



# North Stawell Minerals

## ASX Announcement

23 Apr 2025

## High-grade Gold Intercept Confirmed at Darlington

### HIGHLIGHTS

- Diamond Drilling has returned an impressive intercept at the Darlington Project, 6km north of Stawell, Victoria, Australia.
- A brecciated, quartz-sulphide vein with multiple occurrences of visible gold (VG) <sup>1</sup> returned:  
**2.3m at 29.2 g/t Au from 108.2m (NSD057),**  
**including 0.8m at 82.3 g/t Au from 108.2m (NSD057).**
- The intercept in NSD057 has strong similarities to the historic Mariners Lodes at Stawell - including geology, mineralisation style, structure and gold grades - presenting an exciting deposit-style to explore against. High grade gold intercepts and significant visible gold in the Stawell Corridor are not typical.
- The intercept in NSD057 occurs 70m to the west of the Darlington Mine trend, and, if parallel to Darlington, is open for 850m along strike to the south and 200m to the north, and at depth. If the Mariners-type model<sup>2,4</sup> applies, mineralisation may link to the basalt at depth.
- Four additional anomalous (<1g/t Au) zones occur down-hole, including a 6m anomalous zone at the projected, plunging Darlington mineralisation trend and a 16m anomalous zone at the targeted basalt contact<sup>3</sup>.
- NSD057 intersected the targeted basalt at 276m (120m south of the previous intercept in NSD053<sup>(3)</sup> and remains open to the south and at depth). The sediments-basalt contact is moderately altered but is cut by a late fault on the contact, potentially faulting out the planned target horizon<sup>3</sup>.

<sup>1</sup> [ASX:NSM 19 Mar 25](#). <sup>2</sup> [ASX:NSM 15 Apr 25](#). <sup>3</sup> [ASX:NSM 5 Mar 25](#). <sup>4</sup> [ASX:NSM 25 Nov 24](#).

<sup>3</sup> [ASX:NSM 26 Jul 23](#).

North Stawell Minerals ([ASX:NSM](#)) is pleased to announce an update on the results of its recent diamond drill program. The North Stawell Project includes a 504 km<sup>2</sup> contiguous package of ground that incorporates the gold-prospective corridor immediately north of Stawell Gold Mines' operation at Stawell. A thin blanket of unmineralised sediments preserves potential for large, near-surface repeats of the multimillion-ounce ore deposit at Stawell. The current focus is on two priority targets, Wildwood and Darlington, which both have potential to be repeats of the multi-million-ounce mineralisation at Stawell.



Figure 1 NDS057 – approx. 108.20m – gold (circled). A multiple-phase hydrothermal siliceous breccia includes multiple blebs of visible gold. scale bar in cm's. See also [ASX:NSM 19 Mar 25](#).

Executive Director Campbell Olsen advised:

*“The results from NSD057 have not disappointed, returning an exceptional, high-grade gold intercept at very shallow depth - 84m vertical – where visible gold was identified in the drill core ([ASX:NSM 19 Mar 25](#)). We now interpret strong parallels – geology, mineralisation, grade and structure – to the historic Mariners Lodes at Stawell, 6km to the south and are focused on how this exciting result fits into our existing understanding of the Stawell Corridor mineralisation. We've explored against a Mariners structural model for some time, anticipating structurally-controlled mineralised splays from the deeper basalts into the overlying sediments – but had not anticipated a possible repeat of Mariners high-grade gold tenor.*

*Importantly, the Stawell Corridor is not characterised by high-grade gold, with all published resources in the corridor having grades <5 g/t Au. The intercept in NSD057, if proven to be part of a larger, coherent mineralised zone, has potential to focus some of the strong interest in high-grade Victorian gold systems to western Victoria. There is precedent – the “original” Mariners Mines above the Stawell Mine include historic production of up to 0.95Moz Au at 30g/t Au ([ASX:NSM 15 Apr 25](#)).*

*We are excited to follow up on this result – the target is open in all directions. Also, the very shallow depth gives the exploration team a range of geophysical, geochemical and drilling techniques to quickly expand understanding and refine the target in a cost effective manner.”*

The Darlington prospect lies in the highly gold-prospective corridor that runs from Stawell in the south, through Darlington, and is interpreted to continue to the north of Wildwood, 20 km to the north. Within the corridor, fault-disrupted blocks of basalt occur, and the margins of these basalts are the most likely areas to host a repeat (or repeats) of the multimillion-ounce mineralisation at Stawell (Figure 3). The southern section (from Stawell to Darlington) is termed the Browns Trend and includes semi-continuous (but faulted) basalt with demonstrated, shallow gold mineralisation (Figure 3) associated with basalt margins. The northern-most 2km of the Browns Trend is on NSM tenements (EL007325 (Appendix 1)).

NSD057 (Table 1, Table 2, Figure 4) was planned to test the western flank of a non-outcropping basalt (first identified in NSD053 ([ASX:NSM 26 Jul 2023](#))) where the south-plunging Darlington mineralisation trend is interpreted to intersect the basalt (and potentially host basalt-flank mineralisation, similar to Stawell). However, drilling intersected an off-target quartz-breccia vein high in the hole (108.20-110.50m) including a **0.8m zone with visible gold** (108.20 – 109.00m (85m vertical)) (Figure 4). The mineralised zone returned:

**2.3m at 29.2 g/t Au from 108.2m (NSD057),  
including 0.8m at 82.3 g/t Au from 108.2m (NSD057).**

The mineralisation is a multi-phase, siliceous, faulted and brecciated quartz vein with local laminar textures, weakly developed stylolitic partitions and moderately (and locally strongly) developed arsenopyrite and pyrite. **Visible gold** occurs in quartz as disseminated, rare blebs to 1-3mm (Figure 1, Figure 2, [ASX:NSM 19 Mar 25](#)) and occurs 70m to the west of the Darlington trend target. The rocks, mineralisation and structures that have strong similarities to the historic Mariners Mines that occur in a similar position above and to the west of the basalt-flank-hosted mineralisation at Stawell.

NSD057 is an exploration drill hole. It does not contribute to, or change, any resource estimations.

