

**ASX Announcement**  
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## 2018 Total Gold Mineral Resource increases to 1.4Moz

<b>Total Mineral Resource (↑15%)</b>	<b>27.25Mt @ 1.6g/t Au (1,393,800oz)</b>
M & I (53%) (↑25%)	<b>14.32Mt @ 1.6g/t Au (739,200oz)</b>
Oxide (38%) (↑15%)	<b>11.02Mt @ 1.5g/t Au (529,900oz)</b>
Fresh (62%) (↑15%)	<b>16.23Mt @ 1.7g/t Au (863,900oz)</b>

- **Increase in overall total Mineral Resource of 183,800oz**
- **Open Pit Pre-Feasibility Study to evaluate 391,000oz more shallow ounces than in the previous 2017 Scoping Study**
- **2017/2018 drilling programs focused on improving existing resources and extending shallow open pit amendable extensions**
- **2018/2019 drilling programs will focus on growing the total gold Mineral Resource inventory**
- **All deposits remain open along strike and at depth**
- **High grade underground lodes at Withnell remain open**
- **Total Withnell Mineral Resource of 874,300oz reduces the total Indee Gold acquisition price to \$17/ounce.**
- **Potential to improve mine life, scale and project economics**

**Updated Gold Deposits include:**

<b>Toweranna</b>	254% increase in Total Mineral Resource to 143,900oz Increase in Indicated Resource from nil to 54,400oz
<b>Mt Berghaus</b>	29% increase in Total Mineral Resource to 181,000oz 333% increase in Indicated Resource to 53,300oz
<b>Mallina</b>	9% increase in Total Mineral Resource to 160,700oz 67% increase in Indicated Resource to 50,600oz
<b>Camel</b>	24% increase in M & I Resource to 50,300oz
<b>Amanda</b>	44% increase in Total Mineral Resource to 50,800oz Increase in Indicated Resource from nil to 24,800oz
<b>Roe</b>	31% increase in overall resource to 38,300oz 19% increase in M & I Resource to 17,800oz

## Pilbara Gold Project, Port Hedland in Western Australia

De Grey Mining Limited (ASX: DEG, “De Grey”, “Company”) is pleased to report an updated total Gold Mineral Resource to JORC Code (2012) for the overall Pilbara Gold Project. The Mineral Resource includes all drilling up to the end of 31 July 2018. The base metals Mineral Resources remain unchanged from the September 2017 Total Mineral Resource statement.

### Summary

In summary, the updated total Gold Mineral Resource has achieved the following:

#### Total Gold Mineral Resource 27.25Mt @ 1.6g/t for 1.39Moz

- 44% increase in “Indicated Mineral Resource” to 491,800oz.
- 25% increase in combined “Measured and Indicated Mineral Resource” to 739,200oz.
- 15% increase in Total Mineral Resource ounces.
- 14% increase in Total Mineral Resource tonnes.
- 391,000oz added in shallow Mineral Resource, generally less than 100m depth, since the 2017 Scoping Study was completed in August 2017.
- Increased geological confidence in proposed open pit optimisation shells.
- All deposits remain open along strike and at depth.

**Table 1 Total Gold Mineral Resources by Mining Centre, October 2018**

	Type	Measured			Indicated			Inferred			Total		
		Mt	Au g/t	Au Oz	Mt	Au g/t	Au Oz	Mt	Au g/t	Au Oz	Mt	Au g/t	Au Oz
Withnell Mining Centre	Oxide	0.92	1.8	52,300	2.70	1.4	120,400	1.25	1.4	56,700	4.86	1.5	229,400
	Fresh	0.48	1.5	22,500	4.64	1.7	250,000	6.19	1.9	372,500	11.30	1.8	644,900
	Total	1.39	1.7	74,800	7.33	1.6	370,400	7.43	1.8	429,200	16.16	1.7	874,300
Wingina Mining Centre	Oxide	2.68	1.8	152,100	1.83	1.5	86,900	1.64	1.2	61,400	6.16	1.5	300,400
	Fresh	0.40	1.6	20,500	0.68	1.6	34,500	3.85	1.3	163,900	4.93	1.4	219,000
	Total	3.08	1.7	172,700	2.51	1.5	121,500	5.49	1.3	225,300	11.09	1.5	519,400
TOTAL Pilbara Gold Project	Oxide	3.60	1.8	204,400	4.53	1.4	207,400	2.89	1.3	118,100	11.02	1.5	529,900
	Fresh	0.88	1.5	43,000	5.32	1.7	284,500	10.04	1.7	536,400	16.23	1.7	863,900
	Total	4.47	1.7	247,400	9.85	1.6	491,800	12.93	1.6	654,500	27.25	1.6	1,393,800

The focus of recent drilling has been on increasing the geological confidence and continuity of mineralisation within the 2017 Scoping Study pit optimisation shells and immediate along strike extensions.

The drilling programs have been highly successful on both fronts, with significant increases in the Indicated Mineral Resource category and/or resource extensions along strike and at depth.

#### Total Measured and Indicated Resources

- **25% increase to 14.32Mt @ 1.6g/t for 739,200oz**

The overall net 25% increase in Measured and Indicated Mineral Resource to 739,200oz is a highly positive outcome, as this will provide for the higher conversion of Mineral Resource to open pit Ore Reserves as part of the Open Pit Pre-Feasibility Study (“OP PFS”). Additionally, the increase points to a more significant mine life may be defined in the OP PFS, than previously reported in the 2017 Scoping Study. Most importantly, the majority of the new resources, including increases in the Measured and Indicated categories, fall within the top 100m from surface.

This shallow nature of the Mineral Resources is an underlying theme of all drilling across the project. All the deposits, discovered to date show gold mineralisation from surface and constrained by drilling, i.e. remain open along strike and at depth beyond the current limits of drilling. In all circumstances, except for

Withnell and Wingina, the deposits have rarely been targeted beyond 100m depth. Deeper drilling will form an integral component of future drilling campaigns as will further drilling along strike.

De Grey remains confident of continued resource growth from both the known deposits and the numerous untested regional targets.

Individual deposit increases include:

#### **Toweranna**

- 254% increase in overall Mineral Resource to 143,900oz
- 173% increase in oxide Mineral Resource to 34,100oz
- 288% increase in fresh Mineral Resource to 109,800oz
- Increase in Indicated Mineral Resource from nil to 54,400oz

#### **Mt Berghaus**

- 29% increase in overall Mineral Resource to 181,000oz
- 333% increase in Indicated Mineral Resource to 53,300oz

#### **Mallina**

- 9% increase in overall Mineral Resource to 160,700oz
- 67% increase in Indicated Mineral Resource to 50,600oz

#### **Camel**

- 24% increase in Measured & Indicated Mineral Resource to 50,300oz

#### **Amanda**

- 44% increase in overall Mineral Resource to 50,800oz
- Increase in Indicated Mineral Resource from nil to 24,800oz

#### **Roe**

- 31% increase in overall Mineral Resource to 38,300oz
- 19% increase in Measured and Indicated Mineral Resource to 17,800oz

## **Resources**

All Mineral Resource estimates have been completed by Payne Geological Services Pty Ltd, an external and independent mining consultancy. The new additional Mineral Resources updated in this report includes the results of recent RC and diamond drilling completed by De Grey Mining up to 31 July 2018 and complementing previous drilling completed by the vendors prior to 2017.

The majority of the recent 2017/2018 drilling programs by De Grey have focused on the Toweranna, Mt Berghaus, Mallina, Amanda, Camel and Roe deposits. The results have been positive and has resulted in updated Mineral Resource estimates being prepared for these deposits. Limited drilling has occurred at the other deposits and the resources remains materially unchanged from the September 2017 Total Mineral Resource statement. (ASX: Pilbara Gold Project increases gold resources by >20% to over 1.2Moz, 28 September 2017).

All Mineral Resources remain open in most directions and particularly at depth, except the Leach Pad resource which comprises the previously mined, crushed (<25mm) and stacked material remaining on the historic leach pad used during the earlier mining and processing period from 2006 to 2008.

**Table 2 Total Gold Mineral Resources by deposit, October 2018**

**Withnell - Mining Centre**

	Type	Measured			Indicated			Inferred			Total		
		Mt	Au g/t	Au Oz	Mt	Au g/t	Au Oz	Mt	Au g/t	Au Oz	Mt	Au g/t	Au Oz
Withnell	Oxide	0.57	1.3	23,300	0.22	1.6	11,400	0.15	1.1	5,400	0.94	1.3	40,000
	Fresh	0.45	1.4	20,900	2.57	1.8	145,200	2.41	2.2	171,200	5.43	1.9	337,300
	Total	1.02	1.3	44,100	2.79	1.7	156,600	2.56	2.1	176,600	6.37	1.8	377,300
Mallina	Oxide				0.45	1.3	19,100	0.55	1.2	21,300	1.00	1.3	40,500
	Fresh				0.81	1.2	31,400	2.01	1.4	88,800	2.82	1.3	120,200
	Total				1.26	1.2	50,600	2.57	1.3	110,100	3.83	1.3	160,700
Toweranna	Oxide				0.27	2.2	18,400	0.23	2.1	15,700	0.50	2.1	34,100
	Fresh				0.46	2.5	36,000	1.06	2.2	73,800	1.51	2.3	109,800
	Total				0.72	2.3	54,400	1.29	2.2	89,500	2.01	2.2	143,900
Camel	Oxide	0.18	2.8	16,400	0.32	2.6	26,800	0.04	1.1	1,500	0.54	2.6	44,700
	Fresh	0.01	2.1	600	0.14	1.4	6,500	0.14	1.8	8,600	0.29	1.7	15,700
	Total	0.19	2.8	17,000	0.46	2.2	33,300	0.19	1.7	10,100	0.84	2.2	60,400
Calvert	Oxide				0.43	1.3	17,900	0.05	0.8	1,400	0.48	1.3	19,300
	Fresh				0.56	1.3	23,800	0.23	1.2	9,300	0.79	1.3	33,100
	Total				0.99	1.3	41,700	0.28	1.2	10,700	1.27	1.3	52,400
Roe	Oxide	0.06	2.7	5,500	0.13	1.5	6,000	0.11	1.6	5,700	0.30	1.8	17,200
	Fresh	0.01	2.5	1,000	0.07	2.3	5,300	0.21	2.2	14,800	0.30	2.2	21,100
	Total	0.08	2.7	6,500	0.20	1.8	11,300	0.33	2.0	20,500	0.60	2.0	38,300
Dromedary	Oxide	0.10	2.2	7,200	0.03	1.6	1,400	0.04	1.6	2,200	0.17	1.9	10,800
	Fresh				0.03	1.6	1,700	0.08	1.8	4,700	0.12	1.7	6,400
	Total	0.10	2.2	7,200	0.06	1.6	3,200	0.12	1.7	6,900	0.29	1.9	17,200
Leach Pad	Oxide				0.86	0.7	19,300				0.86	0.7	19,300
	Fresh												
	Total				0.86	0.7	19,300				0.86	0.7	19,300
Hester	Oxide							0.07	1.6	3,500	0.07	1.6	3,500
	Fresh							0.03	1.2	1,300	0.03	1.2	1,300
	Total							0.10	1.5	4,800	0.10	1.5	4,800
Withnell Mining Centre	Oxide	0.92	1.8	52,300	2.70	1.4	120,400	1.25	1.4	56,700	4.86	1.5	229,400
	Fresh	0.48	1.5	22,500	4.64	1.7	250,000	6.19	1.9	372,500	11.30	1.8	644,900
	Total	1.39	1.7	74,800	7.33	1.6	370,400	7.43	1.8	429,200	16.16	1.7	874,300

**Wingina - Mining Centre**

	Type	Measured			Indicated			Inferred			Total		
		Mt	Au g/t	Au Oz	Mt	Au g/t	Au Oz	Mt	Au g/t	Au Oz	Mt	Au g/t	Au Oz
Wingina	Oxide	2.68	1.8	152,100	0.65	1.3	27,000	0.34	1.3	14,400	3.7	1.6	193,500
	Fresh	0.40	1.6	20,500	0.34	1.5	16,300	1.08	1.7	57,400	1.8	1.6	94,200
	Total	3.08	1.7	172,700	0.99	1.4	43,300	1.42	1.6	71,700	5.5	1.6	287,700
Mt Berghaus	Oxide				0.68	1.8	38,900	0.99	1.1	35,800	1.7	1.4	74,700
	Fresh				0.27	1.7	14,400	2.40	1.2	91,800	2.7	1.2	106,300
	Total				0.95	1.7	53,300	3.39	1.2	127,600	4.3	1.3	181,000
Amanda	Oxide				0.50	1.3	21,000	0.32	1.1	11,200	0.8	1.2	32,200
	Fresh				0.07	1.7	3,800	0.37	1.2	14,800	0.4	1.3	18,500
	Total				0.57	1.3	24,800	0.69	1.2	26,000	1.3	1.3	50,800
Wingina Mining Centre	Oxide	2.68	1.8	152,100	1.83	1.5	86,900	1.64	1.2	61,400	6.2	1.5	300,400
	Fresh	0.40	1.6	20,500	0.68	1.6	34,500	3.85	1.3	163,900	4.9	1.4	219,000
	Total	3.08	1.7	172,700	2.51	1.5	121,500	5.49	1.3	225,300	11.1	1.5	519,400

The 2017 Scoping Study indicated a requirement for additional metallurgical test work across the various deposits. As a result, significant additional metallurgical test work has been undertaken as part of the OP PFS. All oxide mineralisation is showing strong recoveries in the range of 90-96%. The gold mineralisation in the fresh material at the Withnell deposit, is generally associated with pyrite and quartz veining in shear zones. Substantial test work on the sulphide component is showing encouraging results, however remains ongoing and will be reported as part of the OP PFS. The Mallina, and Calvert deposits are considered to have similar sulphide characteristics as Withnell and further test work will be carried out in these deposits. The remaining deposits are all considered to be free milling in the fresh domains with relatively high recoveries (>90%) expected.

