



magnetic resources<sup>NL</sup>

## QUARTERLY REPORT for the Quarter Ended 31 December 2023

**Magnetic Resources NL**  
ABN 34 121 370 232

**ASX Codes:** MAU and MAUCA

Level 1  
44A Kings Park Road,  
West Perth, WA 6005

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PO Box 1388  
West Perth WA 6872

**Issued Capital:**  
**Shares - Quoted:**

244,667,260 ordinary shares.  
20,418,862 partly paid shares  
(\$0.20 unpaid).

**Options – Unquoted**

4,900,000 options exercisable at  
\$1.515 on or by 31 December  
2024

3,750,000 options exercisable at  
\$1.20 on or by 6 December 2025

2,386,872 options exercisable at  
\$0.68 on or by 10 May 2025

3,750,000 options exercisable at  
\$1.53 on or by 6 December 2026

**Cash:** \$4.36m

**Directors:**

**George Sakalidis**  
Managing Director

**Eric Lim**  
Non-Executive Chairman

**Hiang Sian Chan**  
**Ben Donovan**  
Non-Executive Directors

**Company Secretary**  
Ben Donovan

### HIGHLIGHTS

**Updated combined Mineral Resources estimate for the whole project area of:**

- 22.7Mt @ 1.69g/t Au totalling 1.24Moz of gold at 0.5g/t cutoff.
- Increase of 107% of the total ounces over the 3 February 2023 ASX Release.

Significantly, the contained gold in LJN4 has risen from 204,000oz to 852,000oz Au (a 317% increase). LJN4 is now by far the largest resource in the project area – and it remains open at depth.

Key deposits are close to each other and form part of one mining field. Given the scale of the resource upgrade, consideration is now also being given to a dedicated processing plant.

Magnetic Resources lodged a Mining Lease application over its Lady Julie North 4 discovery. M38/1315 (pending) overlays Magnetic tenements P38/4170 and E38/3127 and covers an area of 238Ha.

Ongoing extension drilling continues looking to extend the size of LJN4 has resulted in a number of compelling intersections. MLDD033 intersected 16m at 4.51g/t Au from 411m, which was a very large 200m step out below the current resource, which is potentially underground mineable and is still open down dip. This section indicates mineralisation continuity of 550m down dip, which is by far the biggest down dip extension identified to date within LJN4.

New hanging wall breccia zone was also discovered in MLJD033 with an intersection of 2m at 15.32g/t Au from 247m, and 8.7m at 2.43g/t Au from 107m and 13m at 1.00g/t Au from 135m in MLJDD032.

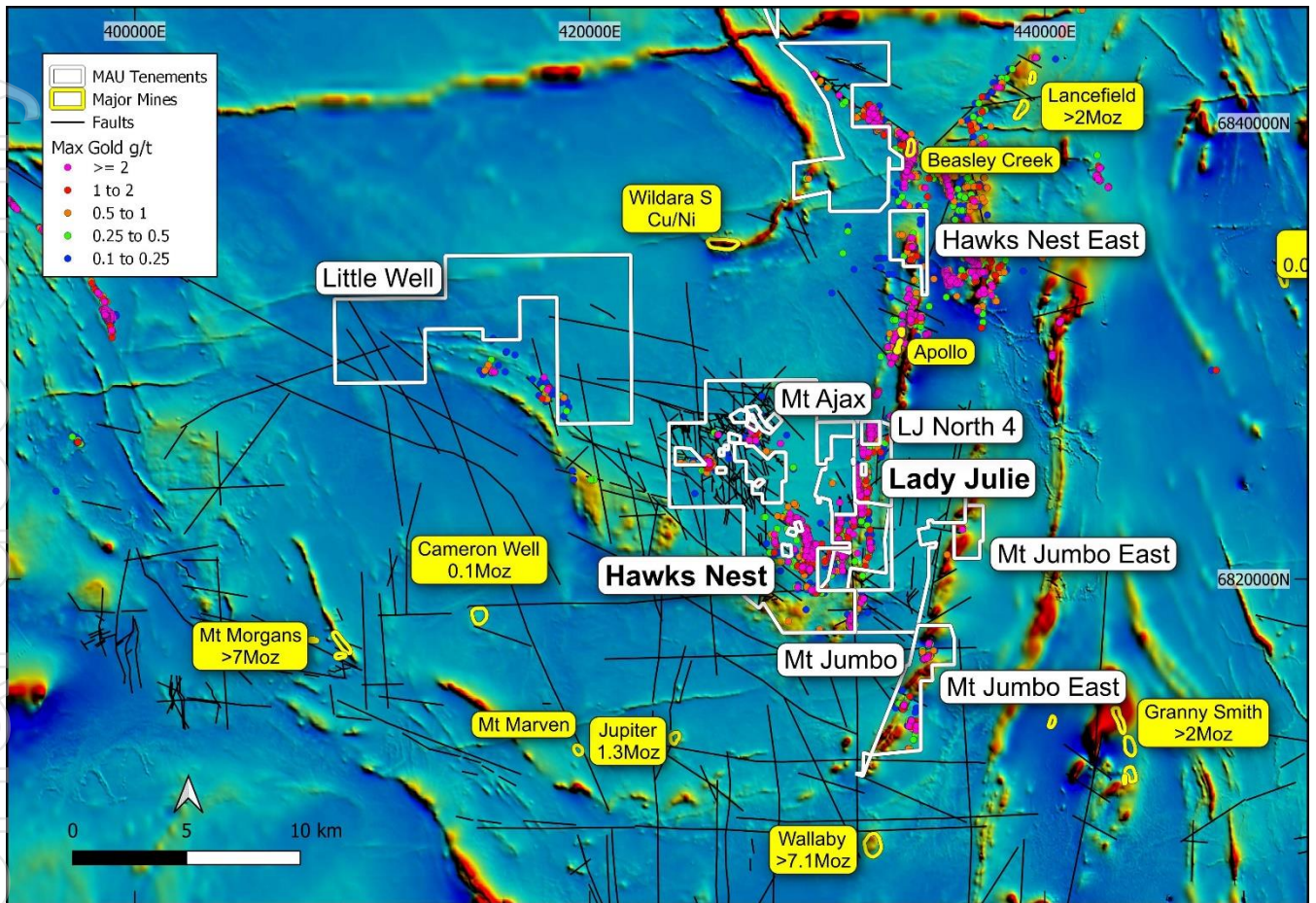
MLJRCD826 intersected a 40m thick breccia zone from 270 to 310m, which has assays pending. It is directly 65m down dip from MLJDD031, which intersected 21m at 5.37g/t Au from 198m within a breccia, and is still open down dip and to the south. Further diamond holes are being planned to follow up this 40m thick breccia zone.

MLJRCD802 had our best intersection to date, of 133m at 2.87g/t Au from 173m, which includes 61m at 4.68g/t Au from 243m (1m splits). Assays are pending for the down-dip extension within MLJRC820 from 290m to 453m.

MLJDD034 intersected 6.8m at 12.06g/t Au from 151m (contained within a 11.5m zone with 4.8m of core loss) in a gossanous chert breccia.

## Laverton Area

Magnetic Resources NL has 203km<sup>2</sup> in the Laverton region comprising E38/3127 Hawks Nest, E37/3100 Mt Jumbo, E38/3205 Hawks Nest East, E38/3209 Mt Ajax, P38/4317–24 Mt Jumbo East, E39/2125, P39/6134-44 Little Well and P38/4346, P38/4379-84, P38/4170 Lady Julie (Figure 1). Table 1 shows the exploration completed to date and recent/proposed exploration.



**Figure 1. Hawks Nest, Hawks Nest East, Lady Julie, Little Well, Mt Ajax, Mt Jumbo and Mt Jumbo East projects, showing tenements, major shear zones, targets and gold deposits and historic workings.**

**Table 1. Laverton region drilling summary.**

Project/Tenements	Surface sampling completed	Drilling & ground magnetics completed	Proposed exploration
Hawks Nest	5,411 soils	1,122 RC holes for 71,230m	
E38/3127, M38/1041	117 rock chips	201 RAB holes for 2,726m	
		5 Diamond holes for 501m	
		67 AC holes for 3,384m	
		507km ground magnetics	
Lady Julie	2,148 soils	802 RC holes for 79,762m	2 RC holes for 450m
P38/4346, P38/4379-84, E38/3127, P38/4170	15 rock chips	10 RCD hole for 2,450m	1 RCD hole for 370m
		22 Diamond holes for 4,864m	6 Diamond tails for 1,840m

Project/Tenements	Surface sampling completed	Drilling & ground magnetics completed	Proposed exploration
		12 Diamond tails for 1,378m	
		237 AC holes for 9,807m	
		290 shallow RAB for 1,691m	
Mt Jumbo E38/3100, E38/3127		125km ground magnetics	
	3 rock chips	3 RC holes for 563m	
	43 lags	2 Diamond holes for 457m	
Mt Jumbo East P38/4317–24		143km ground magnetics	
	23 rock chips	33 RC holes for 2,527m	
	155 lags	229km ground magnetics	

