



North Stawell Minerals

September 2021 Quarterly Activities Report

29 October 2021

Company Details:

ASX: NSM

ACN:: 633 461 453

www.northstawellminerals.com

Capital Structure

Shares: 120.127m

Performance rights: 1.18m

Market Cap @ (\$0.33): \$39.64m

Cash: \$10.8M

Enterprise Value: \$28.8m

Project

North Stawell Gold Project



Contacts

info@northstawellminerals.com

Ph. + 61 (3) 5358 9210

PO Box 265, Stawell, Vic 3380

Highlights:

- An **aircore rig mobilised** to site, at the end of September, commencing a 20,000m+ regional drilling campaign on new and re-interpreted targets, initially at the Radio Hill prospect
- NSM consolidates a 'comprehensive toolkit' of geology and geophysics to **effectively explore its cover-dominated tenements**, including:
 - Structure analysis and 234 km² of 3D inversion modelling of **airborne gravity and magnetics**, significantly improving targeting – highlighting **30km of highly prospective strike**.
 - Geological-geophysical model rebuild **yielding new targets and architecture**
- **20 priority** targets identified with geology and structures interpreted to match the geology at Stawell Mine – a multimillion ounce deposit along strike to the south
 - **8 of the targets are untested** by drilling
- The granting of EL0072324 ('Deep Lead') lifts NSM's portfolio to **520km² of contiguous ground** in the highly prospective northern Stawell Corridor.
- **Historic mine production on NSM ground of is encouraging for high grade gold** potential under cover (Fig. 8).
- Management change brings **renewed focus**.
- **Strong cash position of \$10.8M**



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OVERVIEW

Summarising the September Quarter, North Stawell Minerals CEO Russell Krause said, “Excellent progress has been made during winter in preparation for dry weather and increased access to exploration prospects. Work done has expanded and then consolidated the geological platform required to explore effectively and efficiently in a cover dominated region. The company is positioned to deliver significant value for shareholders by testing priority targets as we head into 2022.

“North Stawell Minerals is exploring for multimillion ounce gold deposits masked by a blanket of Murray Basin cover. Over 80% of NSM’s ground is masked by this cover, but the underlying rocks and structures are similar to the Stawell Gold Mine. Effectively peering through this cover is critical to success and NSM’s work in recent Quarters has yielded dramatic improvements in our ability to target through this cover. Current drilling is informed by these important breakthroughs in our ability to target through cover.

A key geological feature of the style of deposit is a buttress of folded basalt that the mineralisation wraps around. The basalts can be detected with geophysics, and significant work has been completed to interpret basalt positions, geometries and the structural architecture for similarities to the Stawell Mine to maximise focus for drilling.

“High resolution geophysics datasets were consolidated during the previous Quarter. Now, multiple secondary products have been derived to enhance structural and geological information, including regional structural products and 3D inversion of data – to better understand the potential geometries at depth.

“Geological context is imperative to targeting. New data and new thinking has resulted in a full review of the regional geology, and brings important context to controls on mineralisation and potential targets under cover.

“The company’s tenement position has been significantly enhanced by the granting of the 167km² ‘Deep Lead’ licence (EL007324). This ground is the northern continuation of the structures that bound the 4.9Moz Au Stawell Mine - the flagship mine in the region. This exploration ‘fairway’ continues for 30km in our tenement.

As if the discovery of the Stawell Gold Mine was not enough inspiration, NSM has recently identified historic high grade gold production on ground covered by its existing tenements. Historically, **393koz Au at 19 g/t Au** have been mined (GeoVic 2021). Much of this inventory is proximal to the Stawell Mine and all of it occurs where there is no Murray Basin cover. There is no geological reason for similar mineralisation not to occur beneath cover sequences elsewhere on NSM’s tenements.

“An aircore drill rig arrived onsite at the end of September to start an extensive regional drilling program to test these new targets. Successes will refine follow-up RC drilling at the best identified targets, likely early in the new year.



Figure 1A composite image of new interpreted geology and geophysical features that significantly enhance understanding of geological, structural and mineralisation potential under the Murray Basin. The products and their significance is discussed in the text.

EXPLORATION ACTIVITIES

The Murray Basin cover blanketing the gold-prospective geology also presents a challenge for drill access during winter. Therefore, during the quarter, focus has been on building the geological datasets and interpretation that enable NSM to most effectively explore through the mask of Murray Basin sediments. The work completed has materially enhanced NSM's capacity to execute its exploration strategy.

Table 1 Summary of work completed during the September Quarter 2021.

Focus	Summary of work completed in the Quarter	Outcomes (details in text)
1 Regional geophysical data	Geophysical edge and structure detection. 3D inversion of 13 key areas for potential shape and size at depth.	234km2 of 3D inversions of magnetic and gravity data. 71 new targeting and interpretation images 42 new targeting and interpretation vector products 20 high-order Stawell-like targets identified
2 Structural architecture	Complete geological-geophysical reinterpretation of the northern Stawell corridor leveraging off the new geophysics and geophysical products.	New understanding of gold-prospective corridor Consolidated "Roadmap for exploring through cover" 20 discrete targets identified
3 Clear geological models for mineralisation	Continued review of the Stawell Mine mineralisation as the local "type" multi-million ounce deposit.	1 st vector: refined corridor control 2 nd vector: 20 priority potential dome structures 3 rd vector: areas within dome structures where mineralisation is more likely to occur

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		Continued review of characteristics and controls of other known mineralisation	
4	Understanding the cover sequences	Prior regional cover interpretation augmented by vertical seismic to infill data gaps.	60 km ² of targets are more prospective as they're significantly shallower than previously thought.
5	Historic data consolidation	On-going. The dataset is advanced and maturing	Historic production on the footprint of the lease: 393koz Au at 19 g/t Au Mineralisation signatures for October AC drilling refined using past assays
6	Drilling and field work	Regional vanguard AC drilling has commenced in September (20,000m+ planned program). Surface geochemistry in areas with minimal cover. Planning to follow up encouraging results with RC.	Plan for systematic testing of each identified target as a first pass being executed. Test and rank all prospects prior to more focussed work.

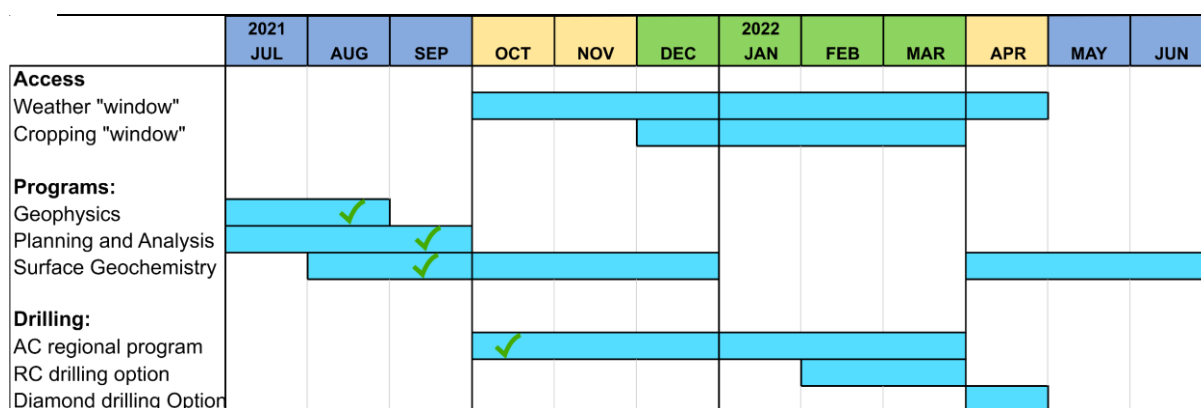


Figure 2 Planned work and exploration schedule, 2021-2022. Ticks indicate work is complete or on schedule.

Exploration Strategy

NSM's exploration strategy is to exploit the geophysics-responsive basalt units that form the core to Stawell-type mineralisation to efficiently vector towards multi-million ounce potential under Murray Basin cover.

Most modern exploration in Victoria has focussed where historic mining is established. Historic mine occurrences stop where the cover begins – the covered terrain being too great an impediment for historic prospectors. However, the potential for gold deposits under cover in Victoria is well recognised. Modelling by the Geological Survey of Victoria determines multiple, multi-million ounce gold deposits may occur under the Murray Basin (median estimate is 32M Oz Au). Peer group explorers (e.g. Catalyst Metals and Chalice Mining) are focused on exploring through Murray Basin cover in the Bendigo region.

