

31 July 2024

Company Details:

ASX: NSM

ACN: 633 461 453

www.northstawellminerals.com

Capital Structure

Shares: 139.875M

Performance rights: 1.81M

Share

Price \$0.011* Cash: \$0.47M* Market Cap: \$1.54M* * on 30 June 2024.

Project:

North Stawell Gold Project



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Summary:

- The appointment of Mr. Campbell Olsen as interim Chief Executive Officer brings a wealth of Victorian mining experience to NSM's management team.
- A collaborative research project with CSIRO, the national science organisation, will commence in the September Quarter. The project is focused on applying Machine Learning (ML) and Artificial Intelligence (AI) to advance geological interpretation and assess prospectivity.
- Building valuable knowledge on our Wildwood tenement with the ongoing honours project reviewing petrology and geochemistry to improve understanding of the ore-controls.
- Prioritised planned drilling focusses on highly strategic holes at Wildwood to test for extensions of the Wildwood Mineral Resource.
- The **Darlington** target remains untested and has strong geological similarities to the mineralisation at Stawell. 6km to the south.



North Stawell Minerals interim Chief Executive Officer Campbell Olsen commented:

"A challenging quarter for NSM, but we've continued to progress our corporate and operations positions, with focus on capital raising to support operations. Activities have been tailored to accommodate industry-wide junior exploration funding headwinds.

Planning remains focused on drill-testing of two key prospects –Wildwood and Darlington – when access and funding permit. Both targets remain priorities following excellent results from the most recent drilling.

At Wildwood, gold-bearing structures intersecting the target Wildwood basalt can be extended down-plunge into untested areas of the shallow Mineral Resource (ASX:NSM 23 June 2023). The target includes an opportunity for mineralisation to spill onto the flanks of the basalts – a critical requirement for increased tonnes that would significantly upgrade the identified mineralisation.

At Darlington, a previously undrilled basalt intersected 100m beneath the at-surface mineralisation (ASX:NSM 26 July 2023) is encouraging for a potential deeper gold system. If the mineralisation is a splay off Stawell-type mineralisation on the basalt margins at depth, Darlington may be the uppermost part of mineralisation similar to Stawell - a multimillion-ounce gold mined to 1,600m with historic and modern production of 5 Moz Au from the gold field.

The Mineral Resource at Wildwood (87koz Au (ASX:NSM 29 Jun 2023) is a bellwether for several reasons:

- It is one of two declared Mineral Resources in Victoria not associated with known historic or modern mining – a positive indication that the Stawell-type gold model is effective in greenfield projects.
- The basalt host at Wildwood, which has the same areal extents as the basalt at the multimillion-ounce gold deposit at Stawell, is only effectively drill-tested to 150m depth and open to the north and south (Stawell mineralisation persists to 1600m depth).
- Limited deeper historic drilling has identified mineralisation at 500m vertical depth in the north of Wildwood.
- Wildwood is preserved, shallow mineralisation under 25m of cover and represents 3km of 60km of identified or interpreted basalts under cover in NSM's tenements – all with the potential to focus and host mineralisation similar the mineralisation mined at Stawell.

NSM has continued to build on its drill targeting and planning. Over 4,500m of diamond drilling and more than 40,000m of air core drilling is designed and prioritised into phases to advance NSM's priorities and project pipeline as funding becomes available.

An honours project is on-going, focused on the Wildwood mineral system and refining vectors to mineralisation. Renewed collaboration with CSIRO, Australia's national science agency, will commence in the September Quarter, building on prior success with numerical modelling. The research will focus on machine learning (ML) and artificial intelligence (AI) methods to increase geological understanding of the geometry and potential of mineralisation-controlling basalts. During the current Quarter, NSM geologists were seconded to the Stawell Gold Mine, building invaluable knowledge of the targeted geology and mineralisation.

We continue working with our stakeholders and landholders to ensure continued strong communications while exploration and field activities are in hiatus. Although market conditions remain challenging, the work done in the guarter is invaluable for future, effective programs."



During the Quarter, corporate activity has focused on several areas including Fringe Benefits Tax (FBT) return, Junior Mining Exploration Incentives (JMEI), annual financial reporting, corporate governance, merger and acquisition opportunities and capital raising.