### Mineral Resource Estimate update 24 November 2023

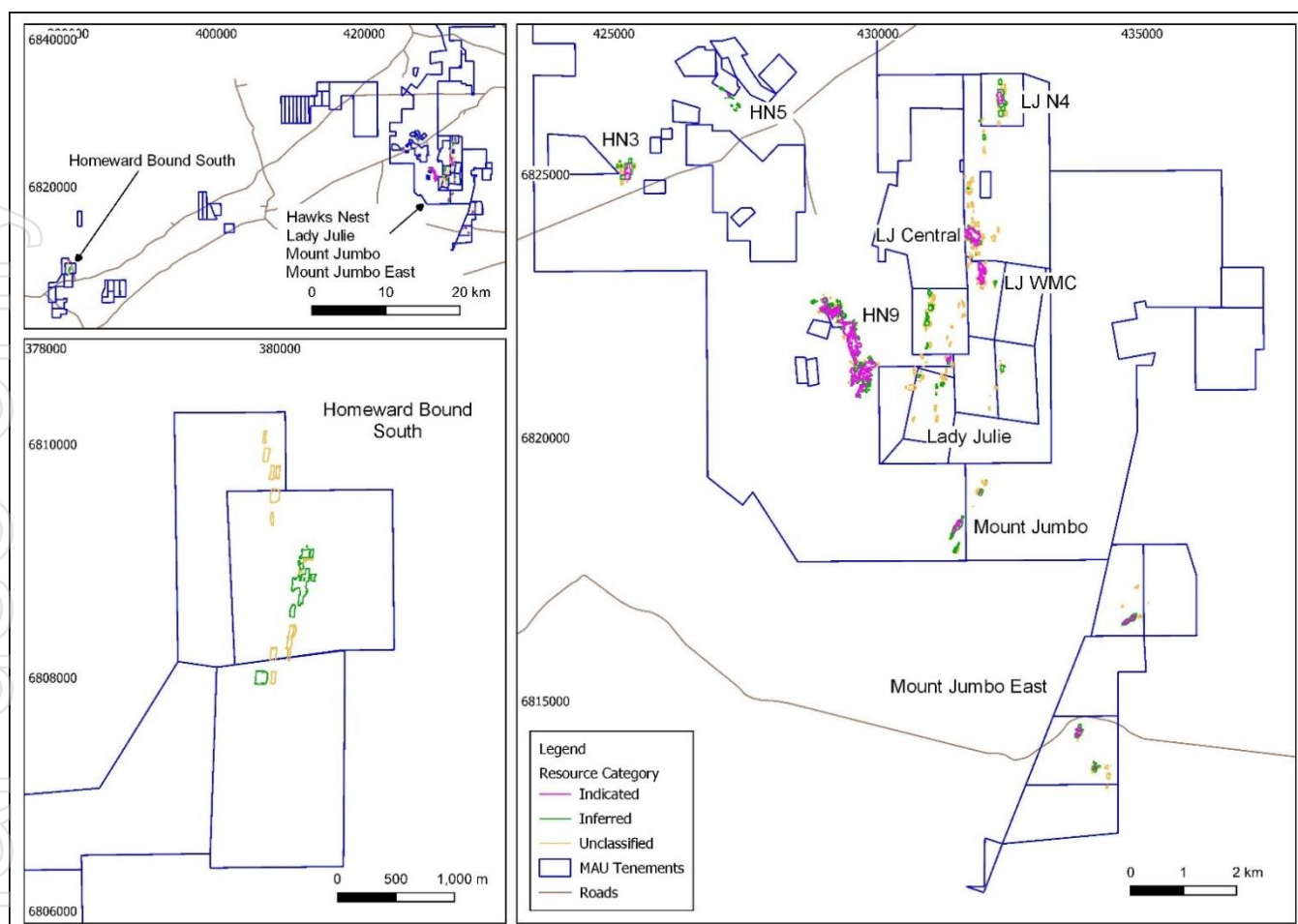
- This update incorporates recent drilling results at Lady Julie North 4 (LJN4) and Lady Julie Central (LJC) since the last resource report in February 2023 (“Expands Mineral Resources estimate ASX release 3 February 2023”).
- Updated combined Mineral Resources estimate for the whole project area of:
  - 22.7Mt @ 1.69g/t Au totalling 1.24Moz of gold at 0.5g/t cutoff.
  - Increase of 107% of the total ounces over the 3 February 2023 ASX Release.
- Significantly, the contained gold in LJN4 has risen from 204,000oz to 852,000oz Au (a 317% increase).
- LJN4 is now by far the largest resource in the project area – and it remains open at depth; exploration continues for similar deposits along the extensive 12km Chatterbox shear.
- Key deposits are close to each other and form part of one mining field.
- Three processing plants are nearby, within 10–35km away providing scope for toll processing. Given the scale of the resource upgrade, consideration is now also being given to a dedicated processing plant.
- Ongoing extension drilling continues and is expected to result in further resource increases.

Magnetic Resources NL (Magnetic or the Company) is pleased to announce an Updated Mineral Resource Estimate from its deposits in the Laverton and Homeward Bound area. The main deposits include Hawks Nest 9 (HN9), Lady Julie Central (LJC), Lady Julie North 4 (LJN4), Mount Jumbo and Homeward Bound South (Figure 2), which are all located in an area with well-endowed regional infrastructure including three processing plants within 35kms.

The update follows extensive infill and down-dip drilling mainly at LJN4 and some at LJC.

The verification and reporting of Mineral Resources on behalf of the Company was completed by its JORC Competent Person, Mr M Edwards of Blue Cap Mining. The Mineral Resources Estimate has been prepared and reported in accordance with the 2012 Edition of the JORC Code.





**Figure 2. Overview of Magnetic's Laverton and Homeward Bound South Resources**

Total Mineral Resources reported for the Laverton and Homeward Bound South projects is now 22.7Mt @ 1.69g/t Au at 0.5g/t cut-off totalling 1,236,000oz of gold (See Table 2 below). The cutoff grade is considered appropriate for a large-scale open pit operation.

The Lady Julie North 4 Resource has been the prime drilling focus as reported in periodic releases to the ASX. It has multiple stacked lodes with a number of thick intersections that have not been closed off at depth. The initial deeper drilling started on the 25 January 2023 and has expanded in subsequent months to a 95-hole RC program for 16,356m. Drilling is continuing, with holes in excess of 400m depth, which is expected to increase the current resource at LJN4 of 13.1Mt at 2.02g/t for 852,000oz at a 0.5g/t cut off (Table 3).

This LJN4 deposit sits within a regional structure called the Chatterbox Shear Zone that extends over a 12km length within the Magnetic tenements. This shear extends southwards of LJN4 and has had initial AC and RC drilling completed and some anomalous intersections that will be followed up with some shallow RC drilling for the purpose of finding further gold deposits.

Drilling in the last 6 months included diamond drill holes for geotechnical evaluation of proposed pits, and for hydrology analysis. Project environmental, heritage and technical background studies are close to completion – optimisation and pit design has commenced on LJC and the expanded LJN4 – the aim is to prepare and submit a Mining Proposal in early 2024. Other strategic opportunities are also being investigated.

Table 2 below summarises the updated Total Mineral Resource at a 0.5g/t Au cutoff, with Table 3 providing details of the major resources. Details for the smaller resources which have not changed can be found in the 3 February 2023 ASX release.

Table 2. Total Mineral Resource at 0.5g/t Au Cutoff

Classification	Au Cutoff	Tonnes	Au	Ounces
Indicated	0.50	10,400,000	1.74	584,400
Inferred	0.50	12,200,000	1.65	651,300
<b>Total</b>	<b>0.50</b>	<b>22,700,000</b>	<b>1.69</b>	<b>1,235,800</b>

Table 3. Resource details by Main Deposits @ 0.5g/t Au cutoff

Deposit	Classification	Tonnes	Au g/t	Ounces
LJN4	Indicated	6,807,400	1.95	426,200
LJC	Indicated	792,000	1.97	50,200
HN9	Indicated	1,995,000	1.29	82,800
Other resources	Indicated	837,400	0.94	25,230
<b>Total</b>	<b>Indicated</b>	<b>10,431,800</b>	<b>1.74</b>	<b>584,430</b>
LJN4	Inferred	6,329,700	2.10	426,400
LJC	Inferred	541,600	1.26	22,000
HN9	Inferred	1,182,000	1.25	47,600
Other resources	Inferred	4,193,700	1.15	155,160
<b>Total</b>	<b>Inferred</b>	<b>12,247,000</b>	<b>1.65</b>	<b>651,360</b>
LJN4	Total	13,137,100	2.02	852,600
LJC	Total	1,333,600	1.68	72,200
HN9	Total	3,177,000	1.28	130,400
Other resources	Total	5,031,100	1.12	180,390
<b>Total</b>	<b>Total</b>	<b>22,678,800</b>	<b>1.69</b>	<b>1,235,790</b>

The key deposits that have been drilled in the last six months are LJC and LJN4, which are shown in Table 2 and are further summarised below.

### LJC Resource

The Lady Julie Central or LJC (Indicated and Inferred) Resource of 1.33Mt at 1.68g/t Au for 72,200oz is 350m × 200m in plan (Figure 3). 59% of the resource falls in the Indicated category. There are some thicker intersections including a number of intersections that start from surface (Figures 4a,b, c). The long section (Figure 5) shows a thickened, near-surface zone that gently plunges to the southeast forming two distinct zones.