Exploring through cover in Victoria has additional challenges. Generally, the sedimentary rocks and structures that host mineralisation, and the mineralisation itself, has poorly contrasting geophysical signatures, making a key exploration tool – regional geophysics – less effective. In



addition to this, the nature of vein arrays and the sometimes chaotic gold distribution in veins can substantially increase required drilling to test and understand identified mineralisation.

North Stawell Minerals has a significant advantage in its exploration. The rocks comprising the Stawell Corridor includes wedges of basaltic rock that is faulted into the sediments along some structures. Basalts are not typically found in the thick sedimentary rocks that host Victorian Gold deposits, and presents some clear exploration advantage namely, the basalts:

- have different geophysical properties and can be detected with magnetics and/or gravity.
- may form structural buttresses that bend and warp the later gold-bearing faults, creating conditions that focus the emplacement of mineralisation on the basalt margins.
- Increase NSMs capacity to identify and map controlling structures (faults and folds) from the geophysics and better understand the geological architecture and gold potential.

As a consequence, “Stawell-like” targets can be identified and prioritised through cover, significantly constraining the early stage targeting process.

1. Regional geophysics data.

To maximise the ability to identify basalts and the effectiveness of geophysical targeting, NSM flew Falcon airborne gravity-gradiometry from April 2021 (see ASX announcement – 8 June, 2021). The data returned a substantial increase in detail over the previously available wide-spaced government data. The gravity data compliments the existing high resolution airborne magnetics data flown by the Victorian government. Over three months through July, multiple derivative products were generated from the high resolution geophysics. Completed by Fathom Geophysics, the work includes products determining:

- Structural breaks and edges
- Curvature of anomalies and estimated dip and dip direction.
- Noise-filtered products to highlight subtler features
- Tilt filtered products
- Intrusion detection

These products have significantly assisted targeting, generating non-biased structural interpretation. The results have been tested against mineralisation models as targeting tools. Examples are presented in Figure 11a, 11c.

In addition, 243 km² of the prospective corridor has been re-processed to deliver 3D inversion models (56% of the total tenement footprint). The work completed by Nordic Geosciences (see Appendix 1: JORC Table 1). Geophysical inversion refers to the mathematical and statistical techniques for recovering information on subsurface physical properties (magnetic and gravity data) from observed geophysical data and is used to predict complex data (e.g. depth, geometry, density, etc) (Reid 2014). This has proved valuable for interpretation and targeting by generating estimates for depth, shape, plunge, fold axes and variability in many of the interpreted features. (Figure 3, Figure 11a).

The work has identified 30km+ strike length of potentially buttressed basalts – an essential feature of NSMs exploration model - and gives substantial insight into the possible shape and depths of targets. The data, in conjunction with modelling of the most prospective geometries and orientations of features hosting mineralisation (Schaubs et al, 2006) represents a powerful exploration targeting tool.



The dips and orientations of major faults have been determined by a processing technique called “worming” (results in Figure 3). These are important for structural understanding and targeting.

2. Structural Architecture

New geophysical data provides an opportunity to re-assess previous geological interpretations. This is essential to target through the Murray Basin cover and to identify geological and structural controls similar to known mines or mineralisation. During the quarter, Western Mining Services completed a review of the prevailing geological-geophysical interpretation of NSM’s tenement portfolio in conjunction with new geophysical data and NSM geologists (Figure 4).

In general, (and as expected) the geological architecture does not depart drastically from prior interpretations (i.e. Caley and Taylor 2001). The Stawell Corridor is the western edge of the Lachlan Fold Belt (Figure 5, 6, 7). On this margin, slabs of basalt are faulted into the geology. The basalts are a critical precursor event to focussing Stawell-type mineralisation. Gold mineralisation occurs in a subsequent structural event, reactivating faults and introducing orogenic gold systems (Figure 7). Folds and faults wrap around the basalts, increasing potential for gold deposition. The gold event at Stawell is the same event emplacing the multi-million ounce mineralisation accumulations throughout western Victoria (e.g. Stawell, Ballarat, Bendigo, Fosterville) (Figure 5). The basalt domes occur almost exclusively in the Stawell Corridor in Victoria.

Mineralisation in NSM’s tenements is essentially constrained between the Coongee Fault in the east and the Pleasant Creek Fault in the west (Figure 4). West of the Mount Pleasant Creek fault, geology is dominated by a major synclinal (upfolded) domain. To the fault’s east, geology is dominated by close-spaced (imbricate) anticlinal (down-folded) thrust sheets that locally repeat the prospective basalts in the sequence. Anticlinal structures are geologically more prospective for orogenic gold, as they channel and trap mineralised fluids. The complexity of folding and thrusting to the east of the Pleasant Creek fault, and the repeated occurrences of interpreted basalts, makes the zone a compelling gold exploration target.

To the east, the Coongee Fault is interpreted to rotate from west-dipping in the south to east-dipping in the north, and is observed in geophysical data (Figure 3). This can explain the changing structural architecture and is an important interpretation for exploration targeting.

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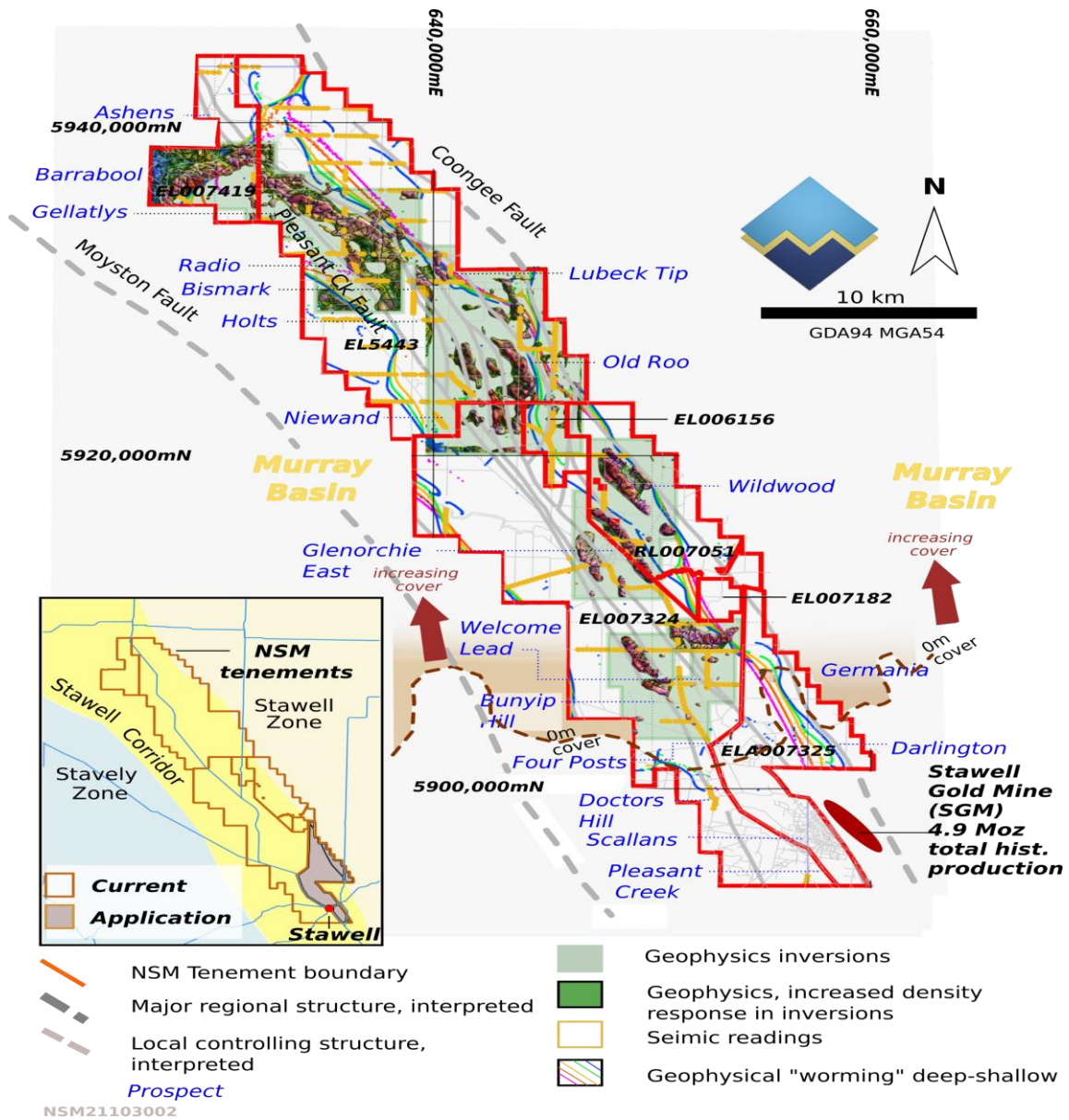


Figure 3 Geophysical data completed in the Stawell Corridor.



