



# North Stawell Minerals

## December 2023 Quarterly Activities Report

25 January 2024

### Company Details:

**ASX: NSM**

ACN: 633 461 453

[www.northstawellminerals.com](http://www.northstawellminerals.com)

#### **Capital Structure**

Shares: 139.875M

Performance rights: 1.81M

Share Price \$0.05\*

Cash: \$1.34M\*

Market Cap: \$6.99M\*

*\* at 31 Dec 2023.*

#### **Project**

North Stawell Gold Project



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### Highlights:

- A significant review of the **Wildwood** Basalt dome has identified untested structural targets to the north and south and at depth with some favourable comparisons to the Stawell Mine mineralisation.
- **NSM capital raise** - a Non-Renounceable Entitlement Offer was announced to the market in December, with successful completion on 28 December announcing \$985,106 raised. The Shortfall under the Entitlement Offer may be placed over Q3.
- Updated targeting complete throughout the project – 40km of air core drilling planned and 4,500m of diamond drilling planned and prioritised.
- **Prioritised planned drilling** focusses on highly strategic holes at Wildwood and Darlington.
- Toni Griffith was appointed as **CFO** – bringing 35 years mine finance and corporate experience to NSM.
- **Mineral systems** (petrology) and **machine learning** projects continue to advance with discussion around next steps on-going.



## OVERVIEW

North Stawell Minerals Chief Executive Officer Russell Krause commented:

*“NSM has continued to progress it’s corporate and operations positions, with significant focus on capital raising to support operations. Activities have been tailored to mitigate risks.*

*A \$2M non-renounceable entitlement offer was also commenced, securing \$0.985M at end-December, including 100% uptake from NSM’s major investors. In December, the corporate team was bolstered by the appointment of Toni Griffith as CFO (ASX:NSM 30 Nov 23) who brings significant mine finance and corporate experience to the team.*

*An anticipated mid-December start to drilling has been deferred as significant rain has curtailed access to field sites and focus diverted to the Entitlement Offer process.*

*The Quarter has allowed the geology team to continue geological interpretation and understanding, including the opportunity for exploration geology to significantly increase its exposure to the mine geology at Stawell. At Wildwood, NSM has identified several areas where structures intersecting the Wildwood basalt can be extended into untested areas, re-defining some priority targets – particularly step-outs from the 87koz Au Mineral Resource (ASX:NSM 27 June 23) - and confirming Wildwood as a priority drilling target. The intersection of altered and (weakly) mineralised basalt at Darlington (ASX:NSM 29 June 23) suggests a compelling analogy to Stawell – also a priority target. 4,500m of diamond drilling has been designed to test both the targets, but only key, strategic holes are planned to be drilled in the short term.*

*Multiple other prospects have been confirmed with drilling and will be further tested after priority drilling is complete. Forsaken and Caledonia include encouraging near-surface gold mineralisation and are open at very shallow depths through cover. The Challenger prospect is a 3,500m trend of anomalous gold. Lubeck tip has significant gold grades occurring on the margins of an NSM-discovered shallow basalt – open down-plunge to the south.*

*A total of 60km of basalts with potential to host Stawell-like mineralisation on the basalt contacts is identified under cover in the NSM tenements. Only half of the basalts has any drilling (ASX:NSM 15 Nov 23). 40,000m of air core drilling has been designed to continue to test these targets and will be completed gradually as drill rig availability, weather and funding permits.*

*NSM has continued discussions for M&A opportunities, focussed on gold projects within the economic footprint of the processing plant at Stawell (ASX:NSM 01 Dec 23.) These discussions are continuing. Any material developments will be advised to the market as and when appropriate.*

*Exploring through cover north of Stawell strongly benefits from the deposit styles response to geophysics – which can be used to see through the blanket of thin, unmineralised sediments that both mask and preserve shallow large gold mineralisation potential. NSM has focussed heavily on these techniques as they focus exploration effectively on a cost and time basis.*

*We continue working with our stakeholders and landholders to ensure we are communicating and liaising with the community with regards to exploration and on-field activities.*

*The 23-24 drilling season, despite a delayed start, includes some exciting targets that can build significantly on prior work, and with increased focus on key targets and resources.”*



## **CORPORATE ACTIVITIES**

During the Quarter, corporate activity has focused on a number of areas including corporate governance, appointment of a CFO, M&A opportunities and capital raising.

The 2023 Annual Report, Appendix 4G and Corporate Governance Statement were completed in October (ASX:NSM 20 Oct 23) and issued to Shareholders. The subsequent NSM Annual General Meeting was held on 20 November with all resolutions passed (ASX:NSM 20 Nov 23).

Two NSM delegates attended the Noosa Mining Conference in mid-November providing an opportunity for professional development and a chance to communicate scientific and general exploration works completed on the NSM tenements with industry peers.

In late November, Toni Griffith joined the NSM team as Chief Financial Officer, replacing the previous incumbent, Kevin Lam. Ms Griffith brings over 35 years of experience in the mining and exploration industry and is a valuable addition to the NSM team (ASX:NSM 30 Nov 23).

NSM continues to review gold projects in the Stawell region within commercial transportation distance from the Stawell Gold Mine. There are several opportunities that are of interest. Non-Disclosure Agreements have been signed and commencement of the Company's due diligence process. Should the due diligence process provide a sound basis for progressing, final review and negotiation of the commercial terms of the possible transaction will commence. If agreement is reached, it will be communicated to shareholders and the ASX.

During the Quarter, NSM commenced a capital raise by way of a 1 for 3 non-renounceable pro-rata entitlement offer at an issue price of \$0.05 per share (ASX:NSM 8 Dec 23). The Company announced the successful completion of the Entitlement Offer on 28 December raising \$985,106 and notifying the market of the Company's intention and capacity to place the shortfall under the entitlement offer over the next three months.

## **FINANCE**

During the quarter, the finance team aided by consultants lodged the 2023 Income Tax Return and made a Research & Development Tax Incentive Application that was subsequently granted. The Application resulted in a refund to the Company in mid-January (ASX:NSM 17 Jan 24).

The Corporate and operations team reviewed prior period expenditure during the Quarter looking for areas of opportunity to build a more efficient and effective plan, team and forecast given the intended exploration objectives and current funding status. The effect of this review should become evident during the March 2024 Quarter.

Planning for the December 2023 Half Year review also commenced.

During the quarter, NSM recognised entitlement offer proceeds net of transaction costs of \$912,900, recognised \$261,800 cashflow on exploration and evaluation activities, and recognised insurance premium funding as a loan facility. Net cash outflow from operating activities was \$407,500. Related party expenditure included director fees and associated superannuation payments totalling \$63,300. The closing cash balance at 31 December 2023 was \$1,341,100.