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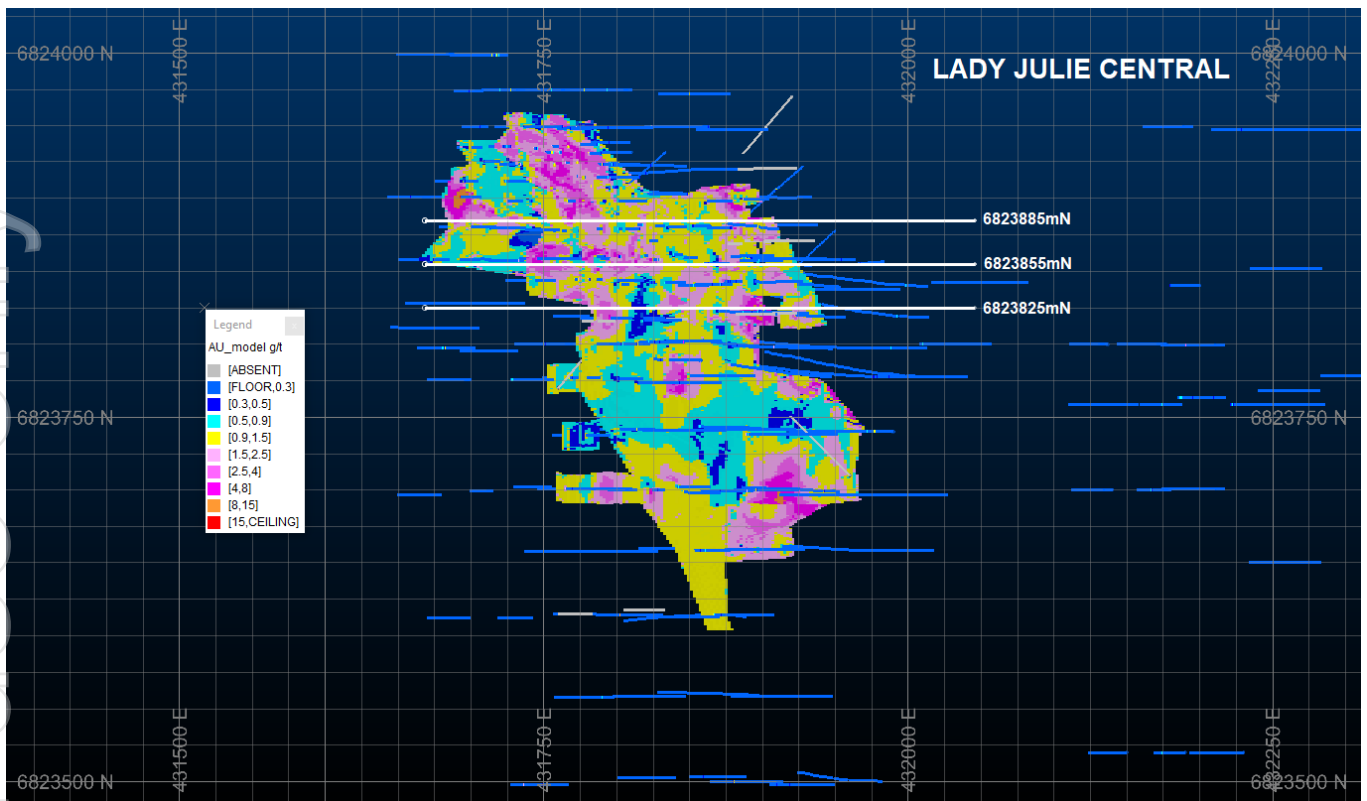


Figure 3. Lady Julie Central plan showing resource block grades and 3 drill sections

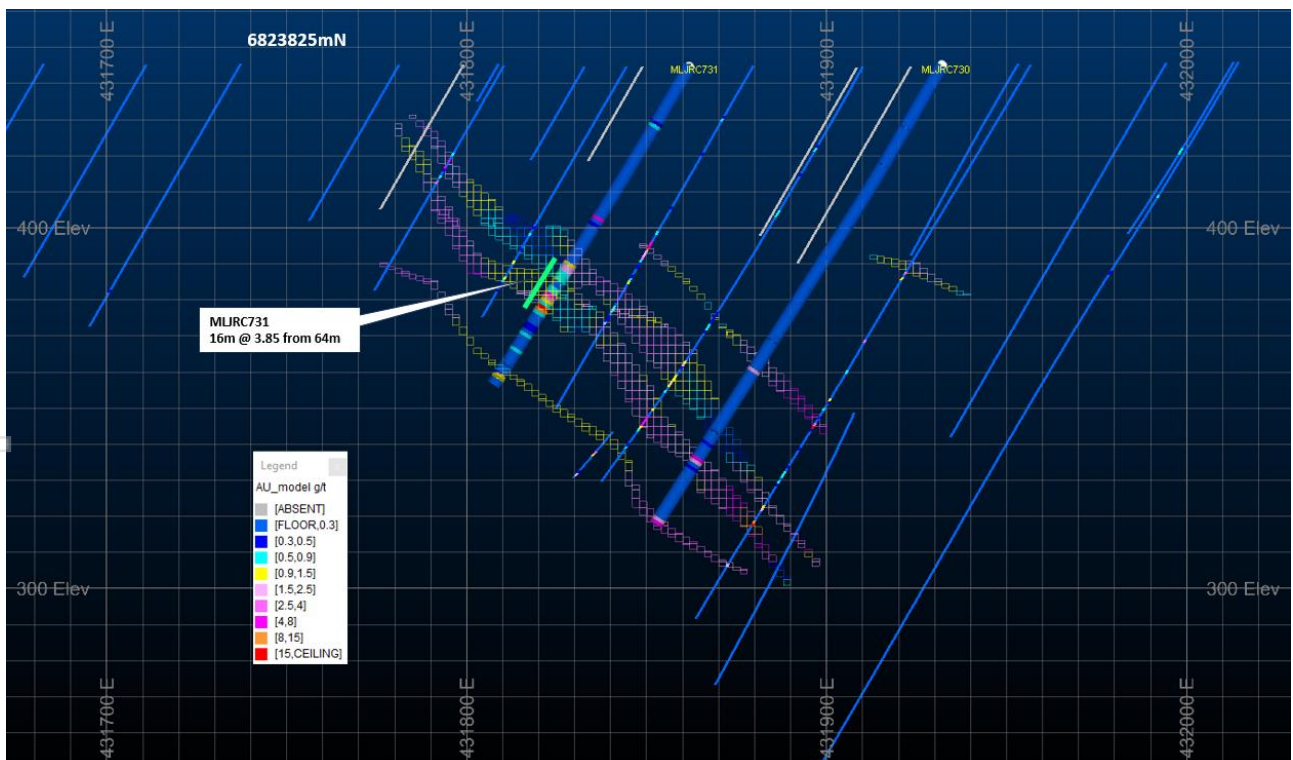
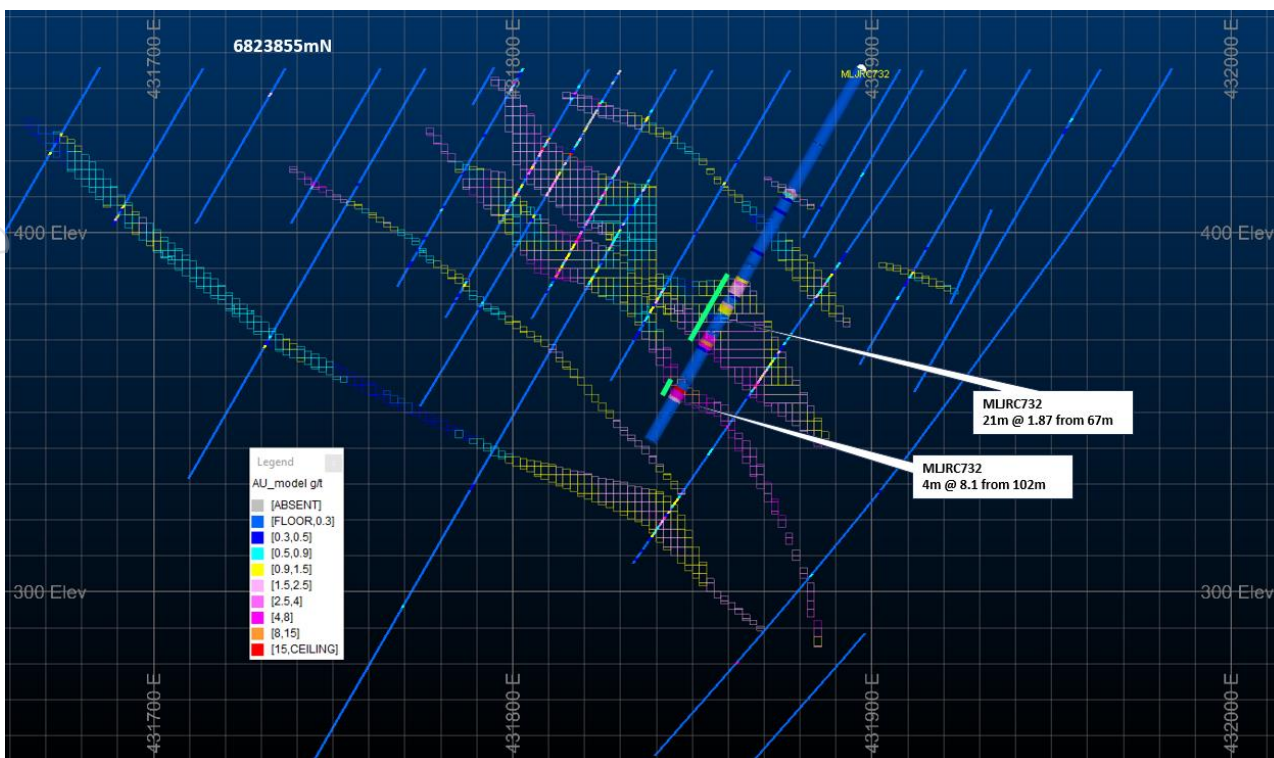
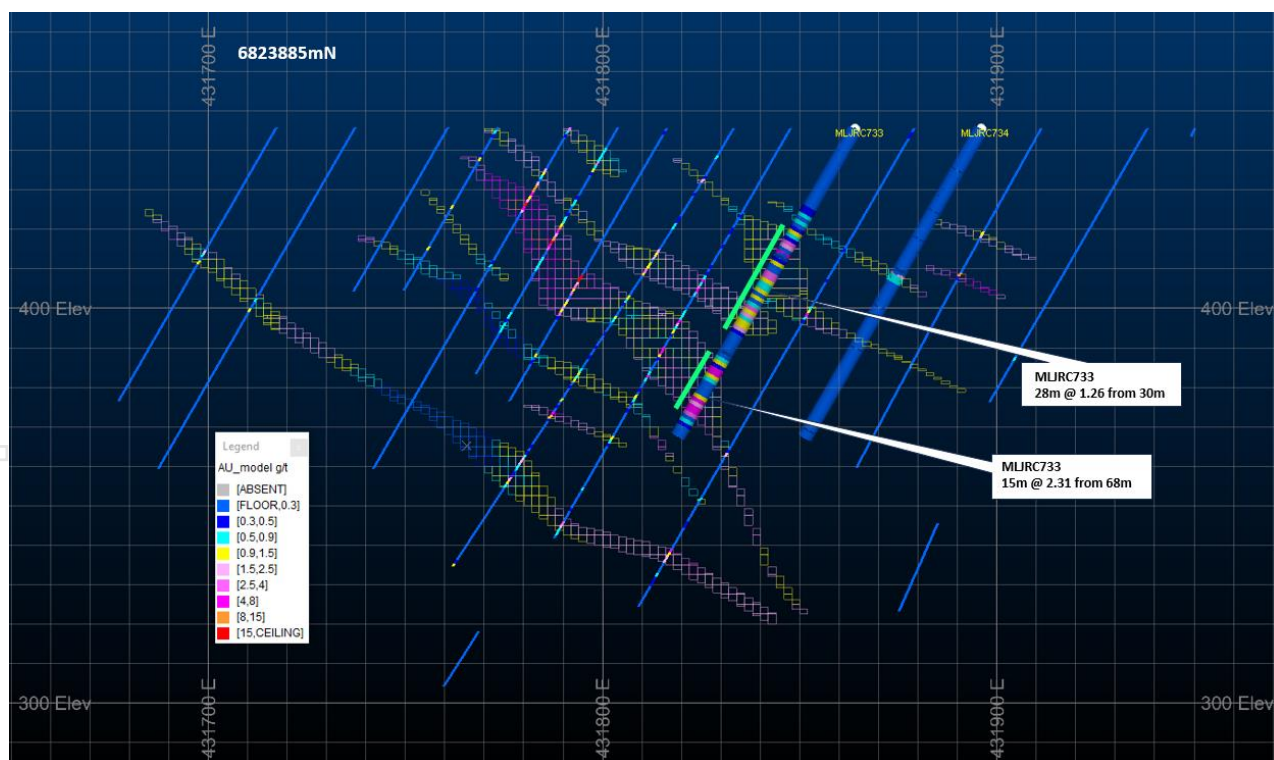


