# 2022 Annual Report on Exploration

# EL 6/2019

## 27th January 2021 to 26th January 2022

**HOLDER:** **Stavely Tasmania Pty Ltd**

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Note: All figures, grids and contained data are presented according to the GDA/MGA94 grid system.

## EXECUTIVE SUMMARY

Exploration Licence 6/2019 was granted on the 27th January 2020.

No exploration could be undertaken by Stavely Tasmania prior to the tenement anniversary due to the COVID-19 pandemic travel restrictions. On the 15th July 2020 Stavely Minerals Limited executed a Letter of Intent to divest its Mathinna/ Alberton and Lefroy tenements, including EL6/2019 to Nubian Resources Ltd. On the 16 December 2020 Stavely Minerals announced that it had completed the sale of the Tasmania tenements to Blackwood Prospecting Pty Ltd a wholly owned subsidiary of Nubian Resources.

The initial two-year work program was designed to assess EL6/2019 for undiscovered near surface mineralisation along strike from historical mines as well as new areas of interest as identified from Mineral Resources Tasmania's (MRT) recently released high resolution 3D model of the Alberton-Mathinna "Gold Corridor", northeast Tasmania. Initially, Stavely Tasmania planned to undertake an environmental baseline survey to map out, characterise and quantify the extent of disturbance related to historic mining activities. Subsequently, Stavely Tasmania proposed to evaluate the extent and grade of gold mineralisation at a number of historical workings in the Alberton Goldfield primarily through diamond core drilling.

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## INTRODUCTION

EL 6/2019 is located in North East Tasmania. The licence covers 40 square kilometres and is located approximately 5 kilometres south-east of Ringarooma and extends south for 13 kilometres. Access to the northern portion of the lease is via Crown roads and Forestry Tasmania tracks.

Due to the travel restrictions related to the COVID-19 pandemic no on-ground exploration was conducted on EL6/2019 for the period 27th January 2021 to 26th January 2022.

The licence is situated within both rural and state forest areas and is serviced by a network of sealed and all weather roads and fire trails.

Topographic relief varies from gently undulating pasture areas to steep hills and ridges with deeply incised valleys developed in the central area of the licence. Vegetation in non-farming areas is dominated by wet-sclerophyll forest.

