The mid-points of significant intercepts from the 2018 drilling are plotted using red circle symbols and significant intercept mid-points, reported in July 2017, are plotted using blue circle symbols. Interval details include the estimated true thicknesses and length-density weighted grades. Drill holes that have closed off the extents of mineralisation are plotted as small grey circles. Note the projected position of the designed exploration drill drive is depicted, extending from the second lowest return of the Bentley decline.

### Underground Drill Drive

IGO commenced the development of a 240m underground drill drive at the Bentley Mine during 3Q18, which is 60-70% complete. This underground drill drive will provide:

- A drill site facilitating resource definition drilling of the Bentayga Lens at a more favourable intersection angle (closer to true thickness); and
- Early mining access to the Bentayga Lens, should an Ore Reserve be defined following Mineral Resource estimation work.

The underground drill drive will require approximately 240m of development from the existing Bentley underground infrastructure, with planned completion in early 1Q19. On completion of the development, an



approximate 8,000m diamond drill program, focused on Mineral Resource definition, will commence. It is anticipated that a decision to mine Bentayga would be in early CY19.

## **Competent Person Compliance Statement**

The information in the report that relates to Exploration Results is based on the information compiled by Mr David Potter, who is a Member of The Australian Institute of Mining and Metallurgy and a full-time employee of IGO. David Potter has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration, and to the activity being undertaken, to qualify as a Competent Person as defined in the 2012 edition of the 'Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves'. David Potter consents to the inclusion in this report of matters based on his information in the form and context in which it appears.

## **Forward Looking Statement**

This announcement contains forward-looking statements regarding future events, conditions and circumstances including but not limited to statements regarding plans, strategies and objectives of management, anticipated timelines and expected costs and rates of processing and recovery. Often, but not always, forward-looking statements can be identified by the use of forward-looking words such as "may", "will", "expect", "intend", "plan", "estimate", "anticipate", "continue" and "guidance", or other similar words.

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

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

APPENDIX A: Tables of Drilling Results

Bentayga Drilling 2018 – Drill hole Metrics

Drill Hole (name)	Collar and Plunge (Jaguar Mine Grid)					Total Length (m)
	X (mE)	Y (mN)	Z (mElv)	Azimuth (°)	Dip (°)	
18BUDD008	9621.40	51114.50	3957.2	204.2	-49.4	359.8
18BUDD009	9621.30	51114.70	3957.2	215.0	-51.0	314.5
18BUDD010	9559.91	51123.22	3718.9	212.3	-18.6	200.9
18BUDD011	9559.36	51123.27	3719.5	204.1	-3.1	212.8
18BUDD012	9683.40	51219.30	4034.0	202.6	-42.1	501.0
18BUDD013	9683.20	51219.40	4034.0	206.3	-37.5	453.0

Bentayga Drilling 2018 – Significant Intercepts by Drill Hole (BHID)

Drill Hole (name)	Interval		Width		Density and Length Weighted Grades				
	From (m)	To (m)	Drilled (m)	True (m)	Zn (%)	Cu (%)	Pb (%)	Ag (g/t)	Au (g/t)
18BUDD008	317.46	344.10	26.64	4.15	8.85	3.92	0.67	199	0.96
Including	329.02	344.10	15.08	2.30	13.47	2.42	1.00	249	1.30
18BUDD009	290.00	298.00	8.00	1.97	0.78	0.17	0.05	11	0.07
18BUDD010	145.0	153.50	8.50	3.94	2.52	0.19	0.46	28	0.21
18BUDD011	134.00	139.12	5.12	2.12	0.24	3.33	0.05	89	0.47
Including	138.45	139.12	0.67	0.28	0.37	14.31	0.02	160	1.34
18BUDD012	432.80	453.38	20.58	4.10	8.81	6.34	0.61	492	1.40
18BUDD013	-	-	-	-	No significant intercepts				



**APPENDIX B: Assessment and reporting Criteria (JORC Table 1)**

The table below follows the requirements of JORC Table 1 sections 1 and as required for reporting of Mineral Exploration results.

