

# **Quarterly Activities Report** For the Quarter ended 30 September 2017

#### 31 October 2017

## The Pilbara Gold Project – Conglomerate Gold

During the quarter the Company identified the potential for conglomerate hosted gold mineralization within the Pilbara Gold Project Tenement package as follows:

- 12km target zone of prospective Fortescue Group rocks, including the basal Mt Roe Basalt, identified within the Pilbara Gold Project.
- Outcropping conglomerate identified at base of Mt Roe Basalt at "Loudens Patch" within E47/2720.
- 91 flattened "watermelon seed" nuggets with pitted texture detected downslope from shallow dipping to flat lying conglomerate.
- Louden's Patch Target Size 1.5km strike x 400m width x 5-10m thick.

## The Pilbara Gold Project – Shear Hosted Gold

- RC drilling confirms the presence of a large gold system at Mallina with wide zones of shallow gold mineralisation intersected in a series of subparallel lodes within a 3.2km long structural corridor.
- Maiden resource announced at Mallina of 3.74Mts @ 1.2 g/t for 147,100 oz.
- Identification of Toweranna as a high-grade gold system. Initial resource of 0.43Mt @ 2.9g/t Au for 40,700oz
- Drilling at heap leach pad to prove resources of 0.86Mt @ 0.7g/t Au for 19,300oz
- > Overall resource upgrade to 23.88Mts @ 1.6 g/t for 1,210,000 oz
- Release of scoping study results which show positive economic outcomes for a 5 year project at 1 mtpa producing on average 57,700 oz pa.
- Additional regional land acquisition focusing on potential high grade gold increasing De Grey's tenement holdings from 1,200 Km2 to 1,800 km2.

## Lithium

Initial drilling at King Col pegmatite co-funded through EIS program. Initial discovery hole reported of 17m @ 2.5% LiO2 from 5 m.

#### Corporate

- Cash at the end of the quarter of \$2.5M
- Raised \$2.6M through the 1<sup>st</sup> of a two tranche placement at \$0.05 per share with a 1 for 2 attaching option
- Announced a subscription agreement with Kirkland Lake Gold for \$5M at a price of \$0.15 per share, with a 1 for 1 attaching option exercisable at \$0.20 by 30 November 2019.

Extension of option to acquire Indee Gold Pty Ltd by 12 months to 24 July 2019.

# ASX: DEG

#### **Issued shares**

273,804,067 as at 31 October 2017

## **Board of Directors**

Simon Lill Executive Chairman

Andy Beckwith Technical Director & Operations Manager

Steve Morris Non-executive Director

Brett Lambert Non-executive Director

#### Company Secretary/CFO

Craig Nelmes

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De Grey Mining Ltd (ASX: DEG, "De Grey", "Company") is pleased to report on activities completed during the September 2017 quarter.

Pilbara Gold Project (100% owned Turner River Project and Option to acquire 100% of neighbouring Indee Gold Project)

#### 1. Extension of Option Period to acquire Indee Gold Pty Ltd

During the quarter the Company countersigned a formal letter received from Northwest Non-Ferrous Australian Mining Limited ("NNAM") stating their intent to extend settlement of the acquisition of Indee Gold Pty Ltd ("Indee"), the owner of the tenements indicated in blue in the map below.

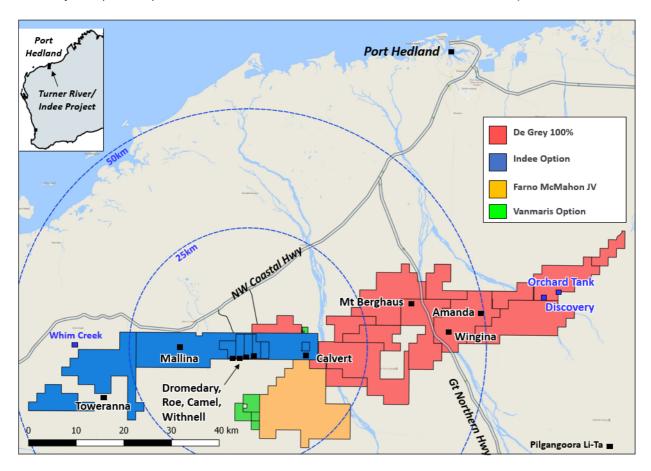


Diagram One – Map indicating tenements that are subject to the Indee Option

The extension is granted to De Grey under the following terms:

- 1. Settlement date is to be extended to 24 January 2018, subject to the following:
  - i. Payment of \$100,000 extension fee on signing the formal Share Sale Agreement by 24 January 2018; and
  - ii. \$2M non-refundable payment on or before 24 July 2018.
- 2. Settlement can be extended by a further 6 months to 24 July 2019 on De Grey's election and the payment of an additional \$100,000 before 24 January 2019.



