

# **ASX ANNOUNCEMENT**

**19 December 2024** 

**ASX:DEG** 

# **Hemi Underground Mining Conceptual Study**

- The Hemi Underground Mining Conceptual Study ("Study") presents an early assessment of the
  potential for underground mining at the Hemi Gold Project ("Hemi") with the timing of release this
  quarter aligned with guidance provided in the September quarterly report
- The Study was undertaken to aid assessment of increasing the production profile at Hemi, thereby building on the previous Hemi Regional Scoping study
- The Study was conducted on the November 2023 Mineral Resource Estimate<sup>1</sup> ("MRE") and presents a strong case for further studies into the future potential of underground mining at Hemi, while not distracting from the primary focus of the Hemi Project development
- Infill drilling within the current Inferred MRE beneath the Eagle open pit design is in progress in support
  of the underground mining concept. Wide-spaced Mineral Resource extension drilling continues, with
  Mineral Resource growth recently demonstrated in the recent 2024 Hemi MRE announcement<sup>2</sup>
- De Grey entered a Scheme Implementation Deed with Northern Star Resources on 2 December 2024

#### **Cautionary Statement**

The Study referred to in this ASX announcement represents an early assessment to determine whether there may be benefit associated with underground mining at Hemi within the Hemi Gold Project in the Pilbara region of Western Australia and to consider if further studies are warranted. It is a preliminary technical study of the potential viability of underground mining and processing of certain parts of the Hemi deposits. The Study outcomes are conceptual and based on low accuracy level technical assessments that are insufficient to support estimation of Ore Reserves. The Study has been completed to a level of accuracy of +/- 35% in line with a conceptual level study accuracy.

Further exploration and evaluation work and appropriate studies are required before De Grey will be able to estimate any Ore Reserves or to provide any assurance of a case for potential underground mining. Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Study.

Of the Mineral Resources falling within mineable shape optimisations in the Study, approximately 0% are classified as Measured and/or Indicated and 100% as Inferred. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources. The potential for underground mining is based on the Company's current expectations of future results or events and should not be solely relied upon by investors when making investment decisions. Further evaluation work and appropriate studies are required to establish sufficient confidence that there will be benefit from underground mining.

The Mineral Resource estimates underpinning the Study and this announcement have been prepared by a competent person in accordance with the requirements of the JORC Code (2012). For full details of the Mineral Resources estimate and the relevant announcements please refer to Appendix A. De Grey confirms that it is not aware of any new information or data that materially affects the information included in those releases. All material assumptions and technical parameters underpinning the estimates in that ASX release continue to apply and have not materially changed.

This release contains a series of forward-looking statements. Generally, the words "expect," "potential", "intend," "estimate," "will", "would", "could" and similar expressions identify forward-looking statements. By their very nature forward-looking statements are subject to known and unknown risks and uncertainties that may cause our actual results, performance or achievements, to differ materially from those expressed or implied in any of our forward-looking statements, which are not guarantees of future performance. Statements in this release regarding De Grey's business or proposed business, which are not historical facts, are forward-looking statements that involve risks and uncertainties, such as the future potential for underground mining, future studies, Mineral Resource estimates, changes in project parameters as plans continue to be evaluated, and statements that describe De Grey's future plans, objectives or goals, including words to the effect that De Grey or management expects a stated condition or result to occur. Forward-looking statements are necessarily based on estimates and assumptions that, while considered reasonable by De Grey, are inherently subject to significant technical, regulatory, business, economic, competitive, political and social uncertainties and contingencies. Since forward-looking statements address future events and conditions, by their very nature, they involve inherent risks and uncertainties. Actual results in each case could differ materially from those currently anticipated in such statements. Investors are cautioned not to place undue reliance on forward-looking statements, which speak only as of the date they are made.

De Grey has concluded that it has a reasonable basis for providing these forward-looking statements included in this release. While De Grey considers all of the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the Study will be achieved.

To achieve the range of outcomes indicated in the Study, pre-production funding will be required. This Study is conceptual by its nature and therefore the Company has not released a capital cost associated with potential underground mining at Hemi. There is no certainty that De Grey will be able to source funding when required. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of De Grey's shares.

No Ore Reserve has been declared. This ASX release has been prepared in compliance with the current JORC Code (2012) and the ASX Listing Rules. All material assumptions, including sufficient progression of all JORC modifying factors have been included in this ASX release.

This announcement does not contain any forecast financial information and does not include a Production Target.

<sup>&</sup>lt;sup>2</sup> Refer to ASX Announcement titled "Hemi Gold Project Mineral Resource Estimate 2024" dated 14 November 2024



<sup>&</sup>lt;sup>1</sup> Refer to ASX Announcement titled "Hemi Gold Project Resource Update November 2023" dated 21 November 2023



De Grey Mining Ltd (ASX: DEG, "**De Grey**" or "**Company**") is pleased to present the outcomes of its Hemi Underground Mining Conceptual Study ("**Study**"). The Study concludes that there may be potential for underground mining at Hemi and presents a strong case for further studies, while not distracting from the primary focus of the Hemi Project development. Further wide spaced Mineral Resource extension drilling will continue. Mineral Resource infill definition drilling is also currently in progress within a test area of the Eagle underground mine plan stope designs.

Respected mining industry consultants, Mining Plus Pty Ltd ("Mining Plus"), conducted the Study for De Grey based on the November 2023 Hemi MRE. As a starting point, underground mineable shape optimisations ("MSO") were initially conducted on the Hemi MRE assuming that it could conceptually be repeated beneath the existing Hemi MRE.