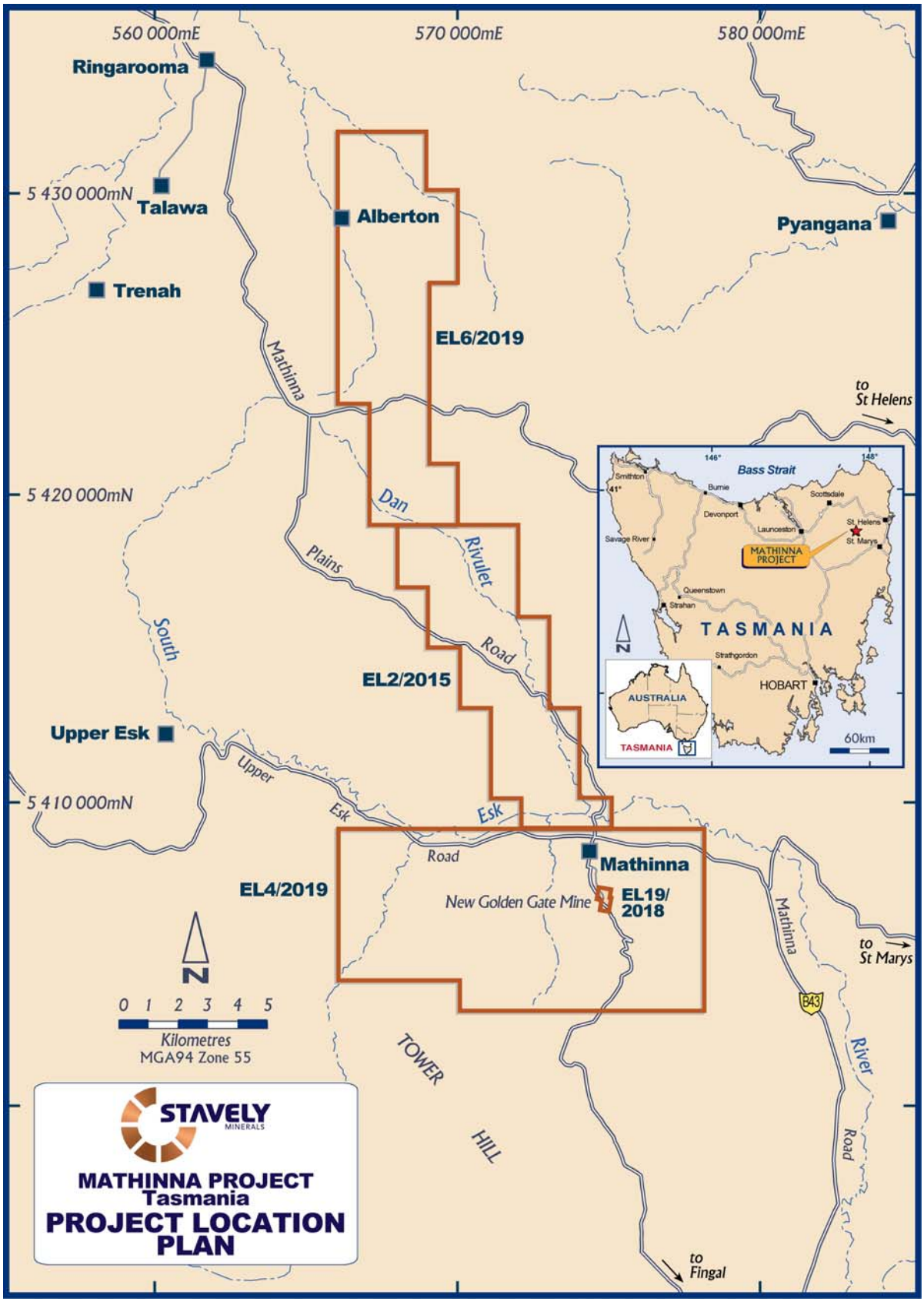


**Figure 1. EL 6/2019 Location Plan.**

## Licence Details

Stavely Tasmania Pty Ltd (a wholly owned subsidiary of Stavely Minerals Limited) was granted EL6/2019 on 27th January 2020 for an initial term of five years. The licence was held in joint venture with Bestlevel Holdings Pty Ltd (Bestlevel). On the 15th July 2020 Stavely Minerals Limited executed a Letter of Intent to divest its Mathinna/ Alberton and Lefroy tenements, including EL6/2019 to Nubian Resources Ltd. On the 16th December 2020 Stavely Minerals announced that it had completed the sale of the Tasmania tenements to Blackwood Prospecting Pty Ltd a wholly owned subsidiary of Nubian Resources.

## Geology & Mineralisation Overview

Exploration Licence 6/2019 is located within the 70 kilometres long, 2- kilometre- wide north westerly trending Mangana to Lyndhurst gold lineament. Gold mineralisation contained within the lineament is hosted by the Silurian to Devonian Mathinna Beds. The Mathinna Beds comprise an alternating sequence of bedded quartzites, sandstones, siltstones and slates. The quartzites have a lithic component and display graded structures locally. The Mathinna Beds are unconformably overlain by probable Carboniferous and Permo-Triassic sedimentary sequences of the Parmeener Supergroup.

Granites and granodiorite of Devonian age have intruded the Mathinna Beds. Sporadic tin and tungsten mineralisation is associated with granitic intrusion.

Regionally the Mathinna Beds are folded about northwest trending axes to from small scale and kilometre scale wavelength tight to moderate folds. Axial plane cleavage development takes the form of a slaty cleavage in the pelitic units. A subsequent deformation has produced regional mega kinking about steep, northeast trending kink planes, and numerous steep dipping bands with both sinistral and dextral geometry.

The age of the gold mineralisation is uncertain; however it is probable that gold mineralisation was concurrent with folding and cleavage development prior to emplacement of the Devonian granites.

The tenement is directly along strike from the New Golden Gate and North Golden Gate Mines which are located in the Mathinna goldfield in Tasmania's north eastern gold province (Figure 2 & 3). The Mathinna goldfield lies on the Mangana- Lyndhurst trend, a north-northwest trending zone which accounts for over half of the gold occurrences in Tasmania's north-eastern gold province (Figure 4). The bulk of the gold occurrences in the province are in discrete high-grade quartz+minor sulphide (predominantly pyrite and arsenopyrite) reefs hosted in Ordovician to Devonian aged shale-siltstone-sandstone sequence of turbiditic origin. These reefs were emplaced structurally during the Middle Devonian Tabberrabberan Orogeny.

The New Golden Gate Mine which produced over 250,000 oz at 26 g/t gold, exploited 4 larger (and a number of smaller) steeply plunging shoots over a vertical extent of over 600 metres. These reefs are north-northeast striking and sub-vertical with the ore-shoots generally <50m along strike. The New Golden Gate

and North Golden Gate Reefs are hosted on the steep eastern limb of a west verging, north-northwest striking fold in a package of dominantly shale and siltstone. Structurally the reefs appear to be hosted in north to north-northeast striking faults which splay off north-northwest striking faults (specifically the steeply west-southwest dipping main and second slides).