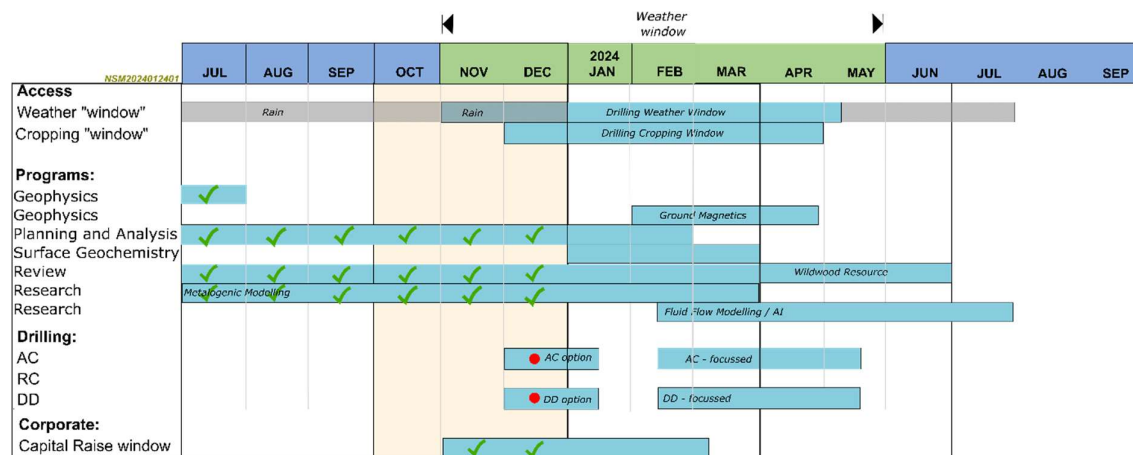
## EXPLORATION ACTIVITIES

A 5-year renewal application was submitted in December for EL5443 (Figure 1, Appendix 1), Barrabool. Victorian regulation permits exploration activity to continue during the renewal process. The Regulators response will be communicated in due course.

Work done and work planned is summarised in Table 1, Planned and completed work. The drilling season typically commences in November, with unrestricted land access (post-harvest) from mid-December. However, during the December Quarter, exploration programs were deferred due to a prolonged wet season impacting access and awaiting the outcome of the entitlement offer process.

40km of Air Core and 4,500m of diamond drilling have been planned. However, into 2024, programs are tailored to focus on priority targets. Despite tailoring field programs, key targets at Wildwood and Darlington with highest strategic value remain in the NSM exploration schedule for early 2024. The NSM project pipeline, summarises priorities (Figure 8).

Table 1 Planned and completed work.





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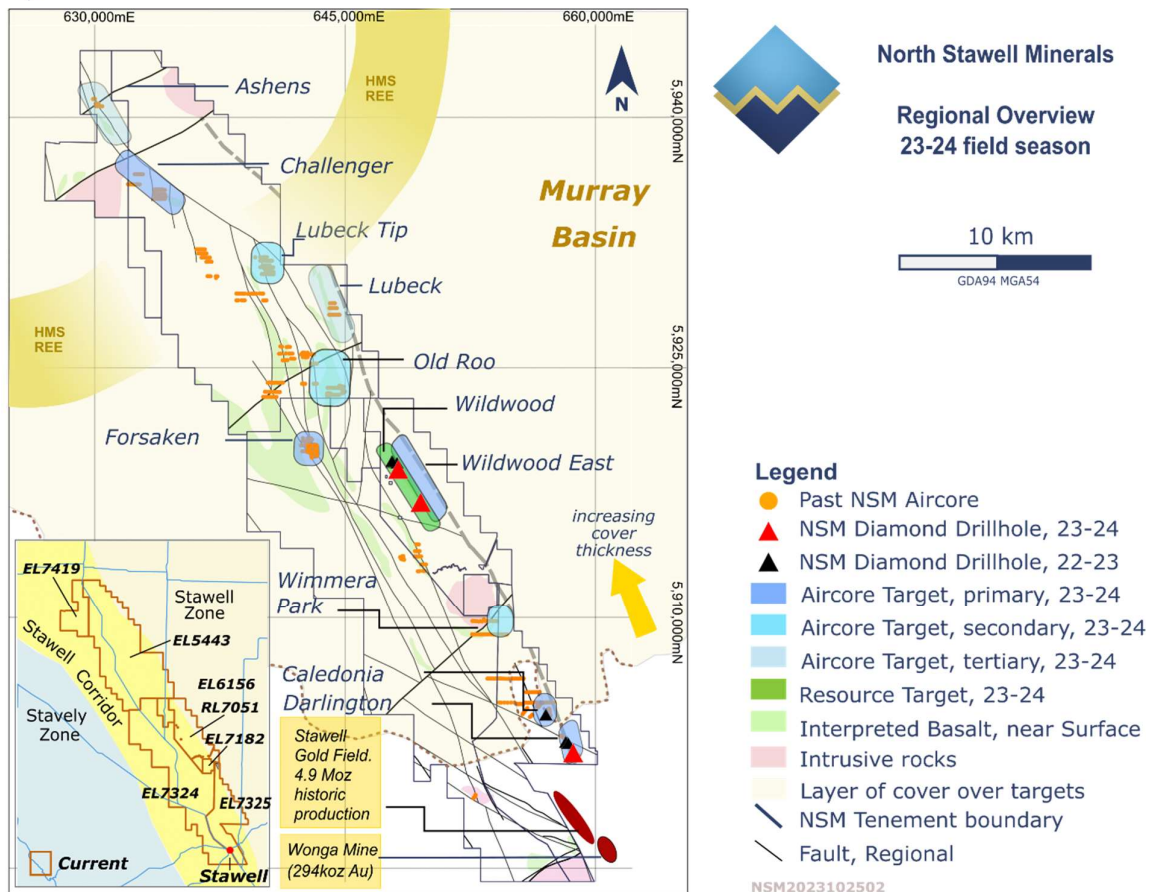


Figure 1 Overview of NSM tenements showing work done during the quarter and key prospects.

## PRIORITY TARGETS

Following the update of the Wildwood Mineral Resource (87,300oz Au at 2.4 g/t Au (1 g/t cutoff) (ASX:NSM 29 June 23)), additional focus has been applied to review the potential of the project, which is open in several areas. Focus included, based on new interpretation and new drill data:

- Infill, near-resource and new opportunities around **Wildwood** to expand the Mineral Resource as well as test for extensions of structural targets.
- Focused geological review of the controls on mineralisation (including thin section work)
- A substantial (and opportunistic) increase in geologists' exposure to the mineralisation at Stawell Gold Mine (the type-deposit for the NSM exploration model).

The mineralisation at Wildwood occurs on the margins of a structurally buttresses basalt (the same controls as at the historic 5Moz mineralisation at Stawell). Mineralisation is focussed where two parallel vertical structures intersect the basalts. The targets are interpreted to propagate to the north and south, reversing plunge depending on the orientation of the basalt. Figure 2 shows the structural targets as well as previous drilling. Untested corridors are identified.