Figure 4a. Lady Julie Central cross sections showing new gold intersections (shown in green) and resource model with block grades

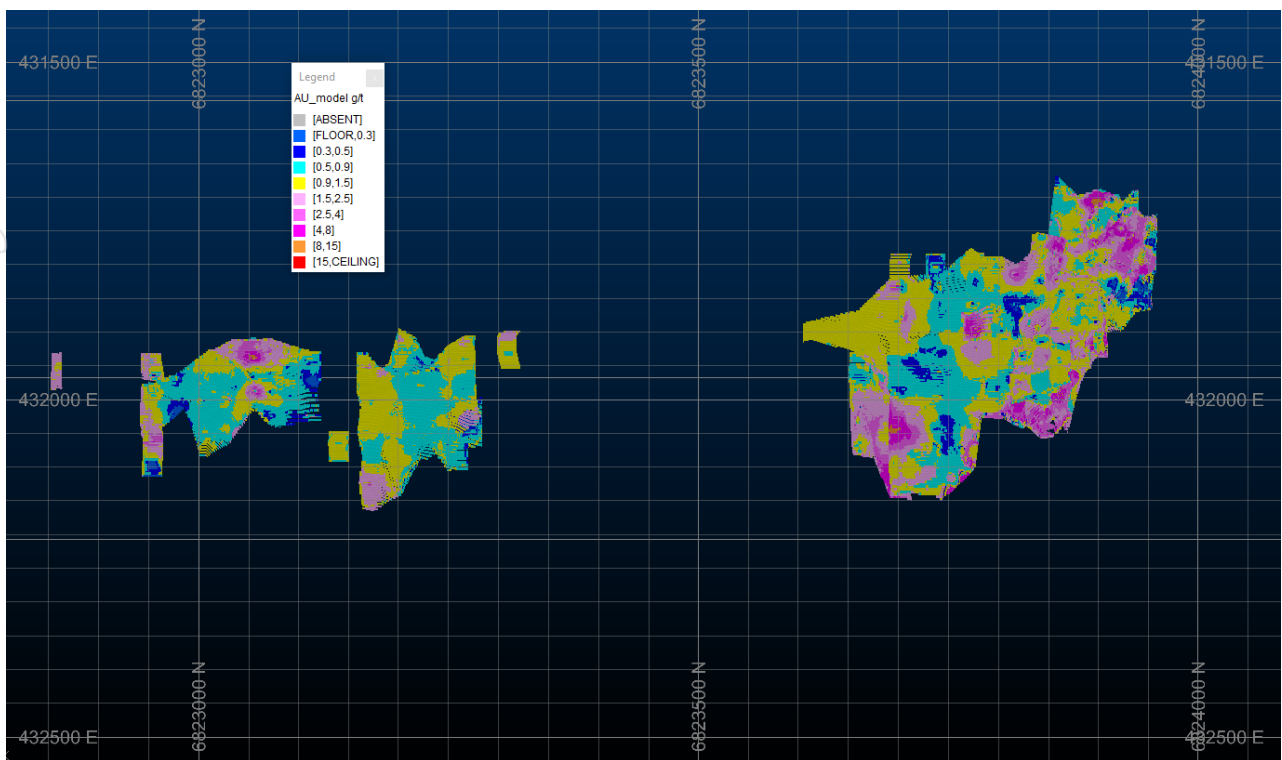


**Figure 4b. Lady Julie Central cross sections showing new gold intersections (shown in green) and resource model with block grades**



**Figure 4c. Lady Julie Central cross sections showing new gold intersections (shown in green) and resource model with block grades**





**Figure 5. Lady Julie Central Long Section showing resource model with block grades**

## LJN4 Resource

The LJN4 (Indicated and Inferred) Resource of 13.1 Mt at 2.02g/t for 852,600oz has a present footprint of 750m x 500m (Figure 6) and remains open down dip to the east.

Recent drilling results have confirmed the previous interpretation of a shallow-dipping, multi-lode structure. Where the drilling encounters breccia, the mineralised structure expands considerably. This is particularly the case below 150m depth. More recent step out drilling has encountered large breccia zones, which auger well for continuation of mineralisation at depth. Additional drilling is being planned to further test these expanded breccia zones.

From February to October 2023, some 95 RC holes were completed for 16,356m with the deepest hole reaching 280m. In the same period, 12 DD holes for 2,174m were also drilled to provide detail on lithology and structure. Drilling is continuing.

Some 52% of the resource is classified in the Indicated Category – this is predominantly the near-surface material where good drill coverage exists.

Figures 7a,b,c and 8 are sections through the deposit.