Shoots within these north to north-northeast striking structures are short strike length, large vertical extent (steeply south plunging), lensoidal “pipes” within these more laterally extensive faults. The main shoot of high grade and width in the New Golden Gate Mine occurred where the Main and Loanes Reefs converged.

Mineralisation at Mathinna is interpreted to be hosted within dextral strike-slip shear zones with right-hand jogs creating dilatant zones that host the structurally controlled quartz vein arrays. Mineralisation is described as being hosted in quartz veins of variable width from a few centimetres to 10m and ranging in strike length from 5m to over 300m. The majority of gold productive veins are reported to be less than 1m wide and between 30m to 60m in strike length.

The recent geological 3D model developed by the MRT, which is based on mapping and multiple cross sections and constrained by 3D geophysical modelling using MRT gravity and magnetic survey data coupled with drilling and rock physical property databases is invaluable in assisting with exploration targeting. The structural architecture of the area is associated with NNW trending dextral wrench shears which control the orientation of lode dilation and mineralisation. The primary lodes at Mathinna are orientated NNE with both linking structures and orthogonal structures. This architecture will provide the philosophy for ongoing exploration activities and drill targeting.

The identification of these regional structural controls provides an excellent exploration target along strike of the Mathinna goldfield into EL 6/2019.

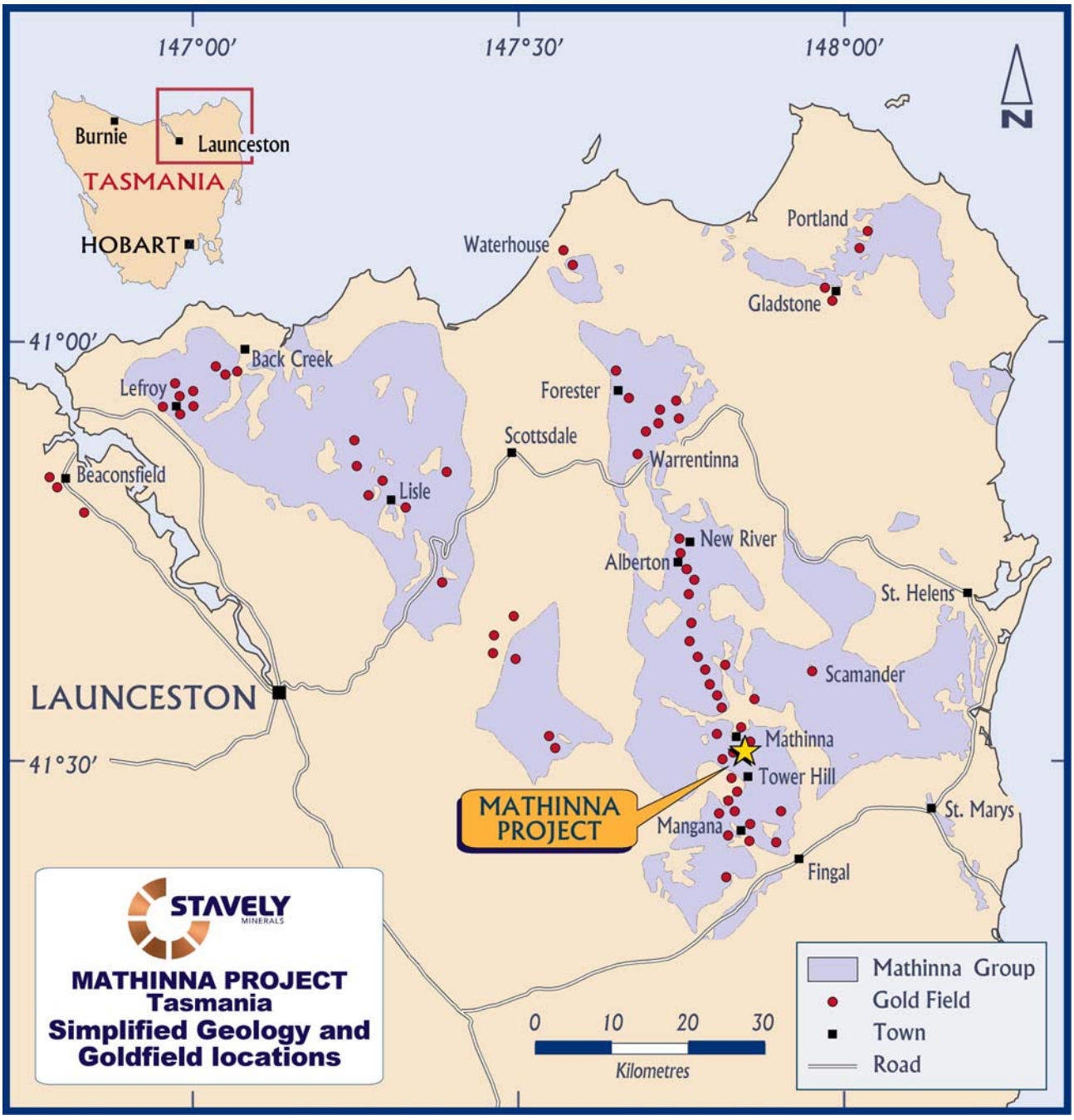


**Figure 2. Mathinna Project – Regional Geology Plan.**

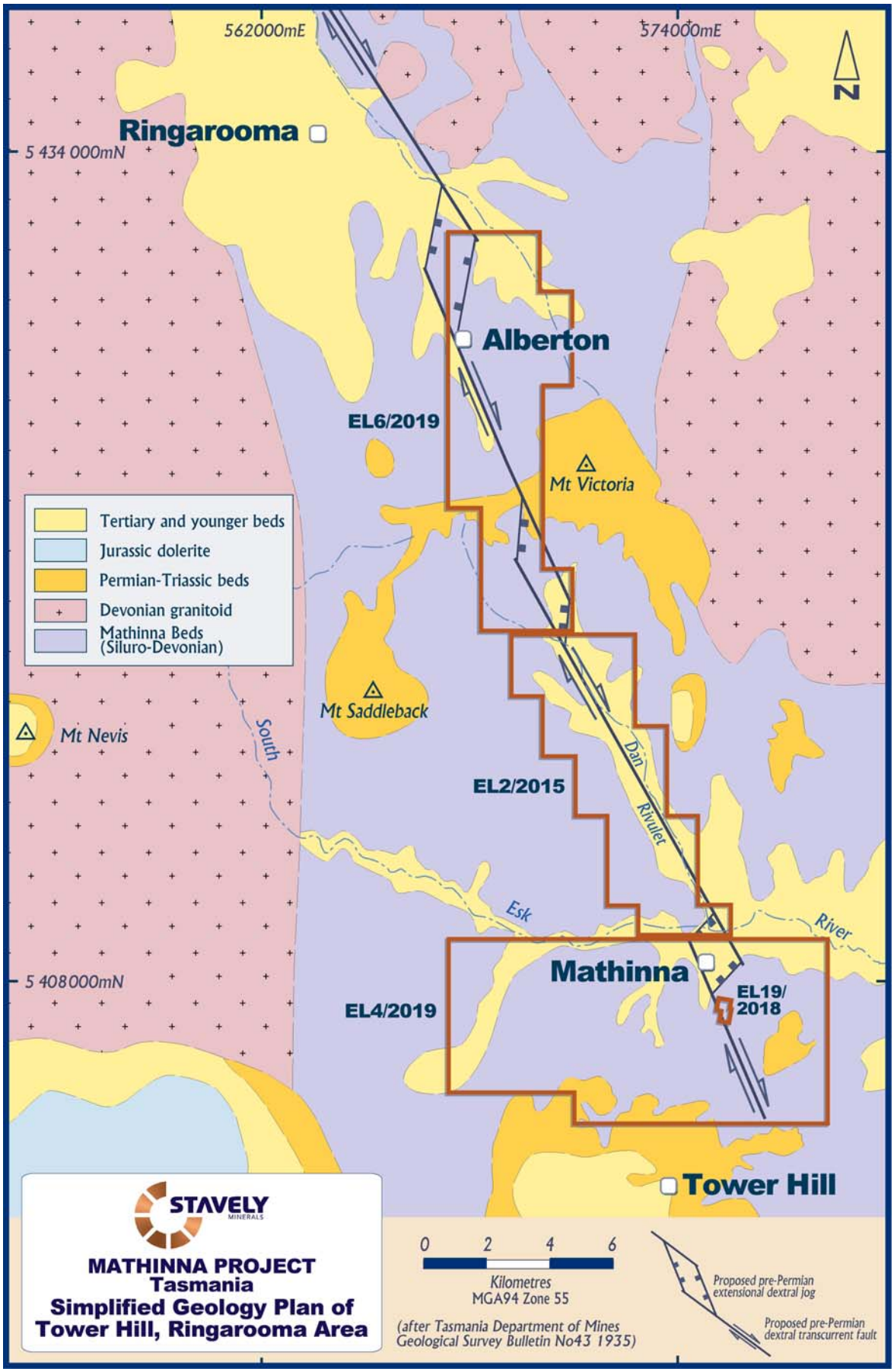


**Figure 3. Mathinna Project – Local Geology Plan.**

## *Exploration Rationale*

Stavely Tasmania has been actively exploring in the area, most recently at the Mathinna goldfield where 7 diamond holes have been drilled on EL19/2018 and EL4/2019.