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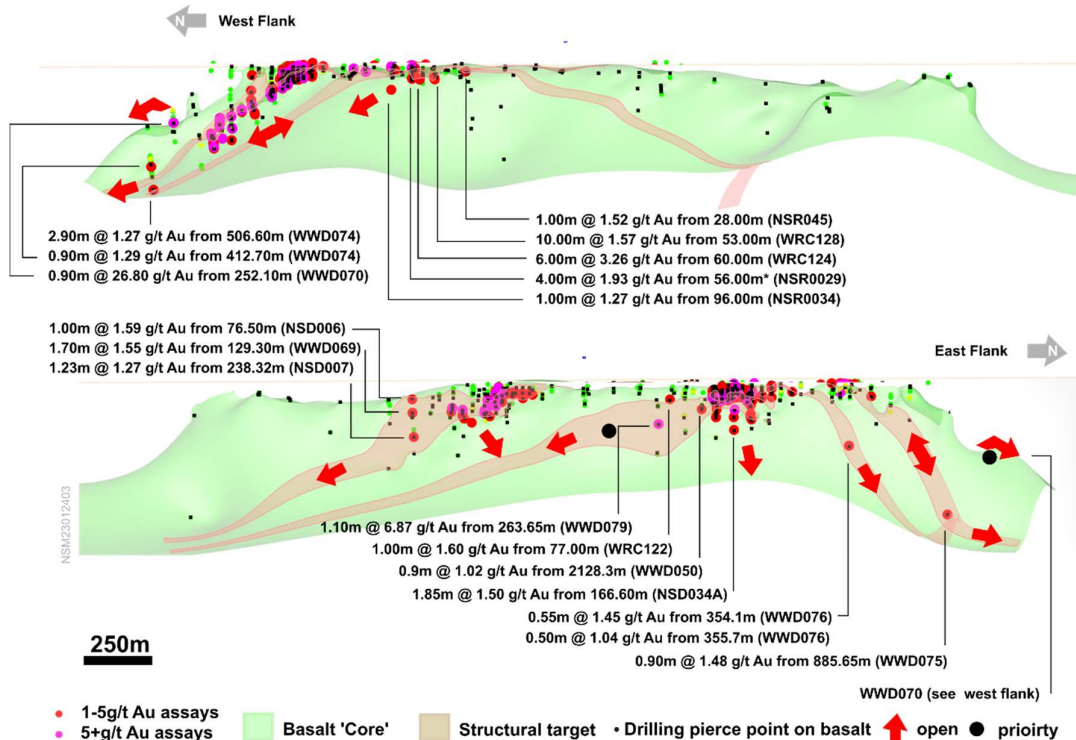


Figure 2 Targets and drilling at Wildwood. All results are previously released (ASX:NSM 15 Nov 23)

A key target for continued work at Wildwood is to find mineralisation that occurs on the flanks of the basalt and is not within embayments (called Waterloos) in the basalts. The advantage to these targets is that the mineralisation can have significantly increase volume and, therefore, increase ounces. Targets on the east flank of the basalt, where the basalt and mineralised structures are sub-parallel are considered most likely to nucleate slabs of flank mineralisation. These are identified and queued for drill-testing.

Figure 3 shows a comparison between the Stawell mineralisation and the Wildwood mineralisation at the same scale and highlights the exploration potential at Wildwood.

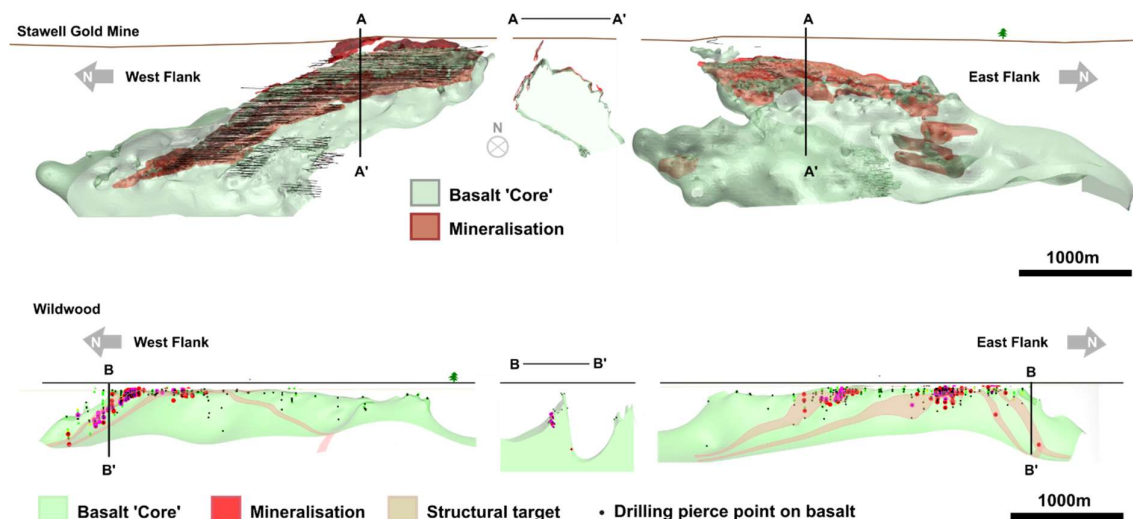


Figure 3 Comparison of the Stawell Gold Mine and the Wildwood Mineral Resource (ASX:NSM 15 Nov 23)



The Wildwood Mineral Resource remains unchanged and is open along structures and down-dip in several area, and has limited deeper drill-testing (Figure 3):

Table 2 Wildwood Mineral Resource 2023<sup>1</sup>

	Tonnes (t)	Grade (g/t Au)	Ounces (oz Au)
Inferred	564,600	2.4	42,700
Indicated	590,300	2.4	44,600
<b>Total</b>	<b>1,154,900</b>	<b>2.4</b>	<b>87,300</b>

<sup>1</sup>ASX:NSM 29 June 23.

Notes:

- All resource figures are reported in accordance with the JORC Code 2012 Edition
- All figures are rounded to reflect the appropriate levels of confidence, with apparent differences potentially occurring due to rounding.
- Mineral Resources are reported at a 1.0 g/t Au cutoff grade.

At **Darlington**, 6km north of Stawell, NSM has planned holes to test the deeper gold potential where the down-plunge projection on the historic Darlington Mine (2,347oz Au at 18.2 g/t Au)) is interpreted to intersect the recently identified basalt at depth (ASX:NSM 28 Mar 23). A structural link between the basalt and the surface mineralisation would significantly increase the likelihood of a Stawell-type gold system (Figure 4), a priority for the Darlington prospects exploration potential. The result may be amplified the interpretation that the basalt intersected beneath Darlington is the structurally dismembered continuation of the Magdala Basalt – the same basalt that host the mineralisation at Stawell, 6km to the south (Figure 4).

Darlington also remains open down-dip with mineralisation intersected at 125m and remaining open (ASX:NSM 26 July 23). An interpreted fault may truncate or offset the system to the north. The controlling basalt continues 2km to the south, presenting a large potential system similar to Stawell.

500m southeast of the historic mine, an additional target identified from numerical modelling CSIRO, (ASX:NSM 31 Oct 23, 29 Aug 23, 31 Jul 23) is untested, and is modelled to include increased potential to host gold (Figure 4). Holes are planned throughout the Darlington target, but only the highly strategic basalt-structure intercept is currently prioritised.