3. NNAM agree to accept \$3M of De Grey shares as part of settlement proceeds. Shares to be issued based on a 10% discount to the Volume Weighted Average Price ("VWAP") on the 20 days preceding settlement.

All payments contemplated above will reduce the final settlement figure of 15M – for example, if the transaction settles on 24 July 2019, it would be settled at that point through the payment of \$9.7M in cash and the issue of \$3M in shares.

#### 2. Scoping Study Base-case Outcomes

- Managed by independent mining consultants Mintrex, with inputs from Cube Consulting and De Grey.
- > Based on only open pit mining within the existing 1Moz resource base
- Treatment via a new, purpose built 1Mtpa oxide CIL plant with a sulphide flotation and regrind circuit proposed to be added in year 3.
- > Base case of 1Mtpa of material to be mined from multiple pits within the project area.

#### Key Study (base-case) outputs include:

Total resource mined	4.8Mt at 2.1g/t Au for approximately 325,000oz Au				
Resource categories	38% Measured, 43% Indicated, 19% Inferred				
	65% oxide & 35% fresh (sulphide)				
Gold production	~290,000 oz. Au recovered over 5 years				
	Ranges from 65,000 oz in Year 1 to 51,000oz in Year 4				
C1 cash cost (LOM)*	< A\$1,000/oz (calculated by De Grey)				
AISC cost (LOM)**	< A\$1,200/oz (calculated by De Grey)				
Project Capex	<b>\$78M</b> for new oxide CIL plant and associated infrastructure <b>+</b> <b>\$18M</b> for sulphide circuit upgrade in year 3, funded from cashflow				

The Scoping Study indicated significant positive economic improvements if the Company could establish a 7-year mine life (additional resources) and improve the assessed metallurgical recoveries of fresh rock at the key Withnell deposit – currently assessed at 80%.

#### 3. Drilling Programs

The Company completed three drilling programs during the quarter, as follows:

#### Mallina

A 90 hole RC drilling program at Mallina for 7,588m. The drilling tested specific zones of mineralisation to a nominal 100m vertical depth on 50m spaced lines.



Significant Results included:

## Central Zone

15m @ 1.68g/t Au from 45m in MLRC110
13m @ 2.35g/t Au from 3m in MLRC112 (incl 6m @ 4.06g/t Au from 4m)
14m @ 1.56g/t Au from 112m in MLRC115
37m @ 1.73g/t Au from 33m in MLRC121 (incl 12m @ 3.54g/t Au from 52m)
19m @ 1.85g/t Au from 84m in MLRC123 (incl 7m @ 3.85g/t Au from 91m)
12m @ 1.86g/t Au from 2m in MLRC164
10m @ 6.09g/t Au from 107m in MLRC126
10m @ 2.79g/t Au from 20m in MLRC138 (incl 1m @ 18.95g/t Au from 25m)

Alfred Argyle

18m @ 1.10g/t Au from 21m in MLRC082
21m @ 2.44g/t Au from 80m in MLRC090 (incl 8m @ 5.30g/t Au from 88m)
12m @ 1.16g/t Au from 13m in MLRC091
4m @ 3.84g/t Au from 36 in MLRC091

<u>Mallina Lode 8</u>

7m @ 2.35g/t Au from 69m in MLRC149 6m @ 4.19g/t Au from 16m in MLRC151 8m @ 2.61g/t Au from 112m in MLRC151 Note: Down hole widths do not necessarily reflect true widths.

Drill results showed mineralisation from surface providing open pit potential, with multiple stacked lodes, most of which remain open. The mineralisation extends over a 3km strike length with strong potential for future resource extensions.

## Heap Leach Pad

Drilling of the stockpile was completed using a Push Probe rig, with excellent sample recovery. 49 vertical drill holes for a total of 366m were completed on a 20m x 40m pattern across the leach pad.