The potential to discover new reefs and extensions to existing reefs in the area of the historic workings, as well as locating previously undiscovered mineralisation is considered high. On Exploration Licence Application 19/2018 (surrounded by EL4/2019) shallow drilling in the late 1990's along strike from the New Golden Gate Mine (Tasmania's second largest gold mine having produced 264,000oz at 26 g/t mostly between 1881 and 1912) identified two new shallow high grade shoots to the NE of historical workings (Dylans and Sophies – 25,500oz at 13.4 g/t Au) from surface to 100m, as well as two new reefs to the west of historical workings (Central – 7,900oz at 6.9 g/t Au and the Upper Western – 4,400oz at 10 g/t).

There is considered to be excellent potential to define small tonnage, high-grade resources in the Alberton Goldfield. Within EL6/2019 there are in excess of 130 historic mines and workings (Figure 4). At the Ringarooma United Mine, which was one of the bigger producers in the goldfield, with recorded gold production of 12,576 ounces between 1901 and 1918, gold bearing lodes in the base of the deepest winze in the underground workings have been reported. Most of the lodes in the Alberton Goldfield were worked to less than 60 m deep, with the deepest being at Ringarooma which reached a depth of about 119m. Hence the potential for relatively shallow depth extensions on the historically mined reefs is excellent.

The geological setting of the Una and Hinemoa historical workings has reportedly many similarities to the structural regime at the New Golden Gate Mine, which produced over 250,000 oz.

An accurate estimate of gold production for the Alberton goldfield is unknown but believed to be in the order of 425kg. In the 1950's the Alberton Goldfield was expected to become the richest goldfield in Tasmania. The Alberton goldfield is characterised by the highest density of relatively gold-rich lodes among the northeast goldfields, but factors such as the erratic distribution and gold content of quartz veins, and also the under-capitalised nature of companies, did not allow the full potential of the goldfield to be evaluated.

Most of the historical mines within EL6/2019 were closed by the 1920's and since then exploration has been extremely piecemeal and largely ineffective, with a high proportion of the few diamond holes drilled failing for various reasons. To be economic, the production grades in the early 1900's had to be around 1oz/t (30 g/t) gold. Only the very high-grade reefs were mined and little attention was paid to mineralisation which today can be mined economically due to a higher gold price and improved mining and processing techniques.

A recent (2018) geological 3D model which demonstrates a new structural synthesis based on mapping and multiple cross sections has been developed by the MRT. The model is constrained by 3D geophysical modelling using MRT's gravity and magnetic survey data coupled with drilling and rock physical property databases. This 3D model will be invaluable in assisting with exploration targeting on EL6/2019.

Drilling is considered to be the most effective exploration tool in this environment for this style of structurally-controlled high-grade orogenic gold mineralisation. The nature of the mineralisation and its host rocks are not conducive to effective electrical, gravity or magnetic geophysical surveys. The underground workings are no longer accessible and underground mapping is not possible, hence historical plans will have to be relied upon.

The structural architecture of the area is associated with NNW trending dextral wrench shears which control the orientation of lode dilation and mineralisation. The primary lodes at Mathinna are orientated NNE with both linking structures and orthogonal structures. This architecture will provide the philosophy for ongoing exploration activities and drill targeting.