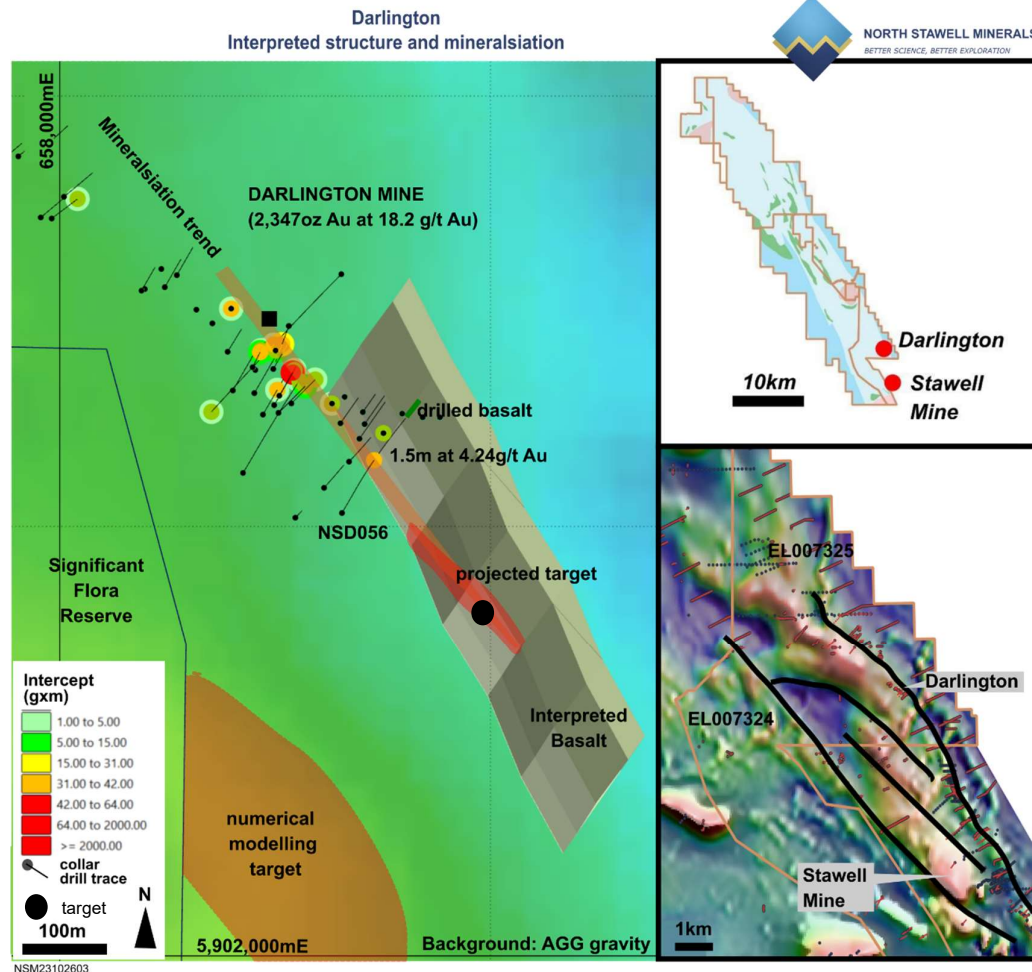


Figure 4 Darlington Mine and basalt at depth. Insets show proximity to Stawell and the interpretation that the basalt at Darlington is the same basalt as the one hosting mineralisation at Stawell (the Magdala basalt).

## SECONDARY TARGETS

Secondary targets have this designation because of a longer pathway to possible resource declaration. They are still highly prospective targets. Regional air core drilling over the last two seasons has consolidated a robust project portfolio, based on the Stawell-gold mode (ASX:NSM 8 June 2021) (Figure 8).

The **Forsaken** and **Caledonia** targets are priorities for near-surface (air core) drilling. Both targets stand out regionally as having near-surface significant, contiguous gold grades (+1g/t Au) and are interpreted to conform to a Stawell-gold model (ASX:NSM 31 July 23, 1 June 23, 16 Feb 23). These targets remain open, and establishing near-surface extents is a pre-cursor to deeper drilling establishing continuity and plunge.

**Forsaken** includes the structurally complex northern 1,500m of a 9km long, north-plunging gravity anomaly, and is interpreted to be the drag-fold of a gold-prospective basalt into a regionally significant fault. The target is over 500m long at surface and is structurally attractive for gold, evidenced by grades in historic drilling (1+ g/t Au) results, thick anomalous intercepts and end-of-hole grades (ASX:NSM 1 Jun 23). **Caledonia** is an NSM discovery beneath shallow cover, shallow-drilled and including 600m strike length of gold mineralisation open to the north and down-dip (ASX:NSM 31 Oct 23).