NSD057 also includes four gold-anomalous zones (<1g/t Au) (Figure 4):

- 6 meters of anomalous gold values (<1 g/t Au) from 150.9m in the top of a faulted 27m wide (down hole) carbonaceous sediment package
- A discontinuous gold anomalous zone (<1 g/t Au) from 187m immediately beneath the same carbonaceous sediment unit, associated with quartz veining and faulting
- Multiple, discontinuous anomalous gold values (<1 g/t Au) over 8 meters from 216m down hole associated with faulting and quartz-veining where the plunging Darlington mineralised trend is interpreted to intersect the drillhole, and
- A 16 meter weakly anomalous gold zone (<1 g/t Au) from 259m in silicified sediments immediately adjacent to the basalt contact. The contact is marked by a late, 2m fault which complicates (and possibly compromises) the gold prospectivity at the contact.

The controls on the first three anomalous gold results – particularly the association with carbonaceous sediments and late faults conform to the geological controls on Mariners-type mineralisation. The thick anomalous sequence on the basalt margin has parallels to the Stawell-type gold model, with mineralisation focused on the basalt margin. The geology to the west of the Darlington basalt remains highly prospective.

The following characteristics of the high-grade gold intercept in NSD057 draw strong parallels to the historic Mariners Mines at Stawell (Figure 3, Figure 5):

- Mineralisation style: multiply faulted and annealed, highly siliceous, visible-gold bearing veins
- Structural position: late, carbonaceous faults in the western hanging wall above a basalt
- Geology: multiply faulted, intercalated sediments and carbonaceous sediments, and

- Grade tenor: the Mariners' historic production averaged approximately 30 g/t Au (see appendix 2).

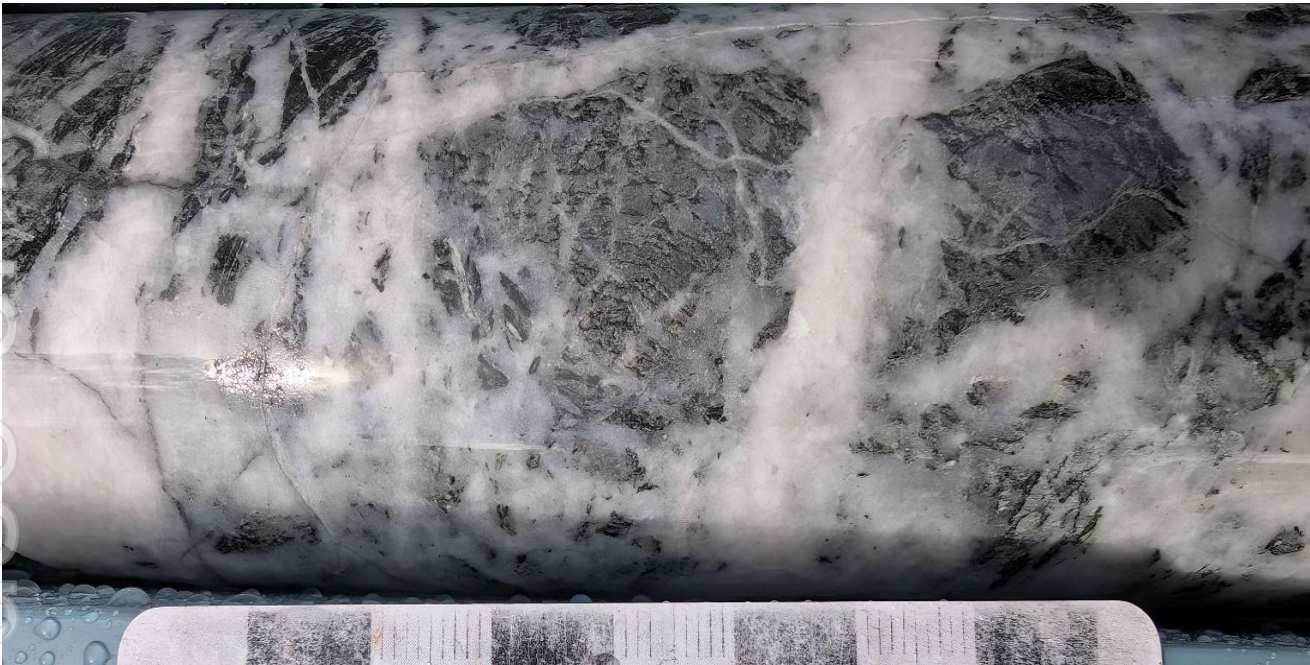


Figure 2 NSD057 - approx. 108.2m – stock-worked, silicified brecciated, arsenopyrite-altered sample. The scale is in cm.