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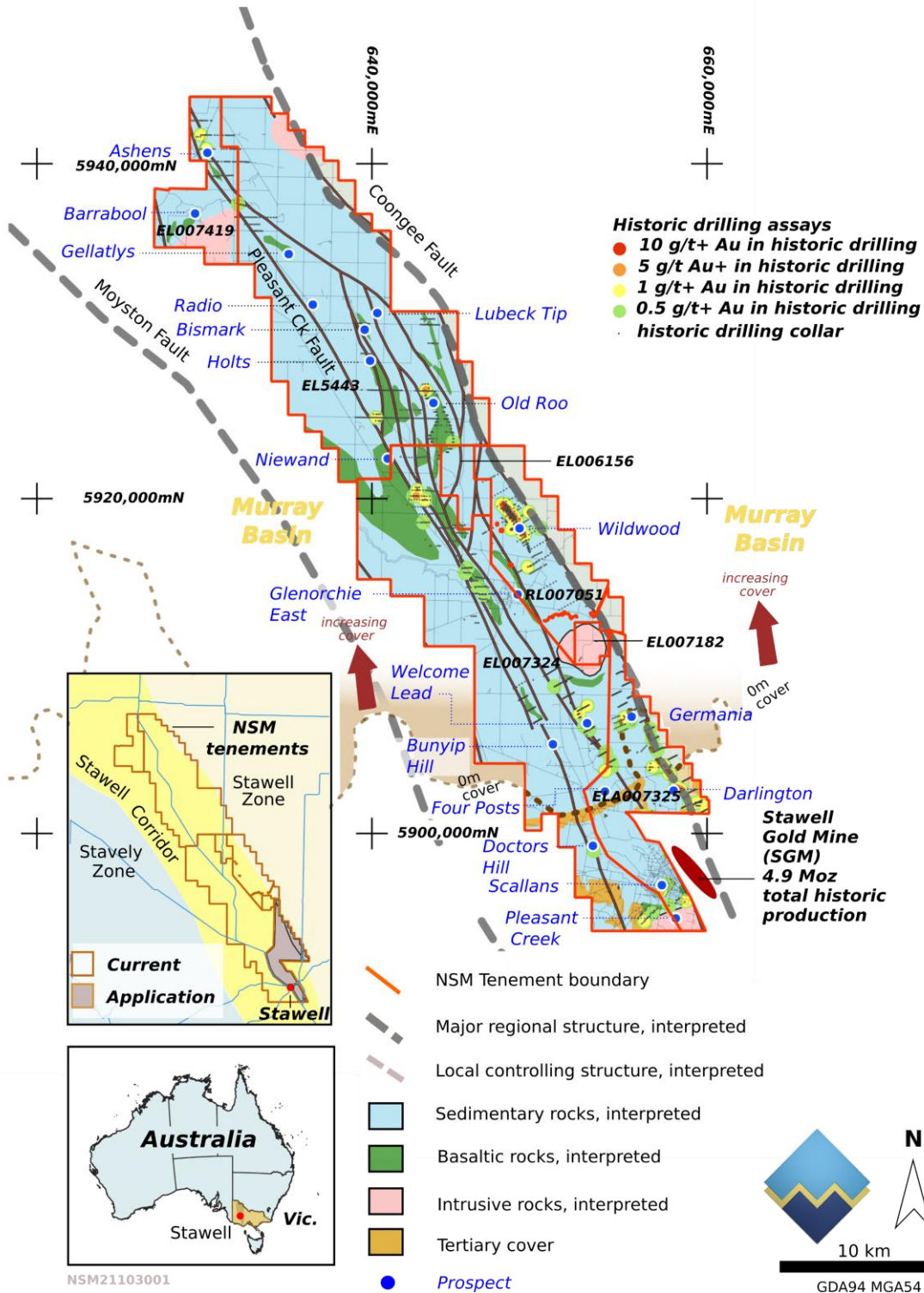
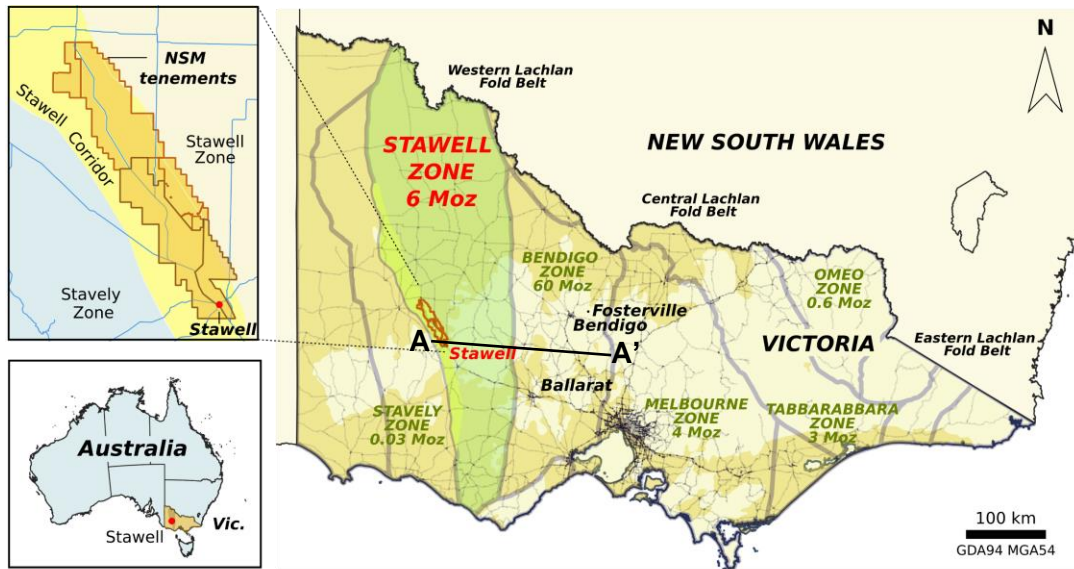


Figure 4 Reinterpretation of basement geology and structure highlights controlling geological relationships



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Figure 5 Victorian Geology and gold zones showing major mines, and total gold production for each geological zones. Section A-A' shown in Figure 5.

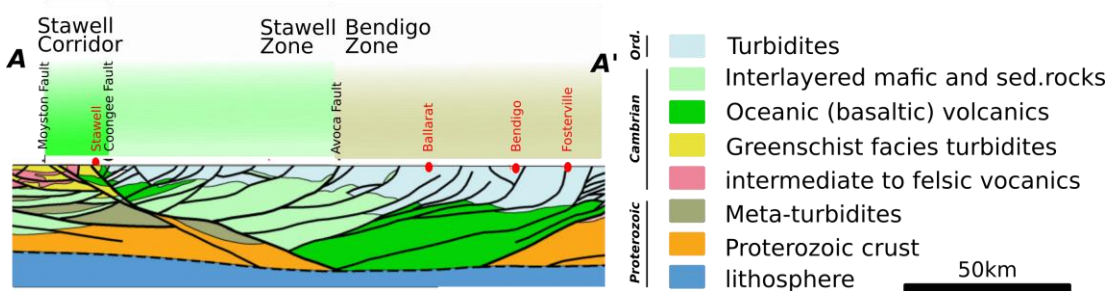


Figure 6 Regional cross section, Stawell Zone.