## On- going Exploration and Evaluation

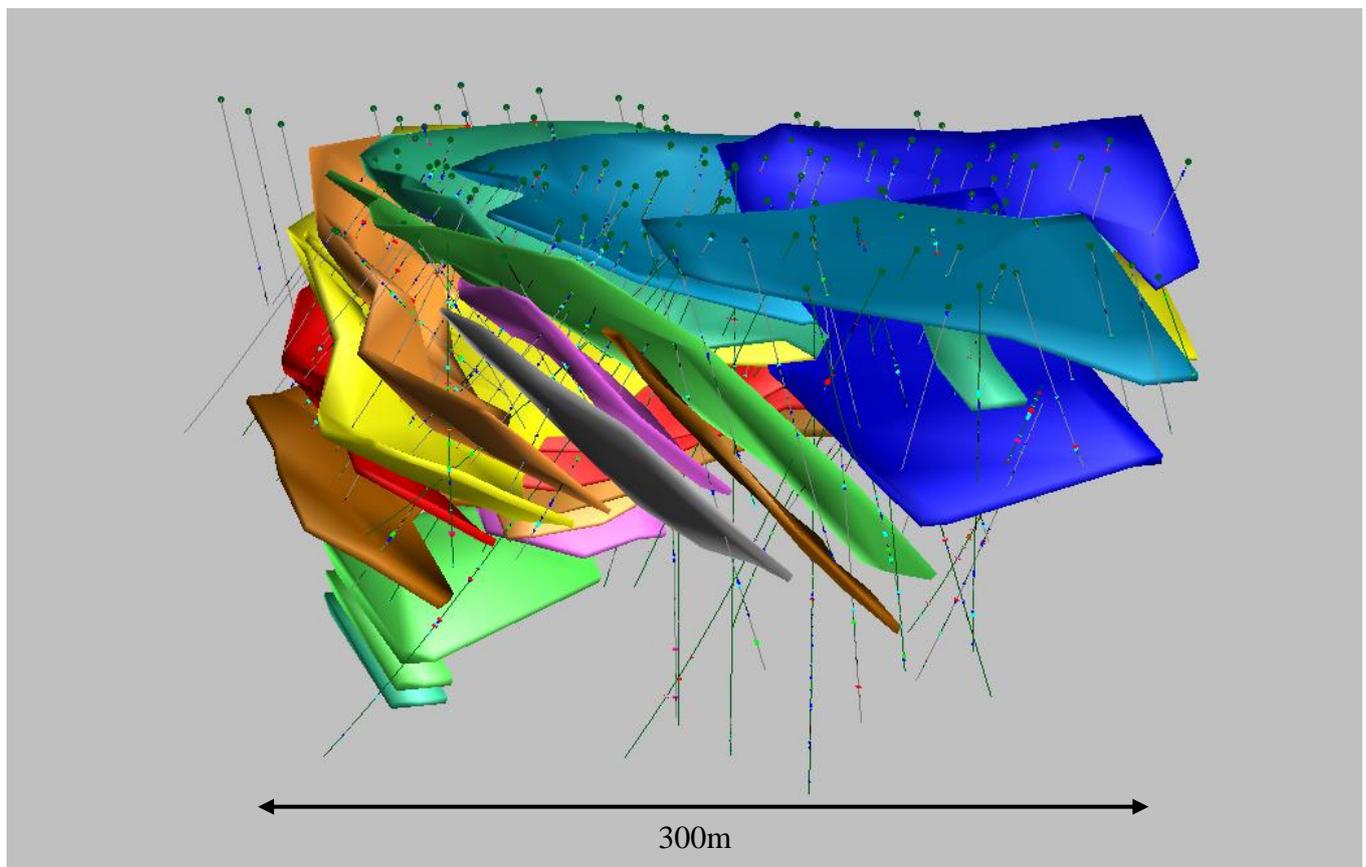
The recent drilling has focussed on improving and increasing potential near term open pit mining Mineral Resources. Future drilling will now target larger increases in Inferred Mineral Resources across the project, as the Company strongly believes the project has the potential to host multi-million ounce resources.

Drilling programs will now turn to “brownfields” wider spaced step out style drill testing of the 5 major gold systems and also new “greenfields” targets. The drilling will look to test the limits of the larger mineralised corridors within each overall known gold system, as well as targeting the discovery of new large gold systems along the prospective 200km of shear zones. The drilling programs will initially aim to define significant increases in Inferred Mineral Resources to demonstrate to potential to support a long term and potentially larger scale mining operation.

One immediate area of “brownfields” focus will be beneath the Withnell open pit, where recent diamond drilling has confirmed significant high grade gold lodes open along strike and at depth. This target occurs from approximately 200m depth to 600m depth and 800m along strike. To date drilling has focussed on confirming Lodes 1 & 2, however at least two other lodes are known to exist to similar depths and provide added potential.

Toweranna is another deposit that shows potential to significantly grow in Resources, mostly at depth. This deposit differs from the other shear hosted deposits as the gold mineralisation occurs as discrete high grade stacked, or sheeted veins hosted within a 250m diameter circular granite.

**Figure 1 Toweranna sheeted veins hosted in a 250m diameter circular granite**



## **Pilbara Gold Project Background**

The Pilbara Gold Project (PGP) located 60km south of Port Hedland, Western Australia (Figure 2), has undergone rapid resource growth over the last 18 months since the agreement to acquire the Indee Gold assets (refer to ASX: De Grey executes Indee Gold Share Sale Agreement, 12 February 2018).

De Grey has signed a binding agreement to acquire 100% of the Indee Gold Project with settlement due on 24 January 2019. A non-refundable deposit of \$1.5M has been paid and final settlement will include \$10.4M in cash and \$3.0M in DEG shares. (refer to ASX release dated 30 January 2018, "De grey executes Indee Gold Share Sale Agreement"). Under the agreement De Grey has the right to extend settlement to July 2019, subject to a further deductible deposit payment of \$700,000 by January 2019.

The PGP continues to have excellent potential to define significant additional resource ounces along its 200 km plus strike length of mineralised shear zones and at depth throughout the large >1500km<sup>2</sup> landholding. To date, approximately 10% of the shear zones have received detailed shallow RC and diamond drilling to a nominal depth of 100-150m, which has already defined Mineral Resources containing over 1.4Moz of gold.

The underground potential at the two largest gold deposits, namely Withnell and Wingina, is considered high in terms of additional tonnes, grade and resource ounces. The economic impact of a high-grade underground mine being added to the proposed open pit mining strategy is substantial in terms of potential to increased revenues, mine life and annualised production rates.

The PGP boasts a large pipeline of attractive exploration targets and the Company is actively ramping up exploration throughout the tenement package in a drive to discover new resources and expand the current 1.4Moz Mineral Resource. The pipeline of targets includes over 40 identified and as yet untested soil anomalies along the highly prospective regional scale shear zones and the newly discovered conglomerate gold style of mineralisation.

The Company previously completed a positive Scoping Study on the initial 1.0Moz Gold Mineral Resource, in August 2017. Since this time, the project's Gold Mineral Resource has increased an additional 400,000oz with the majority defined within 100m from surface. The shallow nature of these new resources in the top 100m from surface are considered potentially very important to economics and mine life of the Open Pit Pre-Feasibility Study, currently underway.

### **For further information:**

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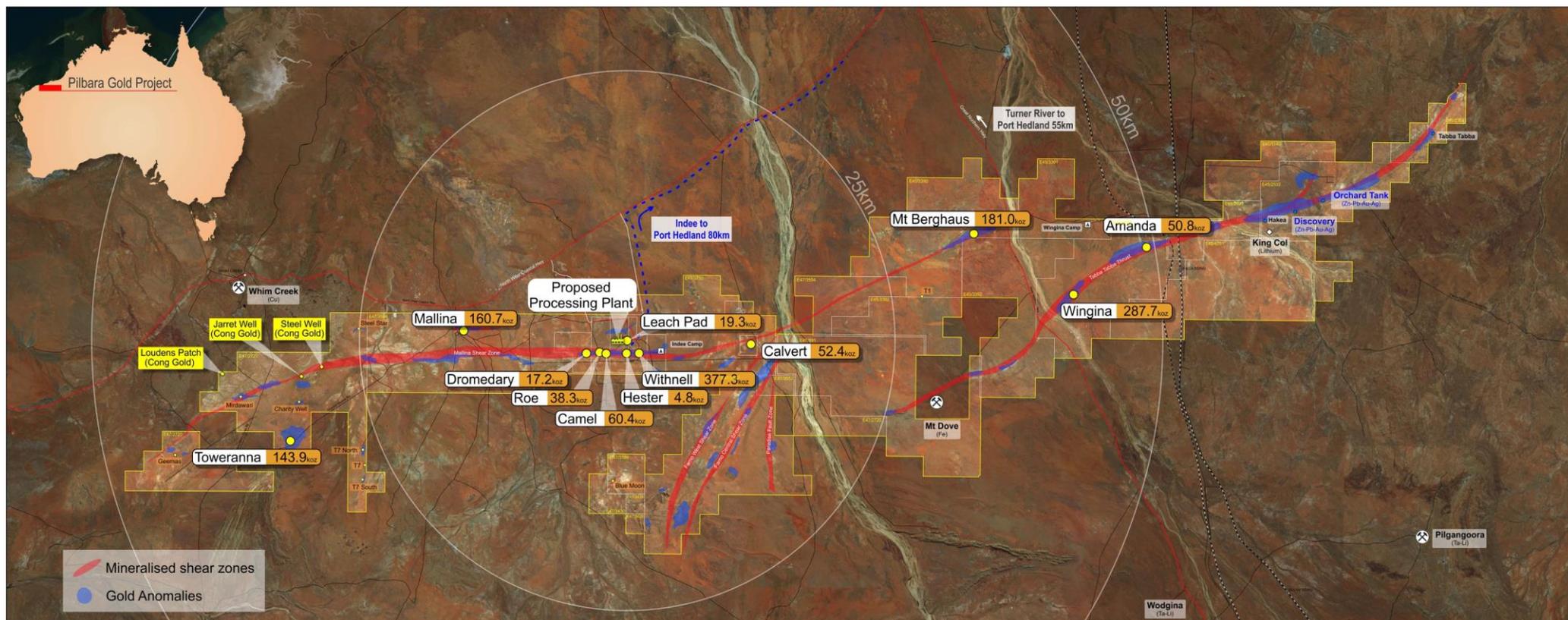
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**Figure 2 Pilbara Gold Project showing deposits locations.**



# Resource Summaries

## 1. Resource Summary – Mallina Gold Deposit

### Geology

At Mallina, gold mineralisation and associated alteration zones occur as linear multiple stacked lodes hosted within metasediments. The gold is intimately associated with quartz veining, carbonate and sulphide alteration, in places along the margins of 2m-30m wide porphyry intrusions within the east-west trending, 200m-wide structural corridor.

The weathering profile comprises a veneer of calcrete or transported sands overlying weathered bedrock to a depth of up to 50m.

### Drilling

A total of 147 reverse circulation (RC) holes, 3 diamond (DD) holes, and 7 RC holes with diamond tails define the Mineral Resource. The majority of holes in the resource were reverse circulation holes drilled by De Grey in 2017 and 2018. RAB and air core (AC) drilling is included in the database but these holes were excluded from the estimate. Drilling at the deposit has occurred over multiple campaigns from 1968 to 2018. The majority of the Mallina deposit has been drilled at 20m hole spacing on 25m or 50m spaced N-S cross sections. An area in the central part of the deposit has been drilled at 100m spaced sections.

De Grey hole collars were surveyed by contract surveyors using DGPS. Historic drill hole collars were surveyed in AMG coordinates using RTK GPS and have since been transformed to MGA grid. Down hole surveys were recorded for the majority of holes at 50m intervals using a single shot Eastman camera or a Reflex multi-shot tool.

### Sampling and Sub-Sampling Techniques

For De Grey RC drilling, a face-sampling hammer was used with samples collected at 1m intervals from mineralised zones with composite sampling of typically 4m in the unmineralised rocks. Samples were collected through a rig-mounted cone splitter. Samples were visually assessed for recovery and were kept dry throughout the mineralised zones.

The historical RC drilling was sampled at 1m intervals and split using a 87.5:12.5 conventional riffle splitter.

Diamond core was HQ3 size and sampled to geological intervals or on a 1 metre basis from half core cut with a diamond saw.

### Sample Analysis Method

For all De Grey drilling, whole samples were crushed then pulverised and analysed for gold at a contract laboratory using a fire assay technique. QAQC protocols were in place for the drilling programs and has confirmed the quality of the sampling and assaying.

The majority of historic RC and diamond drilling was assayed at contract laboratories using a fire assay method. QAQC data has not been reviewed, but the tenor and geometry of mineralisation is consistent with the recent De Grey drilling.

### Estimation Methodology

At the Mallina deposit, the resource was largely estimated using ordinary kriging (“OK”) grade interpolation of 1m composited data within wireframes prepared using nominal 0.4g/t Au envelopes. Interpolation parameters were based on geostatistical analysis of the main lode and considered the geometry of individual lodes. A first pass search range of 40m or 60m was used with a minimum of 10

samples and a maximum of 24 samples. The first pass estimate informed 39% of the blocks. The search range was increased to 80m for the second pass which filled the majority of the blocks. Minor lodes with few samples were estimated using inverse distance interpolation. A high grade cut of 12g/t was to the estimate.

The block dimensions used in the model were 10m EW by 5m NS by 5m vertical with sub-cells of 5m by 1.25m by 2.5m.

Limited bulk density data is available for the deposits from the drilling data, so values used at the main Indee deposits were applied. Bulk density values applied to the Mallina estimate was 2.3t/m<sup>3</sup> for oxide and 2.6t/m<sup>3</sup> for sulphide mineralisation.

### **Mineral Resource Classification**

The upper 50m of the main central lodes at Mallina have been defined by a drill spacing of 25m sections and 20m-25m hole spacing on each section. Portions of the peripheral lodes have also been drilled at 25m by 25m spacings. The areas showing good continuity of mineralisation along these lodes have been classified as Indicated Mineral Resource. The remaining lodes at Mallina have been defined largely by 50m spaced drilling or show poor continuity along strike and have been classified as Inferred Mineral Resource. The deposit was reported to a maximum depth of 100m vertical.

To reflect the potential for extraction by open pit methods, the Mineral Resource has only been reported to a depth of 100m vertical.

### **Cut-off Grades**

The shallow, sub-cropping nature of the deposits suggests good potential for open pit mining. As such, the Mineral Resource has been reported at a 0.5g/t Au lower cut-off to reflect assumed exploitation by open pit mining.

### **Metallurgy**

No metallurgical test work has been conducted on the mineralisation at Mallina. A diamond drill hole has been drilled for metallurgical purposes. Test work has not been completed to date, however it is assumed to have similar sulphide characteristics to the Withnell deposit in fresh material. The oxide metallurgy is assumed to be free milling like all the other tested deposit in the project area.

### **Modifying Factors**

No modifying factors were applied to the reported Mineral Resource estimate. Parameters reflecting mining dilution, ore loss and metallurgical recoveries will be considered during the planned mining evaluation of the project.

## **2. Resource Summary – Toweranna Gold Deposit**

### **Geology**

At Toweranna, gold mineralisation occurs in numerous variously oriented pyrite-rich quartz veins which occur within, and marginal to, a granite stock. Lodes typically strike north-south, with a moderate easterly dip. The mineralisation and host rocks are weathered to a depth of up to 50m.

### **Drilling**

A total of 87 RC holes and 11 diamond holes define the Toweranna Mineral Resource. The majority of holes were completed by De Grey in 2017 and 2018. Historic drilling at the deposit occurred over multiple campaigns from 1970 to 1995. A small number of historic holes were included in the estimate.

The Toweranna deposit has been drilled at 20m hole spacing on 20m spaced E-W cross sections along the western and southern margins of the granite. The northern and eastern portions have drill hole spacings of up to 50m.

De Grey hole collars were surveyed by contract surveyors using DGPS. Historic drill hole collars were surveyed in AMG coordinates using RTK GPS and have since been transformed to MGA grid. Down hole surveys were recorded for the majority of holes at 50m intervals using a single shot Eastman camera or a Reflex multi-shot tool.

### **Sampling and Sub-sampling Techniques**

For De Grey RC drilling, a face-sampling hammer was used with samples collected at 1m intervals from mineralised zones with composite sampling of typically 4m in the unmineralised rocks. Samples were collected through a rig-mounted cone splitter. Samples were visually assessed for recovery and were kept dry throughout the mineralised zones.

De Grey diamond core was HQ3 size and sampled to geological intervals or on a 1 metre basis from half core cut with a diamond saw.

Historical RC drill samples were collected at 1m intervals via a rig mounted multiple splitter. Samples were passed through a single stage Riffle splitter to form 2m composites for analysis. Historic diamond drill core was sampled at 1m intervals or smaller selected intervals based on observed mineralogy or quartz veining, with half core sent for analysis.

### **Sample Analysis Method**

For all De Grey drilling, whole samples were crushed then pulverised and analysed for gold at a contract laboratory using a fire assay technique. QAQC protocols were in place for the drilling programs and has confirmed the quality of the sampling and assaying.