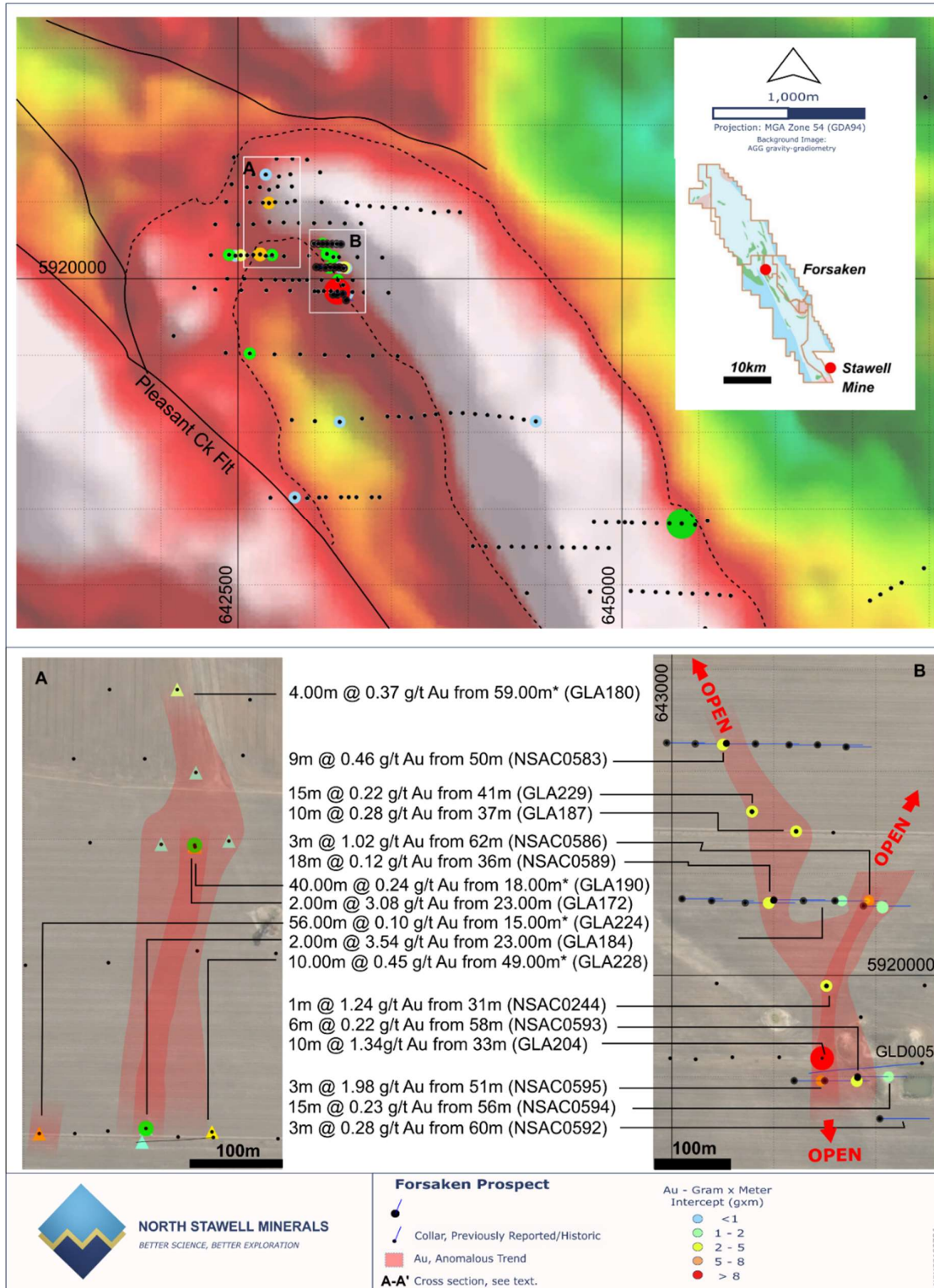


Figure 5 Forsaken air core drilling.

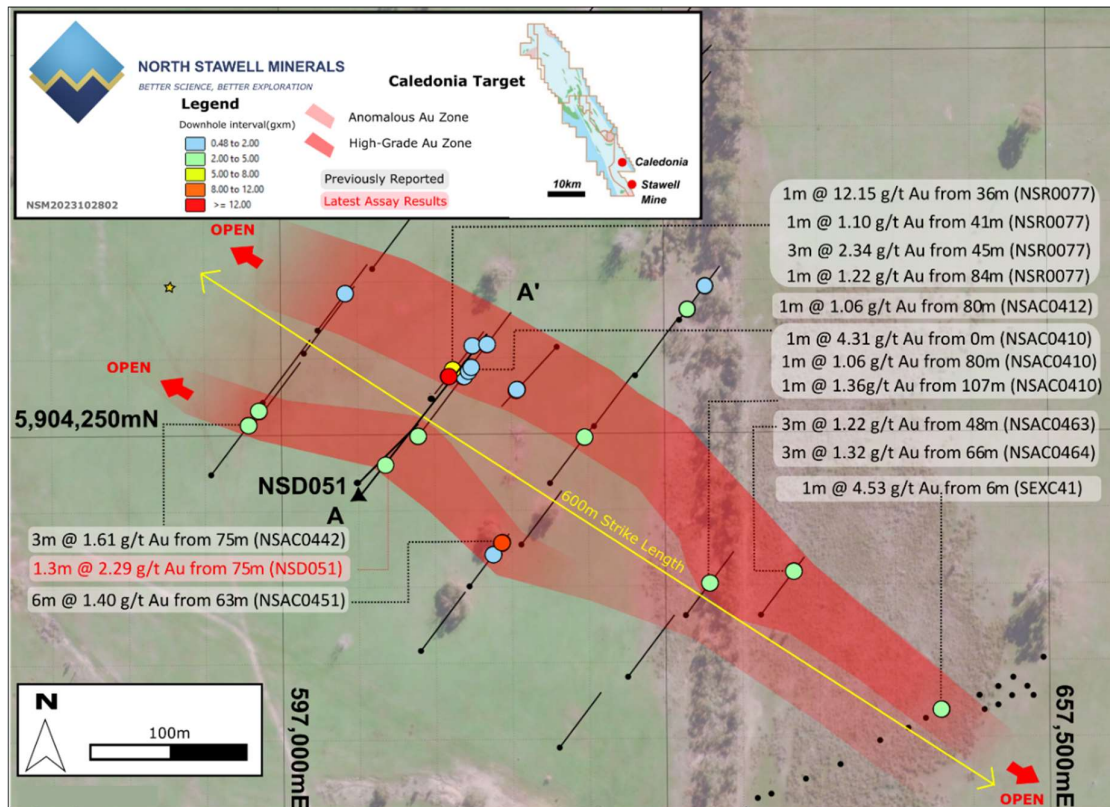


Figure 6 Caledonia plan (ASX: NSM 31 Oct 23)

## ADDITIONAL TARGETS

The **Lubeck Tip** target is an NSM discovery, identified with geophysics through cover. Air core drilling has intersected the interpreted controlling basalts in the north of the target, immediately beneath 30m of cover and interpreted to plunge to the south – a target with significant potential for shallow mineralisation. Anomalous gold has been returned over 800m and significant grades (>1g/t Au) occur over 100m on the east side of the basalt, open down-plunge.

The northern **Challenger** target has significant potential. The 7km long basalt has 3km of strong arsenic anomalism with multiple thick anomalous gold intercepts or end-of-hole anomalous gold intercept that are very positive indicators for a significant gold system. Designed drilling during the season is tasked to continue to test for significant grades on this large, challenging, Stawell-type gold target.

The **Wimmera Park** target (ASX: 20 July 22) is a regional reconnaissance drilling success that could not be accessed in the 22-23 drilling season. The target is a 300m wide arsenic and gold anomalous zone on the intersection of the eastern margin of the Wimmera Park granite and major regional faults-oriented NNW and NE. The geology interpreted structure and geochemistry include significant similarities to the Wonga Mine, 20km south (294koz Au at 3.4g/t Au<sup>2</sup>)(Stawell Gold Mines). Wonga is interpreted as an intrusive-related gold system (Bierlein et al 2005). The comparable intrusive at Wimmera Park is readily identified through the thin cover with geophysics, presenting a compelling, poorly tested exploration target.





## GEOPHYSICS

Geophysics, and derivative products have proven excellent vectors to mineralisation through cover and remain a key exploration tool.

