

### **New High Grade Gold Discovery in the West Tanami**

- First drill hole into a new geochemical target ("Sultan") 750 metres south of the Afghan prospect has intersected high grade gold mineralisation. Results include:
  - 7.6 metres at 3.2 g/t Au from 326.2 metres (TSD0007)
- High grade gold mineralisation is hosted in brecciated and deformed quartz veins within mafics and sediments on a previously untested granite contact
- Mineralisation remains open in all directions including along strike and up and down dip
- Follow-up drilling will target the up-dip projection and along strike of the mineralised veins



*Figure 1*: TSD0007 photos 325m to 335.65m highlight mineralised zone and granitoid contact at ~334.05m

#### Commenting on the Sultan drill results, Hamelin Gold Managing Director Peter Bewick said:

"Over 400 RAB / RC holes and approximately 1,000 vacuum holes have been drilled at the Afghan prospect by previous explores defining a 4 kilometre long gold trend. The Sultan target was initially identified as a gold-in-soil anomaly located 750 metres southeast of the main Afghan trend, on the margin of granite contact in an area with limited previous drilling.

The discovery of high grade gold mineralisation at Sultan in a single hole program is an outstanding result for the Hamelin team. The extent of the Sultan prospect remains completely unconstrained with mineralisation open in all directions with little work conducted along the interpreted mineralised trend. Following these highly encouraging results we have elevated Sultan to a priority target for 2023."

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Hamelin Gold Limited ("**Hamelin**" or the "**Company**") (**ASX:HMG**) is pleased to announce the discovery of high grade gold mineralisation in the first diamond drill hole at the Sultan prospect in the West Tanami Gold Project, Western Australia.

### Background

Previous exploration in the northwest portion of the West Tanami Project focused along the 4km long Northern Gold Anomaly (see Figure 2) at the Afghan gold prospect ("**Afghan**"). Drilling along this east-northeast trending anomaly defined broad zones of near surface gold mineralisation including<sup>1</sup>:

- 10 metres @ 1.4 g/t Au from 4 metres in AFG002
- 23 metres @ 0.85 g/t Au from 43 metres in ACR013
- 10 metres @ 0.42 g/t Au from 116 metres in AFG008 and
- 16 metres @ 0.59 g/t Au from 33 metres in TRB0513

Gold mineralisation at Afghan is interpreted to be located along the axis of a major antiformal fold.

The southern limb of the fold hosts the two Southern Gold Anomalies, located to the north of a large granite intrusion. Previous drilling along the southern limb is limited to broad spaced RAB drilling generally less than 10 metres deep, and a few isolated sections of RC drilling to depths of 50 to 100 metres from surface.

#### **EIS Co-funded Diamond Drilling**

A single diamond drill hole, TSD0007, was designed to test for a bedrock gold source beneath the western end of the two surface gold anomalies along the southern limb of the Afghan antiform, and to provide information on the geological and structural architecture in this underexplored region. This hole was cofunded through the WA Government EIS program.

Diamond drill hole TSD0007 collared in coarse clastic sediments before intersecting zones of faulting and brecciation, and zones of quartz veining and granitoid intrusives. High grade gold mineralisation has been discovered at the contact between a granitoid intrusion and a package of sediments and mafic rocks. Gold mineralisation is hosted within a series of brecciated and deformed quartz veins (see Figure 1) with best results including:

#### • 7.6 metres at 3.2 g/t Au from 326.2 metres including

#### • 1.1 metres at 15.9 g/t Au from 329.7 metres

The mineralised quartz veins intersected in TSD0007 represent a new zone of high grade gold mineralisation along a geological contact not targeted by previous explorers. The mineralisation at Sultan is open along strike and up and down dip. The mineralised veins strike towards the east-northeast and dip steeply to the north.

The discovery of high grade gold in TSD0007 further validates Hamelin's exploration strategy and confirms our belief that systematic exploration of the belt scale West Tanami Project has the potential to deliver high grade gold discoveries in areas of ineffective historic shallow drilling.





*Figure 2*: Afghan and Sultan Prospects – Maximum gold-in-hole and collar location map (background image - RTP magnetics)

#### **Next Steps**

A major drill program is being designed for the West Tanami Project in 2023. The Sultan prospect is now being included as a high priority target and drilling here will initially test the area immediately along strike and up dip of the high grade gold intersected in TSD0007. Additional drilling is also planned to test the granite contact to the west-southwest of Sultan.