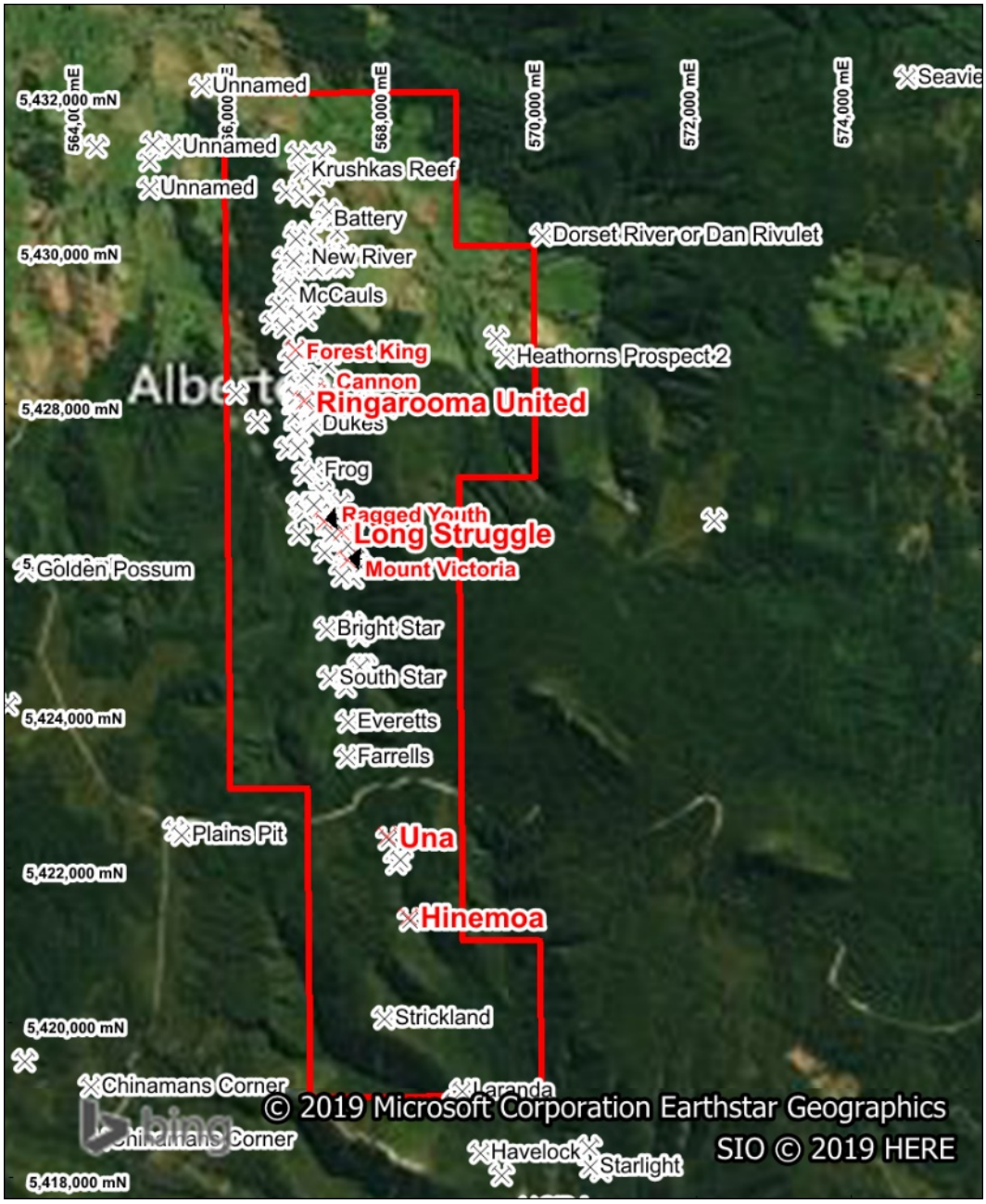


**Figure 4. Historical Mines and Workings on EL6/2019.**

## REVIEW OF PREVIOUS WORK

Auriferous quartz vein hosted mineralisation was discovered in the Alberton goldfield prior to1883. Over one hundred gold bearing lodes were subsequently discovered and mined between 1883 and 1939.

More recent exploration of the Ringarooma United Mine was first undertaken by Newcrest Mining Limited under EL23/92. An Exploration program in 1992-1993, part of work on a larger tenement, included 1:25,000 scale geological mapping, image processing and interpretation of aeromagnetic data, drainage sampling and detailed geochemical sampling.

The tenement was explored by Mancala Pty Ltd under a joint venture arrangement in 1993-1994. Mancala Pty Ltd re-established access to the Long Tunnel and completed 255m of drilling from underground sites with poor results.

During 2000 – 2001 two diamond drill holes (RUL01 and RUL03) for a total of 433.6m were completed by Low Impact Diamond Drilling Specialists (LIDDS) in a joint venture agreement with Hercules Resources Pty Ltd (Mancala Pty Ltd had changed it name to Hercules Resources in 1998). A 0.8m interval in hole RUL01 assayed 85.9 g/t gold with coarse visible gold. A 0.4m interval in hole RUL03 resulted an assay of 14.8 g/t gold from a different structure.

During 2004 – 2005 a further hole was completed (RUL02) for 223.7m without any significant mineralisation being encountered.

During 2005 – 2007 several additional diamond holes (RUL03 – RUL07) were drilled with little or no geological input. Total drilling for the period 2006 – 2007 was 706.70m.