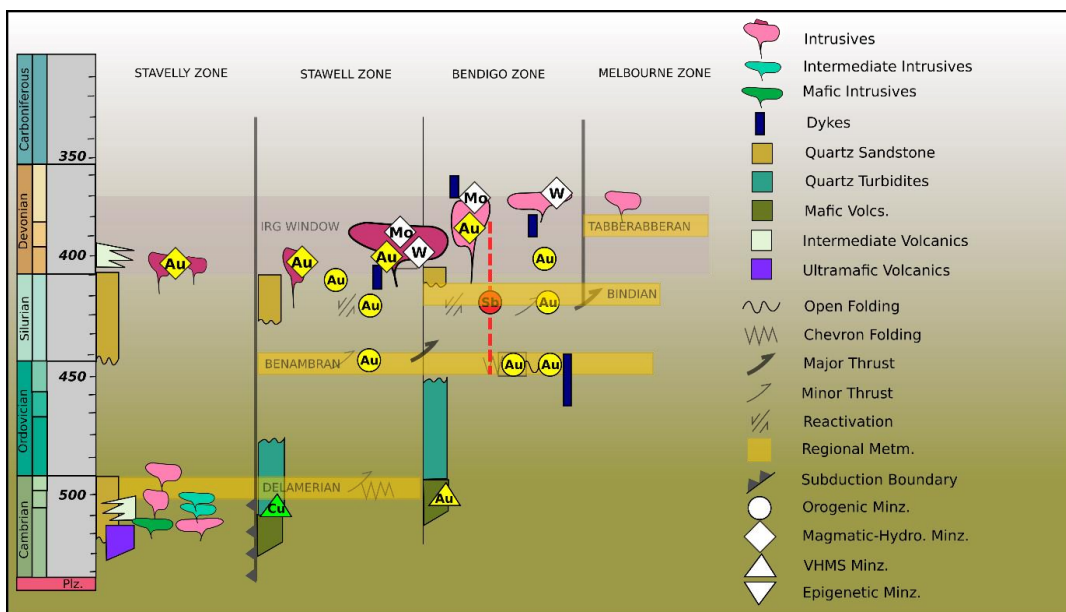


Figure 7 Geological events, structures and mineralisation in western Victoria (after Vandenberg, 1996).

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3. Clear geological models for mineralisation

The NSM tenements encompass 56km strike length of the Stawell Corridor, a belt highly prospective for gold with thrust and folded rocks demonstrated to be mineralised over a strike length of at least 160km (Figure 5). The Stawell Corridor is mineralised by the same geological event that produced Bendigo (22Moz), Ballarat (13Moz) and Fosterville (9Moz) (Figure 7). The flagship gold deposit in the Stawell Corridor is the Stawell Mine (4.9Moz (Winterbottom 2016)).

Stawell-type mineralisation – the Magdala Mine at Stawell

The multi-million ounce Magdala Mine (or Stawell Mine) is owned by Stawell Gold Mines (SGM) and operated by a private syndicate and managed by Arete Capital Partners. It is the “type” deposit inspiring NSM’s own 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 Stawell 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 and dilate (Figure 7).

The Stawell-type mineralisation model is very useful to NSM and our exploration strategy as it has several advantages to the explorer:

- Geophysics responsive and therefore more readily targeted through cover;
- demonstrated multi-million ounce potential;
- includes a geological marker horizon (the basalt domes) that make interpretation of the structure and geometry of mineralisation controls significantly easier to interpret;
- High-sulphide ore lenses are expected to be responsive to surface and downhole geophysics, an effective method to identify mineralisation at depth more cost-effectively.

North Stawell and its geologists have, through its agreement with SGM, an exceptional strategic exploration advantage via access to the Stawell Mine geology team and their current models and observations on mineralisation – which are directly applicable to NSM’s regional exploration.

Exploring for Stawell-type mineralisation through cover

Stawell Mine was found in the 1850’s because it occurred close to the surface and not obscured by a blanket of sedimentary cover. Over 80% of NSM’s tenements are masked by cover, 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 (Figure 3, Figure 4). Some of these have been drill-tested and demonstrate that mineralisation similar to Stawell occurs on some basalts. A significant advantage for exploring for Stawell-type mineralisation is that the basalt domes - intrinsically associated with mineralisation – can be detected with geophysics, and identified through the cover. New geophysical processing and acquisition by the company is leveraging off the geophysics response to find “domes” as a pathway to mineralisation.

Prospect scale targeting for Stawell-type mineralisation

Identifying key areas for gold mineralisation within the basalt dome structures is imperative for effective exploration through cover – finding the dome structures is only a first step. Multiple vectors to mineralisation are recognised. Faults adjacent to the domes, as well as secondary faults further from the domes are recognised as important mineralisation controls. At Stawell, sulphide-rich horizons at the basalt-sediment contact and irregularities in the basalt surface (interpreted to impose changing strain and dilation on the faults) are associated with increased gold mineralisation. Chlorite alteration and reduced magnetite in the ore system are positive indicators



for ore. More recent mining at Stawell also indicates the both the east- and west-flanks of dome structures can host substantial mineralisation.

Geophysical modelling has an important role in focussed exploration within the basalt dome structures. Numerical modelling (Schaubs et al 2006) indicates that the parts of the dome that are most likely to host mineralisation (and hence represent a first pass test to determine if the basalt targets includes gold mineralisation that can be interpreted from 3D inversion modelling) are:

- areas where steep flanks of domes begin to flatten (dependant on structure orientation)
- the hinges of folded domes where the plunge steepens (or potentially changes strike)
- potential for mineralisation on dome flanks is elevated where the flanks have more irregular complex geometries (i.e. domes where basalt “lobes” occur on the dome flanks).

Other Mineralisation potential

NSM recognises that other mineralisation types are possible, and these are not precluded from exploration thinking. Multiple shears, thrusts, faults and folds occur through the NSM tenements (Figure 6). These have potential to host “Turbidite-hosted” style orogenic gold systems, not related to basalt domes that are structurally identical to the Turbidite-hosted orogenic gold systems targeted elsewhere in Central and Western Victoria. These are more challenging targets through Murray Basin cover, as they lack the geophysical signature of the domes that control Stawell-type mineralisation. On NSM’s tenements, the Old Roo prospect (Figure 8) is a “Turbidite-type” mineralisation occurrence, hosted in a discrete fold limb. This style of mineralisation may be significant – providing shallow targets above deeper interpreted domes and bringing critical geochemical signatures of mineralisation closer to surface.

A “hybrid” mineralisation style – relying on elements of the Stawell-type and Turbidite-hosted-type is also recognised in the strain shadow in the fold hinge above buttressed basalts, where dilation occurs in sedimentary rocks more distal to the domes. Examples may include the Big Hill mineralisation and Wonga mineralisation at Stawell, and, on NSMs tenements, the historic Darlington and Germania Mines (Figure 8).

Late granites that intrude the folded rocks have potential to remobilise and upgrade existing mineralisation, or be mineralised themselves. Tectonic setting, granite chemistry, granite-related gold models and observed geochemistry support the potential for this style of mineralisation (e.g. Beirlen and McKnight 2005). Several granites are clearly identified in the geophysical datasets in the NSM tenements (Figure 4 and 6). The potential for mineralisation is untested to date.

Historic Mining

Historic mining records demonstrate the potential of the NSM ground. On NSM’s tenements, **393koz Au at 19 g/t Au** have been mined historically (GeoVic 2021). Much of this inventory is proximal to the Stawell Mine and all of it occurs where there is no Murray Basin cover. There is no geological reason for similar mineralisation not to occur beneath cover sequences. Figure 8 summarises the recorded historic production (GeoVic 2021).

Most of the historic mines on North Stawell Minerals’ tenements are located on the Germania exploration licence (EL007325). The licence is still an application. On approval some high-potential geology will become accessible to the exploration team.