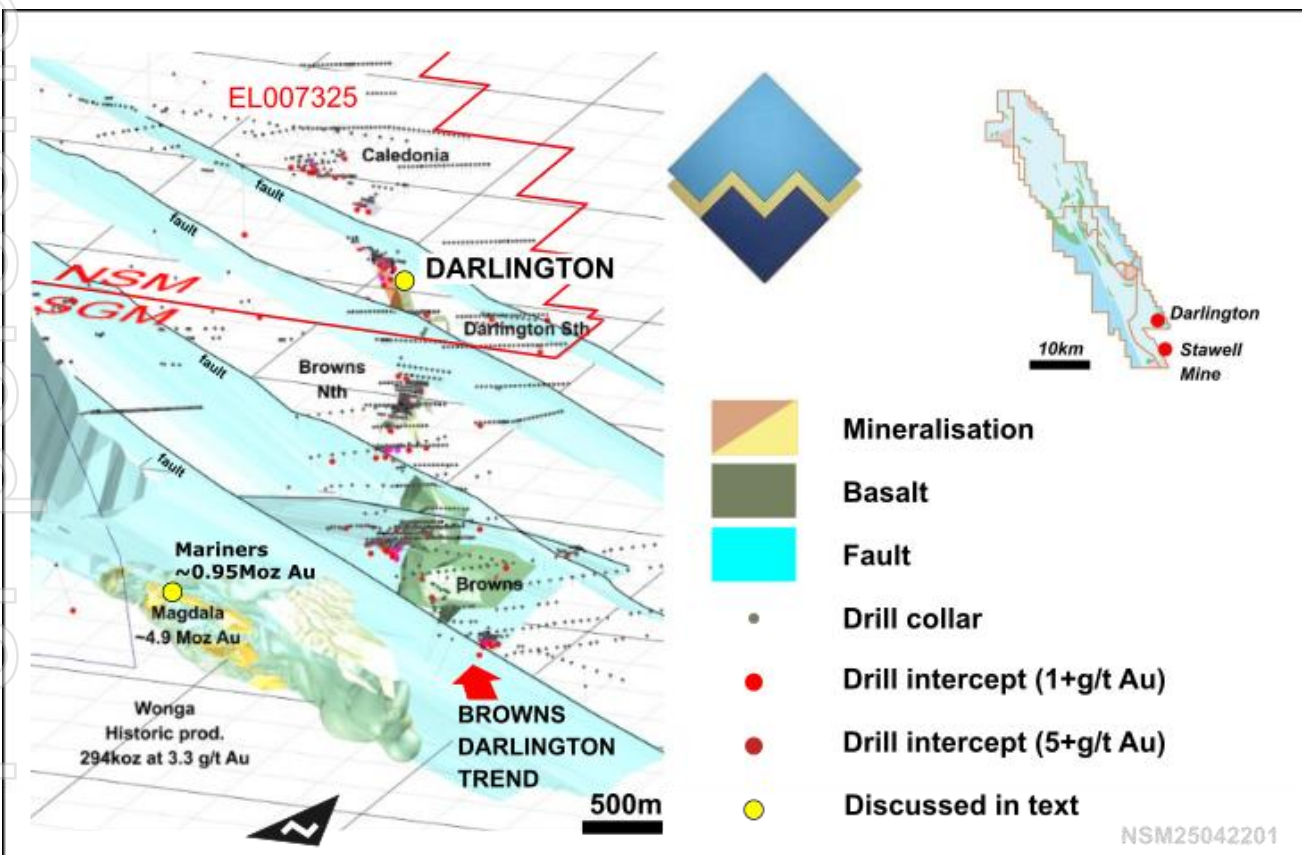


Figure 3 Regional geology, Darlington. Ortho-image looking down to the NNW along the Browns Trend.

The Mariners Mines are an interesting exploration model for follow-up strategies of the mineralisation in NSD057 (Figure 3, Figure 5). The historic Mariners mine(s) were the original focus of mining at Stawell and mined between 1856 and 1880. Multiple (30) historic shafts were sunk on the 1,100m trend to depths up to 500m and historic production records indicate that these mines produced at an average grade of

28-30 g/t Au (see Appendix 2). Mineralisation consisted of brecciated, faulted quartz-veining with visible gold adjacent to a package of carbonaceous sediments. Faulting included sub-vertical and flat sets that both host and offset mineralisation. Mineralisation is characterised by moderately north-plunging, sub-parallel lodes and associated flat-lodes. At depth, the system intersected the Magdala Basalt (the basalt buttress that hosts Stawell-type mineralisation on its margins) with mineralisation focused into the strongly sulphidic volcanogenic sediments on the basalt margin (with an associated change in ore characteristics and grades).

Importantly, the Mariners historic mining and production data demonstrates that large, high-grade gold systems can occur in the Stawell Corridor. The historic production figures at Mariners indicate that 0.75-0.95 Moz Au were produced (see Appendix 2).

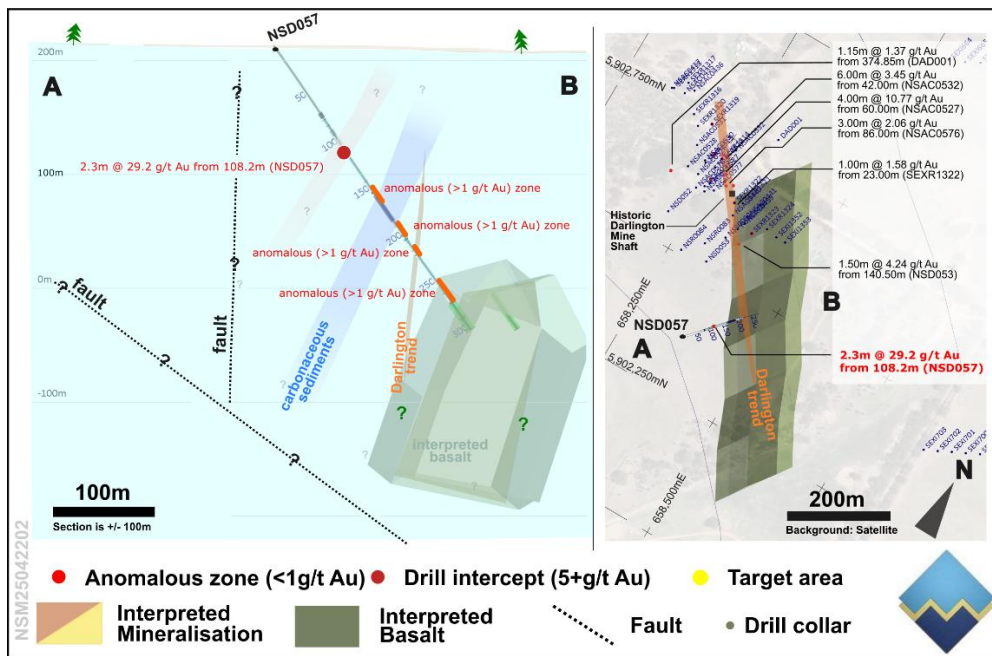


Figure 4 NSD057 - plan and section (+/- 100m). Anomalous zones match geology and are interpreted to have similar controls as at the historic Mariners Lodes. The brecciated quartz-sulphide-gold intercept (Table 2) is also interpreted as similar mineralogy to the descriptions of the Mariners Lodes, 6km to the south at Stawell.