During 2007 – 2008 a completed literature and data review was undertaken. This review proposed a new structural model for the Ringarooma United with the main mine structure has a steep easterly dip component of around 75 – 85$^{o}$. The mineralised structure is off-set by oblique (NNW – SSE) sinistral, steeply south-west dipping fault zones. The presence of these fault zones; which range up to 5m in width has produced the perception that the mine has steeply plunging southerly ore shoots, where in fact that shoots represent the in-between fault sections of the main mine lode or reef.

In order to test the new model three diamond drill holes (RUL08 – 10) were drilled with RUL09 terminated at 20m when an unacceptable azimuth was determined by down-hole survey. The two remaining holes both intersected anomalous auriferous structures extremely close to where modelling predicted. These results gave credence to the new structural model. RUL08 returned 1.5m at 47.43 g/t Au from 91.8m, and RUL10 returned 0.9m at 5.28 g/t Au and 57 g/t Ag from 106.6m and 1.5m @ 4.01 g/t Au from 179m.

The re-modelling with the new structural controls indicated that most of the previous work by explorers on the field was fundamentally flawed. The failure to allow for the ‘fault windows’ developed between the off-sets of

the lode resulted in several drill holes passing through these windows and subsequently missing intersecting any mineralisation. Most of the other deeper drill holes had in hindsight not been drilled deep enough to interest the easterly dipping structure.

In 2012 – 2013, drilling was undertaken to test below the Hannah line at depth. Two holes (RUL11 & RUL12) were drilled with RUL11 being abandoned 101.70m due to mechanical failure. A second hole RUL12 was then drilled from the same collar position, (with a slightly shallower dip) and was completed to a final depth of 245.40m. RUL11 returned 0.85m at 1.48g/t Au from 98.4m and RUL12 returned 0.15m at 38.1 g/t Au from 80.70m. Although the overall assay results for the drilling were considered disappointing with the best result of 0.15m at 38.10 g/t Au, associated with a previously unrecorded structure, the best intersection from the projected Hannah lode was only 0.15m @ 0.77 g/t Au, however given that the intersection was 158m vertical metres below the level of the Hannah Adit, any plunge development on the mineralisation previously mined may well have resulted in the hole missing the high grade shoot.

A further two diamond drill holes RUL13 (157.40m) and RUL14 (164.80m) were completed for a total of 322.20m in 2013 - 2014. The holes were designed to test the Main (Ringarooma) Reef as well as testing for the presence of other easterly mineralised structures (Rosalyn, No.3 and Premier Reefs). Drilling confirmed that the Ringarooma Reef dips steeply to the east. The peak intercept returned was 1.10m at 1.02 g/t Au.

In 2014 to 2015 an earlier hole RUL07 was re-entered and deepened based on re-interpretations and re-modelling. The extension (RUL07A) confirmed that the overall dip of the Ringarooma lode structure was to the east. The peak assay results for RUL07A was 0.94m @ 0.64g/t Au from 148.36m. An additional diamond drill hole RUL15 was completed to a depth of 170.8m, however it appeared that this hole was predominantly within one of the cross-cutting fault structures and as a consequence failed to intersect the target area.

In 2015 – 2016 one diamond hole (RUL16) was designed drilled to test the Main (Ringarooma) reef up dip of a previous high- grade intersection (1.50m 47.43g/t from RUL08). At 87.5m down-hole a 2.0m wide cavity was intersected. It is not known if this is a fault related structure of whether it represents previously unknown mining activities on the Ringarooma Lode. The hole was terminated at 101.70m depth.

One sample was submitted for analysis from a narrow quartz vein approximately 6 metres above the targeted position and returned 0.15m at 0.69 g/t Au from 81.65. The intersecting of the void at approximately the depth where the lode was expected would lead to the conclusion that the void was man-made and that significantly more mining has occurred below the Long Tunnel level than is shown on plans or recognised in literature.

## EXPLORATION ACTIVITIES

EL 6/2019 was granted to Stavely Tasmania Pty Ltd on 27th January 2020. As a result of the Covid-19 pandemic and the resulting state boarder closures, no exploration could be undertaken during the year by Stavely Tasmania.

The following exploration programs have been planned for EL6/2019.

Due to the rugged terrain in the Alberton area, exploration will be conducted by diamond drilling. Track-mounted diamond drill rigs have a smaller footprint than RC drill rigs and are more versatile in steep terrains. In addition, during diamond drilling the water and drill cuttings are contained within cascading rainwater tanks and subsequently removed from site for disposal which provides a better solution regarding effluent management than RC drilling. Diamond drilling provides excellent geological, geo-metallurgical and structural information.