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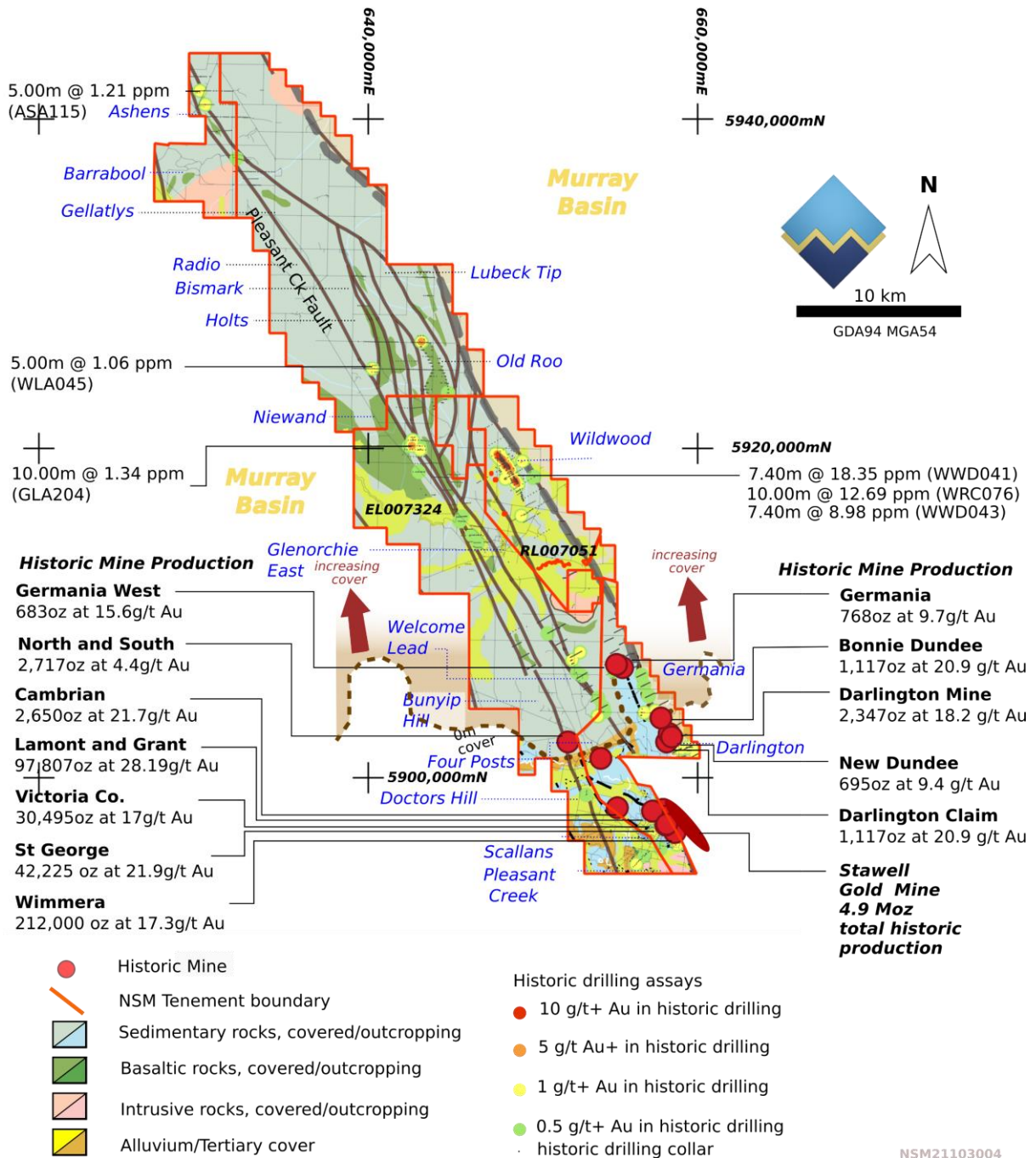


Figure 8 Mineralisation, North Stawell Minerals. The geology that hosts the historic mines is interpreted to continue beneath the Murray Basin. Many of the structures can be traced under cover in the geophysics data. Historic drilling through the Murray Basin has had mixed results. Drilling collars and anomalous grades are shown, and some of the more significant results are highlighted.



4. Understanding the Murray Basin Cover.

80% of NSM's ground is masked by Murray Basin cover, with thickness gradually increasing to the north to depths of approximately 100m. During the quarter, Passive Seismic horizontal-to-vertical spectral ratio (HVSr) surveying was completed throughout the NSM tenements (Figure 3). Passive seismic systems return a vertical seismic profile without requiring a vibration source beyond natural vibration in the ground. The work, initially commenced to identify paleo-surface features that may be related to weathering resistant basalts or mineralisation. This was superseded by geophysical reprocessing. However, the systems application was extended to cost-effectively identifying the regional depth to basement (DTB) (Figures 2, 11a and 11b). A significant result from this work is that 60km² of the tenement package had DTB depths reduced to less than previous estimates (including the 2 current drilling targets). See Figure 11b.

To date, none of the lithologies in the Murray Basin have been identified to have deleterious effects on geophysical responses or aircore drilling rates. However, surface geochemical responses are increasingly impacted by increasing Murray Basin cover depths.

5. Historic data consolidation.

The vast majority of data compilation work is complete, with data added opportunistically rather than on a campaign basis.

The NSM database includes:

- 1,989 AC and RAB holes for 110,000m
- 248 RC holes for 16,000m
- 145 DD holes for 35,500m
- 3,989 Geochemistry samples.

The historic facilitates effective determination of anomalous values for future field programs.

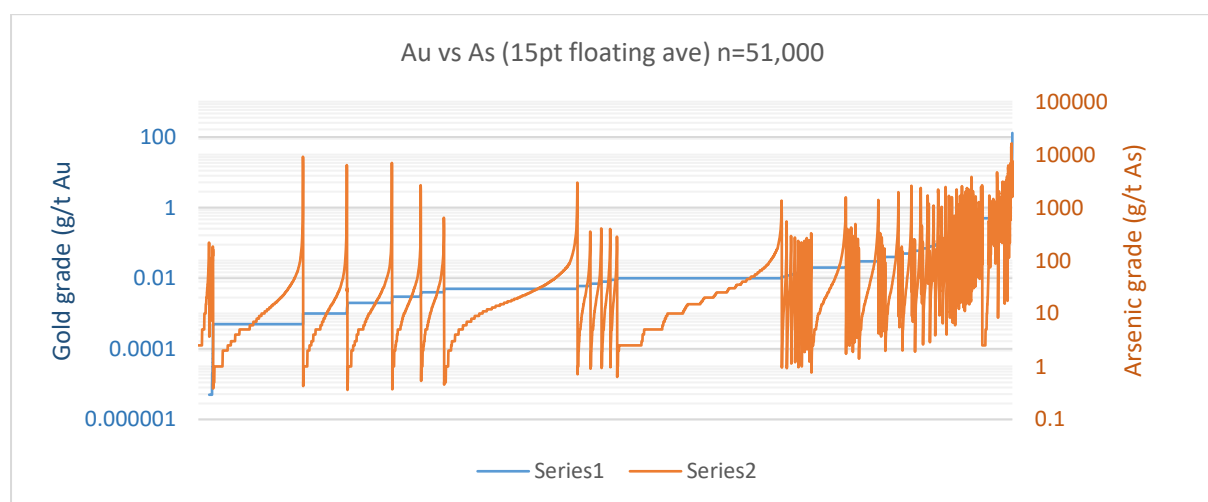


Figure 9 Gold vs Arsenic comparison in regional drilling data. The data shows that, although highly variable at low gold grades, the correlation between gold and arsenic increases significantly as arsenic values increase. NSM interprets that consistent arsenic values above 150-200 ppm are highly encouraging for proximal, significant gold mineralisation.



Review of drilling assays shows a typical relationship between gold and arsenic, with substantial variability (Figure 9). The historic data shows that a consistent arsenic grade of approximately 150-200 g/t As consistently correlates to approximately 0.5 g/t Au. Above 200 g/t Arsenic, gold and arsenic have an increasingly reliable correlation. This metric is critical to assess regional drilling – which is more likely to intersect the broader arsenic halo around mineralisation than the gold-mineralised structure itself (Figure 11).

6. Drilling

Access

Wet weather through winter makes drilling on NSMs tenements impossible. The window for drilling is from October through May. Parts of this window are affected by cropping by farmers.

Results

All drilling results from previous programs have been returned. No new results are reportable in the September Quarter.

Planned drilling.

NSM secured a Mantis 80 aircore rig operated by Wallis Drilling during the quarter. The rig arrived on site at the end of September and started drilling at the Radio prospect in earliest October (Figure 4). Wallis Drilling has substantial experience drilling in the Murray Basin. The rig, with an effective drilling capability of ~120m can test all areas of the tenement portfolio, and its small footprint (6WD landcruiser base) has distinct advantages for operating in cropped paddocks.

Over 20,000m of aircore drilling is planned to date. The drilling is targeting encouraging historic results and new targets identified from geophysics, geological re-interpretation and 3D inversion modelling (see the previous sections of this document).

Drilling is planned to generate geochemical data to assist in prioritising interpreted basalts and domes for follow up deeper drilling. With an emphasis on covering multiple targets over the season, exploration anticipates that identification of a secondary (or primary) alteration halo is most likely. Historic data indicates that arsenic is the most likely pathfinder element, but other typical pathfinder elements, e.g. antimony, sulphur, mercury and magnesium) will be reviewed for anomalism (Figure 10).