The Company commenced review of the current Farmin Agreement with a view to accessing the earn in potential and increasing its holding in each of the tenements subject to the Farmin Agreement. Work remains ongoing at quarter end.

The Company announced the resignation of Mr. Graham Brown from his role of Non-Executive Director and lodged all associated notices (ASX: 2 April 2024).

A technical presentation delivered by Mr. Bill Reid as part of the Australian Institute of Geoscientists was published on the day of presentation (ASX:NSM 18 April 2024).

The collaboration with the CSIRO on the modelling project to understand fluid flow around 3D modelled sub-surface geology was announced to the market (ASX:NSM 14 May 2024).

Subsequent to the end of the quarter, the Company has announced a change of company secretary electing to complete secretarial duties in-house utilising the existing skills of the Chief Financial Officer (ASX:NSM 5 July 2024).

Mr. Russell Krause resigned from the Company effective 24 July, and the Company appointed Mr. Campbell Olsen as interim CEO (ASX:NSM 24 July 2024). Mr. Olsen is also a Director and has a distinguished career in private equity and operational management in the mining industry. Mr. Olsen was responsible for the purchase and restart of the Stawell Gold Mine and brings a deep insight into the Stawell corridor, in which NSM operates. He was the originator of the NSM project from its days as a private company through to listing on the ASX and brings a unique understanding of the geology and mineralogy of the Stawell corridor.

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. Progress on the opportunities and the Company's due diligence process have slowed, along with the gold exploration market in Victoria and Australia. 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 an agreement is reached, it will be communicated to shareholders and the ASX.

FINANCE

During the quarter, the Company lodged the FBT return and quarterly reports.

The Company commenced preparations for the Annual Report including Financial Statements during the quarter. Discussions were held with the auditors and information provided to accelerate the annual audit of the Company and the provision of the Annual Report.

The Corporate and operations team continued to review 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 is apparent during the June 2024 Quarter and will extend into the September 2024 quarter.

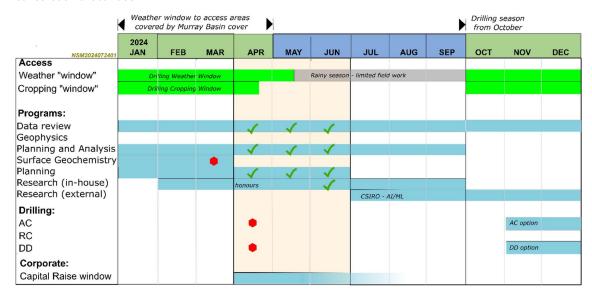


During the quarter, NSM recognised \$180,800 cashflow on exploration and evaluation activities, return of a security deposit of \$150,000 and recognised the final payment for insurance premium funding as a financing activity. Net cash outflow from operating activities was \$314,900. Related party expenditure included director fees and associated superannuation payments was nil. The closing cash balance at 30 June 2024 was \$472,132.

EXPLORATION ACTIVITIES

Work completed and work planned is summarised in Table 1. Unrestricted drilling access is typically from December to May. Planned holes at key targets - Wildwood and Darlington - were deferred and will be drilled as market conditions improve.

Table 1 Planned and completed work. Green ticks indicate progress as planned. Red circles indicate postponement or cancellation of activities.



Activities in the quarter remained focused on refining and expanding drill targeting and proposals, geological support for corporate activities, opportunities to improve data systems, rehabilitation checks of past activities and on-going research. Priority drilling (when drilling recommences) is focused on the Wildwood and Darlington targets (Figure 1, Figure 5, Figure 7), to advance these key targets against a Stawell-type gold model.

In total, planned drilling includes 42km of air core and 4,500m of diamond drilling that are ready to be executed as required to advance targets systematically in the project pipeline (summarised in Figure 2 and detailed below).

A research program in collaboration with CSIRO, Australia's national science agency, will commence in the September quarter and will review sub-surface geological architecture for similarities to Stawell using machine learning (ML) to interpret NSM's high resolution geophysics data and significant geological databases through cover (ASX:NSM 14 May 2024). The project expands on previous collaboration (ASX:NSM 7 Nov 2022) that investigated numerical modelling of potential fluid flow around buttresses as a vector to gold mineralisation.