Significant Results included:

4.5m @ 20.2g/t Au from 0m in LPPP001 (incl 1.5m @ 59.8g/t Au from 1.5m)
7.5m @ 1.35g/t Au from 0m in LPPP029
7.5m @ 1.96g/t Au from 0m in LPPP035 (incl 3m @ 3.68g/t Au from 4.5m)
7.5m @ 3.12g/t Au from 0m in LPPP036
6m @ 1.66g/t Au from 1.5m in LPPP037



## **12m @ 1.27g/t Au** from 0m in LPPP041 **10.5m @ 1.3g/t Au** from 0m in LPPP042

#### Diamond Drilling for Resource Confirmation and Metallurgical Core

Diamond drilling at Withnell, Calvert and Mt Berghaus was undertaken to obtain fresh bedrock mineralisation for metallurgical testwork and to confirm continuity of grade within the resource models.

The drilling confirmed thick high grade gold mineralisation within proposed pit shells which correlated well with existing resource models. Best intercepts were as follows:

 Withnell
 12.0m @ 6.61g/t from 74m

 Calvert
 24.3m @ 2.52g/t from 34.7m

 including 8.0m @ 5.34g/t

 Mt Berghaus
 12.9m @ 3.13g/t from 50m

Diamond drilling was also completed at Dromedary, Roe and Camel but remains un-assayed.

#### 4. Resource Upgrade

As a result of drilling programs at Mallina and the heap leach pad, together with a review of the Toweranna resource, the Company increased the total resources at the Pilbara Gold Project by 20% (207,000 ounces) to 23.88Mt @ 1.6g/t Au for 1,210,000oz.

The new gold resources added were as follows:

Toweranna	0.43Mt @ 2.9g/t Au (40,700oz)
Mallina	3.74Mt @ 1.2g/t Au (147,100oz)
Leach Pad	0.86Mt @ 0.7g/t Au (19,300oz)

The total resource can currently be categorized as follows:

	Tuna		Measured		Indicated			Inferred			Total		
	Type	Mt	Au g/t	Au Oz	Mt	Au g/t	Au Oz	Mt	Au g/t	Au Oz	Mt	Au g/t	Au Oz
De Orres	Oxide	3.53	1.8	200,200	2.74	1.3	117,600	3.23	1.4	141,800	9.51	1.5	459,600
De Grey Total	Fresh	0.93	1.7	49,400	4.42	1.6	223,300	9.03	1.6	477,800	14.37	1.6	750,400
TOLAI	Total	4.46	1.7	249,600	7.15	1.5	340,900	12.26	1.6	619,600	23.88	1.6	1,210,000

Of significance is that within the resource there exists 11.61Mt@ 1.61g/t, or 590,500 oz in measured and indicated categories. Oxide resources are now at 9.51Mt @ 1.5g/t Au for 459,600oz, with fresh resources at 14.37Mt @ 1.6g/t Au for 750,400oz.

#### 5. Tenement Acquisition

As a result of the scoping study, the Company recognized the need to add to the resource base through organic growth and acquisition. In seeking acquisition targets, it also noted the potential for some higher grade ore in proximity to the proposed plant site.

#### Farno JV



On 21 August 2017 and subsequent to the period, the Company entered into a 4 year option to acquire 75% of the highly prospective gold tenement E47/2502, which lies immediately to the south of the Indee tenements and within 15 kms of the proposed plant site.

The key Terms of this option agreement are as follows:

#### > Option Period

- Cash payment of \$40,000 to the Vendor;
- Vendor grants DEG an exclusive right and period to assess the project until 30 September 2017;
- De Grey to complete a minimum expenditure of \$30,000 during the Option Period; and
- De grey may elect to enter into a Joint Venture Earn -in phase.

#### Joint Venture Earn-in

- Stage 1 DEG to spend a minimum of \$1.0M over a period of 3 years to earn 30%;
  - o 1<sup>st</sup> Year expenditure requirement of \$100,000
  - o 2<sup>nd</sup> Year expenditure requirement of \$300,000
  - $\circ$  3<sup>rd</sup> Year expenditure requirement of \$600,000
- Stage 2 DEG may spend a further \$1.0M expenditure over an additional one year period (4th Year) to earn an additional 45% equity in the tenement for a total equity of 75%; and
- Vendor retains all alluvial rights.