Hole_ID	Hole_Type	Grid	Easting	Northing	RL	Azi	Dip	EOH (m)
TSD0007	Diamond	MGA94_52	425943	7821307	368	150	-60	451.8
Table 1: Sultan collar location information. AZI = Azimuth, EOH= End of hole depth in metres								

Hole ID	From (m)	To (m)	Width (m)	Gold (g/t)
TSD0007	24.3	24.8	0.5	0.427
	79	79.2	0.2	0.201
	123.78	125	1.22	0.113
	320.65	321	0.35	0.607
	323.35	324.9	1.55	0.188
	326.2	333.83	7.63	3.15
incl.	326.2	327.27	1.07	1.45
incl.	328.24	328.84	0.6	3.62
incl.	329.67	330.75	1.08	15.9
incl.	331.3	331.75	0.45	1.23
incl.	332.89	333.2	0.31	3.23

 Table 2: Sultan Prospect (TSD0007) drill results (>0.10g/t Au) including sub intervals >1g/t Au.

This announcement has been authorised by the Board of Directors.

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The information in this report that relates to Exploration Results is based on information compiled by Mr. Peter Bewick who is a Member of the Australasian Institute of Mining and Metallurgy. Mr. Bewick holds shares and options in and is a full time employee of Hamelin Gold Ltd and has sufficient experience which is relevant to the style of mineralisation under consideration to qualify as a Competent Person as defined in the 2012 Edition of the 'Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Bewick consents to the inclusion in the report of the matters based on the information compiled by him, in the form and context in which it appears.

<sup>1</sup>Information on historical results outlined in this Announcement together with JORC Table 1 information, is contained in the Independent Technical Assessment Report within Hamelin's Prospectus dated 17 September 2021, which was released in an announcement on 3 November 2021.

The Company confirms that it is not aware of any new information or data that materially affects the information in the relevant ASX releases and the form and context of the announcement has not materially changed. This announcement has been authorised for release by the Board of Hamelin Gold Limited.

### About Hamelin Gold

Hamelin Gold Limited (**ASX:HMG**) is an ASX-listed gold exploration company based in Perth, Western Australia. Hamelin has a landholding of 2,489km<sup>2</sup> in the Tanami Gold Province in Western Australian (Figure 3). The province is prospective for high value, large scale gold deposits and hosts Newmont's Tier 1 Callie Operations in the Northern Territory. Hamelin's West Tanami project is a belt-scale Greenfields opportunity hosting the same geology and key structures as Callie with minimal modern exploration completed across the Hamelin landholdings.



Figure 3: Hamelin's West Tanami Project tenure within the Tanami Gold Province

Hamelin is undertaking systematic whole of project target generation activities in the West Tanami targeting world class gold mineral systems.

The Company has a strong Board and Management team and is well funded after completing an IPO in November 2021.

Hamelin's shareholders include highly regarded gold miners Gold Fields Limited (JSE/NYSE:GFI) and Silver Lake Resources Limited (ASX:SLR).

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# **JORC Code, 2012 Edition – Table 1 report**

### Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling • N techniques sp to so no • In an us • A P	<ul> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate</li> </ul>	Diamond Drilling was used to obtain samples for geological logging and assaying.
	<ul> <li>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 (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	Drillhole TSD0007 was designed to test a geological and geochemical target as well as understanding the stratigraphic architecture of the prospect area to assist with further target generation.
		Drill core was measured, oriented and marked up in the field before being cut and sampled. Oriented core was placed in an orientation rack with a line drawn along the core. This also ensured representativeness of samples when cutting.
		Half core pulverised to produce a 40g charge and has been assayed for gold, arsenic, bismuth, tellurium and gold using and aqua regia digest and analysed via Inductively Coupled Plasma (ICP) Mass Spectrometry
Drilling techniques	<i>rilling</i> <i>chniques Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other</i>	A Sandvik 1200 Multipurpose truck mounted drill rig was used to drill orientated HQ core to fresh, competent rock and then oriented NQ2 till the end of hole.
type, whether core is oriented and if so, by what metho	type, whether core is oriented and if so, by what method, etc).	All HQ and NQ diamond drill core orientated using Reflex ACT Mk2 Orientation Tool.
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>	Core measured using standard measuring tape. Length of core is then compared to the recorded interval drilled from core blocks placed in trays at end of runs.
		All care taken to obtain 100% core recovery (HQ & NQ) and core loss was rare.
		No relationship between sample recovery and grade is known at this stage: more drilling is required to establish if there is any sample bias.