An honours project focused on the mineralisation at Wildwood has continued through the quarter reviewing petrology and mineralisation to better understand the most important alteration and mineralisation in the Wildwood mineralisation system. The work is anticipated to assist in vectoring towards mineralisation in future drilling

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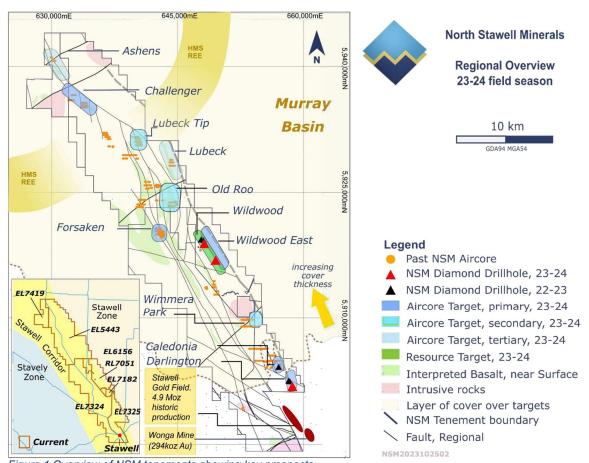


Figure 1 Overview of NSM tenements showing key prospects.

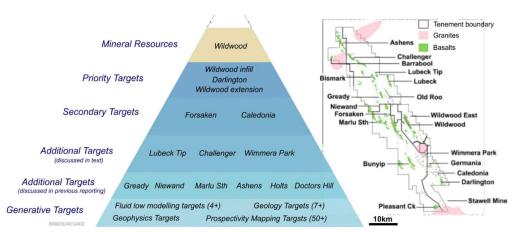


Figure 2 NSM Project Pipeline with resources and prioritised targets.



WILDWOOD RESOURCE

The Wildwood Mineral Resource remains unchanged at 87.3koz Au at 2.4 g/t Au (ASX:NSM 29 June 2023, see Table 2). The mineralisation includes geology and grades very similar to (and typical of) the mineralisation at Stawell, 25km to the south. The Wildwood mineralisation comes within 40m of surface, masked and preserved by a thin blanket of unmineralised Murray Basin sediments ("cover"). Importantly, the mineralisation is open along structures and down-dip in several areas and is poorly tested at depths greater than 150m (Figure 5).

Table 2 Wildwood Mineral Resource 20231

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

¹ASX: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.

EXPLORATION STRATEGY

NSM's target is mineralisation with gold grades and mineralisation characteristics that are "matched" to the mill at Stawell – demonstrated economically viable ore-types.

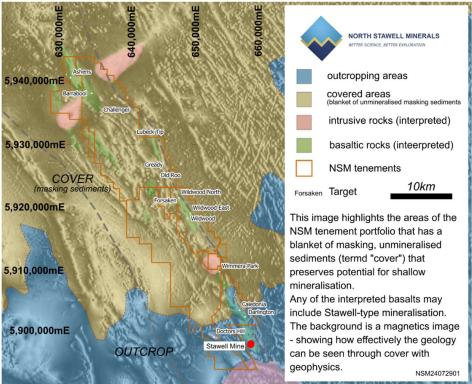


Figure 3 NSM tenements with outcrop and masked ("covered") areas shown.



NSM's target is shallow repeats of the multi-million-ounce mineralisation at Stawell, where the mineralisation potential is masked and preserved by a thin blanket of unmineralised sediments (called "cover") (Figure 9).

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 focusing 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 buttresses.

The mineralisation-controlling basalt is critically important for exploration – basalts can be "seen" through cover and at depth using geophysics. 60kms strike of interpreted basalts are identified in the NSM tenements, half of which are effectively tested.

Using the Stawell-type model, NSM's approach is clear:

- Identify potential basalts using high resolution gravity and magnetics data.
- If basalt is intersected in drilling, 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 focuses on the possibility of Mariners-type mineralisation that can be systematically tested to depth and identify the controlling basalt (e.g., Darlington, Lubeck Tip).