Additional MSO were conducted on the November 2023 MRE beneath the Diucon and Eagle DFS open pit designs. The Mineral Resources beneath DFS open pit designs at Diucon and Eagle are predominantly Inferred classification. As the Study is conceptual, financial outcomes of the Study have not been included in this release.

Decline access options were also assessed with two separate declines being considered to access mineralisation beneath Hemi DFS open pit designs. The geometric orientation of the deposits at Hemi would allow one decline to access mineralisation beneath the Diucon and Eagle deposits while a second decline could access mineralisation beneath the Brolga, Falcon, Aquila and Crow deposits.

### **Study Highlights**

- Mine plan stopes comprising respectively approximately 5.2Mt @ 2.1g/t Au for 355koz and 6.5Mt @ 2.2g/t Au for 460koz of contained gold within the existing Mineral Resources beneath the Diucon and Eagle DFS open pit designs
- Mine plan stopes comprising approximately 46.5Mt @ 2.2g/t Au for approximately 3.2Moz of contained gold within the existing Hemi Mineral Resource if it were conceptually to continue at depth beneath all Hemi DFS open pit designs
- Stope widths varied from approximately 10 to 25m with stoping methods potentially comprising sub-level open stoping and/or sub-level caving depending on the deposit
- Access to Mineral Resources beneath Hemi DFS open pit designs could be achieved with two separate declines (5.8m x 5.5m) allowing underground mining to occur contemporaneously with open pit mining at Hemi and open pit mining from Hemi Regional<sup>3</sup> deposits
- Each decline has been benchmarked as being limited to a maximum haulage rate of between 2.0 and 2.5Mtpa, and in combination with potential mine plan stope widths and stoping methods, would point to a maximum haulage rate of between 4.0 and 5.0Mtpa
- Next steps include continuing wide-spaced step-out drilling at Hemi to confirm extensions to mineralisation, completing Mineral Resource infill drilling at Eagle and continuing studies

<sup>&</sup>lt;sup>3</sup> Refer to ASX Announcement titled "Hemi Regional Scoping Study" dated 11 July 2024



#### **De Grey Managing Director Glenn Jardine commented:**

"Hemi represents a provincial scale exploration and production opportunity. The Company is actively assessing ways in which the Hemi DFS production profile can be enhanced. The Hemi Regional Scoping Study was an important first step in this process and the Hemi Underground Mining Conceptual Study builds on this work.

The Study presents an opportunity to potentially introduce underground mining concurrently with open pit mining at Hemi. Pleasingly, the Study has been successful in demonstrating there is a potential to support this objective. This has potential to introduce additional flexibility during the operations phase.

Following the November 2024 MRE, Hemi now has 2.0Moz of Mineral Resources beneath the maximum depth for open pit mining in the DFS of 390m. However, the extent of Mineral Resources at depth at Hemi is limited by drilling. During the next 12 months we plan to conduct a limited amount of work to support the ongoing assessment of underground mining including infill drilling at Eagle, metallurgical testwork, geotechnical and hydrological studies. This will allow the assessment to progress at a modest rate while maintaining our organisational focus on the development of the main Hemi Project."

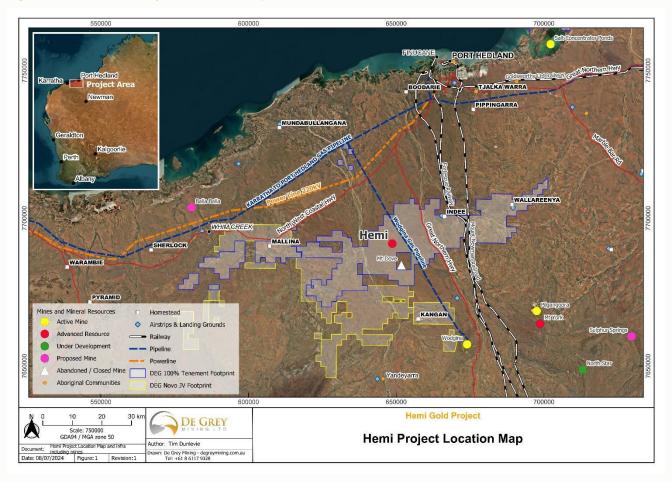


#### Introduction

The Company's 100% owned Hemi Gold Project ("Hemi" or the "Project") is located in the Pilbara region of Western Australia (Figure 1). The Hemi deposit is located on mining lease M47/1628, granted in September 2023 following the execution of a mining agreement with the Kariyarra People in December 2022<sup>4</sup>.

De Grey's exploration tenements stretch east to west for approximately 150km, covering an area of approximately 1,500km<sup>2</sup>. An additional approximately 1,000km<sup>2</sup> is subject to an earn-in arrangement with Novo Resources Limited. The Company recently announced that it had successfully met its \$7 million minimum expenditure commitment on the Egina JV<sup>5</sup>.

**Figure 1: Hemi Gold Project Location Map** 



## **Hemi Underground Conceptual Study**

The Hemi open pit Mineral Resource, which extends to 390 metres below surface, has gold endowment of approximately 25,000 ounces per vertical metre and extends for a combined strike of approximately 6.5km, representing a large-scale mineralised system. High-grade mineralisation has been confirmed to extend beneath the Hemi open pit Mineral Resource and DFS open pit designs.