The tenement comprises 226km<sup>2</sup>, covering large NE trending regional scale structures and numerous partially drill tested gold anomalies, some with exceptional high-grade drill intercepts, as noted below:

*Fir Prospect* 1m @ 328.4g/t Au from 7m 1m @ 12.13g/t Au from 38m *Holly Prospect* 13m @ 15.15g/t Au from 47m 16m @ 1.40g/t Au (Inc. 1m @ 11.58g/t Au from 5m) 1m @ 13.76g/t Au from 47m *Aspen Prospect* 3m @ 3.88g/t Au from 35m

The tenement provides a large landholding with large (> 10 kms) untested gold anomalies and a mineralized system potentially larger than the Indee Gold Project. The drill testing defined in first pass RAB and aircore drilling has only tested shallow gold mineralization to less than 50m vertical depth.

#### Application (E47/3750)

An additional tenement application E47/3750 has also been made by De Grey to secure 100% of the exploration rights and cover an area of 25km<sup>2</sup>. This application is located along the northern boundary of the Indee Project area, and our due diligence suggests that it includes approximately 10km of prospective strike length where previous third party soil and rock chip sampling has highlighted anomalous gold zones. These zones correlate with aerial imagery and reports of surface gold nuggets, similar to many other areas within the Pilbara Gold Project.

#### Vanmaris Option

An Option Agreement was signed with the owner of tenements E47/3399, E47/3428-3430, P47/1732-1733 whereby De Grey may acquire an 80% interest in the listed tenements, located within 20km the proposed processing plant, within a 4 year option period.



The tenements are considered prospective for structurally controlled gold in the older basement rocks similar to mineralisation defined with the greater Pilbara Gold Project.

The terms of the deal include payment to Vanmaris of \$30,000 cash and the issue of 150,000 De Grey shares,

De Grey are to maintain the tenements in good standing during the option period and within the 4 year period may elect to acquire the 80% interest on payment of \$500,000 cash. The vendor retains the alluvial and prospecting rights to the top 3metres depth.

#### Blue Moon Tenement - P47/1773

An Option Agreement was signed with the owner of tenement P47/1773 whereby De Grey may acquire a 70% interest in the listed tenements, located within 20km the proposed processing plant, within a 2 year option period.

Blue Moon is considered highly prospective for structurally controlled high-grade gold discoveries in the basement rocks.

The key terms of the Agreement are that De Grey is to pay \$125,000 cash and issue 600,000 De Grey shares on signing. It is then to fund exploration at De Grey's discretion during the 2 year Option Period after which it can elect to acquire 70% of the mineral rights of the tenement below 6m depth on payment of \$500,000 cash. The Vendor retains all the mineral rights to a depth of 6 metres.

As a result of the above acquisitions, De Grey now controls the following tenure as per the map below.

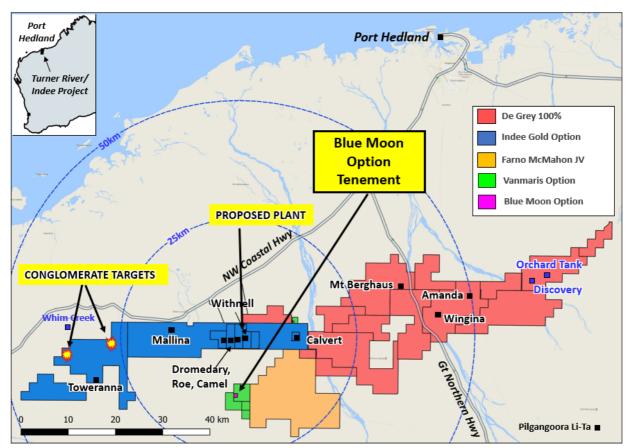


Diagram Two – Map Indicating De Grey's full Pilbara Tenure as at the date of Report



#### 6. Conglomerate Gold

Following the discoveries of numerous surface gold nuggets made near Karratha by Novo Resources Corporation and Artemis Resources, and Novo's associated "land grab" in the region that resulted in them acquiring tenements around De Grey's tenure, De Grey undertook a project wide review of its tenure. This review in the first instance identified and defined a large target area of prospective Fortescue group rocks in the same stratigraphic position that hosts the Novo/Artemis discoveries.

The review identified two significant areas of Mt Roe Basalt, being Louden's Patch and a 12 km zone, both to the western end of De Grey's tenure, and on the Indee tenements that remain the subject of an option agreement. These two areas are shown in the map below.