For historic holes used in the estimate, samples were prepared and a 50g split was collected and fire assayed using aqua regia digest and reading by AAS method. QAQC protocols were not in place for the various drilling programs. A degree of confidence in the assay results can be gained from the repeatability of results between the different generations of drilling over the 25 year exploration history.

### **Estimation Methodology**

The Toweranna resource was estimated using inverse distance squared (“ID2”) grade interpolation of 1m composited data within wireframes prepared using nominal 0.4g/t Au envelopes. Interpolation parameters were based on the geometry of individual lodes. A first pass search range of 30m was used with a minimum of 6 samples and a maximum of 24 samples. The majority of the resource (75%) was estimated in the first pass. The search range was doubled for the second pass which filled a further 22% of blocks.

A high grade cut of between 10g/t and 20g/t was applied to the lodes.

The block dimensions used in the Toweranna model was 10m EW by 10m NS by 5m vertical with sub-cells of 0.625m by 0.625m by 0.625m.

Assumed bulk density values were applied to the Toweranna estimate. These were 2.0t/m<sup>3</sup> for oxide, 2.3t/m<sup>3</sup> for transitional and 2.8t/m<sup>3</sup> for sulphide mineralisation.

### **Mineral Resource Classification**

The southern and western contact areas at Toweranna have been defined by a drill spacing of 10m-20m hole spacings on 20m spaced sections. The areas showing good continuity of mineralisation along these lodes have been classified as Indicated Mineral Resource. The remaining lodes at Toweranna have been defined by drill spacings up to 50m or show poor continuity along strike and have been classified as Inferred Mineral Resource. The deposit was reported to a maximum depth of 180m vertical.

Further drilling is planned at Toweranna to both infill previously drilled areas to further upgrade the resource classification and to test for extensions along strike and down dip.

### **Cut-off Grades**

The shallow, sub-cropping nature of the deposits suggests good potential for open pit mining. As such, the Mineral Resource has been reported at a 0.5g/t Au lower cut-off to reflect assumed exploitation by open pit mining.

### **Metallurgy**

Metallurgical test work completed by a previous operator in 1995 has demonstrated that the mineralisation at Toweranna is free milling. Bottle roll tests showed gold recoveries averaging 96% from oxide and primary mineralisation. Further test work is planned to confirm the earlier metallurgical results.

### **Modifying Factors**

No modifying factors were applied to the reported Mineral Resource estimate. Parameters reflecting mining dilution, ore loss and metallurgical recoveries will be considered during the planned mining evaluation of the project.

### **3. Resource Summary – Mt Berghaus Gold Deposit**

#### **Geology**

The Mt Berghaus Central, North Lode and Berghaus West deposits are controlled by the Mallina Shear Zone and occurs within deformed metasediments of Archean age. Mineralisation is developed within a NE-SW striking, sub-vertical zone with resource grade mineralisation defined to date in three separate areas. The Mt Berghaus zone has a strike extent of 1.4km while the North Lode and West Berghaus zones have strike extents of 160m and 350m respectively. All zones have been reported above a depth of 130m.

Gold mineralisation is associated with zones of quartz veining developed as multiple steep lodes within metasediments. The deposit has a typical depth of oxidation of 40m to 60m and over 74,000oz of the Mineral Resource lies within oxidised and transitional material.

#### **Drilling**

A total of 225 RC holes and 11 diamond holes define the Mineral Resource at Mt Berghaus. The majority of RC holes and two diamond holes were completed by DEG from 2016 to 2018. Previous drilling was largely completed by DEG in 2004 and 2005. An additional nine diamond holes were drilled by a joint venture partner in 2014.

The Mt Berghaus Main and North Lode zones have now been drilled at 20m hole spacings on 20m spaced cross sections. The West Berghaus and North Lode mineralisation has been drilled with a small number of holes at 20m hole spacings on 80-100m spaced cross sections.

De Grey hole collars were surveyed by contract surveyors using DGPS. Historic drill hole collars were surveyed in AMG coordinates using RTK GPS and have since been transformed to MGA grid. Down hole surveys were recorded for the majority of holes at 50m intervals using a single shot Eastman camera or a Reflex multi-shot tool.

#### **Sampling and Sub-sampling Techniques**

For De Grey RC drilling, a 5½ inch face-sampling hammer was used with samples collected at 1m intervals from mineralised zones with composite sampling of typically 4m in the unmineralised rocks. Samples were collected through a rig-mounted cone splitter. Samples were visually assessed for recovery and were kept dry throughout the mineralised zones.

De Grey diamond core was NQ (51mm) or HQ (64mm) size and sampled to geological intervals or on a 1 metre basis from half core cut with a diamond saw.

Historical RC drill samples were collected at 1m intervals via a rig mounted multiple splitter. Historic diamond drill core was sampled at 1m intervals or smaller selected intervals based on observed mineralogy or quartz veining, with half core sent for analysis.

#### **Sample Analysis Method**

For all drilling, whole samples were crushed then pulverised and analysed for gold at a contract laboratory using a fire assay technique. QAQC protocols were in place for the drilling programs and has confirmed the quality of the sampling and assaying.

#### **Estimation Methodology**

The Mt Berghaus resource was estimated using ordinary kriging (“OK”) interpolation of the main mineralisation domains. Inverse distance squared (“ID2”) grade interpolation was used on minor zones. All zones used 1m composited data within wireframes prepared using nominal 0.4g/t Au envelopes. Interpolation parameters were based on the geometry of individual lodes. A first pass search range of 40m was used with a minimum of 10 samples and a maximum of 24 samples. The resource estimated in

the first pass was 55% of blocks. The search range was doubled for the second pass which filled a further 31% of blocks.

A high grade cut of between 15g/t and 25g/t was applied to the lodes.

The block dimensions used in the Mt Berghaus model was 20m EW by 4m NS by 10m vertical with sub-cells of 5.0m by 1.0m by 2.5m.

Assumed bulk density values were applied to the Mt Berghaus model. These were 2.2t/m<sup>3</sup> for oxide, 2.4t/m<sup>3</sup> for transitional and 2.6t/m<sup>3</sup> for sulphide mineralisation.

### **Mineral Resource Classification**

The Main and North Lode areas at Mt Berghaus have been defined by a drill spacing of 20m hole spacings on 20m spaced sections. The areas showing good continuity of mineralisation along these lodes have been classified as Indicated Mineral Resource. The remaining lodes have been defined by drill spacings up to 100m or show poor continuity along strike and have been classified as Inferred Mineral Resource. The deposit was reported to a maximum depth of 130m vertical (-50mRL).

Further drilling is planned at Mt Berghaus to both infill previously drilled areas to further upgrade the resource classification and to test for extensions along strike and down dip.

### **Cut-off Grades**

The shallow, sub-cropping nature of the deposits suggests good potential for open pit mining. As such, the Mineral Resource has been reported at a 0.5g/t Au lower cut-off to reflect assumed exploitation by open pit mining.

### **Metallurgy**

Metallurgical test work has been completed on a diamond drill hole for the Mt Berghaus deposit. The test work confirms the free milling nature of the mineralisation in both oxide and fresh material. A detailed report on the metallurgy is to be completed as part of the Open Pit Pre-Feasibility Study. Further metallurgical sampling of the various lodes and domains is planned as part of ongoing exploration programs.

### **Modifying Factors**

No modifying factors were applied to the reported Mineral Resource estimate. Parameters reflecting mining dilution, ore loss and metallurgical recoveries will be considered during the planned mining evaluation of the project.

## **4. Resource Summary – Amanda Gold Deposit**

### **Geology**

The Amanda deposit is shear-hosted and occurs within deformed cherts and metasediments of Archean age. The cherty horizons form a prominent ridge along much of the deposit extent. Mineralisation is developed within two NE-SW striking, sub-vertical zones which are interpreted to be fault offsets of the same mineralised shear. Resource grade mineralisation is defined over a combined strike length of 1,300m and to a vertical depth of 115m in the central portion of the deposit. The mineralisation remains open down dip over most of the deposit length.

Oxidation at the deposit is variable with the base of complete oxidation typically at 5m to 20m vertical depth. A transition zone of 20m to 80m occurs throughout the deposit.

### **Drilling**

A total of 67 RC holes define the Mineral Resource at the Amanda deposit of which 33 holes were completed by DEG in 2018. Previous drilling was largely completed by DEG between 2003 and 2005.

Two portions of the deposit have been drilled at 20m by 20m spacings. The peripheral zones have been drilled at spacings of 40m or greater.

De Grey hole collars were surveyed by contract surveyors using DGPS. Historic drill hole collars were surveyed in AMG coordinates using RTK GPS and have since been transformed to MGA grid. Down hole surveys were recorded for the majority of holes at 50m intervals using a single shot Eastman camera or a Reflex multi-shot tool.

### **Sampling and Sub-sampling Techniques**

For De Grey RC drilling, a 5½ inch face-sampling hammer was used with samples collected at 1m intervals from mineralised zones with composite sampling of typically 4m in the unmineralised rocks. Samples were collected through a rig-mounted cone splitter. Samples were visually assessed for recovery and were kept dry throughout the mineralised zones.

Historical RC drill samples were collected at 1m intervals via a rig mounted splitter.

### **Sample Analysis Method**

For all drilling, whole samples were crushed then pulverised and analysed for gold at a contract laboratory using a fire assay technique. QAQC protocols were in place for the drilling programs and has confirmed the quality of the sampling and assaying.

### **Estimation Methodology**

The deposit was estimated using ordinary kriging (“OK”) grade interpolation of 1m composited data within wireframes prepared using 0.25g/t Au envelopes for low grade mineralisation. Interpolation parameters were based on the geometry of individual lodes. A first pass search range of 40m was used with a minimum of 10 samples and a maximum of 24 samples. The resource estimated in the first pass was 36% of blocks. The search range was doubled for the second pass which filled a further 35% of blocks. A third pass with a search of 120m and a minimum of 4 samples filled a further 27% of blocks. The final 2% of blocks were filled with an isotropic search of 240m.

A high grade cut of 13g/t was used with only four values being cut.

The block dimensions used in the model were 10m EW by 5m NS by 5m vertical with sub-cells of 5m by 1.25m by 2.5m.

No bulk density data was available for the deposit. The geology and mineralisation is similar to the nearby Wingina deposit, so density values from Wingina were applied to Amanda. Values used in the resource estimate were 2.1t/m<sup>3</sup> for Oxide, 2.3t/m<sup>3</sup> for Transition and 2.7t/m<sup>3</sup> for Primary.

### **Mineral Resource Classification**

The portion of the resource defined by the 20m spaced drilling and displaying good continuity of mineralisation was classified as Indicated Mineral Resource. The portion of the resource defined by the 20-60m spaced drilling and displaying good continuity of structure and mineralisation was classified as Inferred Mineral Resource. The sparsely drilled peripheral portions of the lodes were estimated, but remain unclassified and unreported.

Further drilling is planned at Amanda to both infill previously drilled areas to further upgrade the resource classification and to test for extensions along strike.

### **Cut-off Grades**

The shallow, sub-cropping nature of the deposits suggests good potential for open pit mining. As such, the Mineral Resource has been reported at a 0.5g/t Au lower cut-off to reflect assumed exploitation by open pit mining.

### **Metallurgy**

No metallurgical test work has been completed for the Amanda deposit. Test work completed at the nearby Wingina deposit which has a similar mineralisation style has confirmed the mineralisation is free milling and amenable to cyanide leaching in both the oxide and fresh domains. Specific metallurgical drilling and test work of the various lodes and domains is planned during on-going exploration activities.

### **Modifying Factors**

No modifying factors were applied to the reported Mineral Resource estimate. Parameters reflecting mining dilution, ore loss and metallurgical recoveries will be considered during the planned mining evaluation of the project.

## **5. Resource Summary – Camel/Roe Gold Deposit**

### **Geology**

The Camel/Roe deposit is hosted within deformed sediments comprising siltstones, shales and greywackes. The majority of deposits are aligned approximately east-west within the broad corridor of the Mallina Shear Zone.

Gold mineralisation is associated with quartz veins, quartz-sulphide lodes, disseminated sulphides and associated carbonate alteration and hosted by altered and poly-deformed folded sediments. The mineralised zones are typically sub-vertical however folding and deformation of the sequence has resulted in some complexity to the interpreted geometry. Thickness of the mineralisation is typically 5m to 20m wide.

The weathering profile comprises a veneer of calcrete or transported sands overlying weathered bedrock. Oxidation of the bedrock ranges from 10m to 80m in depth and typically averages around 50m depth.

### **Drilling**

The Mineral Resource at the Camel/Roe deposits is defined by 233 RC holes, 11 air core holes, 9 diamond holes and 3 RC holes with diamond tails. Of these, 29 RC holes were completed by DEG in 2017 and 2018. Previous drilling was largely completed by Range River Gold between 2003 and 2008.

Two portions of the deposit have been drilled for grade control at 12.5m by 12.5m spacings. The majority of the deposits have been drilled at 25m spacings.

De Grey hole collars were surveyed by contract surveyors using DGPS. Historic drill hole collars were surveyed in AMG coordinates using RTK GPS and have since been transformed to MGA grid. Down hole surveys were recorded for the majority of holes at 50m intervals using a single shot Eastman camera or a Reflex multi-shot tool.

### **Sampling and Sub-sampling Techniques**

For De Grey RC drilling, a 5½ inch face-sampling hammer was used with samples collected at 1m intervals from mineralised zones with composite sampling of typically 4m in the unmineralised rocks. Samples were collected through a rig-mounted cone splitter. Samples were visually assessed for recovery and were kept dry throughout the mineralised zones.

Historical RC drill samples were collected at 1m intervals via a rig mounted splitter.

### **Sample Analysis Method**

For all drilling, whole samples were crushed then pulverised and analysed for gold at a contract laboratory using a fire assay technique. QAQC protocols were in place for the drilling programs and has confirmed the quality of the sampling and assaying.

### **Estimation Methodology**

The deposit was estimated using ordinary kriging (“OK”) grade interpolation of 1m composited data within wireframes prepared using 0.2g/t Au envelopes for low grade mineralisation. Interpolation parameters were based on the geometry of individual lodes. A first pass search range of 15m to 40m was used with a minimum of 10 samples and a maximum of 24 samples. The resource estimated in the first pass was 53% of blocks. The search range was doubled for the second pass which filled a further 42% of blocks. A third pass with a search of 120m and a minimum of 4 samples filled the remaining 4% of blocks.

A high grade cut of 30g/t was used for the main Camel lode and cuts between 10g/t and 15g/t applied to the minor lodes.

The block dimensions used in the model were 10m EW by 5m NS by 5m vertical with sub-cells of 5m by 1.25m by 2.5m.

Limited bulk density data is available for the deposits from the drilling data, so values used during the earlier production phase at the deposits were utilised. Bulk density values applied to the resource estimates were 2.3t/m<sup>3</sup> for oxide and 2.6t/m<sup>3</sup> for sulphide mineralisation.

### **Mineral Resource Classification**

For much of the deposit, the main lodes have been defined by drill holes spaced at 25m on 25m spaced sections. The well mineralised shallower portions of the deposits have been infilled to a 12.5m spacing. These areas of 12.5m spaced drilling show excellent continuity of mineralisation and have been classified as Measured Mineral Resource.

The portions of the deposits where drilling is on 25m sections and the mineralisation displays good continuity have been classified as Indicated Mineral Resource.