<sup>&</sup>lt;sup>4</sup> Refer to ASX Announcement titled "Mining Agreement reached with the Kariyarra People" dated 16 December 2022

<sup>&</sup>lt;sup>5</sup> Refer to ASX Announcement titled "De Grey reaches minimum spend at Novo's Egina Gold Project" dated 10 October 2024



Mineralisation continues beneath the Hemi DFS open pit designs in the form of Mineral Resources and wide-spaced drilling (Figure 2). This has encouraged the Company's assessment that potential exists for underground mining at Hemi. The Company's intention, should further studies be successful, would be to schedule underground development so that potential underground production would be conducted in parallel with open pit mining. Timing of any development would be subject to completion of definitive feasibility studies, required regulatory approvals and investment decision.

Mining Plus, a well-regarded mining consulting firm based in Perth Western Australia, conducted the Study for De Grey. The schematic long section (Figure 2) shows the DFS open pit designs and selected drill results beneath the designs.

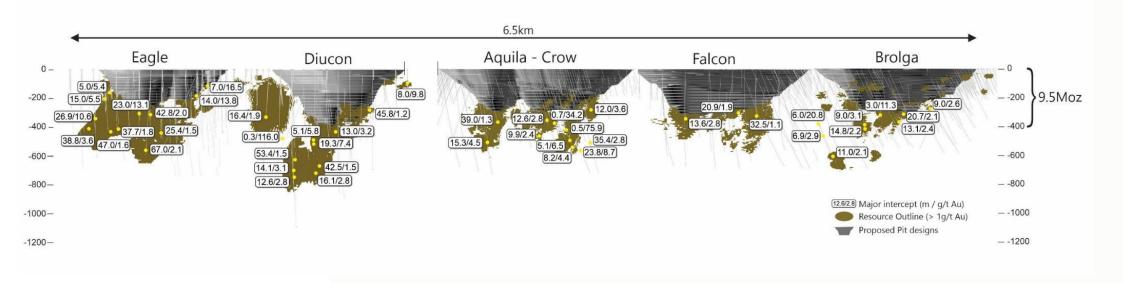
The Study was conducted on the November 2023 Hemi MRE comprising Aquila/Crow, Brolga, Diucon, Eagle and Falcon deposits (Figure 3) having a combined MRE of approximately 10.5Moz from 254.5Mt @ 1.4g/t Au.

The Study progressively assessed:

- The amenability to underground mining of the entire Hemi Mineral Resource assuming conceptually that it continued at depth beneath the Hemi DFS pit designs
- The amenability to underground mining of the existing Mineral Resource beneath the Diucon and Eagle Hemi DFS pit designs, based on the November 2023 Mineral Resource update
- Decline access options from surface to allow the potential for contemporaneous open pit and underground mining at Hemi







All Deposits Open at Depth limited only by current drilling

Average gold endowment top 400m approximately 25,000 ounces per vertical metre

Significant upside beneath existing Mineral Resource



Resource block model grades
Au ppm

0.2-0.5
0.5-1.0
0.3.0
3.5km

Crow
Brolga
Aquila

Figure 3 Hemi Deposits including Hemi DFS open pit designs

### **Whole of Hemi Mineral Resource Optimisations**

An assessment of the whole Hemi Mineral Resource, conceptually, assuming that it was to repeat beneath existing DFS open pit designs, was conducted using MSO software. A cut-off grade was estimated (Table 1) to enable MSO to be conducted. Underground mining costs of \$80/t of ore mined were applied by Mining Plus from benchmarking against existing similar scale underground mining operations. Costs for processing and administration were derived from the Hemi DFS.

A gold price of A\$2,700/oz was used, representing a 35% discount to the current spot gold price of approximately A\$4,150/oz, consistent with the Hemi DFS to estimate the cut-off grade. An overall Mineral Resource recovery of 91% was estimated comprising a metallurgical recovery of 93.5% as per the Hemi DFS and the Western Australian State Government royalty of 2.5%. The cut-off grade estimated was 1.35g/t Au and rounded up to a cut-off grade of 1.5g/t Au for the purposes of the Study.

**Table 1: Hemi Underground Cut-Off grade calculation** 

Item	Unit	Estimate	Comment
Underground mining	\$/t	80.00	Estimate with backfill
Milling	\$/t	24.23	DFS
Admin	\$/t	2.30	DFS
Total mining costs	\$/t	106.53	
Gold Price	A\$/oz	2,700	DFS
Gold Price	A\$/g	86.81	DFS
Recovery	%	91	6.4
Recovered gold price / gram	A\$/g	78.99	
Full cut-off grade		1.35	g/t



Results of the MSO conducted by Mining Plus on the whole of the actual Hemi Mineral Resource (Table 2) indicate that, on a conceptual basis, there is approximately 46.5Mt @ 2.2g/t Au for approximately 3.2Moz of contained gold in mine plan stopes within the existing Hemi Mineral Resource.

**Table 2: Whole of Hemi Mineral Resource MSO Results** 

Orebody	Cut-off	Tonnes	Ounces	Au g/t	Stope average width
Brolga	1.5	11,900,000	850,000	2.22	25.2
Aquila	1.5	4,000,000	340,000	2.62	17.9
Crow	1.5	3,500,000	240,000	2.15	9.9
Falcon	1.5	5,400,000	330,000	1.92	23.6
Diucon	1.5	13,300,000	880,000	2.07	15.9
Eagle	1.5	8,4000,000	610,000	2.26	14.8
<b>Grand Total</b>		46,503,000	3,250,200	2.17	16.1