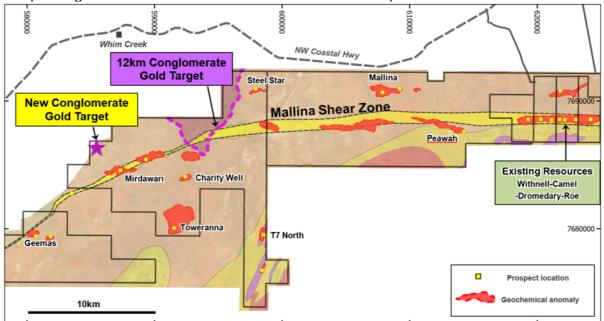


Diagram Three – Map showing Conglomerate Gold Targets at western end of De Grey's tenure

Mapping, sampling and metal detecting commenced for conglomerate hosted gold in these two areas, with Louden's Patch providing immediate results, identifying outcropping conglomerates at the base of Mt Roe Basalt. This was followed up by the metal detection of 91 nuggets downslope from shallow dipping to flat lying conglomerate, many flattened "watermelon seed" shaped nuggets with pitted texture. The target size of the conglomerate zone shows a 1.0km strike x 400m width x 5-10m thick.



**Diagram Four** - Eight (8) of the 91 gold nuggets indicating the potential at Louden's Patch



This work was then followed up with mapping and metal detecting at the 12 km zone which also revealed significant strike lengths of conglomerates and similarly shaped watermelon seed nuggets, at Jarret and Steel Well.

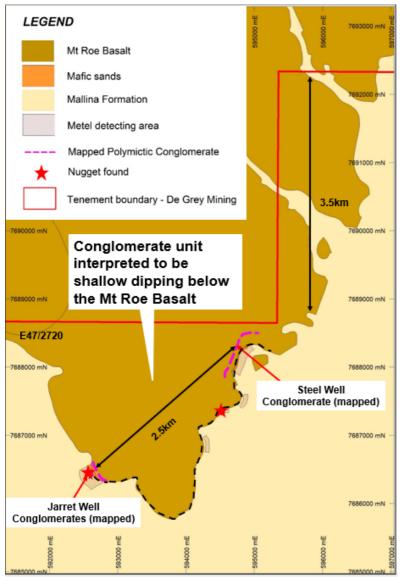


Diagram Five - Conglomerate Gold Targets within the 12 km zone





**Diagram Six** - Jarret Well gold nuggets showing pitted nature where sand grains have been imprinted during burial.



Diagram Seven - Waterworn gold nuggets found 500m south of Steel Well Conglomerate

Interpretation of mapping, geophysics data and aerial photography indicates the Jarret Well and Steel Well Conglomerates represent the same large and continuous unit some 50-80m thick, shallowly dipping beneath the Mt Roe Basalt. This provides a continuous target over 2.5km in strike length and with considerable thickness. The prospective area beneath the Mt Roe Basalt represents an area of approximately 10km<sup>2</sup> providing a large down dip target.

#### 7. Future Work Programs

- The Company will shortly commence drilling at its high grade Toweranna prospect as well as the potentially high grade Blue Moon prospect.
- Continued reconnaissance geology mapping and metal detecting along the 12km Mt Roe Basalt target and at Loudens Patch
- A further program of geochem sampling has commenced at both areas and includes rock chip sampling, orientation stream sediment and soil sampling to determine the best geochem methods to define future drill targets along the conglomerate beds. Particular emphasis will be placed on detailed mapping of the various sedimentary units within the overall conglomerate units, metal detecting and systematic soil sampling as an initial means to define the most prospective areas to focus further work, including drilling.



 Heritage clearance across the two conglomerate areas will also commence to allow the Company to commence ground disturbing exploration activities including trenching and drilling.

## **Base Metals**

#### **Discovery and Orchard Tank Base Metals Resource**

The current combined resources on De Grey's 100% owned Discovery and Orchard Tank VMS style base metal are **3.5Mt at 3.2% Zn, 1.3% Pb, 0.8/t Au, 110g/t Ag. (***ASX announced on 8 November 2016***)**.

Project work during the quarter has focused upon potential synergies in relation to the Pilbara Gold Project and site rehabilitation from prior drilling program.

The Company is considering means of obtaining better recognition of the potential value of the base metals prospect for shareholders.