**Section 1 Sampling Techniques and Data**

Criteria	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>- Samples were collected utilising an underground diamond drill rig that collects a solid core sample (DD core) from the rock.</li> <li>- Details relating to this drilling technique and data collection are outlined below.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>- Drilling was conducted by Swick Mining Services from underground utilising a Jumbo mounted Swick designed diamond drill with a wireline core retrieval system.</li> <li>- Core diameters were 47.6mm (NQ),</li> <li>- Each drill run was a nominal 3m.</li> <li>- Core was oriented where possible using electronic (ACT) tools.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>- During drilling, rod counting was used to verify the lengths drilled and downhole depths.</li> <li>- Post drilling, down hole interval accuracy was monitored through reconstruction of the core into a continuous length and verified against the core blocks. One metre intervals were marked on the core.</li> <li>- Core recovery in all drill programs was quantified as percentage of the core length recovered compared to the drill hole advance length. There were no core recovery issues during the drilling.</li> <li>- There were no relationships between sample recovery and grades with no sample biases due to the preferential loss or gain of core.</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>- Logging was conducted with reference to metre marks and orientation lines marked on the core.</li> <li>- DD cores were logged geologically, structurally and geotechnically with reference to standard logging schemes, to levels of detail that support Mineral Resource estimation, Ore Reserve estimation and metallurgical studies.</li> <li>- DD cores were photographed both wet and dry after logging had taken place.</li> <li>- The total lengths of all drill holes in all deposits have been logged, with greater detail captured through zones of mineralisation and the footwall and hangingwall rocks found within 30m of main lodes.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<p><u>DD primary sampling:</u></p> <ul style="list-style-type: none"> <li>- A geologist marked out DD core for sampling, with intervals based on geological units, ranging no less than 0.3m and no greater than 1.3m, with a target sample interval of 1m.</li> <li>- The sample intervals were then cut in half longitudinally with a wet diamond blade, with the laboratory dispatched half collected from the same side of the core.</li> <li>- Half-core core sub-samples, certified reference materials (CRMs) and duplicates were placed in pre-numbered calico bags for laboratory dispatch.</li> <li>-</li> </ul> <p><u>Quality controls to ensure sample representability included:</u></p> <ul style="list-style-type: none"> <li>- Coarse blanks and standard (CRMs) were inserted into routine sample stream to monitor cross contamination and accuracy at a nominal rate of 1:20.</li> <li>- Variable standards were chosen in line with the predicted grades. Coarse blanks were inserted in and around the high-grade samples.</li> <li>- CRMs for each individual hole must be at, or above, the nominal rates.</li> <li>- Ensuring the laboratory used compressed air and barren rock washes to clean crushing and grinding equipment between each routine sample preparation.</li> <li>- Replicate samples were collected at a nominal rate of 1:20 to monitor the repeat precision at various stages of comminution.</li> <li>- Sieve tests were completed at the pulverization stage to confirm particle size distribution (PSD) compliance at a nominal frequency of 1:10.</li> <li>- Monitoring of quality results confirmed the sample preparation was acceptable in terms of accuracy, precision and minimisation of sample cross contamination.</li> <li>- Umpire laboratory checks were routinely undertaken at a rate of 10% of the primary samples but results are pending at the time of this report.</li> </ul> <p><u>Laboratory DD cut-core preparation:</u></p> <ul style="list-style-type: none"> <li>- Core samples were oven dried for 4 to 6 hours at 95°C then crushed in a jaw-crusher to a PSD of 100% passing 10mm. The jaw-crush lot was then fine crushed to a PSD &lt;2mm in a Boyd crusher-rotary splitter unit.</li> <li>- The whole sample was then pulverised in Essa LM5 grinding mills to a PSD of 90% passing 75 microns with a final 200g sub-sample collected from the pulp into a paper packet for assay.</li> </ul>