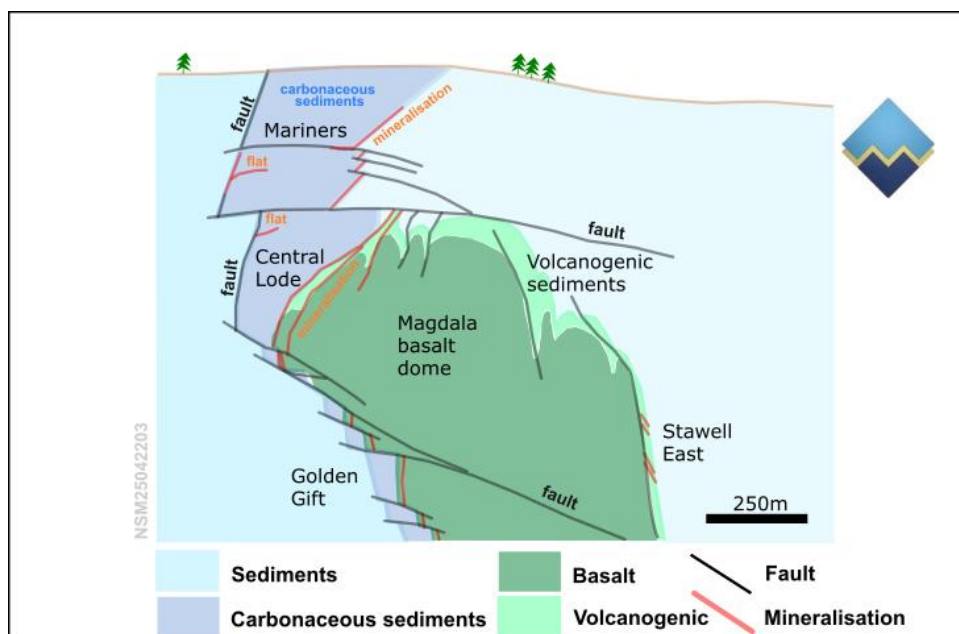


Figure 5 Simplified cross section through the Mariners Lodes (aka. hanging wall lodes). The figure demonstrates the relationship between the Mariners-type mineralisation, geology, faulting and the deeper basalt-associated (Stawell-type) mineralisation (Central Lode and Golden Gift). The mineralisation in the Mariners Lode is characterised by brecciated quartz and visible gold.

Table 1 NSD057 (coordinates GDA94 MGA54)

Hole ID	Easting (MGA54)	Northing (MGA54)	RL (ASL)	Azi (true)	Dip (degrees)	Hole Depth (m)	Target depth (m)
NSD057	658,250	5,902,321	217	042	-55	305	210-280

Table 2 Significant Intercepts, NSD057

Hole ID	Depth From (m)	depth To (m)	Interval* (m)	Gold intercept (g/t Au)	Comment
NSD057	108.20	110.50	2.30	29.2	
includes	108.20	109.00	0.80	82.3	Multiple blebs of visible gold

\* Widths are down hole intervals. Assuming that the intercepts in NSD057 are subparallel to the regional trend (typical for the region), true thickness may be 70-80% of the recorded interval thickness.

The Company advised the commencement of drilling at the Darlington target in March 2025 ([ASX:NSM 5 Mar 25](#)), and the intersection of visible gold in NSD057 in March 2025 ([ASX:NSM 19 Mar 25](#)).

For further details on the project and targets, refer to the most recent investor update ([ASX:NSM 25 Nov 24](#)) and presentation ([ASX:NSM 15 Apr 25](#)) or contacts below.

This announcement has been approved for release by the Board of Directors of North Stawell Minerals Ltd.

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### **Forward-Looking Statements**

*This announcement contains “forward-looking statements” within the meaning of securities laws of applicable jurisdictions. Forward-looking statements can generally be identified by the use of forward-looking words such as “may”, “will”, “expect”, “intend”, “plan”, “estimate”, “anticipate”, “believe”, “continue”, “objectives”, “outlook”, “guidance” or other similar words, and include statements regarding certain plans, strategies and objectives of management and expected financial performance. These forward-looking statements involve known and unknown risks, uncertainties and other factors, many of which are outside the control of NSM and any of its officers, employees, agents or associates. Actual results, performance or achievements may vary materially from any projections and forward-looking statements and the assumptions on which those statements are based. Exploration potential is conceptual in nature. There has been insufficient exploration to define a Mineral Resource, and it is uncertain if further exploration will result in the determination of a Mineral Resource. Readers are cautioned not to place undue reliance on forward-looking statements and NSM assumes no obligation to update such information.*

## **Competent Person's Statement**

*The information that relates to North Stawell Minerals Exploration Targets, Exploration Results and Mineral Resources is based on information compiled by Mr. Bill Reid, a Competent Person who is a Member of The Australian Institute of Geoscientists (AIG) and Head of Exploration of North Stawell Minerals. Mr. Reid 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' (2012 JORC Code). Mr. Reid consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.*

## **About North Stawell Minerals Limited:**

**North Stawell Minerals Limited (ASX:NSM) is an Australian-based gold exploration company, solely focused on discovering large scale gold deposits in the highly prospective Stawell Mineralised Corridor in Victoria.**

The Company is exploring prospective tenements located along-strike of and to the immediate north of the Stawell Gold Mine which has produced more than five million ounces of gold. NSM's granted tenure has a total land area of 504 km<sup>2</sup>. NSM believes there is potential for the discovery of large gold mineralised systems under cover, using Stawell Gold Mine's Magdala orebody as an exploration model to test the 51km length of tenements - northerly strike extension of the under-explored Stawell Mineralised Corridor.

## **Stawell-type mineralisation – the Magdala orebody at Stawell**

The multimillion-ounce Magdala orebody (or Stawell Mine) is owned and operated by Stawell Gold Mines (SGM) and makes an excellent model for exploration. The style of mineralisation is termed Orogenic Gold and has many similarities to other Victorian gold deposits (e.g. Bendigo, Ballarat, Fosterville) where the mineralisation exploits structures that are developing as the host rocks are compressed, folded and faulted. The mine is 3.5km long, approx. 400m wide and mined to depths of around 1,600m. The mineralisation is centred on a large buttress of doubly plunging basaltic rock (the Magdala "Dome"). Ore shoots are on – or proximal to – the margins of the basalt, occurring where the structures that control the mineralisation bend and warp around the basalt. The mine is still operational.

## **Exploring for Stawell-type mineralisation through cover**

The Stawell Gold Mine was found in the 1850s where gold occurred close to the surface and was not obscured by a blanket of sedimentary cover. Over 80% of NSM's tenements are masked by sediments, but the underlying rocks and structures are similar to Stawell. Multiple repeats of basaltic "domes" are interpreted throughout the NSM tenements and elsewhere along the Stawell Corridor. The basalt domes - intrinsically associated with Stawell-type mineralisation – can be detected with geophysics and identified through the blanket of cover. New geophysical processing and acquisition by the Company is leveraging off the geophysics response to find "domes" as a pathway to finding the next, multimillion-ounce, shallow gold deposit north of Stawell

## **Other mineralisation potential**

Multiple shears, thrusts, faults and folds occur through the NSM tenements. These also have the potential to host Orogenic Gold systems without basalt domes (more typical of Ballarat and Bendigo). However, they are more challenging targets through the covering sediments as they lack the geophysical signature of the "domes" found in Stawell-type mineralisation. Intrusion related gold (IRG) and thermal aureole gold (TAG) type deposits are possible as late granites intrude the folded rocks with potential to remobilise and upgrade existing mineralisation or be mineralised themselves. Volcanogenic-Hosted Massive Sulphides also occur in the Stawell Corridor. At surface, within the cover sediments, Heavy Minerals Sands are known to occur at impressive volumes.