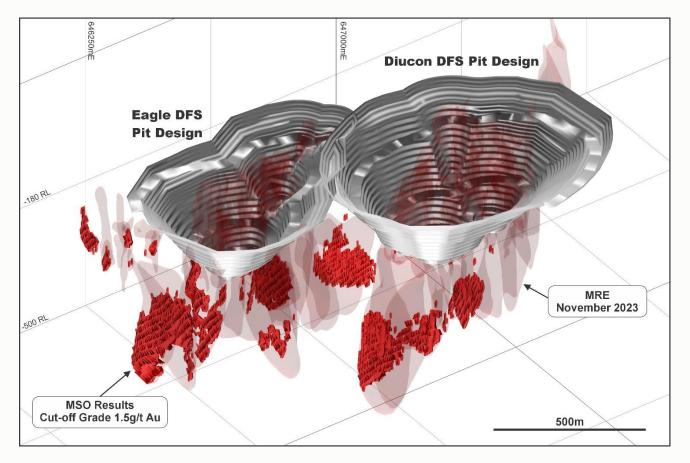
#### **Diucon and Eagle Mineral Resources beneath DFS pit optimisations**

An assessment of the actual Diucon and Eagle Mineral Resources beneath the Hemi DFS pit designs was conducted using MSO software. Figure 4 shows MSO results within the Diucon and Eagle Mineral Resource block models above a cut-off grade of 1.5g/t Au. The results of the MSO conducted on the Hemi Mineral Resources beneath the Diucon and Eagle DFS pit designs indicate that, on a conceptual basis, there is approximately 5.2Mt @ 2.1g/t Au for 355,000oz of contained gold within the existing Mineral Resource at Diucon and 6.5Mt @ 2.2g/t Au for 460,000oz of contained gold within the existing Mineral Resource at Eagle. The average stope width for Diucon and Eagle generated by the MSO software was approximately 15 metres. These figures should be treated as conceptual in nature and do not represent a production target. Further studies will be required to provide a Scoping Study level estimate.

Mineral Resource infill definition drilling is currently in progress within the Eagle underground mine plan stope design area to provide more detailed consideration of the potential for underground mining.



Figure 4 MSO results beneath Diucon and Eagle DFS pit designs



### **Decline Access and Mining Method**

Access from surface to the Mineral Resources beneath the Hemi DFS open pit designs (Figure 5) has been considered from two locations: the west of Diucon and Eagle to access the two deposits and from the north of Crow to access Aquila/Crow, Brolga and Falcon.

Decline access options from surface would allow the potential for contemporaneous open pit and underground mining at Hemi.

An alternative second decline could be considered from Brolga starter pit to access mineralisation beneath the Falcon, Aquila/Crow and Brolga open pits.

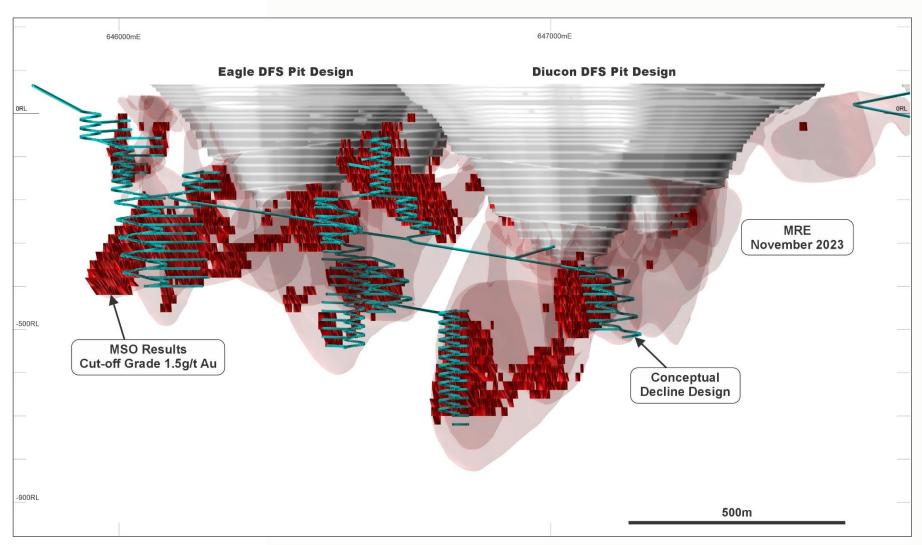
The two surface decline alternatives are shown in Figure 5.

Underground mining methods, based on the Hemi Mineral Resource, could comprise sub-level caving and/or sub-level open stoping depending on the deposit. Stope widths varied from approximately 10 to 25m, again depending on the deposit.

Each decline has a nominal size of 5.8m x 5.5m and has been estimated by Mining Plus as being limited to delivering a maximum of between 2.0 and 2.5Mtpa using a conventional underground haulage fleet. In combination with potential mine plan stope widths and stoping methods, this would point to a maximum haulage rate of between 4.0 and 5.0Mtpa.



Figure 5 Conceptual surface decline access designs to Hemi Mineral Resources beneath Hemi DFS open pit designs





#### **Financial Analysis**

The conceptual level of the Study and assessment of JORC Inferred Mineral Resources beneath the DFS pit designs preclude the presentation of the Company's internal financial analysis. However, the Company is sufficiently encouraged by the early assessment presented in the Study to further progress infill and extensional drilling and further studies.

As with the Regional Scoping Study released to the ASX on 11 July 2024, the Company's intention would be to fund the capital cost of any concurrent Underground access and mining from Hemi operational cashflow and available cash on hand. Potential also exists to access additional debt funding in future.

#### **Study Assumptions**

The objective of the Study was to understand the conceptual scale, stoping methods and access options of potential underground mining at Hemi beneath DFS open pit designs. Underground mining would be proposed to be conducted concurrently with open pit mining, thereby potentially increasing the annual production rate above that of the Hemi DFS.