**Near Surface and Depth Extensions to Gold Mineralisation at the Ringarooma United Mine**-

- As the largest producer in the field (255kg gold), the Ringarooma United Mine will need a number of diamond drill holes to assess the potential for depth extensions and extensions along strike.
- The maximum vertical extent of worked lodes at the Ringarooma United Mine is about 119m. It is considered likely that some of the lodes will continue to greater depths as gold bearing lodes have been reported from the base of the deepest winze in the underground workings.
- The historic gold grade in the mine was reported to be in the order of 20 g/t Au.
- Between 2000 and 2015 a total of 17 diamond drill holes for 2850m were drilled in the vicinity of the Ringarooma United Mine with varying degrees of success. It is considered that the recently released 3D geological and structural model for the Mathinna – Alberton goldfields will provide better targeting for a diamond drilling program.

**Near Surface and Depth Extensions to Gold Mineralisation at the Long Struggle Mine-**

- The Long Struggle Mine produced about 22kg of gold at an average grade of 53 g/t Au. Diamond drilling is proposed to test the depth and strike extent potential of the reefs at the Long Struggle Mine.
- Trenching and some diamond drilling (5 holes for ~530m) in the mid 1990's has identified some additional, previously unknown reefs in the vicinity of the Long Struggle Mine. Gold grades of up to 18.6 g/t Au where returned over narrow (15cm) intervals from the diamond drilling.
- A detailed review of previous results in combination with the new 3D geological and structural model for the Mathinna – Alberton goldfields will provide a robust basis on which to target the diamond drilling at the Long Struggle Mine.

**Near Surface and Depth Extensions to Gold Mineralisation at the Una / Hinemoa Workings**

- Small scale but high-grade quartz lodes have been mined at Una/ Hinemoa. The quartz lodes occur within a 75m wide shear zone, which extends over 550m from Hinemoa to Una. Gold grades of up to 83.5 g/t Au were reported at the turn of the previous century. A bulk tonnage sample taken in the mid 1990's which was estimated to be approximately 31g/t Au.
- In the mid 1990's, 8 diamond drill holes were completed to a maximum depth of 40m below Una No.1 adit and all intersected the lode with abundant visible gold reported and intercepts of up to 19.7g/t Au. A small resource (non-JORC) of 1,000t at 12- 15 g/t Au was outlined from surface and drill results.

- The 17 diamond holes drilled for 1128m between 1996 and 2012 is not considered to have adequately tested the depth and strike continuity of the mineralisation along the Una- Hinemoa trend.
- The Una/Hinemoa mineralisation was previously reported to have many similarities to the New Golden Gate Mine. Diamond drilling will be planned based on previous exploration and using the new 3D geological and structural model for the Mathinna – Alberton goldfields.

**Near Surface Mineralisation at other historical workings**

Following a full evaluation of the in excess of 100 historical working on EL6/2019 the priority targets will be drill tested for depth and strike extension. The vast majority of the historical workings have had no exploration work conducted on them since they shut down in the 1920s. Examples of historical workings include:

- Mt Victoria Mine was one of the major gold producers in the goldfield and produced 146 kg of gold at a grade of between 20 and 60 g/t Au. Four very shallow diamond holes were drilled in the mid 1990's and did return some anomalous intercepts of up to 16 g/t Au.
- At the Ragged Youth workings the average gold content was about 30 g/t Au and total production was approximately 8.5kg. Sampling in the mid 1980's yielded gold values in the range of 1.86 g/t to 55.17 g/t Au.
- The Forest King workings produced 2.2kg of gold. The shaft was sunk to a depth of 18m, however operations had to cease due to water issues. Subsequently an adit was driven along the lode, which was about 750mm wide and yielded an average grade of approximately 14 g/t Au, however the quartz vein itself averaged 71 g/t Au.
- At the Cannon workings the lode is approximately 600mm wide with reported gold values of up 120 g/t au. The workings were very shallow (1 to 2m). Despite it being of economic significance very little subsequent work has been conducted.

## DISCUSSION OF RESULTS

There are no new exploration results to discuss.

## CONCLUSION

As a result of the recent 3D modelling conducted in the Mathinna – Alberton structural trend by Mineral Resources Tasmania, and the identification of regional structures controlling the mineralisation, it appears significant potential remains in the area and that a review of the effectiveness of previous exploration is required.

## ENVIRONMENTAL MANAGEMENT

No environmental studies have been undertaken.

## EXPENDITURE

During the year, no on ground exploration activities were completed. As a result, expenditure for the tenement was low. A total of $2,189 was spent on the tenement during the year.

A significant work program has been developed for the next year including a baseline environmental study and diamond drilling.