**Appendix 1: NSM Tenement Summary**

Tenement	Status	Number	Area (km <sup>2</sup> )	Graticules <sup>1</sup>	Initial NSM holding	Earn-in potential
Wildwood	Granted	RL007051	50	50	51%	90%
Barrabool	Renewal	EL5443	182	194	51%	90%
Glenorchy	Granted	EL006156	10	18	100%	n/a
West Barrabool	Granted	EL007419	37	40	100%	n/a
Wimmera Park Granite	Granted	EL007182	4.5	9	100%	n/a
Deep Lead	Granted	EL007324	167	209	51%	90%
Germania	Granted	EL007325	54	82	51%	90%
<b>Total granted</b>			<b>504.5</b>	<b>602</b>		

<sup>1</sup> Exploration Licence areas in Victoria are recorded as graticular sections (or graticules). Graticules are a regular 1km by 1km grid throughout the state. The graticular sections recorded for an exploration licence are the count of each full graticule and each part graticule. If the tenement shape is irregular, the actual area (km<sup>2</sup>) is less than the graticular area.

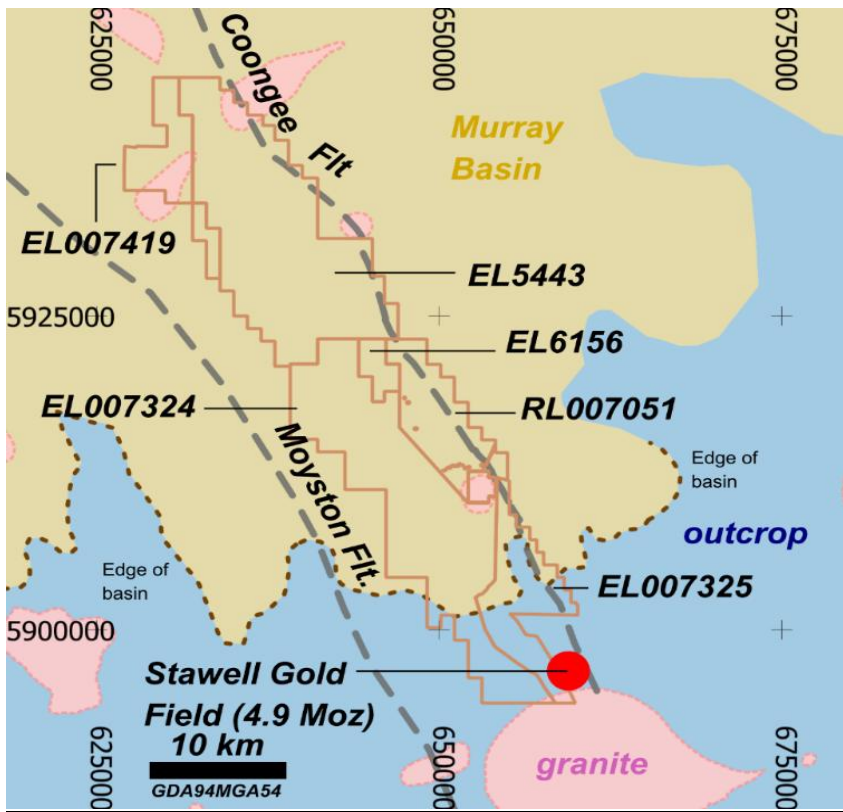


Figure 6 North Stawell Minerals – Tenements



## Appendix 2: Reconstruction of the Mariners Mine from public data

The information on the Mariners Mine (Hanging Wall Lodes) above the Stawell-type mineralisation at Stawell (on the footprint of the Stawell Gold Mines Mining Lease) is compiled from a range of public data sources, including:

1. <https://northstawellminerals.com/our-projects/>
2. <https://smedg.org.au/still-exploring-below-1000m-but-no-headframe/>
3. Fredericksen and Gane, 1998
4. <https://stawellgoldminescommunityhub.com.au/news/>
5. Kirkland Lake 43-101 Stawell. 2016. Sedar
6. <https://portergeo.com.au/database/mineinfo.asp?mineid=mn654>
7. GSV search assist (<https://gsv.vic.gov.au/SearchAssistant2/search?q=>) : maps 14841, 10418, 14845, 34960, 33231, 33230, 33229, 14850, 33228, 33233
8. Geovic (<https://resources.vic.gov.au/geology-exploration/maps-reports-data/geovic>) historic mine data

The historic information indicates that the historic mining centre produced between 0.78Moz Au at 29 g/t Au<sup>(8)</sup> and 0.95 Moz Au at 30 g/t Au<sup>(6)</sup>. Reconstruction from historic maps<sup>(7)</sup> demonstrates the geometry of the mineralised system; 1600m long (mainly within 1,100m), 2-10m wide, 500m deep and 50-350m outboard to the west of the mineralisation at Stawell. Ore styles and textures and mineralogy are described with sufficient details to understand some of the principal differences to the mineralisation found adjacent to the basalts<sup>(1,2,3,5,6)</sup>, and the similarities to the mineralisation encountered at Darlington.