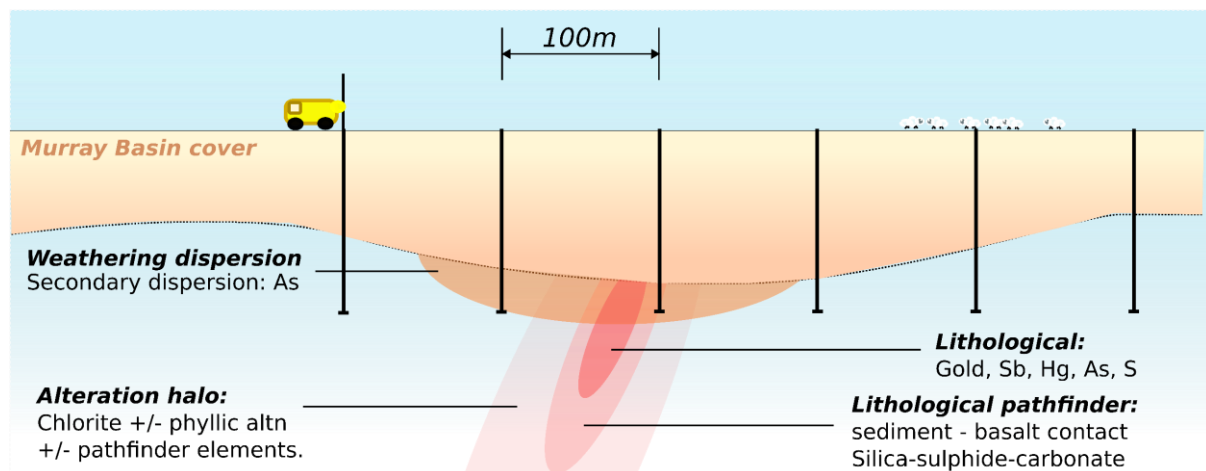


Figure 10 Drill patterns designed to identify dispersion halos of pathfinder element on high gold-potential target horizons.



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Geophysical anomalies adjacent to interpreted major fault are a first-order target. Interpreted fold axes, and inflections in flanks and the hinge line on these features are a second order targeting criteria.

Follow up drilling will occur for encouraging results to either refine or extend mineralisation. Appropriate methods, including infill Aircore, RC or Diamond drilling will be considered as appropriate for the emerging targets.

The Company looks forward to updating shareholders as the drilling programs progress and build momentum as the 2021-2022 field season progresses.

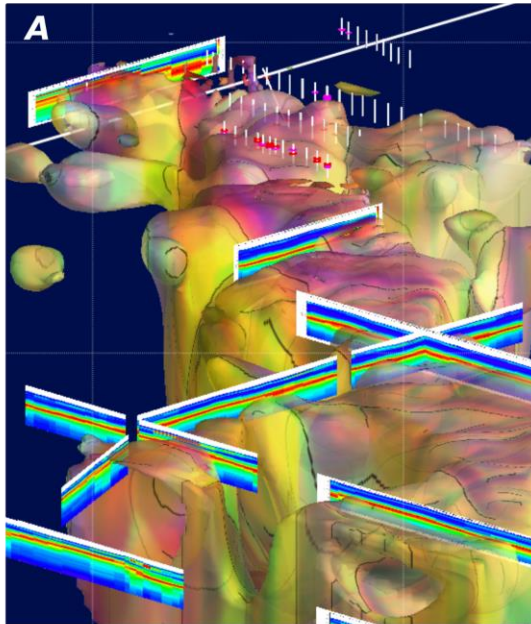
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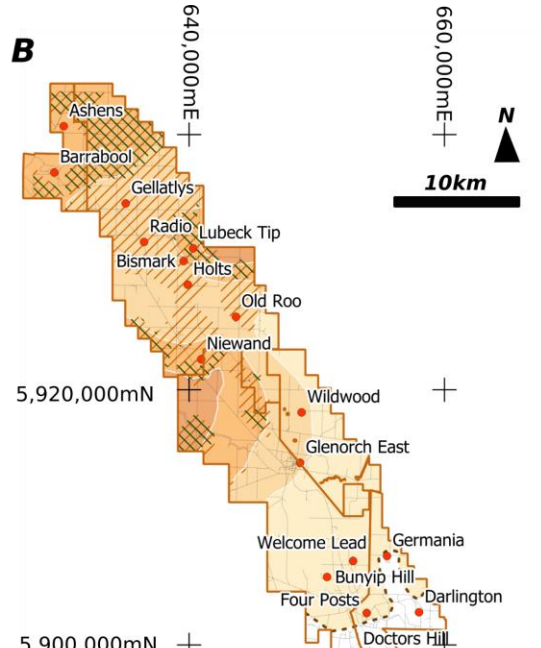
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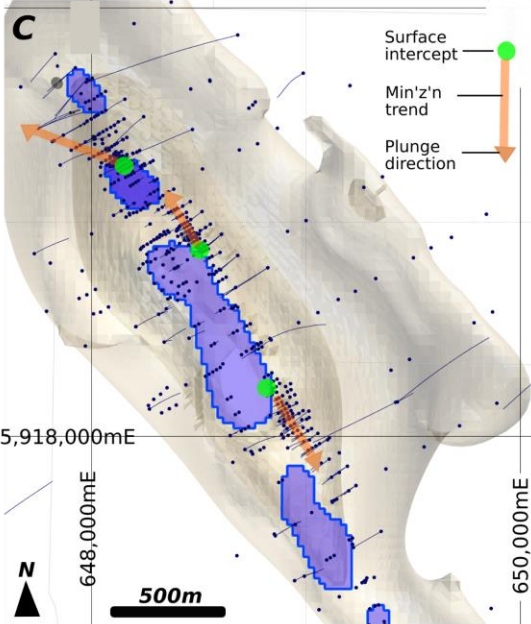
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A Oblique view of the southern Gellatlys Prospect. AGG gravity shown draped with structural interpretation. HVSR (vertical passive seismic profiles shown, taken along road reserves. the red horizon is interpreted as the cover-basement contact, validated by comparison to adjacent drilling.

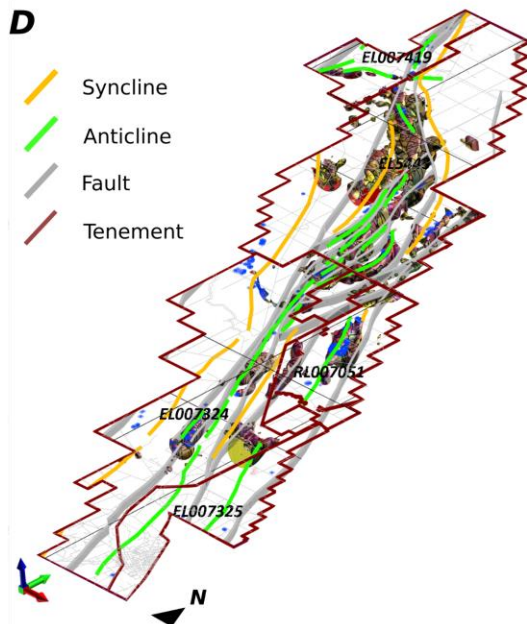


B Depth to basement under the Murray Basin cover, derived from available historic drilling (compiled by Vic. ERR). NE hatch represents areas where basement is shallower than previous interpretation - and reduces exploration depths for ~60km² of prospective Stawell Corridor.



C Wildwood dome inversion (brown) draped with geophysics derived areas with maximum curvature. The surface projection of ribbons of mineralisation intersect the margin of these features. Although as yet unverified as a regional targeting tool (by drilling), the model-derived targets, to date, match observed mineralisation.

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D Orthographic view of NSMs tenement portfolio with interpreted structure superimposed on 3D inversion models. The combined dataset and structural architecture presents some enhanced targeting opportunities. Systematic testing with Aircore commences in earliest October.

Figure 11 Examples of products and observations described in the text.