The remainder of the deposits defined by wider spaced drilling, or where continuity is less well defined at a closer spacing, have been classified as Inferred Mineral Resource. These areas include the majority of the minor lodes and the deeper portions of the main lodes at each deposit.

### **Cut-off Grades**

The shallow, sub-cropping nature of the deposits suggests good potential for open pit mining. As such, the Mineral Resource has been reported at a 0.5g/t Au lower cut-off to reflect assumed exploitation by open pit mining.

### **Metallurgy**

Metallurgical test work was carried out by Range River Gold Limited as part of the previous heap leach feasibility study. The detailed assessment was largely based on oxide mineralisation due to the heap leach processing route selected for the project. The test work and the gold production from a heap leach operation confirmed that the oxide mineralisation is amenable to cyanide leaching.

Recent metallurgical test work completed by De Grey on specifically drilled diamond holes also indicates that CIL processing is likely to achieve substantially higher recoveries than the heap leach operation. This new data combined with the historic data indicates that gold recoveries in the oxide zone are expected to be >90%.

Test work on sulphide mineralisation is more limited. Preliminary data indicates the sulphide component of mineralisation will most likely require a sulphide flotation process similar to the Withnell deposit. A full metallurgical assessment is currently underway of the various deposits as part of the Open Pit Pre-Feasibility Study and will be reported as part of this study.

### **Modifying Factors**

No modifying factors were applied to the reported Mineral Resource estimate. Parameters reflecting mining dilution, ore loss and metallurgical recoveries will be considered during the planned mining evaluation of the project.

## COMPETENT PERSONS STATEMENTS

*The information in this report that relates to Exploration Results is based on, and fairly represents information and supporting documentation prepared by Mr. Philip Tornatora, a Competent Person who is a member of The Australasian Institute of Mining and Metallurgy. Mr. Tornatora is a consultant to De Grey Mining Limited. Mr. Tornatora 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 of Exploration Results, Mineral Resource and Ore Reserves”. Mr. Tornatora consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.*

*The Information in this report that relates to Mineral Resources is based on information compiled by Mr Paul Payne, a Competent Person who is a Fellow of the Australasian Institute of Mining and Metallurgy. Mr Payne is a full-time employee of Payne Geological Services. Mr Payne 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 of Exploration Results, Mineral Resources and Ore Reserves”. Mr Payne consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

## JORC Code, 2012 Edition: Mallina Gold Deposit

### Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>All DEG drilling and sampling was undertaken in an industry standard manner. Information is lacking for early historical drilling.</li> <li>All DEG holes sampled on both a 1m and nominal 4m composite basis over the entire length of the hole. 4m composite samples were submitted for analysis for all intervals. Where assays over 0.2g/t Au were received for 4m composite sample results, 1m samples were then submitted for these zones.</li> <li>Both the 4m and 1m samples were taken from a cone splitter mounted on the drill rig cyclone. The cyclone was calibrated to provide a continuous sample volume accordingly to sample length.</li> <li>Each 4m and 1m sample ranges from a typical 2.5-3.5kg.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).</li> </ul>	<ul style="list-style-type: none"> <li>All DEG drill holes are Reverse Circulation (RC) with a 5 1/2-inch bit and face sampling hammer.</li> <li>Details are lacking for historical drilling of RAB, AC, RC, and diamond holes.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>All samples were visually assessed for recovery.</li> <li>Samples are considered representative with good recoveries. Only a small percentage of samples were considered low recovery primarily due to change of rods when a small amount of wet sample occurred.</li> <li>No sample bias is observed.</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of</li> </ul>	<ul style="list-style-type: none"> <li>For DEG drilling, company geologists logged each hole and supervised all sampling.</li> <li>The sample results are appropriate for a resource</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i></p> <ul style="list-style-type: none"> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<p><i>estimation. The 1m sample results are considered the preferred sample to use in the resource estimation for more accurate definition of lodes.</i></p> <ul style="list-style-type: none"> <li>•</li> <li>•</li> </ul>
<p><b>Sub-sampling techniques and sample preparation</b></p>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>For DEG drilling, the sampling of the RC sample was carried out by a cone splitter on the rig cyclone and drill cuttings were sampled on a 1m and 4m composite basis.</i></li> <li>• <i>Independent standard reference material was inserted approximately every 20 samples.</i></li> <li>• <i>Duplicate samples were taken approximately every 60 samples for 1m resplits.</i></li> <li>• <i>The samples are considered representative and appropriate for this type of drilling and for use in resource estimation.</i></li> <li>• <i>QAQC procedures have not been documented for historical drilling.</i></li> </ul>
<p><b>Quality of assay data and laboratory tests</b></p>	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <i>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i></li> <li>• <i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>The samples were submitted to a commercial independent laboratory in Perth, Australia.</i></li> <li>• <i>Each sample was dried, crushed and pulverised.</i></li> <li>• <i>Au was analysed by a 50gm charge fire assay fusion technique with AAS finish.</i></li> <li>• <i>The techniques are considered quantitative in nature.</i></li> <li>• <i>As discussed previously standards and duplicates samples were inserted by the Company and the laboratory also carries out internal standards in individual batches.</i></li> <li>• <i>The standards and duplicates were considered satisfactory.</i></li> </ul>
<p><b>Verification of sampling and assaying</b></p>	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Sample results have been entered and then checked by a second geologist.</i></li> <li>• <i>Results have been uploaded into the company database (managed by independent consultants), checked and verified.</i></li> <li>• <i>No adjustments have been made to the assay data.</i></li> <li>• <i>Results are reported on a length weighted basis.</i></li> <li>•</li> </ul>
<p><b>Location of data points</b></p>	<ul style="list-style-type: none"> <li>• <i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches,</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Drill hole collar locations are located by Differential GPS to an accuracy of +/-20cm.</i></li> <li>• <i>Locations are given in GDA94 zone 50 projection.</i></li> </ul>

Criteria	JORC Code explanation	Commentary
	<p>mine workings and other locations used in Mineral Resource estimation.</p> <ul style="list-style-type: none"> <li>• Specification of the grid system used.</li> <li>• Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>• Diagrams and location were previously reported.</li> <li>• Early historical drilling was completed on a local grid with subsequent programs completed in AMG. DEG has converted historical drill collars to GDA94.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>• Data spacing for reporting of Exploration Results.</li> <li>• Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>• Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>• The RC drilling is on a nominal 25m by 20m up to 100m by 40m grid.</li> <li>• All holes have been geologically logged and provide a strong basis for geological control and continuity of mineralisation.</li> <li>• Sample results and logging provide support for the results to be used in resource estimation.</li> <li>• Sample compositing has been applied to samples prior to grade interpolation.</li> <li>•</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>• If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>• The drilling is approximately perpendicular to the strike of mineralisation and therefore the sampling is considered representative of the mineralised zone.</li> <li>• In some cases, drilling is not at right angles to the dip of mineralised structures and as such true widths are less than down hole widths.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>• The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>• Samples were collected by company personnel and delivered direct to the laboratory via a transport contractor.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>• The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>• No audits have been completed. Review of QAQC data has been carried out by company geologists and the Competent Person.</li> </ul>

## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>• Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>• The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>• The drilling is on E47/3504 which is located approximately 80km south of Port Hedland. The tenement is held by Indee Gold Pty Ltd, which De Grey mining has an option to purchase 100%. De Grey has the right to acquire Indee Gold with settlement scheduled for 24 January 2019.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>• Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>• The Mallina prospect includes small scale historic mining and has had previous drilling undertaken over a period of many years. Most previous work was completed by Resolute and NWAM. Historic drill intercepts were previously reported in ASX release "Acquisition of Indee Gold provides scale and development momentum" dated 9 February 2017.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Geology</b>	<ul style="list-style-type: none"> <li>• Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>• The mineralisation targeted is hydrothermally emplaced and sediment/quartz hosted gold mineralisation within a shear zone and is similar in style to many other Western Australian gold deposits.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:               <ul style="list-style-type: none"> <li>• easting and northing of the drill hole collar</li> <li>• elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>• dip and azimuth of the hole</li> <li>• down hole length and interception depth</li> <li>• hole length.</li> </ul> </li> <li>• If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>• Drill hole location and directional information has been previously reported.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>• Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>• The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>• Exploration results are reported to a minimum cut-off grade of 0.3g/t gold with an internal dilution of 3m maximum. Intervals over 0.5g/t Au and 2gm metal content are reported.</li> <li>• Intercepts are length weighted averaged.</li> <li>• No maximum cuts have been made.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>• These relationships are particularly important in the reporting of Exploration Results.</li> <li>• If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>• If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>• The drill holes are interpreted to be perpendicular to the strike of mineralisation.</li> <li>• Drilling is not always perpendicular to the dip of mineralisation and true widths are less than down hole widths.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and</li> </ul>	<ul style="list-style-type: none"> <li>• Plans and a cross section have been provided in previous reports.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>appropriate sectional views.</i></p>	
<p><b>Balanced reporting</b></p>	<ul style="list-style-type: none"> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>All exploration results above 2gm metal for the recent RC program have been previously reported.</li> <li>The report is considered balanced and provided in context.</li> </ul>
<p><b>Other substantive exploration data</b></p>	<ul style="list-style-type: none"> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul style="list-style-type: none"> <li>Limited test work on metallurgical and geotechnical characteristics has been completed at this stage.</li> </ul>
<p><b>Further work</b></p>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>Metallurgical test work to determine possible recoveries will be carried out at an appropriate stage. Preliminary metallurgical test work has commenced.</li> <li>Further drilling will be assessed on completion of interpretation, geological wireframing and this resource estimate.</li> </ul>

### Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<ul style="list-style-type: none"> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>Data validation procedures used.</li> </ul>	<ul style="list-style-type: none"> <li>The geological and assay data was captured electronically to prevent transcription errors.</li> <li>Validation included comparison of gold results to logged geology to verify mineralised intervals.</li> </ul>
<b>Site visits</b>	<ul style="list-style-type: none"> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>A site visit was undertaken by Paul Payne in 2017 and May 2018 to examine geological features in outcrop, to locate drill collars from recent drilling and confirm that no obvious impediments to future exploration or development were present.</li> </ul>
<b>Geological interpretation</b>	<ul style="list-style-type: none"> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul style="list-style-type: none"> <li>The confidence in the geological interpretation for the main central lodes is considered to be high due to the drill spacing and consistent mineralisation.</li> <li>The interpretation was based largely on good quality RC drilling, with a number of diamond holes.</li> <li>The deposit consists of moderate to steeply dipping mineralised lodes which have been interpreted based largely on assay data from samples taken at regular intervals from angled drill holes.</li> <li>Geological logging has been used to define oxide and fresh domains.</li> <li>An alternative interpretation is unlikely other than in the extensions to the deposits.</li> </ul>
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</li> </ul>	<ul style="list-style-type: none"> <li>The mineralisation extends over 3km and comprises multiple mineralised lodes over its 360m width. The main lode has been defined to a depth of 150m.</li> </ul>
<b>Estimation and modelling techniques</b>	<ul style="list-style-type: none"> <li>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</li> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of by-products.</li> <li>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</li> </ul>	<ul style="list-style-type: none"> <li>Ordinary kriging (OK) was used to estimate average block grades within the main lodes. Inverse distance squared (ID2) was used to estimate the minor lodes.</li> <li>Surpac software was used for the estimation.</li> <li>A single block model was created to encompass the deposit.</li> <li>Samples were composited to 1m intervals. A high grade cut of 12g/t Au was applied to various lodes based on statistical observations.</li> <li>The parent block dimensions used for the model were 5m NS by 10m EW by 5m vertical with sub-cells of 1.25m by 5m by 2.5m. Cell size was based on KNA and is just less than 50% of the drill spacing.</li> <li>A previous estimate was reported by DEG in 2017.</li> <li>No assumptions have been made regarding recovery of by-products.</li> <li>No estimation of deleterious elements was carried out. Only Au was interpolated into the block</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li><i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i></li> <li><i>Any assumptions behind modelling of selective mining units.</i></li> <li><i>Any assumptions about correlation between variables.</i></li> <li><i>Description of how the geological interpretation was used to control the resource estimates.</i></li> <li><i>Discussion of basis for using or not using grade cutting or capping.</i></li> <li><i>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</i></li> </ul>	<p><i>models.</i></p> <ul style="list-style-type: none"> <li><i>An orientated ellipsoid search was used to select data and was based on drill hole spacing and geometry of mineralisation.</i></li> <li><i>Three interpolation passes were used.</i></li> <li><i>A first pass search of 40m or 60m was used, with a minimum of 10 samples and a maximum of 24 samples which resulted in 39% of the blocks being estimated. The search radius was increased to between 80m or 90m for the second pass, and the minimum number of samples reduced to 6 which resulted in a further 56% of blocks being estimated. The remaining 5% of blocks were filled by increasing the search to 120m or 150m and by reducing the minimum number of samples to 2. The exception to the above parameters was the minimum samples used for the minor lodes 12, 13, and 16 were set to 6, 4, and 2 for successive passes due to the limited drill intersections in those lodes.</i></li> <li><i>Selective mining units were not modelled in the Mineral Resource model. The block size used in the model was based on drill sample spacing and lode orientation.</i></li> <li><i>The deposit mineralisation was constrained by wireframes constructed using a 0.3g/t to 0.4g/t Au cut-off grade. The wireframes were applied as hard boundaries in the estimates.</i></li> <li><i>For validation, trend analysis was completed by comparing the interpolated blocks to the sample composite data within easting intervals for Lode 1 and Lode 2.</i></li> </ul>
<b>Moisture</b>	<ul style="list-style-type: none"> <li><i>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</i></li> </ul>	<ul style="list-style-type: none"> <li><i>Tonnages and grades were estimated on a dry in situ basis. No moisture values were reviewed.</i></li> </ul>
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li><i>The basis of the adopted cut-off grade(s) or quality parameters applied.</i></li> </ul>	<ul style="list-style-type: none"> <li><i>The Mineral Resources have been reported at 0.5g/t Au cut-off for material above -50mRL based on assumptions about economic cut-off grades for open pit mining to a depth of 100m.</i></li> </ul>
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li><i>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</i></li> </ul>	<ul style="list-style-type: none"> <li><i>Based on the previous production history at the Indee Project and the shallow, outcropping nature of the mineralisation, it is assumed that open pit mining is possible at the project if demonstrated to be economically viable.</i></li> <li><i>No mining parameters or modifying factors have been applied to the Mineral Resource.</i></li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Metallurgical factors or assumptions</b>	<ul style="list-style-type: none"> <li>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>No assumption regarding metallurgical methods have been made.</li> <li>Gold production from a heap leach operation at an adjacent deposit within the Indee Project area confirmed that the oxide mineralisation is amenable to cyanide leaching.</li> <li>Further work is planned to clarify processing options for the primary mineralisation.</li> </ul>
<b>Environmental factors or assumptions</b>	<ul style="list-style-type: none"> <li>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>The area is not known to be environmentally sensitive and there is no reason to think that proposals for development including the dumping of waste would not be approved.</li> <li>The Indee area is already highly disturbed with previous permitting granted for open pit mining and processing.</li> <li>The area surrounding the Mallina deposit is generally flat and uninhabited with no obvious impediments to the construction of dumps and other mine infrastructure.</li> </ul>
<b>Bulk density</b>	<ul style="list-style-type: none"> <li>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</li> <li>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul style="list-style-type: none"> <li>Bulk density values were based on test work from drill core at adjacent deposits within the Indee Project area.</li> <li>A bulk density of 2.3t/m<sup>3</sup> was applied to oxide material, and 2.6t/m<sup>3</sup> applied to primary sulphide material. No transitional material has been recorded at the deposit.</li> </ul>
<b>Classification</b>	<ul style="list-style-type: none"> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>Whether appropriate account has</li> </ul>	<ul style="list-style-type: none"> <li>Mineral Resources were classified in accordance with the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC, 2012). The Mineral Resources</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</i></p> <ul style="list-style-type: none"> <li>• <i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></li> </ul>	<p><i>were classified as Indicated and Inferred Mineral Resource on the basis of data quality, sample spacing, and lode continuity.</i></p> <ul style="list-style-type: none"> <li>• <i>The two main central lodes at Mallina have been defined by a drill spacing of 25 sections and 20m hole spacing on each section. The areas showing good continuity of mineralisation along these lodes have been classified as Indicated Mineral Resource. The remaining lodes at Mallina have been defined by 50m spaced drilling or single sections of drilling, or show poor continuity along strike, and have been classified as Inferred Mineral Resource.</i></li> <li>• <i>The estimate has been reviewed by the Competent Person and the results reflect the view of the Competent Person</i></li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of Mineral Resource estimates.</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Internal audits have been completed by PayneGeo which verified the technical inputs, methodology, parameters and results of the estimate.</i></li> <li>• <i>The review confirmed the suitability of the drilling data for use in Mineral Resource estimates.</i></li> </ul>
<b>Discussion of relative accuracy/ confidence</b>	<ul style="list-style-type: none"> <li>• <i>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</i></li> <li>• <i>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</i></li> <li>• <i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>The estimate utilises industry standard estimation practices and good quality drilling data. The deposit is considered to have been estimated with a high level of accuracy.</i></li> <li>• <i>The data quality throughout the project is reported to be good and the drill holes have detailed logs produced by qualified geologists.</i></li> <li>• <i>The Mineral Resource statement relates to global estimates of tonnes and grade.</i></li> <li>• <i>No previous large scale mining has been carried out at the Mallina deposit with minor historic workings being recorded.</i></li> </ul>