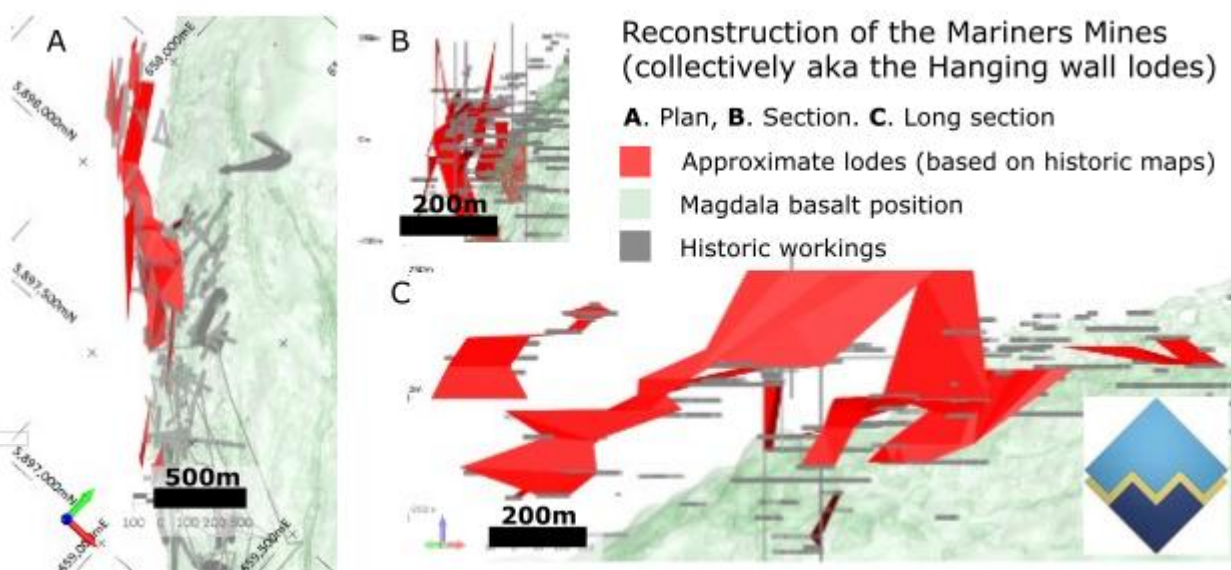


Figure 7 Rebuild of the Mariners Mines (Hanging wall Lodes) from public data, information and reports).

**JORC Table 1**  
**Section 1a Sampling Techniques and Data – NSM Diamond Drilling**  
**Section 1b Sampling Techniques and Data – Historic Data**  
**Section 2 Reporting of Results – NSM Diamond Drilling**

**Section 1a. Sampling Techniques and Data – NSM Diamond Drilling**

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

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole 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 30g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems.</li> </ul>	<p>The diamond drill core samples were selected on geological intervals varying from 0.3m to 1.0m in length.</p> <p>All drill core was routinely cut in half (typically on the right of the marked orientation line) with a Almonte diamond saw and selected intervals submitted for analysis.</p> <p>Sample representivity was ensured by a combination of Company procedures regarding quality control (QC) and quality assurance testing (QA). Certified standards and blanks were routinely inserted into assay batches. Duplicates are taken as field duplicates and laboratory duplicates to monitor variability.</p>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).</li> </ul>	<p>Pre-collars (PCD) were drilled to competent saprolite followed by diamond coring NQ2.</p> <p>All drill core was orientated with a core gyro orientation tool every core barrel run. At the Core farm, core was continuously oriented and aligned during logging.</p>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure the 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>	<p>All diamond core was logged capturing any core loss, if present, and recorded in the database.</p> <p>All drill depths are checked against the depth provided on the core blocks and rod counts are routinely carried out by the driller.</p>
<b>Logging</b>	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<p>Geological logging of samples followed Company and industry common practice. Qualitative logging of samples included (but was not limited to), lithology, mineralogy, alteration, structure, veining and weathering.</p> <p>All logging is quantitative, based on visual field estimates.</p> <p>Detailed diamond core logging, with digital capture, was conducted for 100% of the core.</p>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> </ul>	<p>Half core was sampled from NQ diameter drill core, cut with an Almonte saw. Half core is retained for further study and reference.</p> <p>Company procedures were followed to ensure</p>

- For all sample types, the nature, quality and appropriateness of the sample preparation technique.
- Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.
- 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.
- Whether sample sizes are appropriate to the grain size of the material being sampled.

sub-sampling adequacy and consistency. These included (but were not limited to), daily workplace inspections of sampling equipment and practices.

Blanks and certified reference materials are submitted with the samples to the laboratory as part of the quality control procedures. Sampling is primarily based on geological and mineralogical observation, with priority units oversamples by 5-10 cm to ensure mineralised margins report with the prospective geology.

#### Quality of assay data and laboratory tests

- The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.
- For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis include instrument make and model, reading times, calibrations factors applied and their derivation, etc.
- 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.

Analysis for gold is undertaken at Gekko Laboratories (GAL) by 2-3kg Leachwell Bottle Roll with a 27 element ICP finish to a lower detection limit of 0.01ppm Au using ALS technique Au-AA26. Sample weight data is returned as well as laboratory QAQC.

A 50g Fire assay is conducted on the Leachwell tail to determine residual gold values.

A review of certified reference material and sample blanks inserted by the Company indicate no significant analytical bias or preparation errors in the reported analyses.

Internal laboratory QAQC checks are reported by the laboratory and a review of the QAQC reports indicates the laboratory is performing within acceptable limits.

#### Verification of sampling and assaying

- The verification of significant intersections by either independent or alternative company personnel.
- The use of twinned holes.
- Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.
- Discuss any adjustment to assay data.

The data has been verified by North Stawell Minerals' Competent Person.

Data entry is via standardized Company excel templates, using pre-set logging codes, with built in validation checks.

Data is stored in a third-party geodatabase (Datashed 4) and managed by Stawell Gold Mines DBA with further internal validations before export products are generated. Data is further validated visually in GIS and 3D software by North Stawell Minerals personnel.

#### Location of data points

- The 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.
- Specification of the grid system used.
- Quality and adequacy of topographic control.

All maps and locations are in MGA Grid (GDA94 zone MGA54).

All drill collars were determined with an EMLID Kinematic GPS. Final collar pick-ups were completed with the same instrument, with accuracy <0.01m (including elevation)

An initial topographic control is achieved via use of DEM acquired during Airborne gravity acquisition. Final elevation is by Kinematic GPS.

Gyro down-hole surveys were taken every 30m on the way down to verify correct orientation and dip then multi-shots survey taken every 6m on the way out of the drill hole at hole completion.

#### Data spacing and distribution

- Data spacing for reporting Exploration Results.
- 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.

Drill hole spacing in these vanguard holes is bespoke, targeting geology cf. fences. Collars and targets are determined from geochemical, geophysical and geological data. Effort is made to ensure a 60m x 60m or 80m x 80m pierce points on-target. Collars are determined to deliver as equally spaced as possible intercepts

	<ul style="list-style-type: none"> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>	<p>(geology notwithstanding)</p> <p>Drilling reported in this program are step-out and infill drillholes and may contribute to future mineral resource or ore reserves. Pierce points are determined on the same grid as historic drilling.</p> <p>Refer to sampling techniques, above for sample compositing.</p>
<p><b>Orientation of data in relation to geological structure</b></p>	<ul style="list-style-type: none"> <li>• <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li>• <i>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.</i></li> </ul>	<p>Prior exploration has returned a defensible orientation of the potential mineralisation. The exact location of mineralisation, in relation to lithological and structural boundaries, is relatively well understood in the main, although additional intercepts that depart from the geological model can occur.</p> <p>The drill orientation is attempting to drill perpendicular to the geology and mineralised trends previously identified from earlier drilling.</p>
<p><b>Sample security</b></p>	<ul style="list-style-type: none"> <li>• <i>The measures taken to ensure sample security.</i></li> </ul>	<p>The chain of custody is managed by internal staff and transport contractors. Drill samples are stored on (fenced and secured) site and transported by a licensed reputable transport company to Gekko Assay Laboratories – or by company staff. Sample receipts are issued. At the laboratory samples are stored in a secure yard before being processed and tracked through preparation and analysis.</p> <p>Sample information other than the company name and the sample ID are not provided to the laboratories.</p>
<p><b>Audits or reviews</b></p>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of sampling</i></li> </ul>	<p>An external review of data is underway, as part of data due diligence for a Mineral Resource update.</p>