Section 1 Sampling Techniques and Data

Criteria	Commentary
	<ul style="list-style-type: none"> <li>- The sample preparation laboratory was conducted by Intertek Genalysis laboratory in Perth.</li> <li>- No specific heterogeneity tests have been carried out, but the Competent Person considers that the sub-sample protocols applied, and masses collected, are consistent with industry standards for the styles of mineralization under consideration.</li> </ul>
<p><b>Quality of assay data and laboratory tests</b></p>	<ul style="list-style-type: none"> <li>- No geophysical tools were used to determine any element concentrations estimated in the Mineral Resource.</li> <li>- Laboratory Assay processes for Bentley was conducted by Intertek Genalysis in Perth as follows:                             <ul style="list-style-type: none"> <li>o Digestion of the pulps in a four-acid mixture and heated to dryness. The four-acid digestion is considered a total extraction of all variables of interest.</li> <li>o The digestion salts were then re-dissolved, and the prepared solution was analysed by ICP-OES or ICP-MS analysis of an elemental suite (Cu, Pb, Zn, Ag, Fe, As, Sb and S)</li> <li>o Gold was assayed using 25g fire-assay digestion then AAS assay of the dissolved-bead solution.</li> <li>o Quality control samples were included by the laboratory in the form of standards, blanks and replicates.</li> </ul> </li> </ul>
<p><b>Verification of sampling and assaying</b></p>	<ul style="list-style-type: none"> <li>- Massive-sulphide drill intersections are visually conspicuous in the core and as such, assay results have been readily cross-verified by IGO's geologists through re-inspection of the core or core photographs.</li> <li>- Drill hole sample numbers and logging information are captured at source, using laptop computers with standardised database templates to ensure consistent data entry.</li> <li>- Data records (logs, sample dispatch, core photographs) are downloaded daily to the IGO's main Acquire database system, which is an industry recognised tool for management and storage of geoscientific data.</li> <li>- The databases are backed up off-site daily.</li> <li>- Upon receipt of the assay results, both the company's and the laboratory's CRMs are verified and checked to see that they are within acceptable standard deviations from the expected mean values.</li> <li>- The results of both the company's and the laboratory's CRMs are analysed by site geologists to identify possible biases and trends within the results.</li> <li>- Assay data is merged electronically from the laboratories into a central database, with information verified spatially in Surpac software.</li> <li>- IGO maintains standard work procedures for all data management steps.</li> <li>- An assay importing protocol has been set up to ensure quality samples are checked and accepted before data can be loaded into the main database.</li> <li>- There have been no adjustments or scaling of assay data other than setting below detection limit values to half detection for Mineral Resource estimation work.</li> <li>- No twin-holes have been drilled at Bentayga.</li> <li>- The Competent Person considers that acceptable levels of precision and accuracy have been established and cross-contamination has been minimised for the results received.</li> </ul>
<p><b>Location of data points</b></p>	<ul style="list-style-type: none"> <li>- The collar locations of underground holes have been surveyed by IGO's Mine Survey teams using total station survey equipment, to accuracy better than 1cm in three dimensions.</li> <li>- Initial collar directions are aligned using industry standard azimuth aligner tools.</li> <li>- Down hole paths have been surveyed using a north seeking Reflex DeviFlex RAPID electronic tool that has high azimuth and dip precision, with readings taken continuously downhole.</li> <li>- The grid system used is Jaguar Mine Grid (JMG), a local grid tied to MGA Zone51, GDA94 datum with 311,465.6mE and 6,796,594.3mN subtracted from MGA coordinates and 4,000m added to GDA elevation, followed by a +23.52° clockwise grid rotation.</li> <li>- All other mine surveys have high precision and are prepared by IGO's mine surveyors using total station equipment.</li> </ul>
<p><b>Data spacing and distribution</b></p>	<ul style="list-style-type: none"> <li>- Drilling was conducted from two separate caddy locations underground. Holes 18BUDD008 and 009 were drilled from the 3,955mElv, holes 18BUDD010 and 11 were drilled from the 3,715mElv and holes 18BUDD012 and 13 were drilled from the 4,035mElv.</li> <li>- Drilling is at an irregular spacing and intersects the zone of interest at a shallow angle.</li> <li>- Down-hole sample intervals are targeted to be 1m down hole but vary in length as a function of geological contact spacings.</li> </ul>
<p><b>Orientation of data in relation to geological structure</b></p>	<ul style="list-style-type: none"> <li>- Due to locations of available drill platforms, the drilling has intersected mineralisation at shallow angles and, as such, downhole widths are approximately three to four times the reported true widths.</li> <li>- There is a moderate risk of sampling bias due to collection of samples along rather than across mineralisation. However, no orientation related sampling bias has been confirmed to date.</li> </ul>
<p><b>Sample security</b></p>	<ul style="list-style-type: none"> <li>- Sample dispatches have been prepared by IGO's field personnel and tracked for delivery to the laboratory, with progress through the laboratory monitored.</li> <li>- Samples are sealed for transport and transport is direct.</li> <li>- Sample dispatch sheets have been verified against samples received at the laboratory and any issues, such as missing samples and so on, are resolved before sample preparation commences.</li> </ul>