## Lithium

#### King Col - Drilling program

During the quarter the company also completed an initial scout drilling program on its King Col pegmatite. The program showed that the pegmatite was enriched in lithium with the best results as below:

KRC01217m @ 2.55% Li2O from 13mKRC0118m @ 1.0% Li2O from 27m

The pegmatites occur a as a series of stacked moderately thick and south dipping pegmatites bodies intersected, and is untested to northeast along strike and down dip. This initial drilling was quite limited, with only 1648m drilled over only 2km completed to date.

Initial diamond core drilling to assess mineralogy plus detailed mapping and soil sampling of untested 5.5km strike of pegmatite trend is proposed to advance the project.

The King Col pegmatite is seen to have significant exploration upside through a 7.5km overall pegmatite trend, of which only 2km of the overall 7.5km overall trend has been surface sampled.

## Sands Royalty

De Grey generated royalty revenues of \$3,445 for the current quarter. The June 2017 royalty of \$3,275 was received during the quarter.



# Beyondie

The magnetite iron ore project at Beyondie is under the management of joint venture partner Emergent Resources Ltd (ASX: EMG, "Emergent"), who have earned an 80% interest in the iron ore mineral rights (iron ore, vanadium and manganese) of the project. De Grey retains 100% mineral rights to all minerals other than iron ore rights.

During the September quarter Emergent Resources Limited (EMG or the Company) had advised of their intention to relinquish the iron ore, vanadium and manganese rights on the Beyondie Iron Ore Project tenement (E52/2215) (Beyondie Rights) pursuant to the joint venture agreement with De Grey. the registered holder of the tenement De Grey Mining Ltd.

De Grey has commenced discussions with EMG with respect to this process and will provide further updates in due course.

## Corporate

The cash on hand at end of the quarter was ~\$2.5 million. During the quarter the Company raised \$2.6M through Tranche One of a two tranche placement co-ordinated by broker DJ Carmichael Pty Limited.

Commitments for the issue of a total of 60m shares were received and as noted above the 1<sup>st</sup> tranche were allotted in September 2017 at \$0.05 with a 1 for 2 option exercisable at \$0.10 by end of October 2018. Approval for the issue of 2<sup>nd</sup> tranche 8 million placement shares and all free attaching options (from Tranches 1 and 2) was obtained from shareholders at a General meeting held on 26 October 2017 and is to be allotted shortly.

The Company also executed a subscription agreement with Kirkland Lake Gold Limited a Canadian listed mid-tier gold producer with a market capitalization of US\$2.7Bn. Kirkland Lake have agreed to subscribe to 33,333,333 shares in De Grey at a price of \$0.15 per share to raise \$5M. Each share will have a free attaching option, with the options exercisable at \$0.20 per share at any time before 30 November 2019.

The Kirkland Lake subscription is subject to shareholder approval which the Company will seek at its Annual General Meeting to be held before the end of November.

The Company has also adjusted its Board with the departure of Mr. Davide Bosio and the introduction of Mr. Andy Beckwith (Geologist, Technical Director and Operations Manager) and Mr. Brett Lambert (Mining Engineer).

Finally it has already been noted within that the Company has also been active on the tenement acquisition front and in obtaining an extension of time to settle the option to acquire Indee Gold Pty Ltd.



#### **Appendix 1: Tenement Holdings and Movements**

Project/Location	Country	Tenement	Percentage held/earning
	Australia	550/0045	000/1
Beyondie	Australia	E52/2215	20% <sup>1</sup>
Turner River	Australia	E47/891	100%
Turner River	Australia	E45/2533	100%
Turner River	Australia	E45/2364	100%
Turner River	Australia	E45/2995	100%
Turner River	Australia	E45/3390	100%
Turner River	Australia	E45/3391	100%
Turner River	Australia	E45/3392	100%
Turner River	Australia	P45/3028	100%
Turner River	Australia	P45/3029	100%

## Schedule of Mining Tenements and Beneficial Interests Held as at the end of the September 2017 Quarter

<sup>1</sup> De Grey retains 100% rights to all non-iron ore related minerals under a Split Commodity Agreement.

## Schedule of Mining Tenements and Beneficial Interests Acquired during the September 2017 Quarter

Project/Location	Country	Tenement	Granted Date
Nil			

#### Schedule of Mining Tenements and Beneficial Interests Disposed of during the September 2017 Quarter

Project/Location	Country	Tenement	Withdrawal Date
Nil			

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.