## JORC Code, 2012 Edition: Toweranna Deposit

### Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	• Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>All DEG drilling and sampling was undertaken in an industry standard manner. Information is lacking for early historical drilling.</li> <li>All DEG RC holes were sampled on both a 1m and nominal 4m composite basis over the entire length of the hole. 4m composite samples were submitted for analysis for all intervals. Where assays over 0.2g/t Au were received for 4m composite sample results, 1m samples were then submitted for these zones.</li> <li>Both the 4m and 1m samples were taken from a cone splitter mounted on the drill rig cyclone. The cyclone was calibrated to provide a continuous sample volume accordingly to sample length.</li> <li>Each 4m and 1m sample ranges from a typical 2.5-3.5kg.</li> <li>DEG diamond holes were NQ size and sampled to geological boundaries. Core was cut with a diamond saw to allow half core samples to be submitted for fire assay analysis.</li> <li>Historical sampling at Toweranna has included cut channels, soil samples, rock grab samples, RC, diamond, and RAB samples. Reports indicate that sampling was carried out by competent geologists following industry best practice.</li> <li>All historic diamond holes were selectively sampled at 1m or to mineralisation/geological contacts of less than 1m. Originally half core was sampled for analysis, but subsequent drilling submitted the entire core. Only a few holes were sampled over the entire length.</li> <li>Historic RC samples were generally submitted as 2m composites with anomalous intervals re-submitted as 1m samples.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).</li> </ul>	<ul style="list-style-type: none"> <li>The majority of the holes in the estimate were RC holes drilled by DEG with a 5.5 inch bit and face sampling hammer.</li> <li>DEG has also completed diamond holes drilled with NQ sized core.</li> <li>Historic drilling has been either diamond core, RC or RAB. RC drilling utilised 4.25 or 5.25 inch hammers.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>All samples were visually assessed for recovery. The competent nature of core resulted in good recoveries as noted in the hand written drill logs.</li> <li>Good recoveries for RC have been assumed based on the weights of the samples sent for analysis.</li> <li>Core recovery was measured and was consistently very good.</li> <li>No sample bias was observed.</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>Whether core and chip samples</li> </ul>	<ul style="list-style-type: none"> <li>For the DEG drilling, all holes were logged in detail</li> </ul>

Criteria	JORC Code explanation	• Commentary
	<p>have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</p> <ul style="list-style-type: none"> <li>• Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</li> <li>• The total length and percentage of the relevant intersections logged.</li> </ul>	<p>for the entire hole.</p> <ul style="list-style-type: none"> <li>• Historical drill logs have been preserved in digital copies. Detailed drill logs have been produced by qualified geologists to an appropriate level for use in a Mineral Resource estimation.</li> <li>• Logging is qualitative in nature.</li> <li>•</li> <li>•</li> </ul>
<p><b>Sub-sampling techniques and sample preparation</b></p>	<ul style="list-style-type: none"> <li>• If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>• If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> <li>• For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>• Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>• Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>• Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>• In DEG drilling, sampling of the RC sample was carried out by a cone splitter on the rig cyclone and drill cuttings were sampled on a 1m and 4m composite basis.</li> <li>• Independent standard reference material was inserted approximately every 20 samples.</li> <li>• Duplicate samples were taken approximately every 60 samples for 1m resplits.</li> <li>• Diamond core was cut in half, with one side sent for analysis.</li> <li>• The samples are considered representative and appropriate for this type of drilling and for use in a future resource estimate.</li> </ul>
<p><b>Quality of assay data and laboratory tests</b></p>	<ul style="list-style-type: none"> <li>• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>• For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>• Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>• The samples were submitted to a commercial independent laboratory in Perth, Australia.</li> <li>• Each sample was dried, crushed and pulverised.</li> <li>• Au was analysed by a 50gm charge fire assay fusion technique with AAS finish.</li> <li>• The techniques are considered quantitative in nature.</li> </ul> <p>Quality control protocols have confirmed the accuracy and precision of the assays.</p>
<p><b>Verification of sampling and assaying</b></p>	<ul style="list-style-type: none"> <li>• The verification of significant intersections by either independent or alternative company personnel.</li> <li>• The use of twinned holes.</li> <li>• Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> </ul>	<ul style="list-style-type: none"> <li>• Sample results have been entered and then checked by a second geologist.</li> <li>• Results have been uploaded into the company database (managed by independent consultants), checked and verified.</li> <li>• No adjustments have been made to the assay data.</li> <li>• Results are reported on a length weighted basis.</li> <li>• Infill drilling completed by DEG has largely</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>confirmed the results of the historic drilling.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>Drill hole collar locations are located by Differential GPS to an accuracy of +/-20cm.</li> <li>Locations are given in GDA94 zone 50 projection.</li> <li>Diagrams and location were previously reported.</li> <li>Early historical drilling was completed on a local grid with subsequent programs completed in AMG. DEG has converted historical drill collars to GDA94.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>Drilling is on a 20m by 20m grid spacing along the western and southern contacts with the granite. The remainder of the deposit is defined by drilling on a 30m to 50m spacing, with holes angled at various directions.</li> <li>All holes have been geologically logged and provide a strong basis for geological control</li> <li>All holes have been geologically logged and provide a strong basis for geological control and continuity of mineralisation.</li> <li>Sample results and logging provide support for the results to be used in resource estimation.</li> <li>Sample compositing has been applied to samples prior to grade interpolation.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>The sampling orientation (represented by angled drilling at various directions) does achieve unbiased sampling due to the nature of the veining within the granite host rock.</li> <li>The interpreted mineralised structures are shallow east and north dipping. Several holes drilled down dip have been excluded from resource estimations.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>DEG samples were collected by company personnel and delivered direct to the laboratory via a transport contractor.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>No audits have been completed. Review of QAQC data has been carried out by company geologists and the Competent Person.</li> </ul>

## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in</li> </ul>	<ul style="list-style-type: none"> <li>The drilling is on E47/2720 which is located approximately 80km south of Port Hedland. The tenement is held by Indee Gold Pty Ltd, which De Grey mining has an option to purchase 100%. De Grey has the right to acquire Indee Gold by July 2019.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Exploration done by other parties</b>	<p><i>the area.</i></p> <ul style="list-style-type: none"> <li><i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>Work has been completed by numerous owners at Toweranna since 1969. This has included surface mapping, soil and rock sampling, cutting of channels, diamond, RAB and RC drilling.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li><i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>At Toweranna a granite porphyry plug has intruded into the sedimentary sequence along the structurally weak axial plane of the Croydon anticline. The porphyry is a quartz and feldspar dacite porphyry and is some 200-250m diameter and extends to greater than 450m depth.</li> <li>Gold occurs in numerous quartz veins and veinlets that occur within the granite intrusive and extends some distance into the enclosing sediments. The veins vary in size reaching in some cases 6m in thickness. The veins are interpreted to dip a t20-40° to the east or north.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li><i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</i></li> <li><i>easting and northing of the drill hole collar</i></li> <li><i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li><i>dip and azimuth of the hole</i></li> <li><i>down hole length and interception depth</i></li> <li><i>hole length.</i></li> <li><i>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</i></li> </ul>	<ul style="list-style-type: none"> <li>Exploration results are not being reported.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li><i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</i></li> <li><i>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i></li> <li><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>Exploration results are not being reported.</li> </ul>

Criteria	JORC Code explanation	Commentary
<ul style="list-style-type: none"> <li>Relationship between mineralisation widths and intercept lengths</li> </ul>	<ul style="list-style-type: none"> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>Drilling has been oriented to intersect orthogonal to the granite/sediment contact and is generally perpendicular to the vein direction.</li> <li>The variable orientation of the quartz veins has resulted in some holes intersecting the veins at less than ideal angles, so a number of intersections will have a true thickness of less than the down hole thickness.</li> </ul>
<ul style="list-style-type: none"> <li>Diagrams</li> </ul>	<ul style="list-style-type: none"> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>Plans and sections have been included in previous releases of the exploration results.</li> </ul>
<ul style="list-style-type: none"> <li>Balanced reporting</li> </ul>	<ul style="list-style-type: none"> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>Exploration results are not being reported.</li> </ul>
<ul style="list-style-type: none"> <li>Other substantive exploration data</li> </ul>	<ul style="list-style-type: none"> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul style="list-style-type: none"> <li>No other exploration data has been identified.</li> </ul>
<ul style="list-style-type: none"> <li>Further work</li> </ul>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>Further drilling is currently being planned to further test the Toweranna deposit for shallow resource extensions and deeper targeting of the higher-grade gold zones.</li> <li>Mining and metallurgical studies are also planned to allow detailed evaluation of the deposit..</li> </ul>

## Section 3 Estimation and Reporting of Mineral Resources

• <b>Criteria</b>	• <b>JORC Code explanation</b>	• <b>Commentary</b>
<ul style="list-style-type: none"> <li>• <b>Database integrity</b></li> </ul>	<ul style="list-style-type: none"> <li>• Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>• Data validation procedures used.</li> </ul>	<ul style="list-style-type: none"> <li>• The geological and assay data was captured electronically to prevent transcription errors.</li> <li>• Validation included comparison of gold results to logged geology to verify mineralised intervals.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Site visits</b></li> </ul>	<ul style="list-style-type: none"> <li>• Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>• If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>• A site visit was undertaken by Paul Payne in May 2018 to examine geological features in outcrop, to locate drill collars from recent drilling and confirm that no obvious impediments to future exploration or development were present.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Geological interpretation</b></li> </ul>	<ul style="list-style-type: none"> <li>• Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>• Nature of the data used and of any assumptions made.</li> <li>• The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>• The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>•</li> <li>• The factors affecting continuity both of grade and geology.</li> </ul>	<ul style="list-style-type: none"> <li>• The deposit mineralisation occurs in numerous variously orientated quartz veins which occur within, and marginal to, a granite stock. The granite is a dominant geological feature, and the quartz veins a controlling feature for mineralisation. These veins have been domained as separate lodes to control Mineral Resource estimation.</li> <li>• The confidence in the geological interpretation for the main lithologies is very high.</li> <li>• Confidence in the quartz vein orientations is reasonable, supported by the geometry of historic workings and orientation data from drill core.</li> <li>• The interpretation was based largely on good quality RC drilling, with a number of diamond holes.</li> <li>• Alternate interpretations could be modelled with a possibility of contact related mineralisation in some areas.</li> <li>• Geological logging has been used to define oxide and fresh domains.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Dimensions</b></li> </ul>	<ul style="list-style-type: none"> <li>• The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</li> </ul>	<ul style="list-style-type: none"> <li>• The mineralisation extends over 320m NS and comprises multiple mineralised lodes over a EW width of 350m width. Mineralisation has been defined to a depth of 180m from 80mRL at surface to -100mRL.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Estimation and modelling techniques</b></li> </ul>	<ul style="list-style-type: none"> <li>• The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</li> <li>• The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>• The assumptions made regarding recovery of by-products.</li> <li>• Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</li> <li>• In the case of block model</li> </ul>	<ul style="list-style-type: none"> <li>• Inverse distance squared (ID2) was used to estimate grade into the lodes.</li> <li>• Surpac software was used for the estimation.</li> <li>• A single block model was created to encompass the deposit.</li> <li>• Samples were composited to 1m intervals. High grade cuts of 10g/t to 20g/t Au were applied based on statistical observations.</li> <li>• The parent block dimensions used for the model were 10m NS by 10m EW by 5m vertical with sub-cells of 0.625m by 0.625m by 0.625m. Cell size was based on just less than 50% of the drill spacing.</li> <li>• A previous estimate was prepared by DEG in 2017. Additional drilling since then has allowed the deposit to be extended and enlarged.</li> <li>• No assumptions have been made regarding recovery of by-products.</li> <li>• No estimation of deleterious elements was carried out. Only Au was interpolated into the block models.</li> <li>• An orientated ellipsoid search was used to select data and was based on drill hole spacing and geometry of mineralisation.</li> <li>• Three interpolation passes were used.</li> <li>• A first pass search of 30m was used, with a minimum of 6 samples and a maximum of 24 samples which resulted in 75% of the blocks being estimated. The search radius was</li> </ul>

• <b>Criteria</b>	• <b>JORC Code explanation</b>	• <b>Commentary</b>
	<p><i>interpolation, the block size in relation to the average sample spacing and the search employed.</i></p> <ul style="list-style-type: none"> <li>Any assumptions behind modelling of selective mining units.</li> <li>Any assumptions about correlation between variables.</li> <li>Description of how the geological interpretation was used to control the resource estimates.</li> <li>Discussion of basis for using or not using grade cutting or capping.</li> <li>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> </ul>	<p><i>doubled for the second pass, which resulted in a further 22% of blocks being estimated.</i></p> <ul style="list-style-type: none"> <li>Selective mining units were not modelled in the Mineral Resource model. The block size used in the model was based on drill sample spacing and lode orientation.</li> <li>The deposit mineralisation was constrained by wireframes constructed using a 0.4g/t Au cut-off grade. The wireframes were applied as hard boundaries in the estimates.</li> <li>For validation, trend analysis was completed for the main lodges by comparing the interpolated blocks to the sample composite data within northing intervals.</li> </ul>
<ul style="list-style-type: none"> <li><b>Moisture</b></li> </ul>	<ul style="list-style-type: none"> <li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> </ul>	<ul style="list-style-type: none"> <li>Tonnages and grades were estimated on a dry in situ basis. No moisture values were reviewed.</li> </ul>
<ul style="list-style-type: none"> <li><b>Cut-off parameters</b></li> </ul>	<ul style="list-style-type: none"> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>The Mineral Resources have been reported at 0.5g/t Au cut-off based on assumptions about economic cut-off grades for open pit mining.</li> </ul>
<ul style="list-style-type: none"> <li><b>Mining factors or assumptions</b></li> </ul>	<ul style="list-style-type: none"> <li>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>Based on the previous production history at the Indee Project and the shallow, outcropping nature of the mineralisation, it is assumed that open pit mining is possible at the project if demonstrated to be economically viable.</li> <li>No mining parameters or modifying factors have been applied to the Mineral Resource.</li> </ul>
<ul style="list-style-type: none"> <li><b>Metallurgical factors or assumptions</b></li> </ul>	<ul style="list-style-type: none"> <li>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>Preliminary metallurgical test work was undertaken by Tindals in 1995 to determine characteristics of the Toweranna mineralisation. Eight samples were collected for testing by Genalysis. Sampling was designed to test shallow oxidised versus primary sulphide and high grade versus low grade mineralisation from the western and southern zones of mineralisation. All recoveries were better than 79%, averaging 96%. There was no discernible difference between oxide, transitional, or sulphide zones. It was concluded that the gold is free milling and amenable to recovery by standard CIP techniques.</li> </ul>
<ul style="list-style-type: none"> <li><b>Environmental</b></li> </ul>	<ul style="list-style-type: none"> <li>Assumptions made regarding</li> </ul>	<ul style="list-style-type: none"> <li>The area is not known to be environmentally sensitive and</li> </ul>