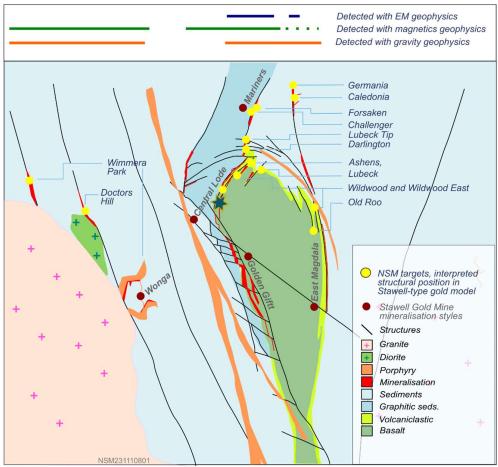


Figure 4 Schematic of Stawell mine showing relative interpreted position of NSM targets.



Figure 10 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 focused on delivering a robust exploration pipeline (Figure 2), and future work will both resolve resource potential and maintain a healthy exploration pipeline.

PRIORITY TARGETS

Priority targets include Wildwood and Darlington (Figure 1). Wildwood is a priority target to expand on the open mineralisation already identified on the margins of the Wildwood basalt dome against a revised structural model. Darlington is a priority target as drilling completed in June 2023 (ASX:NSM 26 July 2023) intersecting mineralisation and geology has significant similarities to the multimillion-ounce gold deposit at Stawell, 6km to the south and is entirely untested at depth.

Wildwood

The update of the Wildwood Mineral Resource included reinterpretation of the structural model controlling mineralisation along the flanks of the structurally buttressed basalt (the same controls as at Stawell). At Wildwood, mineralisation is focused where two sub-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 structures intersection with the basalt. Figure 5 shows the structural targets and previous drilling. Untested targets are indicated with arrows.

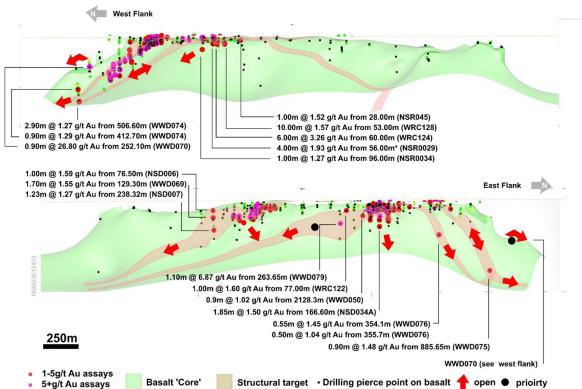


Figure 5 Targets and drilling at Wildwood. Interpreted controlling structures are brown. All results are previously released (ASX:NSM 15 Nov 23)



A key target for continued work at Wildwood is to find mineralisation that occurs on the flanks of the basalt and not constrained to embayments (termed "Waterloos") in the basalts. The advantage to this type of target is that there is higher potential for significantly increased volumes (and, therefore, an increase in potential 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. The principal target ("priority" on Figure 5) is also open down-plunge and down-flank on the basalt from depths of 200m, and adjacent to an encouraging historic intercept (1.10m at 6.87 g/t Au (WWD079).

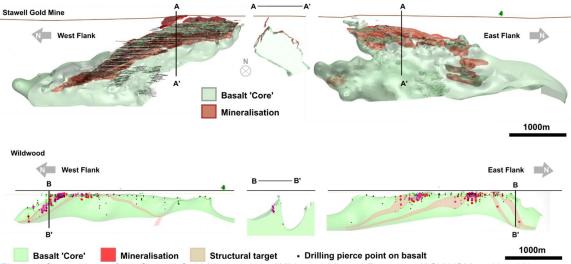


Figure 6 Comparison of the Stawell Gold Mine and the Wildwood Mineral Resource (ASX:NSM 15 Nov 23)

Figure 6 shows a comparison between the Stawell mineralisation and the Wildwood mineralisation at the same scale and highlights the exploration potential at depth at Wildwood. Limited historic drilling at greater depths have intersected gold mineralisation as deep as 550m vertical (historic result: 0.9m at 1.48g/t Au from 885.65m (550m vertical)) – an encouraging result supporting interpreted deeper mineralisation on the basalt flank.