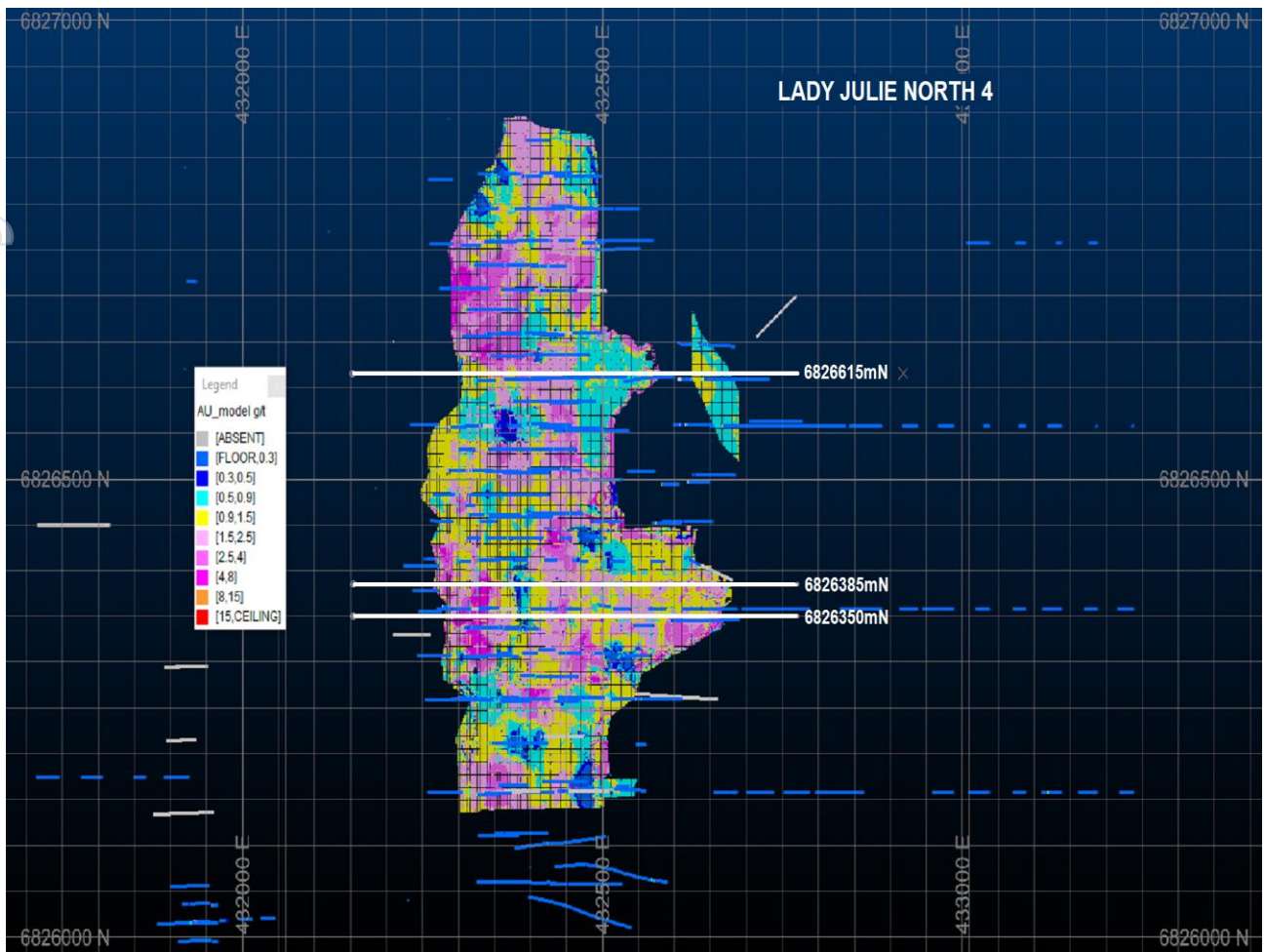


Figure 6. Lady Julie North 4 plan showing resource block grades and 3 drill sections

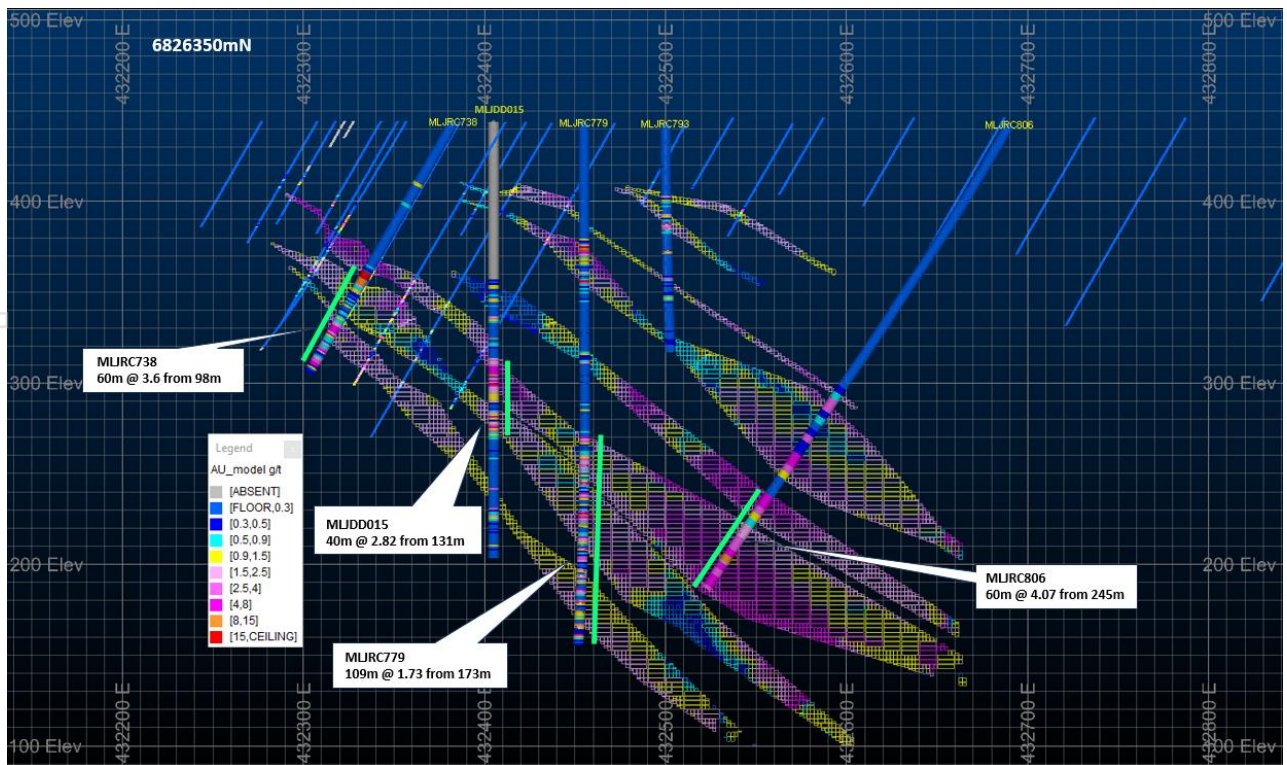
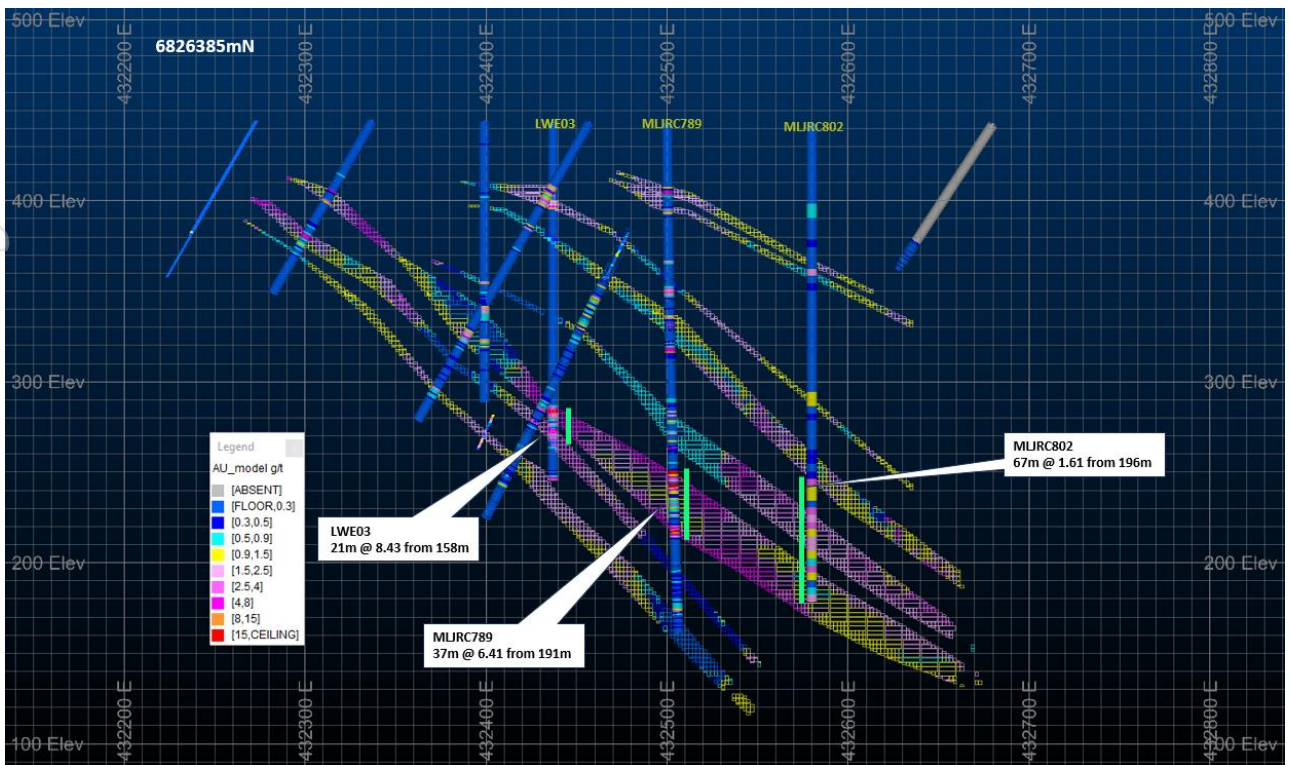
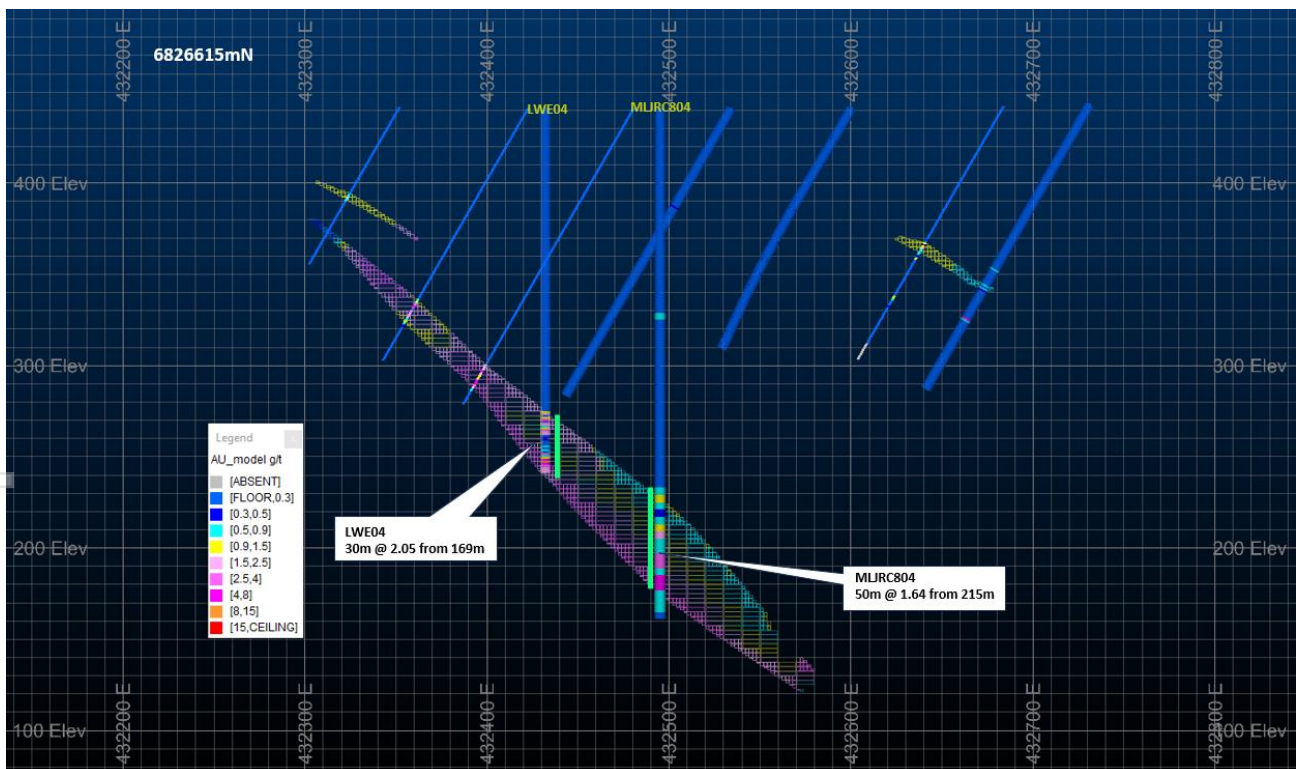