• <b>Criteria</b>	• <b>JORC Code explanation</b>	• <b>Commentary</b>
<p><b>factors or assumptions</b></p>	<p>possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</p>	<p>there is no reason to think that proposals for development including the dumping of waste would not be approved.</p> <ul style="list-style-type: none"> <li>• The Indee area is already highly disturbed with previous permitting granted for open pit mining and processing.</li> <li>• The area surrounding the Toweranna deposit is generally flat and uninhabited with no obvious impediments to the construction of dumps and other mine infrastructure.</li> <li>• Numerous historical mine workings occur across the deposit area.</li> </ul>
<p><b>Bulk density</b></p>	<ul style="list-style-type: none"> <li>• Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</li> <li>• The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</li> <li>• Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul style="list-style-type: none"> <li>• Bulk density values were assumed based on values generally applied for fresh and oxidised granites and sediments.</li> <li>• A bulk density of 2.1t/m<sup>3</sup> was applied to oxide material, 2.3t/m<sup>3</sup> was applied to transitional material, and 2.8t/m<sup>3</sup> applied to primary sulphide material.</li> </ul>
<p><b>Classification</b></p>	<ul style="list-style-type: none"> <li>• The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>• Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> <li>• Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul style="list-style-type: none"> <li>• Mineral Resources were classified in accordance with the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC, 2012). The Mineral Resources were classified as Indicated and Inferred Mineral Resource on the basis of data quality, sample spacing, and lode continuity.</li> <li>• The southern and western contact areas at Toweranna have been defined by a drill spacing of 20m spaced holes on 20m spaced cross sections. The areas showing good continuity of mineralisation along these lodes have been classified as Indicated Mineral Resource. The remaining lodes have been defined by up to 50m hole spacings, or show poor continuity along strike, and have been classified as Inferred Mineral Resource.</li> <li>• The estimate has been reviewed by the Competent Person and the results reflect the view of the Competent Person.</li> </ul>
<p><b>Audits or reviews</b></p>	<ul style="list-style-type: none"> <li>• The results of any audits or reviews of Mineral Resource estimates.</li> </ul>	<ul style="list-style-type: none"> <li>• Internal audits have been completed by PayneGeo which verified the technical inputs, methodology, parameters and results of the estimate.</li> <li>• The review confirmed the suitability of the drilling data for use in Mineral Resource estimates.</li> </ul>
<p><b>Discussion of relative accuracy/confidence</b></p>	<ul style="list-style-type: none"> <li>• Where appropriate a statement of the relative accuracy and confidence level in the Mineral</li> </ul>	<ul style="list-style-type: none"> <li>• The estimate utilises industry standard estimation practices and good quality drilling data. The deposit is considered to have been estimated with a high level of accuracy.</li> </ul>

• <b>Criteria</b>	• <b>JORC Code explanation</b>	• <b>Commentary</b>
	<p><i>Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</i></p> <ul style="list-style-type: none"> <li>• <i>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</i></li> <li>• <i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>The data quality throughout the project is reported to be good and the drill holes have detailed logs produced by qualified geologists.</i></li> <li>• <i>The Mineral Resource statement relates to global estimates of tonnes and grade.</i></li> <li>• <i>No previous large scale mining has been carried out at the Toweranna deposit with minor historic workings being recorded.</i></li> </ul>

## JORC Code, 2012 Edition: Mt Berghaus Deposit

### Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>All drilling and sampling was undertaken in an industry standard manner</li> <li>All holes sampled on both a 1m and nominal 4m basis over the entire length of the hole. 1m samples were submitted for analysis for mineralised zones based on the geologist's interpretation, with 4m composite samples submitted for analysis for all other intervals. Where assays over 0.1g/t Au were received for 4m composite sample results, 1m samples were then submitted for these zones.</li> <li>Both the 4m and 1m samples were taken from a cone splitter mounted on the drill rig cyclone. The cyclone was calibrated to provide a continuous sample volume accordingly to sample length</li> <li>Each 4m and 1m sample ranges from a typical 2.5-3.5kg</li> <li>The independent laboratory then takes the sample and pulverises the entire sample for analysis as described below</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).</li> </ul>	<ul style="list-style-type: none"> <li>Majority of drill holes are Reverse Circulation (RC) with a 5 1/2-inch bit and face sampling hammer.</li> <li>Diamond holes comprise NQ (51mm diameter) or HQ (64mm diameter).</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>All samples were visually assessed for recovery.</li> <li>Samples are considered representative with good recoveries. Only a small percentage of samples were considered low recovery primarily due to change of rods when a small amount of wet sample occurred.</li> <li>Diamond drill hole core recovery was measured for each run and was typically 100%.</li> <li>No sample bias is observed</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>Company geologist logged each hole and supervised all sampling.</li> <li>The sample results are appropriate for a resource estimation. The 1m sample results are considered the preferred sample to use in the resource estimation for more accurate definition of lodes</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and</li> </ul>	<ul style="list-style-type: none"> <li>The sampling of the RC sample was carried out by a cone splitter on the rig cyclone and drill cuttings were sampled on a 1m and 4m composite basis.</li> <li>Duplicate samples were taken approximately every 95 samples and independent standards were inserted approximately every 30 samples</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p>appropriateness of the sample preparation technique.</p> <ul style="list-style-type: none"> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>Core samples were collected with a diamond drill rig drilling NQ or HQ diameter holes.</li> <li>After logging and photographing, drill core was sent to an independent metallurgical laboratory and whole core crushed and sampled on intervals selected by De Grey geologists</li> <li>The samples are considered representative and appropriate for this type of drilling and for use in a resource estimate</li> <li>The samples are considered representative and appropriate for this type of drilling and for use in a future resource estimate.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>The samples were submitted to a commercial independent laboratory in Perth, Australia.</li> <li>Each sample was dried, crushed and pulverised.</li> <li>Au was analysed by a 50gm charge Fire assay fusion technique with a AAS finish</li> <li>The techniques are considered quantitative in nature.</li> <li>Standards and duplicates samples were inserted by the Company and the laboratory also carries out internal standards in individual batches</li> <li>The standards and duplicates were considered satisfactory</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>Sample results have been entered and then checked by a second company geologist</li> <li>Results have been uploaded into the company database, checked and verified</li> <li>No adjustments have been made to the assay data.</li> <li>Results are reported on a length weighted basis</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>Drill hole collar locations are derived using differential GPS, and are accurate to +0.05m.</li> <li>Locations are given in Mount Berghaus local grid coordinates in addition to GDA94 zone 50 .</li> <li>Diagrams and location table are provided in previous releases of exploration results.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>The RC drilling is on a nominal 20m by 20m spacing in the well drilled portions of the deposit</li> <li>Peripheral areas are drilled at 20-40m hole spacings on 40-100m section spacings.</li> <li>All holes have been geologically logged and provide a strong basis for geological control and continuity of mineralisation</li> <li>Sample result and logging will provide strong support for the results to be used in a resource estimate</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this</li> </ul>	<ul style="list-style-type: none"> <li>The drilling is approximately perpendicular to the strike of mineralisation and therefore the sampling is considered representative of the mineralised zone.</li> <li>In some cases, drilling is not at right angles to the dip of mineralised structures and as such true widths are less than downhole widths. This will be allowed for in resource estimates when</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>should be assessed and reported if material.</i>	<i>geological interpretations are completed.</i>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Samples were collected by company personnel and delivered direct to the laboratory via a transport contractor</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>No audits have been completed. Review of QAQC data has been carried out by company geologists</li> </ul>

## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>The drilling is on E45/3390 which is located approximately 50km south of Port Hedland and is 100% owned De Grey Mining (or its 100% owned subsidiaries)</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>The Mount Berghaus deposit has had previous drilling undertaken over a period of 12 years. The large proportion of the holes were completed by De Grey Mining between 2003-2008. A joint venture party completed several diamond holes in 2014/15.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The mineralisation targeted is hydrothermally emplaced and sediment/quartz hosted gold mineralisation within a shear zone and is similar in style to many other Western Australian gold deposits.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>Drill hole location and directional information was provided in previous ASX releases of exploration results.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of</li> </ul>	<ul style="list-style-type: none"> <li>Exploration results are not being reported</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>metal equivalent values should be clearly stated.</i>	
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>• These relationships are particularly important in the reporting of Exploration Results.</li> <li>• If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>• If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>• The drill holes are interpreted to be approximately perpendicular to the strike of mineralisation.</li> <li>• Drilling is not always perpendicular to the dip of mineralisation and true widths are less than downhole widths.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>• Exploration results are not being reported</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>• Exploration results are not being reported</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>• Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul style="list-style-type: none"> <li>• The Mount Berghaus Gold deposit has an existing 2012 JORC gold resource (141,000oz) previously reported by De Grey.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>• The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>• Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>• Metallurgical test work to determine possible recoveries is planned</li> <li>• Follow up drilling to test extensions to known mineralisation and follow up geochemical anomalies will be completed in future.</li> </ul>

### JORC Table Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<ul style="list-style-type: none"> <li>• Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>• Data validation procedures used.</li> </ul>	<ul style="list-style-type: none"> <li>• Data was captured electronically to prevent transcription errors.</li> <li>• Validation included comparison of gold results to logged geology to verify mineralised intervals.</li> </ul>
<b>Site visits</b>	<ul style="list-style-type: none"> <li>• Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>• If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>• A site visit was undertaken by the Competent Person in May 2018 to examine geological features in outcrop, locate drill collars from current drilling and confirm that no obvious impediments to future project exploration or development were present.</li> </ul>
<b>Geological interpretation</b>	<ul style="list-style-type: none"> <li>• Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>• Nature of the data used and of any assumptions made.</li> <li>• The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> </ul>	<ul style="list-style-type: none"> <li>• The confidence in the geological interpretation is considered to be reasonable, with numerous discontinuous mineralised structures lying along a broad east-west trend.</li> <li>• The interpretation was based largely on good quality RC drilling, with a number of diamond holes</li> <li>• The deposit consists of steeply dipping</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<p>mineralised lodes which have been interpreted based largely on assay data from samples taken at regular intervals from angled drill holes.</p> <ul style="list-style-type: none"> <li>An alternative interpretation is possible but unlikely and this will be clarified with infill drilling in the future</li> <li>Mineralisation is conformable with observed zones of quartz veining and porphyry dykes.</li> </ul>
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</li> </ul>	<ul style="list-style-type: none"> <li>The Mt Berghaus Mineral Resource occurs in three zones. The Main Zone has a strike extent of 1.4km and a vertical extent of 160m.</li> <li>West Zone is 2.7km to the west and has a strike extent of 350m and a depth extent of 115m</li> <li>North Zone lies 300m north of Main zone and has a strike extent of 160m and a depth extent of 120m.</li> </ul>
<b>Estimation and modelling techniques</b>	<ul style="list-style-type: none"> <li>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</li> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of by-products.</li> <li>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</li> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>Any assumptions behind modelling of selective mining units.</li> <li>Any assumptions about correlation between variables.</li> <li>Description of how the geological interpretation was used to control the resource estimates.</li> <li>Discussion of basis for using or not using grade cutting or capping.</li> <li>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> </ul>	<ul style="list-style-type: none"> <li>Ordinary kriging was used to interpolate the main mineralisation domains. Inverse distance squared (ID2) was used to estimate minor domains.</li> <li>Surpac software was used for the estimation.</li> <li>Samples were composited to 1m intervals and a high grade cuts of between 15g/t and 20g/t were applied to the estimate.</li> <li>The parent block dimensions used were 4 NS by 20m EW by 10m vertical with sub-cells of 1.0m by 5m by 2.5m.</li> <li>Previous resource estimates have been completed. The new estimate is larger due to the definition of new mineralised zones and extension of the Main Zone</li> <li>No assumptions have been made regarding recovery of by-products.</li> <li>No estimation of deleterious elements was carried out. Only Au was interpolated into the block model.</li> <li>An orientated ellipsoid search was used to select data and was based on variography, drill hole spacing and geometry of mineralisation.</li> <li>An initial interpolation pass was used with a maximum range of 40m which filled 55% of blocks. A second pass radius of 80m filled 31% of the blocks and a third pass range of 150m filled the remaining blocks.</li> <li>A minimum of 10 and a maximum of 24 samples were used, reducing to a minimum of 4 samples for pass 2, and 2 samples for pass 3.</li> <li>Selective mining units were not modelled in the Mineral Resource model. The block size used in the model was based on drill sample spacing and lode orientation.</li> <li>Only Au assay data was available, therefore correlation analysis was not possible.</li> <li>The deposit mineralisation was constrained by wireframes constructed using a 0.4g/t Au cut-off grade in association with logged geology. The wireframes were applied as hard boundaries in the estimate.</li> <li>For validation, trend analysis was completed by comparing the interpolated blocks to the sample composite data within 40m easting intervals and by 10m vertical intervals.</li> </ul>
<b>Moisture</b>	<ul style="list-style-type: none"> <li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> </ul>	<ul style="list-style-type: none"> <li>Tonnages and grades were estimated on a dry in situ basis. No moisture values were reviewed.</li> </ul>
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>The Mineral Resource has been reported at a 0.5g/t Au cut-off based on assumptions about economic cut-off grades for open pit mining.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>Based on the shallow, outcropping nature of the mineralisation and the proximity to other substantial deposits, it is assumed that open pit mining is possible at the project if demonstrated to be economically viable.</li> <li>No mining parameters or modifying factors have been applied to the Mineral Resource.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<ul style="list-style-type: none"> <li>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>Metallurgical test-work has not been carried out.</li> <li>Much of the gold occurs as fine particles in quartz veins and it is assumed that there will not be any metallurgical problems.</li> </ul>
<b>Environmental factors or assumptions</b>	<ul style="list-style-type: none"> <li>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>The area is not known to be environmentally sensitive and there is no reason to think that proposals for development including the dumping of waste would not be approved.</li> <li>The area surrounding the Mt Berghaus deposit is generally flat and uninhabited with no obvious impediments to the construction of dumps and other mine infrastructure.</li> </ul>
<b>Bulk density</b>	<ul style="list-style-type: none"> <li>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</li> <li>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul style="list-style-type: none"> <li>Bulk density values were assumed.</li> <li>Bulk density values used in the resource were 2.2t/m<sup>3</sup>, 2.4t/m<sup>3</sup> and 2.6t/m<sup>3</sup> for oxide, transitional and fresh mineralisation respectively.</li> </ul>
<b>Classification</b>	<ul style="list-style-type: none"> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values,</li> </ul>	<ul style="list-style-type: none"> <li>Mineral Resources were classified in accordance with the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC, 2012). The Mineral Resource was classified as Indicated and Inferred Mineral Resource on the basis of data quality, sample spacing, and lode continuity.</li> <li>The portion of the Main Lode and North Lode</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p>quality, quantity and distribution of the data).</p> <ul style="list-style-type: none"> <li>• Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<p>areas of the resource defined by the 20m spaced drilling and displaying good continuity of mineralisation was classified as Indicated Mineral Resource.</p> <ul style="list-style-type: none"> <li>• The peripheral and sparsely drilled portions of the lodes were classified as Inferred Mineral Resource due to the sparse drilling or discontinuous nature of the mineralisation.</li> <li>• The definition of mineralised zones is based on assumptions of geological controls producing a grade based model of mineralised domains.</li> <li>• The Mineral Resource estimate appropriately reflects the view of the Competent Person.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>• The results of any audits or reviews of Mineral Resource estimates.</li> </ul>	<ul style="list-style-type: none"> <li>• A documented internal audit of the Mineral Resource estimate was completed by the consulting company responsible for the estimate.</li> </ul>
<b>Discussion of relative accuracy/confidence</b>	<ul style="list-style-type: none"> <li>• Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</li> <li>• The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</li> <li>• These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul style="list-style-type: none"> <li>• The Mt Berghaus Mineral Resource estimate is considered to be reported with a degree of confidence consistent with the classification. The data quality is good and the drill holes have detailed logs produced by qualified geologists.</li> <li>• The Mineral Resource statement relates to global estimates of tonnes and grade.</li> <li>• There has been no previous mining at the deposit so no production records exist.</li> </ul>