Darlington

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 2023). A structural link between the basalt and the surface mineralisation would significantly increase the likelihood of a Stawell-type gold system (Figure 7), and demonstrating this relationship is a priority for the Darlington prospects exploration potential. The interpretation and mineralisation potential is amplified the interpretation that the basalt intersected beneath Darlington is a structural repeat of the Magdala Basalt – the same basalt that host the mineralisation at Stawell (Figure 7 inset).

Darlington also remains open down-dip with mineralisation intersected at 125m (vertical) (ASX:NSM 26 July 23). An interpreted fault may truncate or offset the system to the north.

500m southeast of the historic mine, an additional target identified from numerical modelling CSIRO, (ASX:NSM 31 Oct 2023, 29 Aug 2023, 31 Jul 2023) 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.

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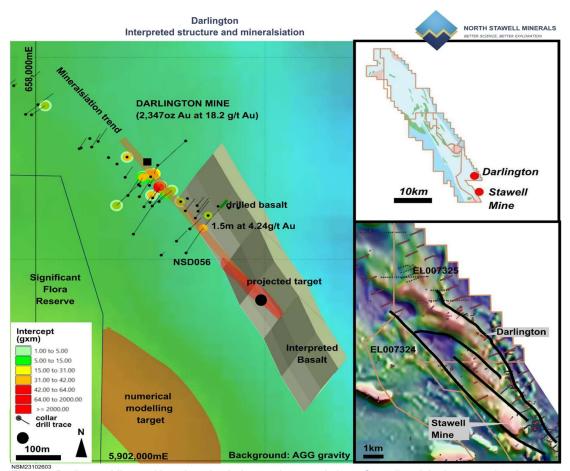


Figure 7 Darlington Mine and basalt at depth. Insets show proximity to Stawell and the interpretation that the basalt at Darlington is the same basalt as the one hosting mineralisation at Stawell (the Magdala basalt).

SECONDARY TARGETS

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 2).

Secondary targets designation is based on longer exploration pathway to possible resource declaration. Note that these are still highly prospective targets based on prior drilling and interpreted potential to host significant Stawell-type mineralisation.

The **Caledonia and Forsaken** targets are priorities for near-surface (air core) drilling (Figure 1). 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 2023, 1 June 2023, 16 Feb 2023). These targets remain open, and establishing near-surface extents is a precursor to deeper drilling establishing continuity and plunge.

Caledonia (Figure 8) 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 2023).



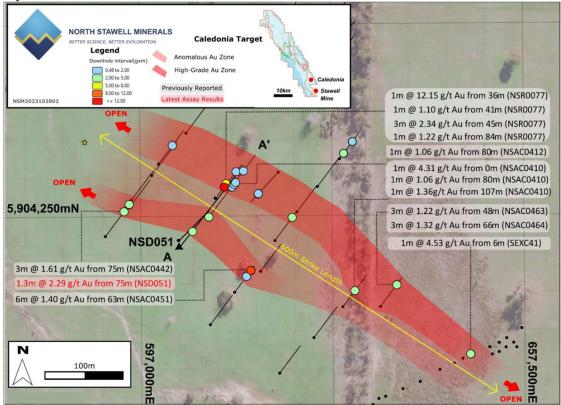


Figure 8 Caledonia plan (ASX:NSM 31 Oct 23)

Forsaken (Figure 9) 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 2023).



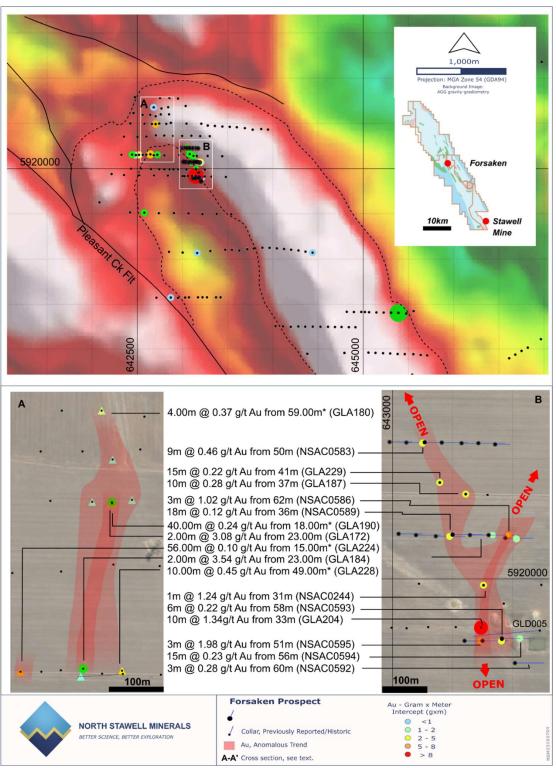


Figure 9 Forsaken air core drilling and historic results.