**Section 1 Sampling Techniques and Data**

Criteria	Commentary
	<ul style="list-style-type: none"> <li>- The Competent Person considers that the likelihood of deliberate or accidental loss, mix-up or contamination of samples is very low.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>- IGO's geological staff have confirmed all significant intercepts in assay results against geological log expectations.</li> <li>- An independent audit of IGO's sampling was completed in 2015 on drilling and sampling at the Jaguar operations, with some procedural improvements recommended and implemented into current procedures.</li> </ul>

**Section 2: Reporting of Exploration Results**

Criteria	Explanation
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>- The tenements hosting the Bentley Mine (including Bentayga) are all 100% owned by Independence Group Jaguar Limited, which is an IGO 100%-owned subsidiary. The key relevant WA Mining Leases are as follows:                             <ul style="list-style-type: none"> <li>o Bentley deposit is within M37/1290, which has an expiry date of 2 Feb 2031.</li> <li>o Teutonic Bore deposit is within M37/44, which has an expiry date of 17 Dec 2026.</li> </ul> </li> <li>- All tenements are in good standing, with rents paid and expenditure commitments met.</li> <li>- Any ore mined from the tenements listed is subject to WA State royalties as prescribed in the WA Mining Act.</li> <li>- There are no other material issues relating to agreements, third parties, joint ventures, partnerships, other royalties, native title interests, historic sites, wilderness or national parks, or environmental settings.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>- In 1972, the GSWA mapped the area and identified volcanic rocks in the region.</li> <li>- In 1974, CEC sampled surface gossans in the area and found a Zn-Cu-Pb anomalism.</li> <li>- In 1976, Seltrust/CEC discovered the Teutonic Bore deposit through follow up drilling of the gossan.</li> <li>- From 1975 to 1978, Esso and Aquitaine explored the region and found some stringer type mineralisation in the Jaguar region.</li> <li>- In 1984, Chevron drilled an EM target and missed the Jaguar deposit by 50m.</li> <li>- In 1991, MIMEX defined a 700-m long anomaly in the Bentley area with follow up drilling intersecting stringer mineralisation 170 m below surface, but a deeper planned hole was cancelled.</li> <li>- In 1994, Pancontinental Mining rediscovered the anomaly and intersected 6m grading 2.4% Zn.</li> <li>- In 2001, Inmet-Pilbara identified a 1.8km long conductor and intersected 7.7m of Jaguar mineralisation in the second test hole at 485.5m.</li> <li>- In 2003, Inmet drilled an EM conductor at Bentley, but stopped in a graphic shale zone in the hangingwall shale.</li> <li>- In 2008, Bentley is discovered when a hole by JML intersected 10.5m of high grade at 370m depth.</li> <li>- In 2008, IGO acquired JML and since then has been the sole explorer in the Bentley area.</li> <li>- During 2010 to 2014, many in-mine discoveries have been made using systematic drilling and down hole geophysical targeting.</li> <li>- Extension lenses discovered including the Bubble lens at Jaguar and the Comet, Azure and Flying Spur lenses at Bentley.</li> <li>- IGO purchased the tenement hosting the Triumph Deposit in 2011 and intersected 8.4m of high grade mineralisation after re-entering and deepening a hole drilled by a prior explorer.