## JORC Code, 2012 Edition: Amanda Deposit

### Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>All DEG drilling and sampling was undertaken in an industry standard manner. Information is lacking for early historical drilling.</li> <li>All DEG holes sampled on both a 1m and nominal 4m composite basis over the entire length of the hole. 4m composite samples were submitted for analysis for all intervals. Where assays over 0.2g/t Au were received for 4m composite sample results, 1m samples were then submitted for these zones.</li> <li>Both the 4m and 1m samples were taken from a cone splitter mounted on the drill rig cyclone. The cyclone was calibrated to provide a continuous sample volume accordingly to sample length.</li> <li>Each 4m and 1m sample ranges from a typical 2.5-3.5kg.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).</li> </ul>	<ul style="list-style-type: none"> <li>All DEG drill holes are Reverse Circulation (RC) with a 5 1/2-inch bit and face sampling hammer.</li> <li>Details are lacking for historical drilling of RAB, AC, RC.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>All samples were visually assessed for recovery.</li> <li>Samples are considered representative with good recoveries.</li> <li>No sample bias is observed.</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>For DEG drilling, company geologists logged each hole and supervised all sampling.</li> <li>The sample results are appropriate for a resource estimation. The 1m sample results are considered the preferred sample to use in the resource estimation for more accurate definition of lodes.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample</li> </ul>	<ul style="list-style-type: none"> <li>The sampling of the RC holes was carried out by a cone splitter on the rig cyclone and drill cuttings were sampled on a 1m and 4m composite basis.</li> <li>Independent standard reference material was inserted approximately every 20 samples.</li> <li>Duplicate samples were taken approximately every 30 samples for 1m re-splits.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p>preparation technique.</p> <ul style="list-style-type: none"> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>The samples are considered representative and appropriate for this type of drilling and for use in a future resource estimate.</li> <li>QAQC procedures have not been documented for historical drilling.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>The samples were submitted to a commercial independent laboratory in Perth, Australia.</li> <li>Each sample was dried, crushed and pulverised.</li> <li>Au was analysed by a 50gm charge Fire assay fusion technique with an AAS finish.</li> <li>The techniques are considered quantitative in nature.</li> <li>As discussed previously standards and duplicates samples were inserted by the Company and the laboratory also carries out internal standards in individual batches.</li> <li>The standards and duplicates were considered satisfactory.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>Sample results have been entered and then checked by a second geologist.</li> <li>Results have been uploaded into the company database (managed by independent consultants), checked and verified.</li> <li>No adjustments have been made to the assay data.</li> <li>Results are reported on a length weighted basis.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>Drill hole collar locations are located by Differential GPS to an accuracy of +/-20cm.</li> <li>Locations are given in GDA94 zone 50 projection and local grid coordinates.</li> <li>Topographic control is by air photo photogrammetry to a resolution of either 0.10m or 0.15m, together with DGPS control.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>The RC drilling is on a nominal 20m by 20m spacing in portions of the deposit. Other areas up to 100m by 40m grid.</li> <li>All holes have been geologically logged and provide a strong basis for geological control and continuity of mineralisation.</li> <li>Data spacing and distribution is sufficient to provide strong support for the results to be used in a resource estimate.</li> <li>Sample compositing has been applied to samples prior to grade interpolation.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>The drilling is approximately perpendicular to the strike of mineralisation and therefore the sampling is considered representative of the mineralised zone.</li> <li>In some cases, drilling is not at right angles to the dip of mineralised structures and as such true widths are less than down hole widths.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Samples were collected by company personnel and delivered direct to the laboratory via a</li> </ul>

Criteria	JORC Code explanation	Commentary
		<i>transport contractor.</i>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>No audits have been completed. Review of QAQC data has been carried out by company geologists.</li> </ul>

## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>The drilling is on E45/2995 which is located approximately 60km south of Port Hedland. The tenement is 100% owned by De Grey mining (or its 100% owned subsidiaries).</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>The Amanda deposit has had some drilling undertaken previously. Most holes were completed by De Grey Mining between 2003-2007.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The mineralisation targeted is hydrothermally emplaced and sediment/chert hosted gold mineralisation within a shear zone and is similar in style to many other Western Australian gold deposits.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>Drill hole location and directional information has been previously provided.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>Exploration results are reported to a minimum cutoff grade of 0.3g/t gold with an internal dilution of 3m maximum. Intervals over 0.5g/t Au and 2gm metal content are reported.</li> <li>Intercepts are length weighted averaged.</li> <li>No maximum cuts have been made.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>• These relationships are particularly important in the reporting of Exploration Results.</li> <li>• If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>• If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>• The drill holes are interpreted to be perpendicular to the strike of mineralisation.</li> <li>• Drilling is not always perpendicular to the dip of mineralisation and true widths are less than down hole widths.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>• Plans and cross sections have been previously reported.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>• All exploration results above 2gm metal for the recent RC program have been previously reported.</li> <li>• The report is considered balanced and provided in context.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>• Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul style="list-style-type: none"> <li>• Limited test work on metallurgical and geotechnical characteristics has been completed at this stage.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>• The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>• Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>• Metallurgical test work to determine possible recoveries will be carried out at an appropriate stage.</li> <li>• Further drilling will be assessed on completion of interpretation, geological wireframing and this resource estimate.</li> </ul>

### Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<ul style="list-style-type: none"> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>Data validation procedures used.</li> </ul>	<ul style="list-style-type: none"> <li>The geological and assay data was captured electronically to prevent transcription errors.</li> <li>Validation included comparison of gold results to logged geology to verify mineralised intervals.</li> </ul>
<b>Site visits</b>	<ul style="list-style-type: none"> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>A site visit was undertaken by Paul Payne in 2016 and 2018 to examine geological features in outcrop, to locate drill collars from historic drilling and confirm that no obvious impediments to future exploration or development were present.</li> </ul>
<b>Geological interpretation</b>	<ul style="list-style-type: none"> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul style="list-style-type: none"> <li>The confidence in the geological interpretation for the main lodes is considered to be high due to the drill spacing, outcropping geology and consistent mineralisation.</li> <li>The interpretation was based largely on good quality RC drilling, and assessment of outcrop.</li> <li>The deposit consists of steeply dipping mineralised lodes which have been interpreted based largely on assay data from samples taken at regular intervals from angled drill holes.</li> <li>Geological logging has been used to define oxide, transitional and fresh domains.</li> <li>An alternative interpretation is unlikely other than in the extensions to the deposits.</li> </ul>
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</li> </ul>	<ul style="list-style-type: none"> <li>The mineralisation extends over 1.3km and comprises multiple mineralised lodes. The main lode has been defined to a depth of 120m.</li> </ul>
<b>Estimation and modelling techniques</b>	<ul style="list-style-type: none"> <li>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</li> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of by-products.</li> <li>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</li> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>Any assumptions behind modelling of selective mining units.</li> <li>Any assumptions about correlation between variables.</li> <li>Description of how the geological interpretation was used to control the resource estimates.</li> <li>Discussion of basis for using or not using grade cutting or capping.</li> <li>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> </ul>	<ul style="list-style-type: none"> <li>Ordinary kriging (OK) was used to estimate average block grades within the deposit.</li> <li>Surpac software was used for the estimation.</li> <li>A single block model was created to encompass the deposit.</li> <li>Samples were composited to 1m intervals. A high grade cut of 13g/t Au was applied to various lodes based on statistical observations.</li> <li>The parent block dimensions used for the model were 5m NS by 10m EW by 5m vertical with sub-cells of 1.25m by 5m by 2.5m. Cell size was based on KNA and is 50% of the drill spacing in the well drilled areas.</li> <li>A resource estimate was completed by previous workers.</li> <li>No assumptions have been made regarding recovery of by-products.</li> <li>No estimation of deleterious elements was carried out. Only Au was interpolated into the block models.</li> <li>An orientated ellipsoid search was used to select data and was based on drill hole spacing and geometry of mineralisation.</li> <li>Up to four interpolation passes were used.</li> <li>A first pass search of 40m was used, with a minimum of 10 samples and a maximum of 24 samples which resulted in 36% of the blocks being estimated. The search radius was increased to 80m for the second pass, which resulted in a further 35% of blocks being estimated. The search radius was increased to 120m for the third pass with a minimum of 4 samples. The remaining blocks were filled by increasing the search to 240m and by reducing the minimum number of samples to 2.</li> <li>Selective mining units were not modelled in the Mineral Resource model. The block size used in the model was based on KNA, drill sample</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>spacing and lode orientation.</p> <ul style="list-style-type: none"> <li>The deposit mineralisation was constrained by wireframes constructed using a 0.25g/t Au cut-off grade. The wireframes were applied as hard boundaries in the estimates.</li> <li>For validation, trend analysis was completed by comparing the interpolated blocks to the sample composite data within easting intervals.</li> </ul>
<b>Moisture</b>	<ul style="list-style-type: none"> <li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> </ul>	<ul style="list-style-type: none"> <li>Tonnages and grades were estimated on a dry in situ basis. No moisture values were reviewed.</li> </ul>
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>The Mineral Resources have been reported at 0.5g/t Au cut-off based on assumptions about economic cut-off grades for open pit mining to a depth of 110m.</li> </ul>
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>Based on the shallow, outcropping nature of the mineralisation, it is assumed that open pit mining is possible at the project if demonstrated to be economically viable.</li> <li>No mining parameters or modifying factors have been applied to the Mineral Resource.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<ul style="list-style-type: none"> <li>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>No assumption regarding metallurgical methods have been made.</li> <li>Test work completed at the nearby Wingina deposit has confirmed that the mineralisation is amenable to cyanide leaching.</li> <li>Test work is planned to clarify processing options for the primary mineralisation.</li> </ul>
<b>Environmental factors or assumptions</b>	<ul style="list-style-type: none"> <li>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>The area is not known to be environmentally sensitive and there is no reason to think that proposals for development including the dumping of waste would not be approved.</li> <li>The area surrounding the Amanda deposit is generally flat and uninhabited with no obvious impediments to the construction of dumps and other mine infrastructure.</li> </ul>
<b>Bulk density</b>	<ul style="list-style-type: none"> <li>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the</li> </ul>	<ul style="list-style-type: none"> <li>Bulk density values were assumed but based on test work from drill core at an adjacent deposit.</li> <li>A bulk density of 2.1t/m<sup>3</sup> was applied to oxide material, 2.3t/m<sup>3</sup> to transitional and 2.7t/m<sup>3</sup></li> </ul>

Criteria	JORC Code explanation	Commentary
	<p>measurements, the nature, size and representativeness of the samples.</p> <ul style="list-style-type: none"> <li>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<p>applied to primary sulphide material.</p>
<b>Classification</b>	<ul style="list-style-type: none"> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul style="list-style-type: none"> <li>Mineral Resources were classified in accordance with the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC, 2012). The Mineral Resources were classified as Indicated and Inferred Mineral Resource on the basis of data quality, sample spacing, and lode continuity.</li> <li>Two areas of the deposit have been defined by a drill spacing of 20m sections and 20m hole spacing on each section. The areas showing good continuity of mineralisation along these lodes have been classified as Indicated Mineral Resource.</li> <li>Portions of the deposit defined by drilling up to 60m spacings and consistent geometry have been classified as Inferred Mineral Resource.</li> <li>The deposits have been reviewed by the Competent Person. Where detailed data is available, the results reflect the view of the Competent Person.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of Mineral Resource estimates.</li> </ul>	<ul style="list-style-type: none"> <li>Internal audits have been completed by PayneGeo which verified the technical inputs, methodology, parameters and results of the estimate.</li> <li>The review confirmed the suitability of the drilling data for use in Mineral Resource estimates.</li> </ul>
<b>Discussion of relative accuracy/confidence</b>	<ul style="list-style-type: none"> <li>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</li> <li>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</li> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul style="list-style-type: none"> <li>The estimate utilises industry standard estimation practices and good quality drilling data. The deposit is considered to have been estimated with a high level of accuracy.</li> <li>The data quality throughout the project is reported to be good and the drill holes have detailed logs produced by qualified geologists.</li> <li>The Mineral Resource statement relates to global estimates of tonnes and grade.</li> <li>No previous mining has been carried out at the Amanda deposit.</li> </ul>