The Study did not involve any additional studies in areas such as metallurgy, geotechnical, environment, power, infrastructure and permitting. Additional studies in these areas specific to the mining and processing of the Underground Mineral Resources will be undertaken as part of future studies.

The Company has already completed and released the outcomes of a large amount of work in these areas as part of the Pre-Feasibility Study<sup>6</sup> and Definitive Feasibility Study<sup>7</sup> for Hemi. This previous work will be leveraged as part of future Underground studies and has provided sufficient confidence to proceed forward. The planned investment in the Hemi open pit operations, processing plant and associated infrastructure will deliver many benefits to potential Underground mining operations. The Hemi processing plant will have capability to process a range of gold ore types so metallurgical risk of processing Underground extensions to the Hemi deposits is considered low.

#### **Future Exploration and Studies**

Drilling beneath the Eagle DFS open pit design is currently in progress. This drilling comprises infill drilling and Mineral Resource extension drilling. The infill drilling is designed to improve confidence levels in the continuity of higher cut-off grade mineralisation and future Mineral Resource models. That work will support more detailed study of that area of the Hemi Mineral Resource.

The November 2023 MRE<sup>8</sup> for Eagle below 390m has been increased by 159Koz in the recent November 2024 MRE. This additional mineralisation is not included in this Study. Figure 6 is a long section of the Eagle Mineral Resource showing the DFS open pit design and drilling previously announced<sup>9</sup> and new drill results from Mineral Resource extensional drilling in HEDD228 and HEDD340. Both drill holes have successfully extended mineralisation with HEDD340 intersecting 31.0m at 2.4g/t Au, including 11.1m at 5.6g/t Au over 100m down plunge of the November 2023 MRE (Figure 6). These extensions were drilled after the completion of the Study and have not been included in the Study results presented here, or the November 2024 MRE<sup>10</sup>.

<sup>&</sup>lt;sup>6</sup> Refer to ASX Announcement titled "Prefeasibility Study Outcomes – Mallina Gold Project" dated 8 September 2022

<sup>&</sup>lt;sup>7</sup> Refer to ASX Announcement titled "Hemi Gold Project – DFS Outstanding Financial Metrics" dated 28 September 2023

<sup>&</sup>lt;sup>8</sup> Refer to ASX Announcement titled "Hemi Gold Project Resource Update November 2023" dated 21 November 2023

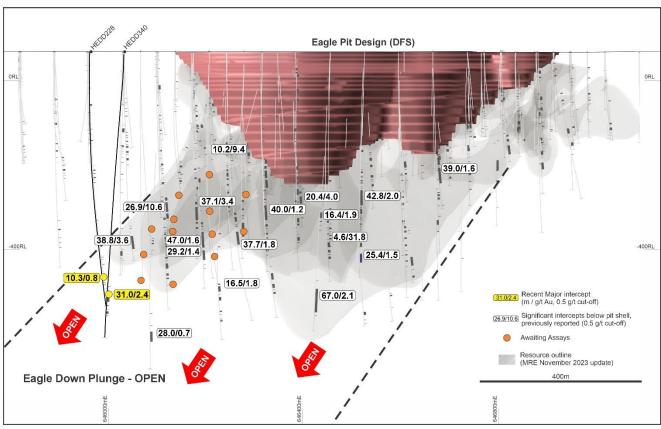
<sup>9</sup> Refer to ASX Announcement titled "Eagle High Grades and Extensions support Hemi DFS upside" dated 26 June 2024

<sup>&</sup>lt;sup>10</sup> Refer to ASX Announcement titled "Hemi Gold Project Mineral Resource Estimate 2024" dated 14 November 2024



A full list of new intercepts at Eagle is included in Table 3. Further results from ongoing infill diamond drilling are expected in the New Year.

Figure 6 Eagle Long Section



Gold mineralisation at Hemi is primarily hosted in a series of intermediate intrusions associated with sulphide (pyrite and arsenopyrite) stringers and disseminations within brecciated and altered quartz diorites that intrude into the surrounding Archaean aged Mallina Basin sediments. The Archaean basement is eroded and truncated by a 25m to 45m thick horizon of recent transported sediments that are barren of gold mineralisation. The Hemi style of mineralisation was previously unknown in the Pilbara region and shows a scale of gold mineralisation not previously seen in the Mallina Basin.

The current combined strike of the six current deposits at Hemi is approximately 6.5km. Where comprehensive drilling has been conducted at the deposits, the combined gold endowment is approximately 25,200 ounces per vertical metre. This provides an indication of the deeper potential at Hemi, where all the deposits remain open at depth.

Limited drilling has been conducted below 390m depth. There is strong potential to increase the deeper gold endowment where previous drilling has intersected broad zones of mineralisation including higher grade intervals. Recent drilling results released from Eagle<sup>11</sup>, Diucon, Aquila and Crow<sup>12</sup> support this belief. Increases in Resource confidence and scale with further drilling will support future Underground studies and assist in optimising the configuration of any future Underground mining.

Recent drilling at Aquila/Crow<sup>12</sup> extended mineralisation in the hanging wall of the Aquila intrusive approximately 200m down dip and 400m along strike (Figure 7). Mineralisation to the east of Aquila

<sup>&</sup>lt;sup>11</sup> Refer to ASX Announcement titled "Eagle High Grades and Extensions support Hemi DFS upside" dated 26 June 2024

<sup>12</sup> Refer to ASX Announcement titled "Crow and Aquila extensions support Hemi production upside" dated 29 July 2024



and in the footwall of the Aquila/Crow intrusive was extended approximately 500m down dip and 200m along strike (Figure 8). In addition, high grade intercepts including 23.8m @ 8.7g/t Au and 23.6m @ 7.3g/t Au were returned from the McLeod Lodes at Crow (Figure 9). This drilling resulted in an increase of 0.5Moz for the Aquila and Crow deposits below 390m depth, compared to the November 2023 MRE<sup>13</sup>. Further drilling of Aquila/Crow has the potential to increase this resource, and better define higher grade zones within the resource outline.