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 2022) 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, 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.

The possibility of poly-metallic (Cu-Au- Zn-Ag) Volcanic-hosted Massive Sulphide (VHMS) is also noted (occurring as Besshi-type VHMS in similar geology in the southern Stawell Corridor (off NSMs tenements).



GEOPHYSICS

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

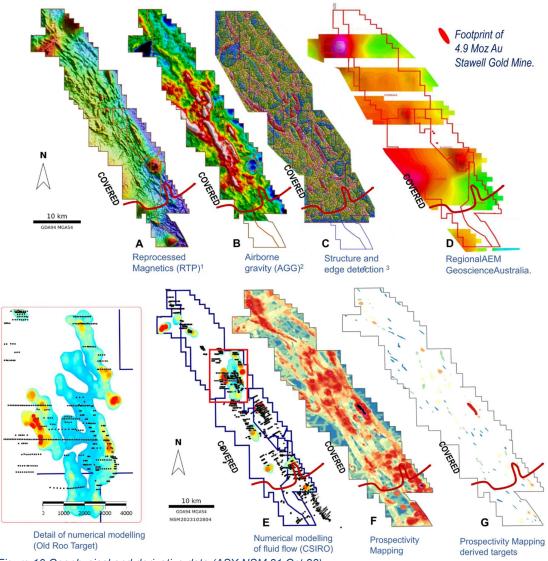


Figure 10 Geophysical and derivative data (ASX:NSM 31 Oct 23)

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.



HEAVY MINERAL SANDS - RARE EARTH ELEMENTS (HMS-REE)

Critical Mineral potential (HMS-REE) is interpreted to extend across the centre of the NSM tenements (EL5443) (Figure 1, Appendix 1)). The tenement, continuously held by gold explorers since 1999, has only 30 HMS-REE focused drill holes on its footprint - an under-tested exploration opportunity. EL5443 is immediately adjacent to Astron Corporation's Jackson Deposit.

Astron's Jackson Deposit – 823Mt at 4.8% REE (see ASX:ATR investor presentation May 2023)

There are multiple, rapidly advancing HMS-REE projects in the district, and strong signaling of support for critical minerals from the Victorian government. As a gold-focused explorer, any moves to test HMS potential will include careful and appropriate community consultation.

References

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This Announcement is authorised for release by Campbell Olsen, Chief Executive Officer of North Stawell Minerals Ltd.

For Media Enquiries For Investor Enquiries

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North Stawell Minerals 167 Leviathan Road Stawell Victoria 3380





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 km². 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.



Appendix 1: NSM Tenement Summary

Tenement	Status	Number	Area (km2)	Graticules ¹	Initial NSM holding	Earn-in potential
Wildwood	Granted	RL007051	50	50	51%	90%
Barrabool	Granted	EL5443	182	194	51%	90%
Glenorchy	Granted	EL006156	10	18	100%	n/a
West Barrabool Wimmera Park	Granted	EL007419	37	40	100%	n/a
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		

¹ 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 (km²) is less than the graticular area.

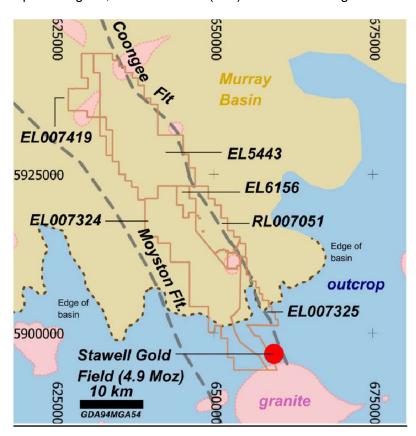


Figure 10 North Stawell Minerals - Tenements