## JORC Code, 2012 Edition: Camel/Roe Deposit

### Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
<ul style="list-style-type: none"> <li>Sampling techniques</li> </ul>	<ul style="list-style-type: none"> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>The majority of resource drilling comprised RC drilling completed by RNG. A program of RC drilling was completed by DEG in 2018;</li> <li>All DEG drilling and sampling was undertaken in an industry standard manner. Information is lacking for early historical drilling.</li> <li>All DEG holes sampled on both a 1m and nominal 4m composite basis over the entire length of the hole. 4m composite samples were submitted for analysis for all intervals. Where assays over 0.2g/t Au were received for 4m composite sample results, 1m samples were then submitted for these zones.</li> <li>Both the 4m and 1m samples were taken from a cone splitter mounted on the drill rig cyclone.</li> <li>In RNG drilling, RC sampling in mineralised zones comprised 1m samples collected during drilling using a rig mounted or free standing riffle splitter;</li> <li>Diamond core was cut using a diamond saw and sampled either at 1m intervals or to geological boundaries;</li> <li>All drilling programs included comprehensive QAQC protocols including the use of certified standards, blanks and duplicate samples;</li> </ul>
<ul style="list-style-type: none"> <li>Drilling techniques</li> </ul>	<ul style="list-style-type: none"> <li>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).</li> </ul>	<ul style="list-style-type: none"> <li>The majority of drill holes are Reverse Circulation(RC) with face sampling hammer;</li> <li>A small number of air core and diamond core holes were also completed.</li> </ul>
<ul style="list-style-type: none"> <li>Drill sample recovery</li> </ul>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>In RC drilling holes were either weighed (RNG) or visually assessed (DEG) for recovery and recoveries were considered to be good;</li> <li>Drill core recovery was determined from physical core measurements</li> <li>There is no indication of a relationship between sample recovery and grade.</li> </ul>
<ul style="list-style-type: none"> <li>Logging</li> </ul>	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>Company geologists logged in detail each hole at the time of drilling;</li> <li>It is not known if core was geotechnically logged.</li> </ul>
<ul style="list-style-type: none"> <li>Sub-sampling techniques and sample preparation</li> </ul>	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample</li> </ul>	<ul style="list-style-type: none"> <li>The sampling of the RC holes was by a free standing or rig mounted riffle splitter and drill cuttings were sampled at 1m and 4m intervals;</li> <li>Sample preparation was by reputable contract laboratories and is satisfactory;</li> <li>Independent standard reference material was inserted approximately every 20 samples.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p>preparation technique.</p> <ul style="list-style-type: none"> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>Duplicate samples were taken approximately every 30 samples for 1m re-splits.</li> <li>The samples are considered representative and appropriate for this type of drilling and for use in a resource estimation.</li> <li></li> <li></li> <li></li> <li></li> </ul>
<ul style="list-style-type: none"> <li>Quality of assay data and laboratory tests</li> </ul>	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>The samples were submitted to commercial independent laboratories in Perth, Australia.</li> <li>Each sample was dried, crushed and pulverised.</li> <li>Au was analysed by a 50g Fire assay fusion technique with a AAS finish</li> <li>The techniques are considered quantitative in nature.</li> <li>Standards, blanks and duplicate samples were inserted by the Company;</li> <li>QAQC results and assaying procedures were considered satisfactory by independent consultants.</li> <li></li> </ul>
<ul style="list-style-type: none"> <li>Verification of sampling and assaying</li> </ul>	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>It is not known if verification of significant intersections was carried out, however multiple phases of infill drilling has been completed to improve confidence in the results;</li> <li>Sample results have been entered and then checked by a second geologist.</li> <li>Results have been uploaded into the company database (managed by independent consultants), checked and verified.</li> <li>No adjustments have been made to the assay data.</li> </ul>
<ul style="list-style-type: none"> <li>Location of data points</li> </ul>	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>Historic drill hole collars were surveyed in AMG coordinates using RTK GPS then transformed to MGA;</li> <li>DEG drill hole collars were surveyed in MGA coordinates using DGPS;</li> <li>Down hole surveys were recorded at 50m intervals using a single shot Eastman camera</li> <li>Detailed topographic surveys have been carried out to show the extent of open pit mining.</li> </ul>
<ul style="list-style-type: none"> <li>Data spacing and distribution</li> </ul>	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>The majority of resources were defined with 25m by 25m spaced RC holes;</li> <li>In partly mined deposits or deposits in the original mined schedule, grade control RC drilling has been completed using infill on either 12.5m by 12.5m or 12.5m by 6m spacing;</li> <li>The close spaced drilling has confirmed the continuity of mineralisation consistent with the resource classifications.</li> <li></li> </ul>
<ul style="list-style-type: none"> <li>Orientation of data in relation to geological structure</li> </ul>	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>The drilling is approximately perpendicular to the strike of mineralisation and therefore the sampling is considered representative of the mineralised zones.</li> <li>The deposits are aligned on an east-west shear zone, so drilling is oriented north-south;</li> <li></li> </ul>
<ul style="list-style-type: none"> <li>Sample</li> </ul>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample</li> </ul>	<ul style="list-style-type: none"> <li>Sample security procedures are not known.</li> </ul>

Criteria	JORC Code explanation	Commentary
security	security.	
<ul style="list-style-type: none"> <li>Audits or reviews</li> </ul>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>Reviews were carried out by reputable industry consultants as part of the resource estimation work and found practices and procedures to be satisfactory.</li> </ul>

## Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
<ul style="list-style-type: none"> <li>Mineral tenement and land tenure status</li> </ul>	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>The Indee Gold Project is located over a 60km strike length of the Mallina Shear Zone on granted mining and exploration licenses with associated miscellaneous licenses accessing the North West Coastal Highway.</li> <li>The Camel/Roe deposit is within the group of Mining Leases M47/473-477 and 480.</li> </ul>
<ul style="list-style-type: none"> <li>Exploration done by other parties</li> </ul>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>The majority of drilling was carried out by RNG between 2003 and 2008 and led to the definition of Ore Reserves and the development of a mining and processing operation;</li> <li>Reference is made to pre-RNG exploration, this work was undertaken by Resolute Mining and Bullion Resources. Records in the database show that drilling has taken place at the Project since 1997.</li> <li>After the cessation of mining, the project was bought by Indee Gold Pty Ltd and exploration was carried out throughout the project area;</li> <li>Exploration by Indee Gold has occurred throughout the project over a period from 2010 to 2016, including RC and diamond drilling used in the resource estimates.</li> </ul>
<ul style="list-style-type: none"> <li>Geology</li> </ul>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The Indee Project area is dominated by a sequence of Archaean turbidite sediments intruded by a series of granitic plugs dated between 2946 Ma and 2948 Ma. Gold and base metal mineralisation lies within the east-west trending Mallina Shear Zone that extends for over 70km with an overall width of 2km. The gold mineralisation is associated with quartz-sulphide lodes and carbonate alteration.</li> <li>The main Withnell to Dromedary mineralised trend (including Camel) lies within the Mallina Shear Zone with the mineralisation hosted by altered and poly-deformed folded sediments comprising sandstone, siltstone, and shales.</li> </ul>
<ul style="list-style-type: none"> <li>Drill hole Information</li> </ul>	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>Exploration results are not being reported.</li> </ul>
<ul style="list-style-type: none"> <li>Data</li> </ul>	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting</li> </ul>	<ul style="list-style-type: none"> <li>Exploration results are not being reported.</li> </ul>

Criteria	JORC Code explanation	Commentary
<ul style="list-style-type: none"> <li>aggregation methods</li> </ul>	<ul style="list-style-type: none"> <li>averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li></li> <li></li> <li></li> <li></li> <li></li> </ul>
<ul style="list-style-type: none"> <li>Relationship between mineralisation widths and intercept lengths</li> </ul>	<ul style="list-style-type: none"> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>The drill holes are interpreted to be approximately perpendicular to the strike of mineralisation.</li> <li>Drilling is not always perpendicular to the dip of mineralisation and in those cases true widths are less than downhole widths.</li> </ul>
<ul style="list-style-type: none"> <li>Diagrams</li> </ul>	<ul style="list-style-type: none"> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>Plans and sections are provided in previous ASX releases of exploration results.</li> </ul>
<ul style="list-style-type: none"> <li>Balanced reporting</li> </ul>	<ul style="list-style-type: none"> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>Exploration results are not being reported.</li> <li></li> <li></li> <li></li> <li></li> <li></li> </ul>
<ul style="list-style-type: none"> <li>Other substantive exploration data</li> </ul>	<ul style="list-style-type: none"> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul style="list-style-type: none"> <li>Nothing material to the Mineral Resource estimation</li> </ul>
<ul style="list-style-type: none"> <li>Further work</li> </ul>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>Metallurgical test work and mine planning work is planned to evaluate possible mining and processing options.</li> </ul>

### Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<ul style="list-style-type: none"> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>Data validation procedures used.</li> </ul>	<ul style="list-style-type: none"> <li>The geological and assay data was captured electronically to prevent transcription errors.</li> <li>Validation included comparison of gold results to logged geology to verify mineralised intervals.</li> </ul>
<b>Site visits</b>	<ul style="list-style-type: none"> <li>Comment on any site visits undertaken by the Competent Person and the outcome of</li> </ul>	<ul style="list-style-type: none"> <li>A site visit was undertaken by Paul Payne in 2017 and 2018 to examine geological features in</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p>those visits.</p> <ul style="list-style-type: none"> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<p>outcrop and in mine exposures, locate drill collars from historic drilling and confirm that no obvious impediments to future exploration or development were present.</p>
<b>Geological interpretation</b>	<ul style="list-style-type: none"> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul style="list-style-type: none"> <li>The confidence in the geological interpretation for the Camel deposit is considered to be high due to the close spaced drilling and consistent mineralisation.</li> <li>The interpretation was based largely on good quality RC drilling, with a number of diamond holes. Infill grade control drilling has been carried out in a portion of the deposit.</li> <li>The deposit consists of moderate to steeply dipping mineralised lodes which have been interpreted based largely on assay data from samples taken at regular intervals from angled drill holes.</li> <li>Geological logging has been used to define oxide and fresh domains.</li> <li>Due to the close spaced drilling, an alternative interpretation is unlikely other than in the extensions to the deposit.</li> </ul>
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</li> </ul>	<ul style="list-style-type: none"> <li>The Camel and Roe deposits each have a strike length of approximately 600m and vertical extents of 160m and 115m respectively. The combined lodes occur over a width of 80m.</li> </ul>
<b>Estimation and modelling techniques</b>	<ul style="list-style-type: none"> <li>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</li> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of by-products.</li> <li>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</li> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>Any assumptions behind modelling of selective mining units.</li> <li>Any assumptions about correlation between variables.</li> <li>Description of how the geological interpretation was used to control the resource estimates.</li> <li>Discussion of basis for using or not using grade cutting or capping.</li> <li>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> </ul>	<ul style="list-style-type: none"> <li>Ordinary kriging (OK) was used to estimate average block grades within the deposit.</li> <li>Surpac software was used for the estimation.</li> <li>Samples were composited to 1m intervals. Various high grade cuts were applied and varied from 10g/t to 30g/t.</li> <li>The parent block dimensions used for the adjacent models were 5m NS by 10m EW by 5m vertical with sub-cells of 1.25m by 2.5m by 1.25m. Cell size was based on 50% of the closest spaced drilling at each deposit.</li> <li>Previous resource estimates have been completed by other Industry mining consultants. The mineralisation domains used in this estimate were largely based on those previous interpretations.</li> <li>No assumptions have been made regarding recovery of by-products.</li> <li>No estimation of deleterious elements was carried out. Only Au was interpolated into the block models.</li> <li>An orientated ellipsoid search was used to select data and was based on drill hole spacing and geometry of mineralisation.</li> <li>Three interpolation passes were used at each model.</li> <li>At Camel/Roe a first pass search of 15m to 40m was used dependant on lode, with a minimum of 10 samples and a maximum of 24 samples which resulted in 53% of the blocks being estimated. The search radius was increased to between 30m and 80m for the second pass, and the minimum number of samples reduced to 6 which resulted in a further 42% of blocks being estimated. The remaining 1% of blocks were filled by increasing the search to between 60m and 160m and by reducing the minimum number of samples to 2.</li> <li>Selective mining units were not modelled in the Mineral Resource model. The block size used in the model was based on drill sample spacing and lode orientation.</li> <li>The deposit mineralisation was constrained by</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>wireframes constructed using a 0.25g/t Au-off grade. The wireframes were applied as hard boundaries in the estimates.</p> <ul style="list-style-type: none"> <li>For validation, trend analysis was completed by comparing the interpolated blocks to the sample composite data within easting intervals and by 10m vertical intervals.</li> </ul>
<b>Moisture</b>	<ul style="list-style-type: none"> <li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> </ul>	<ul style="list-style-type: none"> <li>Tonnages and grades were estimated on a dry in situ basis. No moisture values were reviewed.</li> </ul>
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>The Mineral Resource has been reported at 0.5g/t Au-off based on assumptions about economic cut-off grades for open pit mining.</li> </ul>
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>Based on the previous production history and the shallow, outcropping nature of the mineralisation, it is assumed that open pit mining is possible at the project if demonstrated to be economically viable.</li> <li>No mining parameters or modifying factors have been applied to the Mineral Resource.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<ul style="list-style-type: none"> <li>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>Metallurgical test-work largely based on oxide mineralisation was carried out as part of a previous CIL and heap leach feasibility study.</li> <li>Gold production from a heap leach operation confirmed that the oxide mineralisation is amenable to cyanide leaching.</li> <li>Test work on oxide mineralisation demonstrates a recovery of &gt;90% can be expected</li> <li>Test work on the fresh mineralisation indicates a sulphide flotation and CIL circuit maybe be required for processing.</li> <li>Further test work remains to be undertaken on this processing flowsheet to determine recovery in the sulphide zone and to clarify processing options for the sulphide mineralisation.</li> <li>Gravity test work indicates the deposits generally yield in the order of 5-20% of the gold through a gravity circuit. Further test work will be undertaken to determine if a gravity circuit provides an economic benefit in the final processing flowsheet.</li> </ul>
<b>Environmental factors or assumptions</b>	<ul style="list-style-type: none"> <li>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental</li> </ul>	<ul style="list-style-type: none"> <li>The area is not known to be environmentally sensitive and there is no reason to think that proposals for development including the dumping of waste would not be approved.</li> <li>The Indee area is already highly disturbed with previous permitting granted for open pit mining and processing.</li> <li>The area surrounding the Indee deposits is generally flat and uninhabited with no obvious impediments to the construction of dumps and other mine infrastructure.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>assumptions made.</i></p>	
<b>Bulk density</b>	<ul style="list-style-type: none"> <li>• <i>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</i></li> <li>• <i>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</i></li> <li>• <i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Bulk density values were based on test work from drill core.</i></li> <li>• <i>Bulk density values used in the resources were based on those applied by previous Industry consultants. At all the deposits a bulk density of 2.3t/m<sup>3</sup> was applied to oxide material, and 2.6t/m<sup>3</sup> applied to primary fresh material.</i></li> </ul>
<b>Classification</b>	<ul style="list-style-type: none"> <li>• <i>The basis for the classification of the Mineral Resources into varying confidence categories.</i></li> <li>• <i>Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</i></li> <li>• <i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Mineral Resources were classified in accordance with the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC, 2012). The Mineral Resources were classified as Measured, Indicated and Inferred Mineral Resource on the basis of data quality, sample spacing, and lode continuity.</i></li> <li>• <i>At Camel/Roe, the main lodes have been defined by drill holes at 12.5m spacing on 12.5m sections. These areas of dense drilling show excellent continuity of mineralisation and have been classified as Measured Mineral Resource. Adjacent to these zones drilling is on 25m sections and mineralisation displays good continuity. These areas have been classified as Indicated Mineral Resource. The remainder of the deposit defined by wider spaced drilling, or where continuity is less well defined at the closer spacing, have been classified as Inferred Mineral Resource.</i></li> <li>• <i>The results reflect the view of the Competent Person.</i></li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of Mineral Resource estimates.</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>A documented audit of drilling and sampling procedures was completed by a reputable consulting company in 2006.</i></li> <li>• <i>The review confirmed the suitability of the drilling data for use in Mineral Resource estimates.</i></li> </ul>
<b>Discussion of relative accuracy/confidence</b>	<ul style="list-style-type: none"> <li>• <i>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</i></li> <li>• <i>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</i></li> <li>• <i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>The estimate utilised good estimation practices, high quality drilling data and includes observations and data from mining operations. The deposit is considered to have been estimated with a high level of accuracy.</i></li> <li>• <i>The data quality throughout the project is reported to be good and the drill holes have detailed logs produced by qualified geologists.</i></li> <li>• <i>The Mineral Resource statement relates to global estimates of tonnes and grade.</i></li> <li>• <i>Previous mining has been carried out at the Camel deposit. No reconciliation data has been located and only global production records have been reviewed.</i></li> </ul>