## Section 1b Sampling Techniques and Data - Historic Drilling

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

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>Nature and quality of sampling (e.g., cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g., 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems.</li> </ul>	Historic results are from previous exploration conducted by past explorers including Rio Tinto Exploration, WMC Resources, Leviathan Corporation, Highlake Resources, Planet Resources and Stawell Gold Mines.
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>Drill type (e.g., core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g., core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<p>A variety of techniques have been used in historic drilling and includes regional lines of RAB or Air core drilling (357 of 732 historic holes) over identified structures or geophysical anomalies. Follow up historic RC drilling (233 holes) under AC anomalies occur is sound practice. Pattern drilled RC at Wildwood is likewise an industry standard for resource drilling. Forty-eight historic diamond holes (8,228m) were completed – mainly focused on near Mine targets in the south and in the Wildwood Project area (RL007501).</p> <p>Standard Industry techniques have been used for historic drilling where documented.</p>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<p>For historic data, if available, drilling data recoveries (e.g., weights for historic AC/RC drilling and recoveries for historic diamond drilling are recorded.</p> <p>No tests for bias are identified as yet for historic results.</p>
<b>Logging</b>	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<p>Geological logging of historic holes, where reviewed, follows industry widespread practice. Qualitative logging includes lithology, mineralogy, alteration, veining and weathering and (for core) structures.</p> <p>All historic logging is quantitative, based on visual field estimates.</p>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> </ul>	Standard industry practices are expected to be in place. However, QAQC data is incomplete in the historic data. It is considered that historic explorers have used appropriate analytical methods.

- For all sample types, the nature, quality and appropriateness of the sample preparation technique.
  - Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.
  - 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.
  - Whether sample sizes are appropriate to the grain size of the material being sampled.
- Historic core sampling is typically sawn half-core.
- Historic RC and AC samples are typically riffle split or spear sampled. Information is not always complete.
- Historic sampling is typically dry.

#### Quality of assay data and laboratory tests

- The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.
  - 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.
  - 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.
- Historic assays include gold +/- arsenic and base metals. Assays are generally aqua regia or fire assay. Detection limits and techniques are appropriate for historic results.

#### Verification of sampling and assaying

- The verification of significant intersections by either independent or alternative company personnel.
  - The use of twinned holes.
  - Documentation of primary data, data entry procedures, data verification, data storage
  - (Physical and electronic) protocols.
  - Discuss any adjustment to assay data.
- Historic intercepts have not been verified by the Company. The data from WMC, Leviathan and Stawell Gold Mines has been verified as part of entering data into geological databases.
- No adjustments to assay data have been made.

#### Location of data points

- 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.
  - Specification of the grid system used.
  - Quality and adequacy of topographic control.
- Locations for historic collars have been captured in WGS84, AGD 66 and GDA94 projected coordinates or in local grids. All data is reprojected as GDA94 MGA54.
- Historic drill collars have been determined with multiple techniques, ranging from survey pick-up through differential GPS.
- Topographic data is based on generational topographic maps and/or survey pick-up. Topographic control, for regional exploration, has not been validated.
- Future use of data will verify recorded elevations against high-resolution topographic data acquired by NSM.

#### Data spacing and distribution

- Data spacing for reporting of Exploration Results.
  - 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.
  - Whether sample compositing has been applied.
- Historically, variable drill hole spacings are used to test targets and are determined from geochemical, geophysical and geological data.
- Historic regional and geochemical drilling (AC) is drilled on strike perpendicular fences, with approx. 100m hole spacings and 100-400m line spacing.
- Historic RC sampling is generally specifically targeted to follow up AC results. Minor RC fences are drilled, on 30-200m spacing.

Historic diamond drilling is located to follow up on specific prior results or targets.

Historic data in the footprint of the NSM tenements were designed and executed as regional exploration (except at Wildwood, RL007051). The historic drilling data has not been reviewed for its appropriateness to inform Mineral Resource Classification. Wildwood is outside the discussion required for this announcement.

**Orientation of data in relation to geological structure**

- *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*
- *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.*

The historic drill orientation is perpendicular to the regional geology and known mineralised trends previously identified from earlier drilling.

**Sample security**

- *The measures taken to ensure sample security.*

Sample security has not been reviewed for the historical data.

**Audits or reviews**

- *The results of any audits or reviews of sampling*

There has not been internal or external audit or review of historic assays identified.

## Section 2 Reporting of Results – NSM Diamond Drilling

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<p>Current tenements are summarised in Appendix 1 -Table 1 of the announcement. Historic tenements are identified from the Victorian Government Geovic online spatial resource.</p> <p>All granted tenements are current and in good standing.</p> <p>The project area occurs on freehold land. Minor Crown Land (&gt;3%) and Restricted Crown Land (&gt;1%) is identified. All areas are accessible if appropriate land access requests and agreements are in place.</p> <p>The Victorian Governments Geovic spatial online resource does not identify any material cultural, environmental or historic occurrences.</p> <p>The southern end of EL007325 encompasses parts of the Stawell Township. These areas are complicated by dense, urban freehold land parcels, and challenges gaining access may occur if attempted.</p> <p>EL007325 is held by Stawell Gold Mines (SGM). North Stawell Minerals has an earn-in agreement with SGM. Initial Interest is 51%. Up to 90% earn-in can be achieved on meeting agreement conditions.</p> <p>EL007325 “Germania” was granted in November 2021.</p> <p>Tenement security is high, established in accordance with the Victorian Mineral Resources Act (MRSDA) and Regulations (MR(SD)(MI)R 2019).</p> <p>Victorian Exploration licences are granted for a 5-year initial term with an option to renew for another 5 years. Compulsory relinquishments are as follows; end of year 2 - 25%; end of year 4 - 35%; end of year 7 - 20%; end of year 9 - 10%. An additional 5 years is possible at the discretion of the Minister.</p>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<p>The Tenure area has been explored in several campaigns since the 1970’s, principally by companies related to Stawell Gold Mines and its predecessors (initially WMC Resources in the 1970’s, Leviathan Resources and then subsequent owners).</p> <p>Rio Tinto Exploration, Planet Exploration, Highlake Resources and Iluka Resources have also held parts of the tenement historically.</p> <p>Public data available on exploration programmes has been downloaded from the Victorian State Governments’ GeoVic website and sometimes describes exploration strategy, which is consistent with exploring for gold mineralisation under shallow cover into structural targets generated from available geochemistry and geophysics.</p> <p>Although NSM has reviewed and assessed the exploration data, it has only limited knowledge of the targeting and planning process and, as a consequence, has had to make assumptions based on the available historical data generated by these companies. However, the methodology appears robust.</p> <p>Work by Iluka was for Heavy Minerals exploration and is not material to gold exploration.</p>