These new results from Eagle and Aquila-Crow were received after the November 2023 MRE so have not been incorporated into this Study, and represent additional upside.

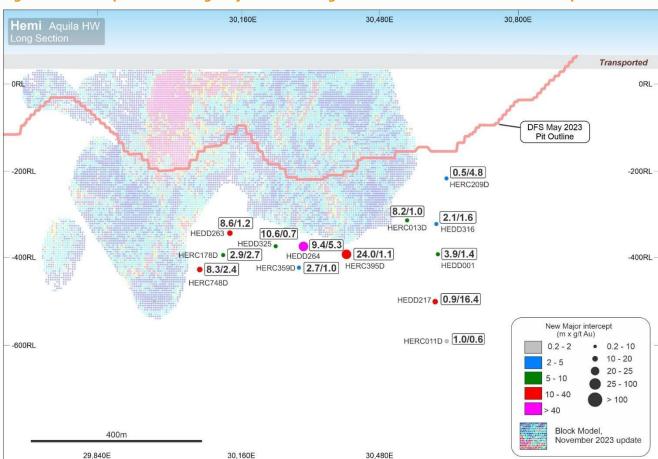
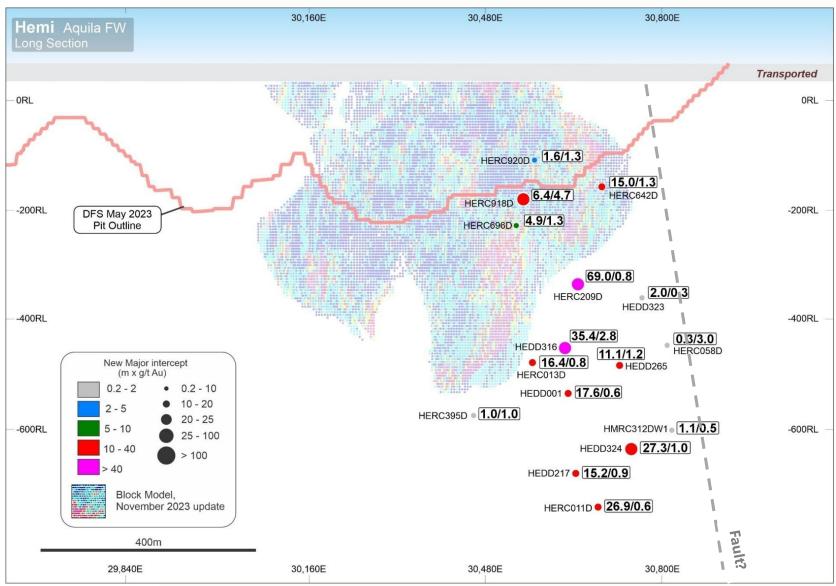


Figure 7: Aquila-Crow Long Projection showing new drill intersections in the main Aquila HW zone

<sup>&</sup>lt;sup>13</sup> Refer to ASX Announcement titled "Hemi Gold Project Mineral Resource Estimate 2023" dated 21 November 2023 and ASX Announcement titled "Hemi Gold Project Mineral Resource Estimate 2024" dated 14 November 2024



Figure 8: Aquila-Crow Long Projection showing new drill intersections in the main Aquila HW zone





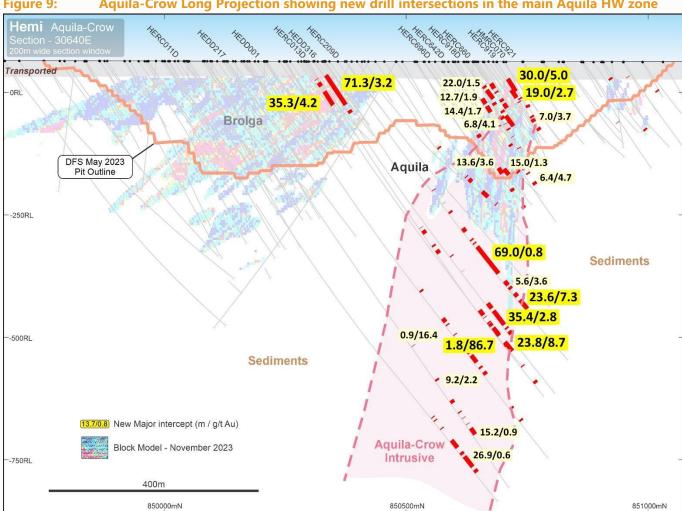


Figure 9: Aguila-Crow Long Projection showing new drill intersections in the main Aguila HW zone

#### **Summary and Future Steps**

The outcomes of the Study provide a strong case to continue-low level studies and supporting workstreams for future underground mining at Hemi.

Additional infill drilling is planned for Eagle in the next 12 months to upgrade the confidence of the Mineral Resource and allow a mining study to be completed to a Scoping Study level. Metallurgical testwork, geotechnical and hydrological studies will also be conducted to a Scoping Study level over this period.

The outcomes of the Study mean that underground mining options for Eagle and elsewhere at Hemi will continue to be assessed against and in parallel with other options to increase and extend the Hemi production profile such as development of the Regional Deposits.