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Finance and Use of Funds

Pursuant to ASX Listing Rule 5.3.4, the Company advises the proposed use of Funds as per Section 4.7 of the Prospectus to actual use of funds as follows:

Funding Allocation	Prospectus	Dec 20 Qtr	Mar 21 Qtr	June 21 Qtr	Sep 21 Qtr	Actual to date	Variance
Cost of IPO, Listing	2,127,929	2,200,400	-	-	-	2,200,400	72,471
Exploration (2 years)	11,026,000	284,100	1,839,800	2,481,100	437,900	5,042,900	(5,983,100)
Capital Equipment	631,000	291,100	4,900	70,300	9,800	376,100	(254,900)

Cash at the end of the Quarter was \$10.85m. As per ASX Listing Rule 5.3.5 a Company is required to provide a description and explanation of any related party payments made during the quarter. \$61,500 in total, being for \$48,000 Director fee payments (inclusive of superannuation) and \$13,500 to Arete Capital Partners for media and administrative support.

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

For Media Enquiries
Angela East
Angela.East@mcpartners.com.au
0428 432 025

For Investor Enquiries
info@northstawellminerals.com

For further information visit the website: <https://www.northstawellminerals.com/>

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 LTD

ACN 633 461 453
ABN 84 633 461 453

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 in excess of five million ounces of gold. NSM's granted tenure has a total land area of 450 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.

Interim Chief Executive Russell Krause said:

"NSM regards the northern Stawell Mineralised Corridor, over which NSM has a commanding ground position, to be one of Australia's most underexplored historic gold provinces, with significant potential to deliver multi-million ounce gold mineralisation under shallow cover. Many prospects in the tenement area, tested by prior explorers, are demonstrated to be gold mineralised, and we are excited to incorporate this knowledge, regional re-interpretation, geophysical modelling and the ongoing regional aircore drilling program results into the exploration to deliver the next major Stawell Corridor exploration success – under cover.

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 Tenure Summary



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Tenement	Status	Number	Area (km ²)	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	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	Application	EL007325	54	82	51%	90%
Total granted			450.5	520		

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.

In July, EL007324 "Deep Lead" was granted, adding 167km² of tenure to the NSM portfolio. The tenement includes the northern continuation of the geology and structures that host the Stawell Gold Mine. 80% of the tenement is under cover, and the ground is considered to have significant potential for Stawell-type mineralisation.

EL007325 "Germania" has remained an application throughout the Quarter. NSM is not aware of any reason that the tenement will not be granted following due process at Earth Resources Victoria (the regulator).

JORC Table 1

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Section 1 Sampling Techniques and Data

Section 1 is divided into 3 sections by topic:

- a. Geophysical Inversions
- b. Passive Seismic
- c. Historic Drilling

Section 1 Sampling Techniques and Data - a. Geophysics Inversions

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> • <i>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.</i> • <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i> • <i>Aspects of the determination of mineralisation that are Material to the Public Report.</i> • <i>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.</i> 	<ul style="list-style-type: none"> • NSM is reporting 3D inversions of airborne gravity gradiometer (AGG) and airborne total magnetic intensity (TMI) survey data over its tenure. • The inversions were computed by Nordic Geoscience Pty. Ltd. • The aim and scope of the inversion was to produce 3D magnetic susceptibility and density models for selected areas, in order to identify preferential sites for gold mineralisation and occurrences, and in order to assess thickness of cover. • The AGG and TMI inversions were carried out using Geoscience Analyst Pro (version 3.3) from Mira Geoscience. • For the AGG inversions data was provided from the 2021 FALCON North Stawell survey. • For the TMI inversions data was provided from three airborne TMI surveys: 2412_Stawell, Glenorchy, and 2526_Rowell.
Drilling techniques	<ul style="list-style-type: none"> • <i>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).</i> 	<ul style="list-style-type: none"> • na
Drill sample recovery	<ul style="list-style-type: none"> • <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i> 	<ul style="list-style-type: none"> • na

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	<ul style="list-style-type: none"> Measures taken to maximise sample recovery and ensure representative nature of the samples. 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. 	
Logging	<ul style="list-style-type: none"> 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. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged. 	<ul style="list-style-type: none"> na
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. 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. 	<ul style="list-style-type: none"> na
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> na



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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.
- To evaluate the coherence of the sampled AGG and TMI data, 2D data images were produced and assessed for noise and artefacts by Nordic Geoscience.
- Nordic Geoscience determined that the sampled data is acceptable.
- The 3D voxel models created from the inversions are reviewed and revised by:
 - Fit of model to data
 - Resolution of density/magnetic susceptibility and depth

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.
- The grid system used is (Projection: MGA54, Horizontal datum: GDA94, Vertical datum: EGM96 geoid)
- The AGG and the topographic data have an estimated positional accuracy of 5m (horizontal) and 0.5m (vertical).
- The TMI data has an estimated positional accuracy of 10m (horizontal) and 5m (vertical).

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.
- Noise-reduced FALCON GDD data and airborne TMI data is gridded at 50m cell size and converted to point data.
- Vertical position for the AGG data was derived from the FALCON survey flight GPS data.
- Vertical position for the TMI data was derived from the TMI survey altimeter data and from the FALCON LiDAR-derived terrain model.
- Data spacing and distribution is not sufficient to allow the estimation of mineral resources.

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.
- As data is modelled on a rectangular voxel format, the data distribution allows for generation of plan view maps which are presented at different elevations (metres above sea level - EGM96) from -300m to the topographic surface every 25m.



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Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> Survey data collated and interpreted by North Stawell Minerals and Nordic Geoscience personnel
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of sampling 	<ul style="list-style-type: none"> Data collection and processing protocols aligned with industry best practice.

Section 1 Sampling Techniques and Data - b. Passive Seismic

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> 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. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. 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 cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. 	<ul style="list-style-type: none"> Passive Seismic horizontal-to-vertical spectral ratio (HVSR) Surveying Specifications: Rental Contractor (for hire of Instrumentation): Resource Potentials Pty. Ltd. Instrumentation: Tromino® TEB – 0543, TEB – 0544, TEB – 0552 and TEB – 0553 seismometers. Station Spacing: Variable 40m – 200m Line Spacing: Variable Measurement Duration: 20 minutes per HVSR station Sample Rate: 128 Hz Components: NS, EW, Z Tromino® ENGY TEB seismometer specifications: Manufacturer – MoHo s.r.l Dimensions: 10 x 14 x 8 cm Weight: 1.1 kg Vibration sensors: 3 orthogonal velocimeters Sampling rate 64 kHz per channel Output sample rate: 128 Hz Sensor frequency range: 0.1 – 1024 Hz
Drilling techniques	<ul style="list-style-type: none"> Drill type (e.g. core, reverse circulation, open- hole hammer, rotary air blast, 	<ul style="list-style-type: none"> na



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	<p><i>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).</i></p>	
Drill sample recovery	<ul style="list-style-type: none"> • Method of recording and assessing core and chip sample recoveries and results assessed. • Measures taken to maximise sample recovery and ensure representative nature of the samples. • 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. 	<ul style="list-style-type: none"> • na
Logging	<ul style="list-style-type: none"> • 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. • Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. • The total length and percentage of the relevant intersections logged. 	<ul style="list-style-type: none"> • na
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> • If core, whether cut or sawn and whether quarter, half or all core taken. • If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. • 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. 	<ul style="list-style-type: none"> • na
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • Tromino® ENGY TEB seismometer specifications: • Manufacturer – MoHo s.r.l • Dimensions: 10 x 14 x 8 cm • Weight: 1.1 kg • Vibration sensors: 3 orthogonal velocimeters



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	<ul style="list-style-type: none">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.	<ul style="list-style-type: none">Sampling rate 64 kHz per channelOutput sample rate: 128 HzSensor frequency range: 0.1 – 1024 Hz
Verification of sampling and assaying	<ul style="list-style-type: none">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.	<ul style="list-style-type: none">na
Location of data points	<ul style="list-style-type: none">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.	<ul style="list-style-type: none">Passive seismic stations were surveyed by handheld Garmin GPS units.The datum and projection was GDA 94 Zone 54
Data spacing and distribution	<ul style="list-style-type: none">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 estimationprocedure(s) and classifications applied.Whether sample compositing has been applied.	<ul style="list-style-type: none">Passive seismic survey line spacings were not uniform as they were restricted to existing infrastructure (access roads) and were on average spaced approximately 2 km apart. Station spacing ranged from a nominal 40m to 200m. All spacings are considered sufficient for mapping the thickness of soft sedimentary and regolith cover deposits.
Orientation of data in relation to geological structure	<ul style="list-style-type: none">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.	<ul style="list-style-type: none">The majority of survey lines were orientated in a north south or east west direction as they were limited to existing infrastructure.