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>- Jaguar Operation is centred on a cluster of Volcanic Hosted Massive Sulphides (VHMS) deposits that are located within the Gindalbie Terrane, which is part of the late Archaean Eastern Goldfields Superterrane of the Yilgarn Craton of Western Australia.</li> <li>- The area is dominated rocks of volcanic, intrusive, volcano-sedimentary origin and lesser sedimentary rocks.</li> <li>- The local sequences have undergone tilting to sub-vertical positions and regional metamorphism to a lower greenschist facies.</li> <li>- The principal deposits forming the known VHMS cluster are Bentley, Jaguar, Teutonic Bore and the recently defined Triumph deposit.</li> <li>- The Jaguar Operation deposits are interpreted to have been formed by sub-seafloor replacement, principally of shales and volcanoclastic sediments, with mineralisation located in a similar stratigraphic position near a transition from calc-alkaline to tholeiitic volcanism.</li> <li>- The Bentley VHMS mineralisation occurs at the contact of a thick basal rhyolitic sequence with an overlying andesite. The rhyolitic sequence is overlain by a sequence of carbonaceous mudstones and siltstones. The sequence is steeply dipping.</li> <li>- The Bentley massive sulphide mineralisation is banded and consists of pyrite, sphalerite, chalcopyrite, galena and minor pyrrhotite. The upper contact of the massive sulphide is typically sharp. The footwall to the massive sulphide zone consists typically of stringer and disseminated sulphide mineralisation comprising pyrite, chalcopyrite and minor sphalerite.</li> <li>- A dolerite sill has intruded the Bentley region, cutting the mineralisation into six main lenses (Arnage, Mulsanne, Brooklands, Comet, Flying Spur and Bentayga).</li> </ul>



**Section 2: Reporting of Exploration Results**

Criteria	Explanation
<b>Drill hole Information</b>	- A listing of the drill holes relating to the Public Report are included as an appendix to the main body of this report.
<b>Data aggregation methods</b>	- Drill hole intercepts included in this report are length density weighed intercepts. - No metal equivalent values are considered in this report – all key payable metals are reported individually for each intercept.
<b>Relationship between mineralisation widths and intercept lengths</b>	- The mineralisation widths and intercept lengths are a function of drill intercept angle from the current drill platforms. - The true width for each intercept length has been estimated and no statistical relationship is expected between width and length.
<b>Diagrams</b>	- A long section projection of the reported intercepts and past relevant intercepts is included in the main body of the Public Report.
<b>Balanced reporting</b>	- Both mineralised and non-mineralised intercepts are included in the long section projection to give a balanced view of the exploration results.
<b>Other substantive exploration data</b>	- There is no other substantive information currently available that is material to the understanding of the reported Exploration Results.
<b>Further work</b>	- A drill drive is under development to provide a more favourable location to test the extents of the Bentayga zone. The drive is ~ 60-70% complete at the date of the report. - This drive is targeted for completion in June 2018, and then ~ 8,000m of DD drilling is planned to define a (likely) Mineral Resource. The target completion date of the drilling is November 2018.