As an organisation, De Grey will continue to retain its immediate focus on the development of Hemi through the upcoming construction phase, commissioning and commercial production.



#### This announcement has been authorised for release by the De Grey Board.

#### For further information, please contact:

Glenn Jardine
Managing Director
+61 8 6117 9328
admin@degreymining.com.au

Peter Canterbury
Chief Financial Officer
+61 8 6117 9328
admin@degreymining.com.au

Michael Vaughan (Media enquiries) Fivemark Partners +61 422 602 720 michael.vaughan@fivemark.com.au

#### **Competent Person's Statement**

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 an employee of De Grey Mining Ltd. 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.



#### **ADDITIONAL INFORMATION**

#### Forward looking statements disclaimer

This announcement has been prepared by De Grey and contains forward-looking statements. Forward-looking statements include those containing words such as "anticipate", "estimates", "forecasts", "indicative", "should", "will", "would", "expects", "plans" or similar expressions.

Such forward-looking statements are based on information available as at the date of this announcement and are not guarantees of future performance and involve known and unknown risks, uncertainties, assumptions and other important factors, many of which are beyond the control of the Company, and which could cause actual results or trends to differ materially from those expressed in this announcement.

Relevant factors include risks associated with exploring for gold, project development and construction and the mining, processing and sale of gold, including without limitation, changes in commodity prices, foreign exchange fluctuations and general economic conditions, increased costs and demand for production inputs, the speculative nature of exploration and project development, including the risks of obtaining necessary licenses and permits and diminishing quantities or grades of reserves, political and social risks, changes to the regulatory framework within which the Company operates or may in the future operate, environmental conditions including extreme weather conditions, recruitment and retention of personnel, industrial relations issues and litigation.

Readers of this announcement are cautioned not to place undue reliance on forward-looking statements included in it.

Forward looking statements in this announcement only apply at the date of issue. Subject to any continuing obligations under applicable law or any relevant securities exchange listing rules, in providing this information the Company does not undertake any obligation to publicly update or revise any of the forward-looking statements or to advise of any change in events, conditions or circumstances on which any such statement is based.



Table 3: Significant new results (>2 gram x m Au) - Intercepts - 0.5g/t Au lower cut, 4m maximum internal waste,>2gm

HoleID	Zone	Depth From (m)	Depth To (m)	Down hole Width (m)	Au (g/t)	Collar East (GDA94)	Collar North (GDA94)	Collar RL (GDA94)	Dip (deg rees)	Azimuth (GDA94)	Hole Depth (m)	Hole Type
HEDD228	Eagle	634.0	644.3	10.3	0.8	646083	7692061	67	-56	329	718	DD
HEDD340	Eagle	657.0	687.9	31.0	2.4	646193	7692030	67	-57	327	786	DD
incl	Eagle	657.0	668.0	11.1	5.6	646193	7692030	67	-57	327	786	DD
HEDD340	Eagle	697.0	699.0	2.0	1.2	646193	7692030	67	-57	327	786	DD
HEDD340	Eagle	708.0	709.0	1.0	2.9	646193	7692030	67	-57	327	786	DD
HEDD340	Eagle	714.2	720.9	6.7	0.7	646193	7692030	67	-57	327	786	DD
HEDD340	Eagle	725.0	725.9	0.9	2.4	646193	7692030	67	-57	327	786	DD



# JORC Code, 2012 Edition - Table 1

## **Section 1 Sampling Techniques and Data**

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <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> <li>an industry standard manner.</li> <li>Core samples were collected with a diamond rig drilling mainly NQ2 diameter core.</li> <li>After logging and photographing, NQ2 drill core was cut in half, with one half sent to the laboratory for assay and the other half retained. HQ and PQ core was quartered, with one quarter sent for assay. Holes were sampled over mineralised intervals to geological boundaries on a nominal 1m basis.</li> <li>Sample weights ranged from 2-4kg.</li> <li>RC holes were sampled on a 1m basis with samples collected from a cone splitter mounted on the drill rig cyclone. The 1m samples typically ranged in weight from 2.5kg to 3.5kg.</li> </ul>
Drilling techniques	<ul> <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>	(51mm), HQ3 (61mm), PQ (85mm).



Criteria	JORC Code explanation	Commentary
Drill sample recovery	<ul> <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> <li>Core recovery is measured for each drilling run by the driller and then checked by the Company geological team during the mark up and logging process.</li> <li>RC samples were visually assessed for recovery.</li> <li>Samples are considered representative with generally good recovery. Deeper RC and aircore holes encountered water, with some intervals having less than optimal recovery and possible contamination.</li> <li>No sample bias is observed.</li> </ul>
Logging	<ul> <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>	
Sub-sampling techniques and sample preparation	<ul> <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 subsampling 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> <li>Core samples were collected with a diamond drill rig drilling NQ2, HQ3 or PQ diameter core. After logging and photographing, NQ2 drill core was cut in half, with one half sent to the laboratory for assay and the other half retained. HQ and PQ core was quartered, with one quarter sent for assay. Holes were sampled over mineralised intervals to geological boundaries on a nominal 1m basis.</li> <li>RC sampling was carried out by a cone splitter on the rig cyclone and drill cuttings were sampled on a 1m basis in bedrock and 4m composite basis in cover.</li> <li>Each sample was dried, split, crushed and pulverised to 85% passing 75µm.</li> <li>Sample sizes are considered appropriate for the material sampled.</li> <li>The samples are considered representative and appropriate for this type of drilling.</li> <li>Core and RC samples are appropriate for use in a Mineral Resource estimate.</li> </ul>



Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	<ul> <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> <li>The samples were submitted to a commercial independent laboratory in Perth, Australia.</li> <li>For diamond core and RC samples Au was analysed by a 50g charge Fire assay fusion technique with an AAS finish.</li> <li>At least every fifth RC and DD sample were analysed with ALS procedure MS61 which comprises a four acid digest and repots a 48 element analysis by ICPAES and ICPMS.</li> <li>The techniques are considered quantitative in nature.</li> <li>A comprehensive QAQC protocol including the use of CRM, field duplicates and umpire assay at a second commercial laboratory has confirmed the reliability of the assay method.</li> </ul>
Verification of sampling and assaying	<ul> <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>	visually field verified by the Competent Person.
Location of data points	<ul> <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>	



Criteria	JORC Code explanation	Commentary
Data spacing and distribution	<ul> <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> <li>Drill spacing varies from 40m x 40m to 320m x 80m.</li> <li>The extensive drilling programs have demonstrated that the mineralised domains have sufficient continuity in both geology and grade to be considered appropriate for the Mineral Resource and Ore Reserve estimation procedures and classification applied under the 2012 JORC Code.</li> <li>Data spacing and distribution of RC and diamond drilling is sufficient to provide support for the results to be used in a Mineral Resource estimate.</li> <li>Sample compositing has not been applied except in reporting of drill intercepts, as</li> </ul>
Orientation of data in relation to geological structure	<ul> <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>	to the strike of mineralisation. The holes are generally angled at -55° which provides good intersection angles into the mineralisation which ranges from vertical to -45° dip.
Sample security	The measures taken to ensure sample security.	Samples were collected by company personnel and delivered direct to the laboratory via a transport contractor.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	

# **Section 2 Reporting of Exploration Results**

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <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> <li>The Hemi deposit lies within granted Mining Lease M47/1628. The tenement is held 100% by Last Crusade Pty Ltd, a wholly owned subsidiary of De Grey Mining Ltd.</li> <li>The Hemi deposit is approximately 60km SSW of Port Hedland.</li> <li>The tenements are in good standing as at the time of this report.</li> <li>There are no known impediments to</li> </ul>



Criteria	JORC Code explanation	Commentary
		operating in the area.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	No detailed exploration is known to have occurred on the tenement prior to De Grey Mining Ltd. Prior to the Hemi discovery, De Grey completed programs of airborne aeromagnetics/radiometrics, surface geochemical sampling and wide spaced aircore and RAB drilling. Limited previous RC drilling was carried out at the Scooby Prospect approximately 2km NE of the Brolga deposit at Hemi.
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>The Hemi discovery comprises a series of gold deposits hosted within predominately diorite to quartz diorite intrusions and sills that have been emplaced within the Mallina Basin. Six main deposits have been delineated within the complex and have been separately estimated and reported. These include Brolga, Aquila, Crow, Diucon, Eagle and Falcon.</li> <li>Gold mineralisation is associated with localised to massive zones of fractured to brecciated albite, chlorite and carbonate (calcite) altered intrusion with disseminated sulphides and stringers containing pyrite and arsenopyrite with minor occurrences of pyrrhotite, overprinted in places by quartz-sulphide veins that occasionally host visible gold. Sulphide abundance in the mineralised intrusions typically ranges from 2.5% to 10% and there are strong correlations between gold, arsenic, and sulphur.</li> </ul>
Drill hole Information	<ul> <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:</li> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea</li> </ul>	
	<ul> <li>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> <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>	



Criteria	JORC Code explanation	Commentary
Data aggregation methods	<ul> <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> <li>Results are reported to a minimum cutoff grade of 0.5g/t gold with an internal dilution of 4m maximum.</li> <li>Higher grade intervals are aggregated using a 1.0g/t Au lower cut with an internal dilution of 2m maximum. Results greater than 5gm are reported.</li> <li>Intercepts are length weighted averaged.</li> <li>No maximum cuts have been made.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <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> <li>The drill holes are approximately perpendicular to the strike of mineralisation.</li> <li>Where drilling is not perpendicular to the dip of mineralisation the true widths are less than downhole widths.</li> </ul>
Diagrams	<ul> <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>	Plans and sections are provided in this release.
Balanced reporting	<ul> <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> <li>All drill collar locations are shown in figures and all significant results are provided in this report.</li> <li>The report is considered balanced and provided in context.</li> </ul>
Other substantive exploration data	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.	Extensive metallurgical, groundwater, and geotechnical studies have commenced as part of the economic assessment of the project.
Further work	<ul> <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>	drilling aimed at extending Mineral Resources at depth and laterally are underway.



## Appendix A: Listing Rule 5 cross-references

The information in this release that relates to Mineral Resource Estimates and Ore Reserve Estimates for the Hemi Project is based on information previously disclosed in the following Company ASX Announcements:

- 28 September 2023, Hemi Gold Project DFS Outstanding Financial Metrics
- 21 November 2023, Hemi Gold Project Resource Update November 2023
- 14 November 2024, Hemi Gold Project Mineral Resource Estimate 2024

The Company confirms that it is not aware of any new information as at the date of this release that materially affects the information included in this release and that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.

The information in this release relates to 100% of the Mineral Resources classified as Inferred. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources. The potential for underground mining at the Hemi Project is based on the Company's current expectations of future results or events and should not be solely relied upon by investors when making investment decisions. Further evaluation work and appropriate studies are required to establish sufficient confidence that there will be potential for underground mining.

All of these ASX Announcements are available on the Company's website and the ASX website (<a href="www.asx.com.au">www.asx.com.au</a>) under the Company's ticker code "DEG".