Figure 7a. Lady Julie North 4 cross section showing main gold intersections, resource model with block grades

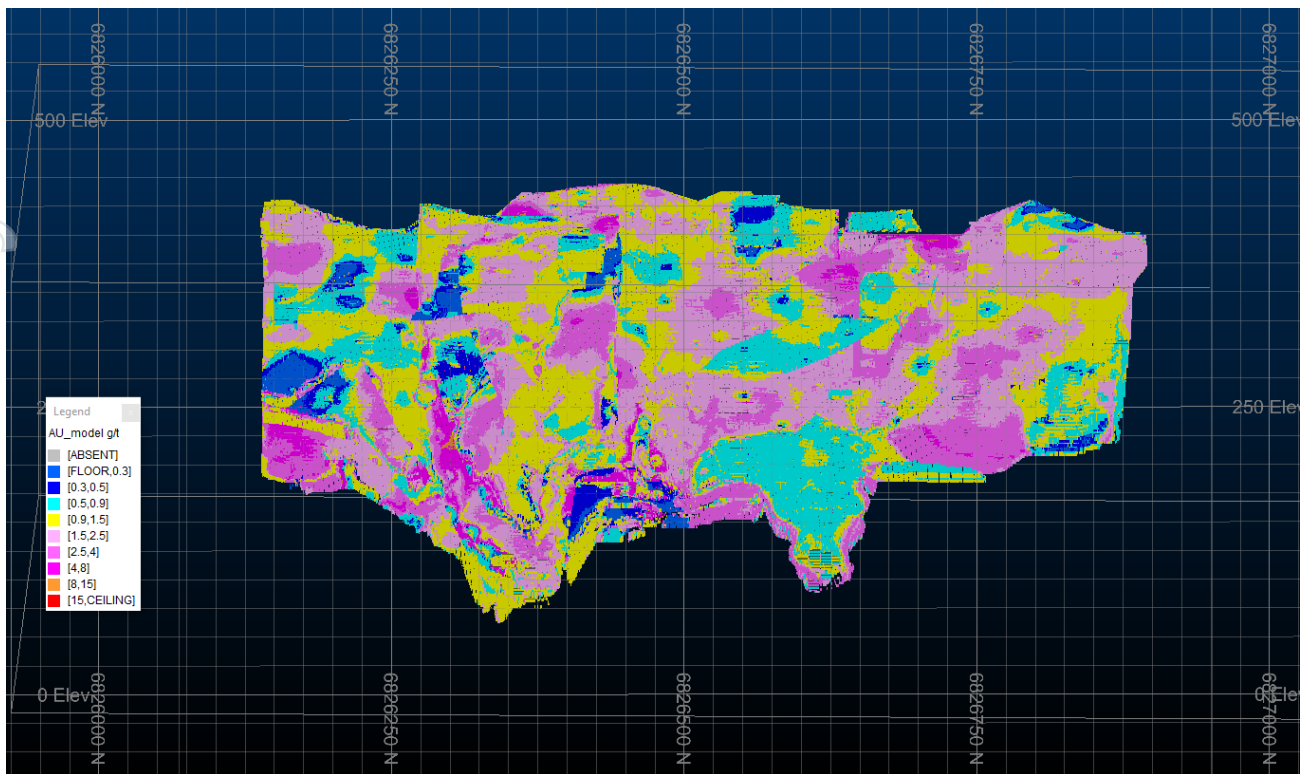




**Figure 7b. Lady Julie North 4 cross section showing main gold intersections, resource model with block grades**



**Figure 7c. Lady Julie North 4 cross section showing main gold intersections, resource model with block grades**



**Figure 8. Lady Julie North 4 Long Section showing resource model with block grades**

## Technical Summary of the Mineral Resource Estimate

Drilling at the various deposits has been by a variety of methods, the drillholes used in the modelling of each deposit are summarised below in Table 4. In general, all holes are used to assist in geological interpretation, while DDH (Diamond), RC (Reverse Circulation) and RAB (Rotary Air Blast) are used for grade estimation.

**Table 4. Drillholes used in modelling.**

Deposit	Total Metres	Number of Holes
Hawks Nest 9	66,654	1,093
Lady Julie	111,987	1,730
Hawks Nest 3	10,306	249
Hawks Nest 5	6,471	163
Mount Jumbo	28,508	506
Homeward Bound S	11,412	413
<b>Total</b>	<b>235,338</b>	<b>4,154</b>

## Drillhole Summary

Historical drilling was generally RAB and Air Core (AC) for initial exploration with most follow up and infill work being carried out using RC. Magnetic has used RC for its recent drilling programs at HN9 and Lady Julie.

One metre RC samples are assayed using a 50g charge and a fire assay method with an AAS finish which is regarded as appropriate. The technique provides an estimate of the total gold content.

Industry standard standards and duplicates are used by the NATA registered laboratory conducting the analyses.

Primary data is entered into an in-house database and checked by Magnetic's database manager.

The data is subsequently exported to Micromine format files and imported into Micromine 2022 software for further validation, statistical analysis and resource estimation. Mineralisation styles in the Laverton-Leonora deposits include:

- quartz veining and stock working in felsic porphyry
- shear-hosted quartz veins on porphyry-amphibolite contacts
- Pyritic polymictic breccias
- Vuggy silica-pyrite alteration
- Silicified, quartz-veined shear zones in ultramafic.

Mineralised domains at HN9, LJC and LJC4 have been digitised using mineralised trends. Drill data was flagged inside domain boundaries and composited to 1m intervals. Geostatistical analysis was completed to determine top cut of grades. A Dynamic Anisotropy Modelling methodology was adopted with inverse distance squared for grade estimation.

Model validation has been carried out by comparison of average grades of models and drill hole data, visual examination of models vs drillhole data on section and plan, and swathe plots. All methods have shown good agreement between models and data.

The Mineral Resources have been classified in the Indicated and Inferred categories, in accordance with the 2012 Australasian Code for Reporting of Mineral Resources and Ore Reserves (JORC Code).

A range of criteria has been considered in determining this classification including:

- Geological continuity;
- Data quality;
- Drill hole spacing;
- Modelling technique;
- Estimation properties including search strategy, number of informing data and average distance of data from blocks.