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Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> All field data was processed and interpreted in-house by Resource Potentials Pty. Ltd. Data was electronically transferred between North Stawell Minerals Pty. Ltd. (Victoria) and Resource Potentials Pty. Ltd. (Perth, Western Australia) via a secure, password-controlled, Dropbox system.
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of sampling 	<ul style="list-style-type: none"> All of the passive seismic HVSA data collected during the survey were reviewed by experienced geophysicists at Resource Potentials Pty. Ltd.

Section 1 Sampling Techniques and Data - c. Historic Drilling

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> 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. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. 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 cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. 	<ul style="list-style-type: none"> Samples in the 2021 Aircore program are riffle split if dry and 2-3kg grabs for wet samples. The Murray basin sediments are only samples near the basalt interface. Samples are weight in the field and remnant sample bagged to be dried and re-samples if required. Aircore drilling is used to obtain 1m samples from which 2-3kg is sent to a certified laboratory for assay. As at 7 October, samples have been collected but not sent. Historic results (only depicted on Figure 1) are from previous exploration conducted by past explorers including Rio Tinto Exploration, WMC Resources, Leviathan Corporation, Highlake

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Resources, Planet Resources and Stawell Gold Mines.

Drilling techniques

- *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).*
- The 2021 program is using a Mantis80 Aircore rig with NQAC rods.
- A variety of techniques have been used in historic drilling and includes regional lines of RAB or Aircore 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).
- Standard Industry techniques have been used for historic drilling where documented.

Drill sample recovery

- *Method of recording and assessing core and chip sample recoveries and results assessed.*
- *Measures taken to maximise sample recovery and ensure representative nature of the samples.*
- *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.*
- In 2021 programs, each meter is logged. Each interval is weighed and recorded. Samples are photographed, and the remainder of assayed intervals retained.
- For historic data, if available, drilling data recoveries (e.g. weights for historic AC/RC drilling and recoveries for historic diamond drilling are recorded.
- No tests for bias are identified as yet for historic results.

Logging

- *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.*
- *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.*
- *The total length and percentage of the relevant intersections logged.*
- 2021 samples are logged on meter intervals. Representative chips are kept for future reference. The samples are photographed and remnants stored.
- Geological logging of historic holes, where reviewed, follows industry common practice. Qualitative logging includes; lithology, mineralogy, alteration, veining and weathering and (for core) structures.
- All historic logging is quantitative, based on visual field estimates.



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Sub-sampling techniques and sample preparation

- *If core, whether cut or sawn and whether quarter, half or all core taken.*
- *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*
- *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.*
- *Aquifers in the Murray basin produce wet samples. Grab/spear samples are taken on a meter basis. Selective sampling by size of mineral is avoided.*
- *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.*
- *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.*
- *No assays have been returned for 2021. Matrix matched CRMs are inserted approximately every 20m. Duplicates are cone-and quartered.*
- *An Olympus Vanta is being used for multielement analysis. The data will be used as an internal check for pathfinder elements. The unit self calibrates. NSM has pXRF standards and blanks.*
- *No sample data has been returned, bias and accuracy checks will be determined and the QAQC datasets are returned.*
- *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.*
- *No assays have been returned for the 2021 program. Significant assays will be resampled from stored cuttings if required.*
- *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.*



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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.
- 2021 collars are laid out with a Garmin GPS. This is sufficiently accurate for the regional program specifications. They will be picked up post programs with a DGPS and recorded and reported in GDA94 MGA54S coordinates.
- 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 a number of 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.
- The 2021 program at Radio is vanguard work, tasked to identify anomalism for future follow up, and is therefore widespaced and not appropriately spaced for Resource determination.
- 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 tenement EL007324 were designed and executed as regional exploration. The historic drilling data has not been reviewed for its



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		appropriateness to inform Mineral Resource Classification.
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 2021 AC drill holes are drilled vertically, perpendicular to any basalt-cover interface anomalism. Orientations of any basement mineralisation is unknown as yet, but is expected to be subvertical, with sub-horizontal stringers and splays. The orientation is considered appropriate for reconnaissance drilling in a new terrain. The historic drill orientation is perpendicular to the regional geology and known mineralised trends previously identified from earlier drilling.
Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> In the 2021 program, samples are removed from the field each day and stored in a secure compound area at Stawell. Sample security has not been reviewed for the historical data.
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of sampling 	<ul style="list-style-type: none"> There has not been internal or external audit or review of historic assays identified.

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and	<ul style="list-style-type: none"> Type, reference name/number, location and ownership including agreements or 	<ul style="list-style-type: none"> Current tenements are summarised in Appendix 1 -Table 1 of the



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land tenure status

material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.

- *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.*

announcement. Historic tenements are identified from the Victorian Government Geovic online spatial resource

- All granted tenements are current and in good standing.
- The project area occurs on freehold land. Minor Crown Land (>3%) and Restricted Crown Land (>1%) is identified. All areas are accessible if appropriate land access requests and agreements are in place.
- The Victorian Governments Geovic spatial online resource does not identify any material cultural, environmental or historic occurrences.
- 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.
- 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.
- EL007325 "Germania" is yet to be granted. The licence was applied for 12 months ago. There are no known issues with the application that are stalling its progression through ERR.
- Tenement security is high, established in accordance with the Victorian Mineral Resources Act (MRSDA) and Regulations (MR(SD)(MI)R 2019).
- 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%

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



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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, exploration is typically testing for fault-repeats of the Stawell-type mineralisation, centered on magnetic anomalies. Basalt 'dome' analogies were identified with minor associated gold mineralisation.

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



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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 mineralisation event.
- 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
 - dip and azimuth of the hole
 - down hole length and interception depth
 - hole length.
- If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does
- The report includes no new drilling results. Drill hole information will be summarised and reported as assays are returned.
- Historic results are summarised as assays extracted from a historic, managed, validated database solution (Acquire), and associated procedures for QAQC.
- Historic easting and northings are captured as WGS84, AGD66 and GDA94 coordinates. All are transformed to GDA94MGA54S for the collar tables.
- Drill collar elevation is defined as height above sea level in metres (RL).



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not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.

- 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 not included in this report, or considered material, as the only representation of the data is a map at 1:350,000 scale.

Data aggregation methods

- *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.*
- *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.*
- *The assumptions used for any reporting of metal equivalent values should be clearly stated.*

- The report includes no new drilling results. Data aggregation methods will be reported on assay return.

Historic results

- The only representation of drill results (Figure 2) includes individual grades, therefore:
- No composites or weighted averages are applied.
- No top cuts have been applied.
- A nominal 0.5g/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.

Relationship between mineralisation widths and intercept lengths

- *These relationships are particularly important in the reporting of Exploration Results.*
- *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*
- *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').*

- The 2021 data intercepts and geometry will be reviewed as assays are returned. The orientation of any mineralisation at Radio is yet to be determined, but is likely to be sub-parallel to faults or basalt contacts (if intercepted).
- Historic results are presented at 1:350k scale, the assays are plotted (Figure 2) as individual sample result. As such, the orientation and true thickness are not material to the Figure or its interpretation.



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Diagrams	<ul style="list-style-type: none">• <i>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.</i>	<ul style="list-style-type: none">• Diagrams are accurate and representative at the scales presented.• Plan is at 1:350k scale. A supporting section at this scale is not regarded to be material or informative.
Balanced reporting	<ul style="list-style-type: none">• <i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i>	<ul style="list-style-type: none">• All available drill holes and assays have been used to generate the only Figure using assay data. The figure is based on highest values rather than total intercepts to simplify the document and minimise the chances of introducing bias from non-representative composite intercepts.
Other substantive exploration data	<ul style="list-style-type: none">• <i>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.</i>	<ul style="list-style-type: none">• All scale-relevant exploration data is shown in diagrams and discussed in text.• Regional geology is interpreted from available historic data and geophysical data.• See previous sections for geophysical interpretation and the generation of inversion data.
Further work	<ul style="list-style-type: none">• <i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i>• <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i>	<ul style="list-style-type: none">• NSM plans to build on the surface geochemical data, further assess the historic drilling for open or high-priority data in the context of the Company's exploration model, and review targets in the context of new geophysical data and historic work• Drill testing of interest areas will be assessed with air drilling for coverage, then RC/DD as appropriate to test depth continuation of near-surface anomalism.

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