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>	All HQ/NQ drill core is photographed, core recovery calculated; core marked up along the orientation line and logged by Hamelin geologists. Magnetic susceptibility and pXRF measurements are taken at each metre interval down the length of the core. Geological logging is both qualitative and quantitative. Lithology, alteration, mineralisation, veins and structural data is captured digitally and stored securely in the Hamelin Gold database.
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 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>	Diamond Drilling – drill core is sawn in half with one half submitted for analysis and the other half kept in the core trays and stored Sample preparation was completed at Bureau Veritas Minerals Pty Ltd Laboratories in Perth. Samples were dried, crushed, pulverised (90% passing at a ≤75µM size fraction) and split into a sub – sample that was analysed The nature and quality of the samples collected are considered appropriate for the style of mineralisation. Field duplicates are taken at a ratio 1:50 and no work has been done to date to determine if the sample sizes are appropriate for the material being sampled.
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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	The samples have been digested with Aqua Regia. This is a partial digest though is extremely efficient for extraction of gold. Easily digested elements show good recoveries however others (particularly the refractory oxides and silicates) are poorly extracted. Routine pXRF analysis has been completed down hole but this information does not form part of this report. Laboratory QAQC involves the use of internal lab standards using certified reference material and blanks as part of in-house procedures. Hamelin also submitted an independent suite of CRMs and blanks (see above). A formal review of this data is completed on a periodic basis.
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>	The intersections included in this report have been verified by Clayton Davys (Exploration Manager) Geological logging is completed using in-house logging data systems. All data entry is carried out by qualified personnel. Standard data entry is used on site and is backed up on external hard drives and then to a cloud based database.

		No adjustments have been made to the assay data
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and	Drill hole locations collected by hand held GPS (±5m)
	down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	Grid Datum MGA94 UTM Zone 52S
	<ul><li>Specification of the grid system used.</li><li>Quality and adequacy of topographic control.</li></ul>	Down hole surveys have been carried out using a non-magnetic north seeking gyro and core orientation using Reflex ACT III Orientation Tool.
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> </ul>	A single diamond drill hole was completed in this program at the Sultan Prospect. Mineralisation has not yet demonstrated to be sufficient in both geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications to be applied.
	Whether sample compositing has been applied.	Intervals have been composited using a length weighted methodology
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</li> </ul>	N/A – this is early stage drilling and the orientation of the hole with respect to key structures is not is not fully understood however the drilling has intersected the strata at an appropriate angle not to significantly bias samples.
	of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	This is early stage drilling and the orientation of sampling to the mineralisation is not fully understood. Structural analysis of the diamond drill core in ongoing and the orientation of future drilling will be informed by this body of work.
Sample security	The measures taken to ensure sample security.	The chain of custody of the samples is managed by Hamelin. Samples were delivered by Hamelin personnel to the Coyote mine site and then transported to the assay laboratory via AWH.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	Sampling techniques and procedures are regularly reviewed internally, as is data. To date, no external audits have been completed on the Sultan data

## Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<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,</li> </ul>	The Sultan prospect is located within the tenement E80/5147 which is held by Hamelin Resources Pty Ltd, a 100% owned subsidiary of Hamelin Gold Ltd.
	<ul> <li>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</li> </ul>	The prospect is located on vacant crown land where the Tjurabalan People have been determined to hold native title rights.
	known impediments to obtaining a licence to operate in the area.	No historical or environmentally sensitive sites have been identified in the area of work.
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	Previous exploration at the Sultan prospect consisted of regional surface geochemical sampling including rock chip, lag, soil and auger sampling, and vacuum drill sampling. These techniques identified geochemical anomalies that were targeted with vacuum and rotary air blast (RAB) drilling followed by a few isolated reverse circulation (RC) drill lines.
Geology	Deposit type, geological setting and style of mineralisation.	The prospect is situated in the Proterozoic Tanami Province of Western Australia. The Sultan prospect is hosted in the Stubbins Formation.
		The Sultan prospect is considered prospective for sediment – hosted 'Callie style' vein hosted orogenic gold mineralization.
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: <ul> <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>	Refer to tabulation in the body of this announcement.
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg 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</li> </ul>	All reported assays have been length weighted, with a nominal 0.1g/t Au lower cut-off. Intervals greater than 1g/t Au have been reported as separate intervals.

	<ul> <li>results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples o 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>	No metal equivalents have been reported in this announcement.
Relationship between mineralisatio n 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 (eg 'down hole length, true width not known').</li> </ul>	The geometry of the mineralisation is not yet known due to insufficient drilling in the targeted area and therefore down hole length vs true width is not known.
Diagrams	• 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.	Refer to body of this announcement
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>	All significant intervals are reported with a 0.1g/t Au lower cut-off
Other substantive exploration data	<ul> <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>	All meaningful and material information has been included in the body of the text. No metallurgical or mineralogical assessments have been completed.
Further work	<ul> <li>The nature and scale of planned further work (eg 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>	A drill program to test along strike and up dip of high grade gold mineralisation drilled in TSD0007 will be included in the 2023 drill program.