### **Application for a Mining Lease over the Lady Julie North 4 project**

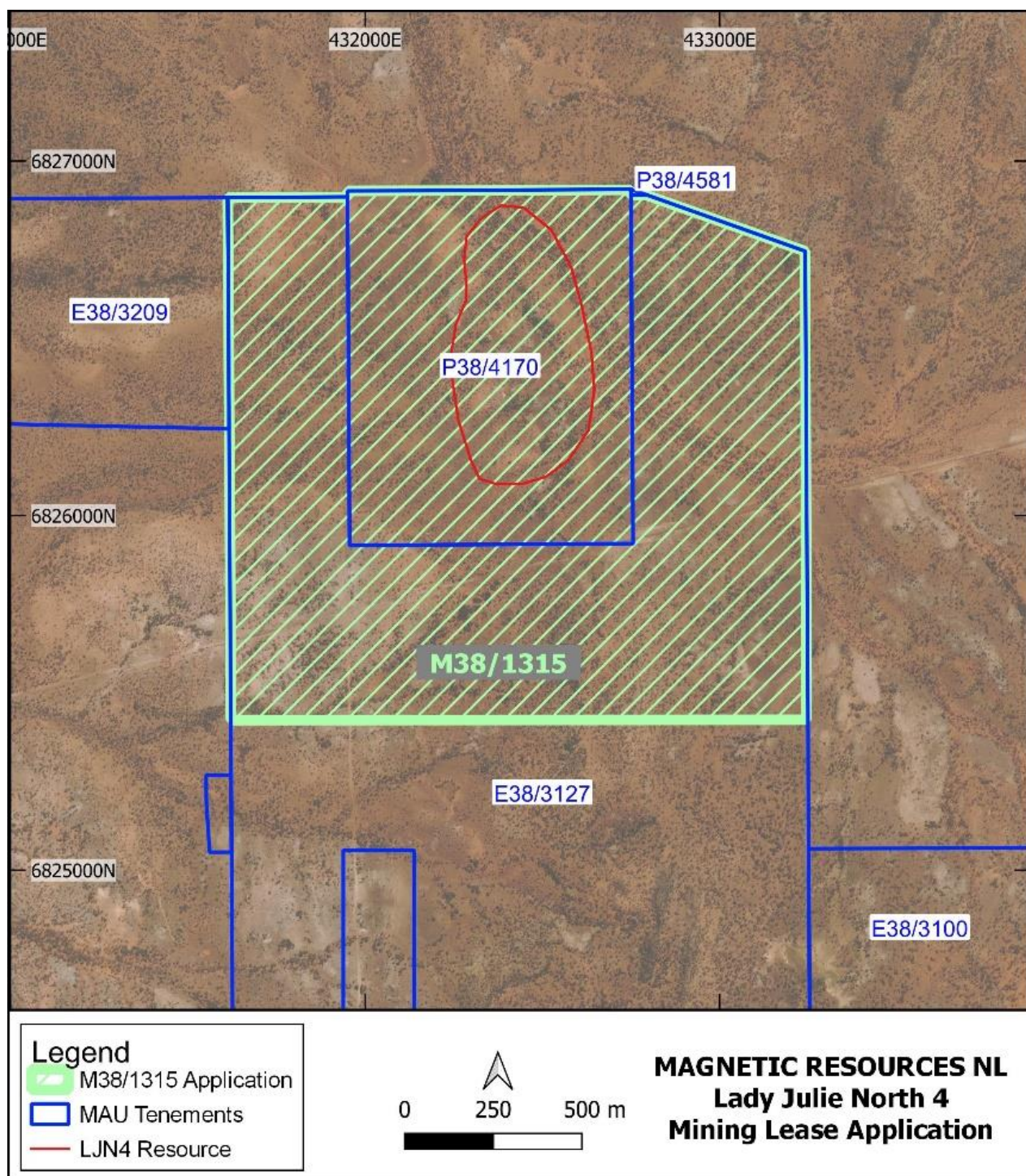
Magnetic Resources lodged a Mining Lease application over its Lady Julie North 4 discovery. M38/1315 (pending) overlays Magnetic tenements P38/4170 and E38/3127 and covers an area of 238Ha (Figures 9 and 10).

The application was made on the basis of the declared gold resource at LJC4 of 13.1Mt @ 2.0g/t containing 852,000ozs, bringing the total of the Laverton area resources to 22.7Mt @ 1.69 g/t for 1.24Mozs, which was published recently in an ASX release 23 November 2023 (Tables 2-3).

The rapidly growing LJC4 resource is situated on the Chatterbox shear zone, a regional structure which hosts other significant gold deposits. An aggressive drilling program at LJC4 has led to the recognition of thick high-grade breccia mineralisation and silica-pyrite alteration zones which remain open at depth. Further drilling at depth is anticipated to result in further growth of the LJC4 resource.

Work is continuing on the development of a Mining Proposal which will apply to both M38/1315 and a further Mining Lease over other key deposits (Figure 2). Magnetic can now advise that the application has passed the initial 35-day period and will now move through the Department of Energy, Mines, Industry Regulation and Safety's review and approvals process.





*Figure 9. Magnetic's Mining Lease Application (M38/1315)*

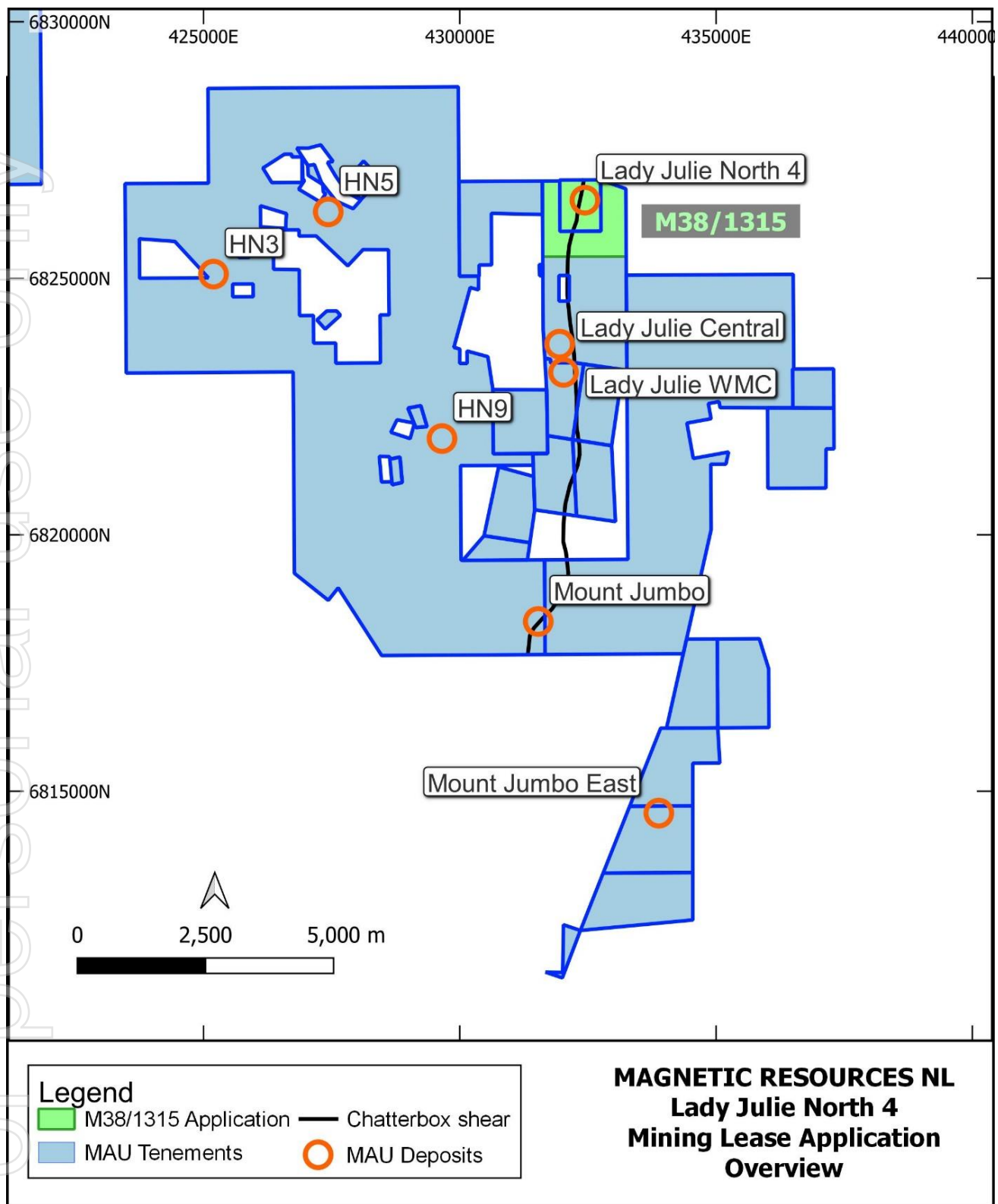
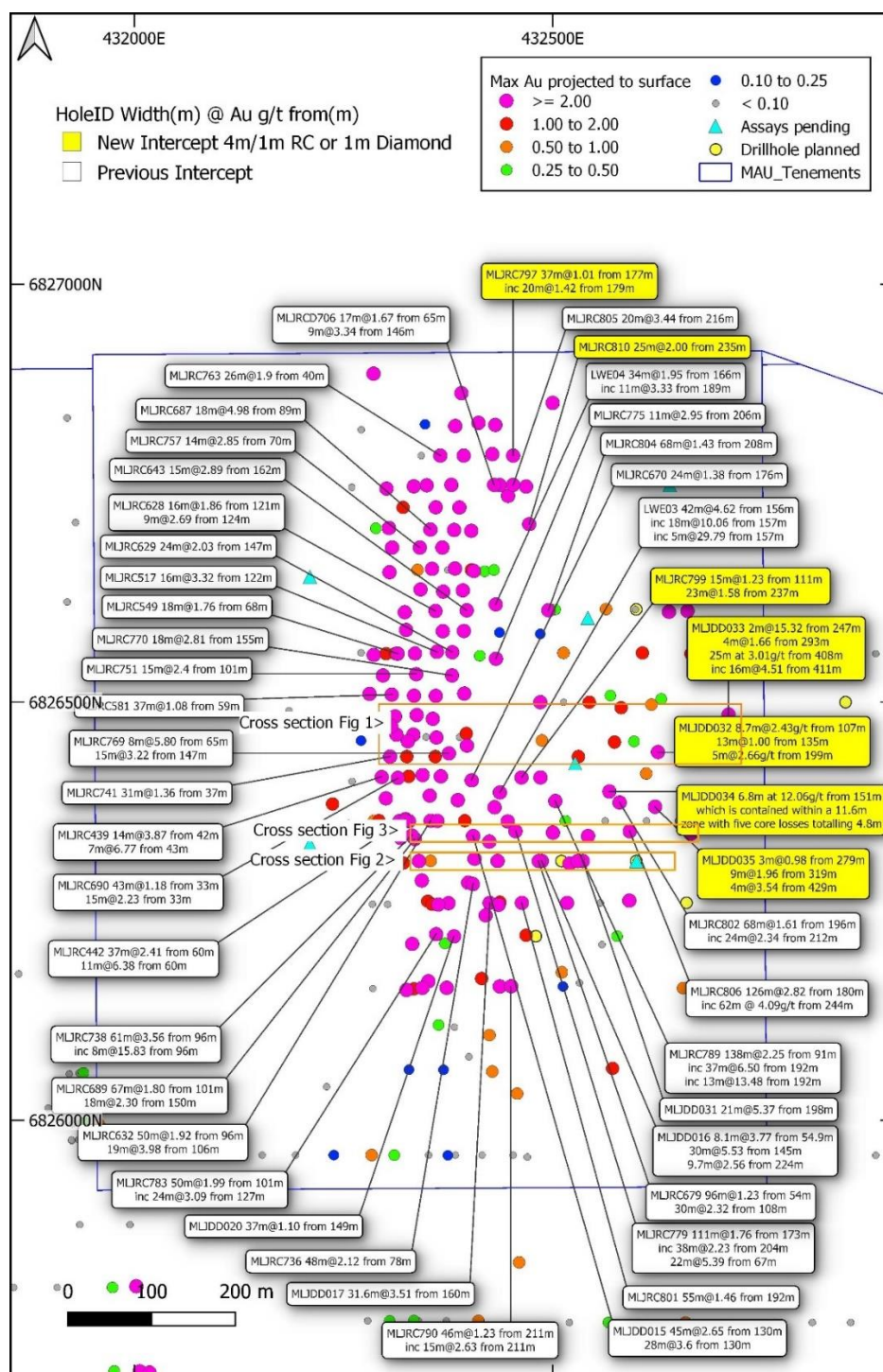