Most programs include regional lines of RAB or AC drilling (13 of 14 holes for 2927m) around the immediate environs of the historic Darlington Mine

A single historic diamond hole is drilled into Darlington (DADD001 – 209.57m), located below the historic mine shaft. The hole was drilled to the west.

In prior programs NSM has drilled 22 AC holes for 4659m between 2022 and 2023. In 2023, 2 diamond holes were drilled into the southern trend, and total 428.8m.

In the far south of tenement EL007324 and EL007325, exploration is typically testing for fault-repeats of the Stawell-type mineralisation, centred on magnetic anomalies. Basalt 'dome' analogies were identified with minor associated gold mineralisation.

Historic and modern work includes:  
 142,000m AC (2,422 holes)  
 34,358m RC (449 holes)  
 47,261m DD (211 holes)  
 10,003 geochem samples  
 504km<sup>2</sup> high-res Magnetics  
 504km<sup>2</sup> high-res Gravity (AGG)  
 211km<sup>2</sup> Inversion modelling

## Geology

- *Deposit type, geological setting and style of mineralisation.*

The project areas are considered prospective for the discovery of gold deposits of similar character to those in the nearby Stawell Gold Mine, particularly the 5Moz Magdala gold deposit located over the Magdala basalt dome. The Stawell Goldfield has produced approximately 5 million ounces of gold from hard rock and alluvial sources. More than 2.3 million ounces of gold have been produced since 1980 across more than 3 decades of continuous operation.

Orogenic Gold occurrences are possible away from the basalt domes.

Mariners-type gold (occurring as splays above the roof of the basalt domes) is possible (and interpreted as likely in this announcement) and characterised by the type-deposit at Mariners above the Stawell Mine, including brecciated, gold-bearing quartz veins associated with late faulting and, sometimes, carbonaceous sediments.

The geological setting is a tectonised accretionary prism on the forearc of the Delamerian-aged Stavely Arc active plate margin.

Elements of the subducting tholeiitic basaltic ocean crust are incorporated into the accretionary pile and are important preparatory structures in the architecture of Stawell-type gold deposits.

Mineralisation is a Benambran-aged hydrothermal (orogenic gold) overprinting event – penecontemporaneous with other major mineralisation events in western and central Victoria (e.g., Ballarat, Bendigo, Fosterville).

## Drill hole Information

- *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:*
  - *easting and northing of the drill hole collar*
  - *elevation or RL (Reduced Level—elevation above sea level in metres) of the drill hole collar*

All required tables, images and discussion to understand the results of NSD057 are in the body of this announcement.

Historic results are summarised as assays extracted from a historic, managed, validated database solution (Datashed), and associated procedures for QAQC.

	<ul style="list-style-type: none"> <li>o dip and azimuth of the hole</li> <li>o down hole length and interception depth</li> <li>o hole length.</li> </ul>	Historic easting and northings are captured as WGS84, AGD66 and GDA94 coordinates. All are transformed to GDA94MGA54S for the collar tables.
	<ul style="list-style-type: none"> <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>	Drill collar elevation is defined as height above sea level in metres (ASL).  Drill holes were drilled at an angle deemed appropriate to the local structure and stratigraphy and is tabulated. Regional AC and RAB holes are typically vertical.  Hole length of each drill hole is the distance from the surface to the end of hole, as measured along the drill trace.  Tabulated data is included in this report, with all relevant details.
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g., cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>• Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>• The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<p>Determination of gold grades is a weighted average method of grades above 1 g/t Au, with no external dilution and a maximum of 2m of internal dilution. Internal dilution is attributed the sub-1 g/t value or, if below detection, 0 g/t Au. No top cuts have been applied.</p> <p>Historic results</p> <p>Intercept summaries (composites) are determined from the historic assays using the same criteria as NSM summarised data (see above).</p> <p>Weighted averages are applied with up to 2m of internal dilution and no external dilution.</p> <p>No top cuts have been applied.</p> <p>A nominal 1 g/t Au or greater lower cut-off is reported as being potentially significant in the context of this report. No metal equivalent reporting is used or applied.</p>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>• These relationships are particularly important in the reporting of Exploration Results.</li> <li>• If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>• If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g., 'down hole length, true width not known').</li> </ul>	Estimated true widths are based on orientated drill core axis measurements and are interpreted to represent between 30% to 80% of total downhole widths.
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	Diagrams are included in this report, including locations, plans, sections, and areas mentioned in the text.
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be</li> </ul>	<p>All drill hole results received have been reported in this announcement. Results for a subsequent program at Darlington are pending.</p> <p>No holes are omitted for which complete results have been received.</p>

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*practiced avoiding misleading reporting of Exploration Results.*

For the exploration results, only significant exploration results are reported and described.

**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.*
- All relevant exploration data is shown in diagrams and discussed in text.

**Further work**

- *The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling).*
  - *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*
- Discussion on further work will be possible when the current drillhole is clogged and quantitative assays returned for the laboratory.
- A second planned diamond hole is currently drilling.
- The shallow position of the intercept in NSD057 and the thick weathered saprolite is best suited to air drilling. A program to assess the new mineralisation trend will be designed during the next Quarter. The shallow position and the silicification of the intercept suggest IP surveying may be appropriate to delineate a trend.
- Hi resolution, multi-element geochemistry, appropriately designed and targeting chemical “fingerprints” from yet to be sampled and returned assays will also be considered.
- The location of the Darlington target may be amenable to winter drilling, particularly if the current dry conditions continue.

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