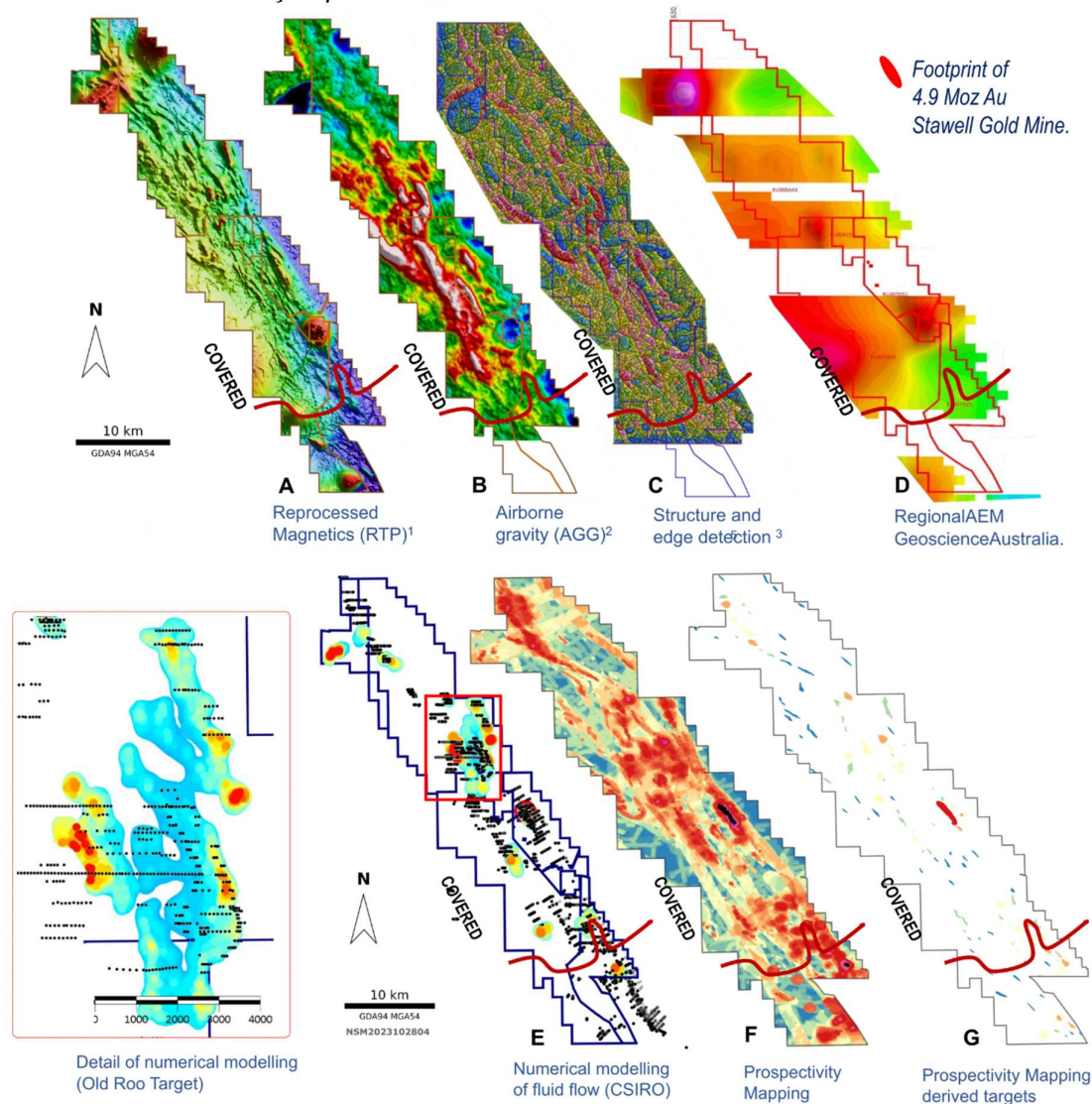


Figure 7 Geophysical and derivative data (ASX:NSM 31 Oct 23)

**High resolution gravity data** (ASX:NSM 8 Jun 21), derivative 3D modelling of interpreted basalts (ASX:NSM 29 Oct 2021), numerical modelling of fluid flow around inversion models to identify dilation sites (ASX:NSM 21 June 23, 23 Mar 23) and government high-resolution magnetics data continues to effectively vector to Stawell-type gold mineralisation through the blanket of thin cover that obscures the gold-prospective geology throughout the tenements.

## BETTER SCIENCE

NSM values the science that informs and refines its programs and continues to advance several projects.

A **regional TEM** electromagnetic survey completed by Geoscience Australia was flown in late 2022 and processed results released in 2023 (GA 2023). External review of the data against

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other datasets continues to determine effectiveness.

On the drill hole scale, a **mineral chemistry and metallogenesis** project is reviewing the multi-phase pyrrhotite–pyrite–carbonate–arsenopyrite–chlorite and multiple deformations present complicated structural and alteration systems. A suite of petrology samples (from recent drilling from Wildwood and within the Stawell Mine) have been taken to identify key controls and pathfinders to gold at Wildwood. The work is on-going. Review has included site visits from academics from multiple Victorian universities and external petrographic consulting. An honours project will commence in 2024 to focus on the evolution of the alteration and its association with gold mineralisation.

NSM continues work to determine the science to apply **machine learning research** to map out the masked geology and structure north of Stawell. The project benefits from the acquisition of regional, high-resolution potential field datasets, regional data derived from exploration, existing relationships with researchers and research organisations active in this area, and the recruitment of a geoscientist with data science qualifications. Next steps are in discussion and will be resolved in the first quarter of 2024. Meanwhile, data cleaning to support the project continues.

## HEAVY MINERAL SANDS

**Heavy mineral sand (HMS)** potential may extend across the centre of the NSM tenements (EL5443) (Figure 1, Appendix 1)). The ground, continuously held by gold explorers since 1999, has only 30 HMS-REE focussed drill holes on its footprint - an under-tested exploration opportunity.

NSM has recently applied to renew the licence that includes HMS potential for 5 years (pending). However, there are multiple, rapidly advancing HMS projects in the district, and we recognise the concern and potential for fatigue amongst our landholders. We value our strong community support. As a gold-focussed explorer, any moves to test HMS potential will include careful and appropriate community consultation.

## EXPLORATION STRATEGY

NSM's target is shallow repeats of the multi-million-ounce mineralisation at Stawell, where the geology is masked and preserved by a thin blanket of unmineralised sediments (called "cover"). The Stawell Mine has been a modern operation for 40 years and is well-researched and well-understood (see Winterbottom 2017). Stawell-type mineralisation occurs in two areas: on the margins of buttressed basalt that force gold-bearing structures to wrap around them, creating dilation and focussing gold-deposition, and as splays of mineralisation that bifurcate off the basalt (called Mariners-type) and propagate into the surrounding sedimentary rocks – particularly above the basalt buttress.

The basalt is important for exploration – basalts can be "seen" beneath cover and at depth using geophysics. 60kms strike of basalts are identified, half of which are un-tested.

Using the Stawell-type model, NSM's approach is simple - Identify potential basalts using high resolution gravity and magnetics data. If basalt is intersected, focus on the margins where mineralisation is expected and systematically follow mineralisation to depth (e.g., Wildwood). If the basalt is deeper and overlying sediments intersected, drilling is focussed on the possibility of Mariners-type mineralisation, which, that can be systematically followed to depth to identify where the system has splayed off the controlling basalt (e.g., Darlington, Lubeck Tip). Figure 9 presents the relative positions of NSM's target portfolio superimposed on a simplified section





of the Stawell Mine (Stawell-type gold mineralisation model).

The exploration strategy has focussed on delivering a robust exploration pipeline (Figure 8), and future work will both resolve resource potential and maintain a healthy exploration pipeline.

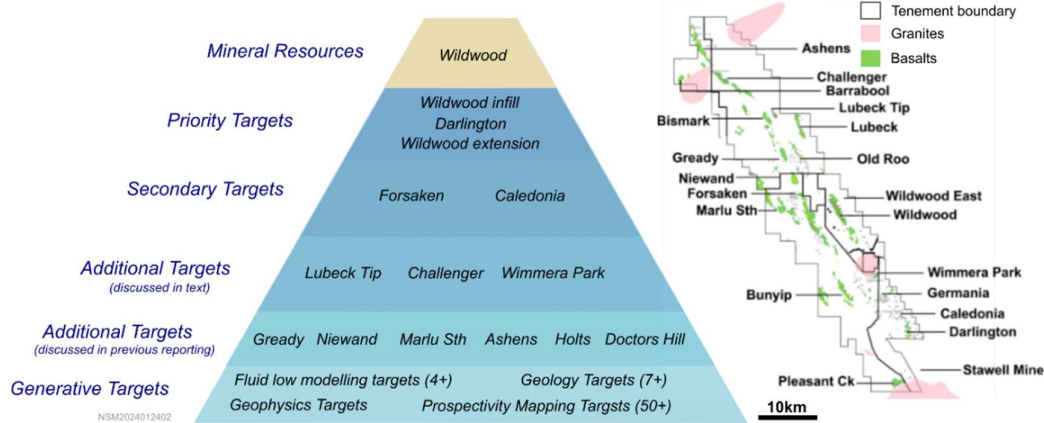


Figure 8 Project Pipeline

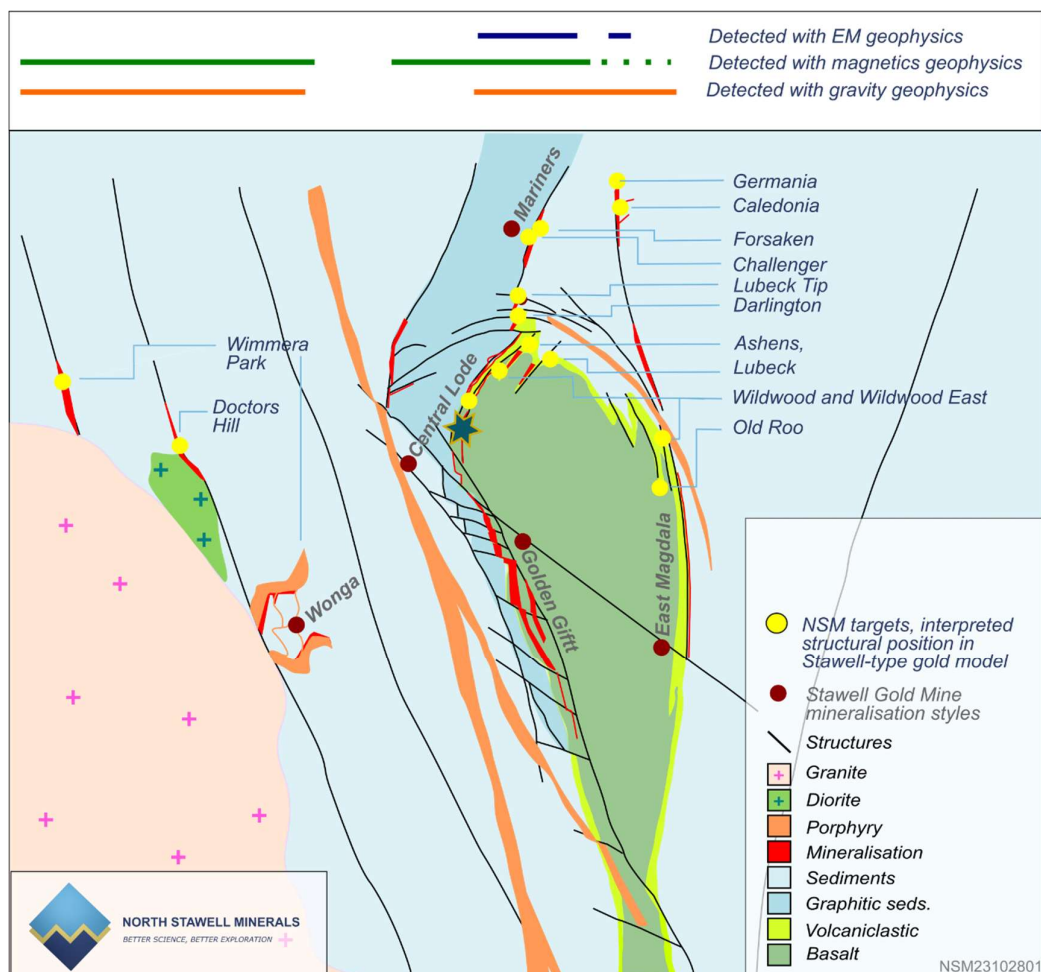


Figure 9 Schematic of Stawell mine showing relative interpreted position of NSM targets.



## **References**

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This Announcement is authorised for release by Russell Krause, Chief Executive Officer of North Stawell Minerals Ltd

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Visit us on LinkedIn: <https://www.linkedin.com/company/north-stawell-minerals/>  
Visit us on Twitter: <https://twitter.com/NorthStawell>

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

North Stawell Minerals Limited (ASX: NSM) is an Australian-based gold exploration company 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 Field which has produced more than five million ounces of gold. NSM's granted tenure has a total land area of approximately 500 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 51km of northerly strike extension of the underexplored Stawell Mineralised Corridor.

### **Competent persons Statement**

The information that relates to 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 the report of the matters based on his information in the form and context in which it appears.

### **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.

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### 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%
Total granted			504.5	602		

<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 is 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.

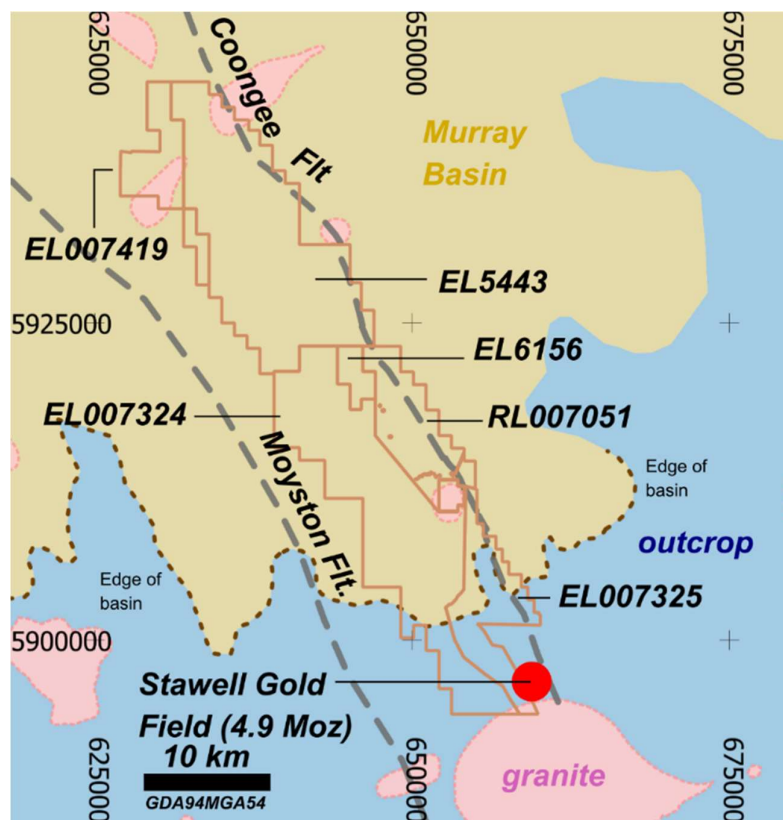


Figure 10 North Stawell Minerals - Tenements





## Appendix 2: JORC Table 1

### Section 1 Sampling Techniques and Data

#### a. Historic Drilling

### Section 2 Reporting of Exploration Results

### Section 1 Sampling Techniques and Data – a. Historic Drilling

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

Criteria	JORC Code explanation	Commentary
	<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. 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</li> </ul>	Historic results (only depicted on Figures) 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 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.)</li> </ul>	<p>Geological logging of historic holes, where reviewed, follows industry common 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>



	<ul style="list-style-type: none"> <li>photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	
<b>Sub-sampling Techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>Core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary it, 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 plicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain e of the material being sampled.</li> </ul>	<p>Standard industry practices are expected to be in place. However, QAQC data is incomplete in the historic data. It is considered that appropriate analytical methods have been used by historic explorers.</p> <p>Historic core sampling is typically sawn half-core.</p> <p>Historic RC and AC samples are typically riffle split or spear sampled. Information is not always complete.</p> <p>Historic sampling is typically dry.</p>
<b>Quality of assay Data and laboratory tests</b>	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used.</li> <li>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>	<p>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.</p>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (Physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<p>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.</p> <p>No adjustments to assay data have been made.</p>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<p>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.</p> <p>Historic drill collars have been determined with several techniques, ranging from survey pick-up through differential GPS.</p> <p>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.</p>
<b>Data spacing and distribution.</b>	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing, and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation.</li> </ul>	<p>Historically, variable drill hole spacings are used to test targets and are determined from geochemical, geophysical, and geological data.</p> <p>Historic regional and geochemical drilling (AC) is drilled on strike perpendicular fences, with approx. 100m hole</p>



	<ul style="list-style-type: none"> <li>• <i>procedure(s) and classifications applied.</i></li> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>	<p>spacings and 100-400m line spacing</p> <p>Historic RC sampling is generally specifically targeted to follow up AC results. Minor RC fences are drilled, on 30-200m spacing.</p> <p>Historic diamond drilling is located to follow up on specific prior results or targets.</p> <p>Historic data in the footprint of the tenement EL007324 were designed and executed as regional exploration.</p> <p>The historic drilling data has not been reviewed for its appropriateness to inform Mineral Resource Classification.</p>
<b>Orientation of data in relation to geological structure</b>	<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>The historic drill orientation is perpendicular to the regional geology and known mineralised trends previously identified from earlier drilling.</p>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>• <i>The measures taken to ensure sample security.</i></li> </ul>	<p>Sample security has not been reviewed for the historical data.</p>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of sampling</i></li> </ul>	<p>There has not been internal or external audit or review of historic assays identified.</p>

## Section 2 Reporting of Exploration Results - Drilling

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<p><i>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, wildemess or national park and environmental settings.</i></p> <p><i>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.</i></p>	<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 EL007324 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>EL007324 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>Tenement security is high, established in accordance</p>



## NORTH STAWELL MINERALS LTD

ACN 633 461 453

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with the Victorian Mineral Resources Act (MRSDA) and Regulations (MR(SD)(MI)R 2019).

### **Exploration done by other parties**

- *Acknowledgment and appraisal of exploration by other parties.*

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).

Rio Tinto Exploration, Planet Exploration, Highlake Resources and Iluka Resources have also held parts of the tenement historically.

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.

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.

Work by Iluka was for Heavy Minerals exploration and is not material to gold exploration.

Most programs include regional lines of RAB or AC drilling (577 of 650 holes) over identifiable magnetic highs. Follow up RC drilling (58 holes) under AC anomalies occur is sound practice. Eleven diamond holes (2419m) are completed – mainly focused on near Mine targets in the south.

Work has identified large, low grade gold anomalism along major interpreted structures (magnetics) and represents a technical success.

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

### **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.

Wonga-style mineralisation is possible, interpreted as Intrusive-Related Gold, and may be either an upgrade on prior (orogenic mineralisation) or a fresh

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		<p>mineralisation event.</p> <p>The geological setting is a tectonised accretionary prism on the forearc of the Delamerian-aged Stavely Arc active plate margin.</p> <p>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.</p> <p>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).</p>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level– elevation above sea level in metres) of the drill hole collar <ul style="list-style-type: none"> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> </ul> </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>	<p>Details of all air core drilling is summarised in Appendix 2 of this report.</p> <p>Sections and plans with summaries of assay are included in the body of the document for all drilling completed.</p> <p>Summary tables of drillhole data are included.</p> <p>Pathfinder elements determined by ICP for Gekko samples are not reported – these are vectors to mineralisation. Where discussed in the text, laboratory analyses for these elements are described in qualitative terms.</p>
<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>Only results with anomalous gold values (&gt;0.05ppm) have been reported.</p> <p>No metal equivalents have been reported. No metal equivalent reporting is used or applied.</p> <p>For significant results (&lt;1g/t Au) No external dilution is used. Internal dilution up to 2m so long as the average grade remains significant.</p> <p>For anomalous results (1 g/t Au&gt;assay&gt;0.05 g/t Au) no internal or external dilution is used.</p> <p>“including” results will be stated where the included result is an order of magnitude greater than the larger intercept.</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>	<p>AC drillholes in this program were angled. Intercept lengths are down-hole length.</p> <p>Orientations of mineralisation are not known but are expected to be sub-vertical to moderately dipping.</p>
<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</li> </ul>	<p>Diagrams are included in this report, including locations, plans and sections and areas mentioned in the text.</p>



	views.	
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced avoiding misleading reporting of Exploration Results.</li> </ul>	<p>All drill holes have been surveyed by hand-held GPS, which is considered an appropriate degree of accuracy for regional exploration air core drilling.</p> <p>For the exploration results, only significant and anomalous exploration results are reported and described.</p>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<p>Geophysical data is described in the text. Details of the processing methodology are available in Table 1 of the September 2021 Quarterly report and in Table 1, part B: Geophysical inversions.</p>
<b>Further work</b>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<p>Further campaigns of drilling will be based on the completion of the current air core programme, followed by evaluation of the data. For better results, infill drilling is expected to delineate trends.</p> <p>Other drill rigs (RC or DD as appropriate) will execute any deeper follow up work.</p>