Figure 10. Mining Lease Application (M38/1315) overview



## Additional drilling post-resource statement at Lady Julie North 4 project (E38/3127, P38/4170)

After a significant 107% increase in overall resource in our Laverton Project to 22.7Mt @ 1.69g/t totalling 1.24Moz of gold at 0.5g/t cut off and LJN4 increased by 317% from 204,000oz to 852,000oz, which was announced on November 23 2023 (Table 2), a number of deeper step-out holes were drilled to see whether the LJN4 resource could be extended further at depth. Some exciting intersections are outlined below in Figure 11 and significant intersections in Table 5.



**Figure 11. The Lady Julie North 4 deposit has numerous significant thick intersections from the latest drill programme (yellow large rectangular label) and previous drilling (white label) with maximum gold projected to surface and planned deeper drillholes (in yellow).**

**Table 5. Significant intersections from recent drilling.**

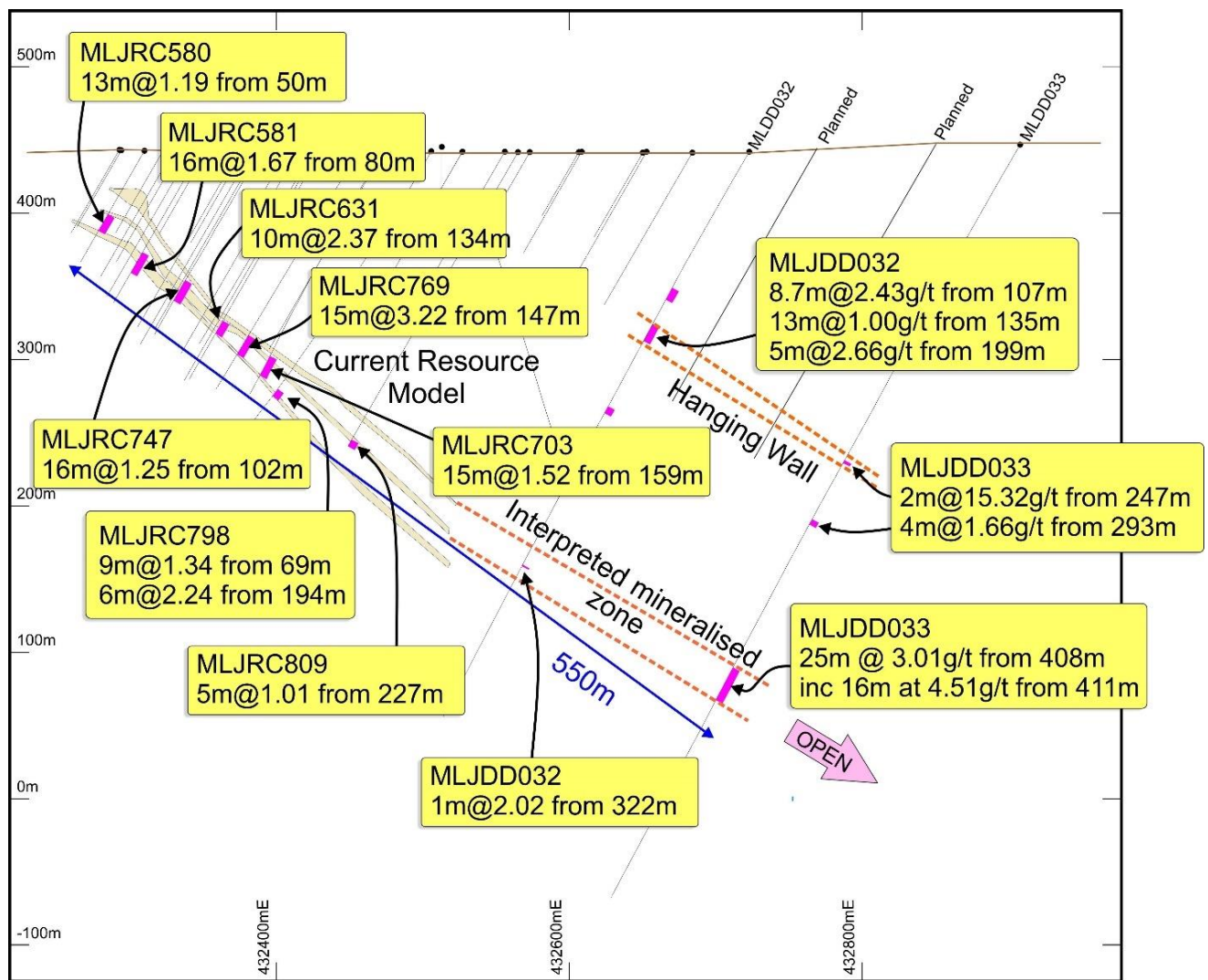
Hole_Id	Easting	Northing	From	To	Width	Gold	
	MGA	MGA	Metres	Metres	Metres	g/t	
MLJDD015	432405	6826340	130	175	45	2.65	
MLJDD016	432487	6826310	145	175	30	5.53	
MLJDD031	432536	6826310	198	218	21	5.37	
MLJDD032	432723	6826442	107	116	8.7	15.32	
			135	148	13	1.00	
			199	204	5	2.66	
MLJDD033	432908	6826500	247	249	2	15.32	
			293	297	4	1.66	
			408	433	25	3.01	
		including	411	427	16	4.51	
MLJDD034	432643	6826400	151	158	6.8	12.06	
(contained within a 11.5m zone with 4.8m of core loss) in a gossanous chert breccia.							
MLJDD035	432825	6826385	319	328	9	1.96	
			429	433	4	3.54	1m splits
MLJRC679	432511	6826310	94	148	54	1.95	1m splits
MLJRC736	432465	6826284	78	126	48	2.12	1m splits
MLJRC779	432455	6826345	173	284	111	1.76	1m splits
MLJRC789	432500	6826380	91	229	138	2.25	1m splits
MLJRC802	432580	6826380	173	241	68	2.87	1m splits
		including	243	304	61	4.68	1m splits
MLJRC804	432495	6826610	208	276	68	1.43	1m splits
MLJRC805	432570	6826760	216	236	20	3.44	1m splits
MLJRC806	432690	6826346	180	306	126	2.82	1m splits
		including	244	306	62	4.09	1m splits
MLJRC810	432587	6826705	235	260	25	2.00	1m splits

MLDD033 intersected 16m at 4.51g/t Au from 411m, which was a very large 200m step out below the current resource (Figure 11). This intersection of 72 gram-metres is potentially underground mineable and is still open down-dip. The section in Figure 12 indicates mineralisation continuity of 550m down-dip, which is by far the biggest down-dip extension identified to date within LJV4. This structure and mineralisation is expected to continue at depth within the Chatterbox Shear, which is a regional-scale structure that controls many deposits along its length including LJV4, Apollo, Beasley Creek and Wallaby Figures 24 and 25). A seismic survey Magnetic completed (ASX Release 15 February 2021) shows a depth extent of 1.5km.

The above intersection in MLJDD033 occurs partly in a pyrite-bearing black shale with intercalated carbonate and minor breccia, and partly in a pyrite-bearing carbonate with pyrite ranging from disseminated to semi-massive, which is a new style of alteration.

New hanging wall mineralisation was also discovered in MLJDD033 with an intersection of 2m at 15.32g/t Au from 247m, and 8.7m at 2.43g/t Au from 107m and 13m at 1.00g/t Au from 135m in MLJDD032. These hanging wall intersections are associated with a breccia zone and are planned to be followed up with RC drilling.





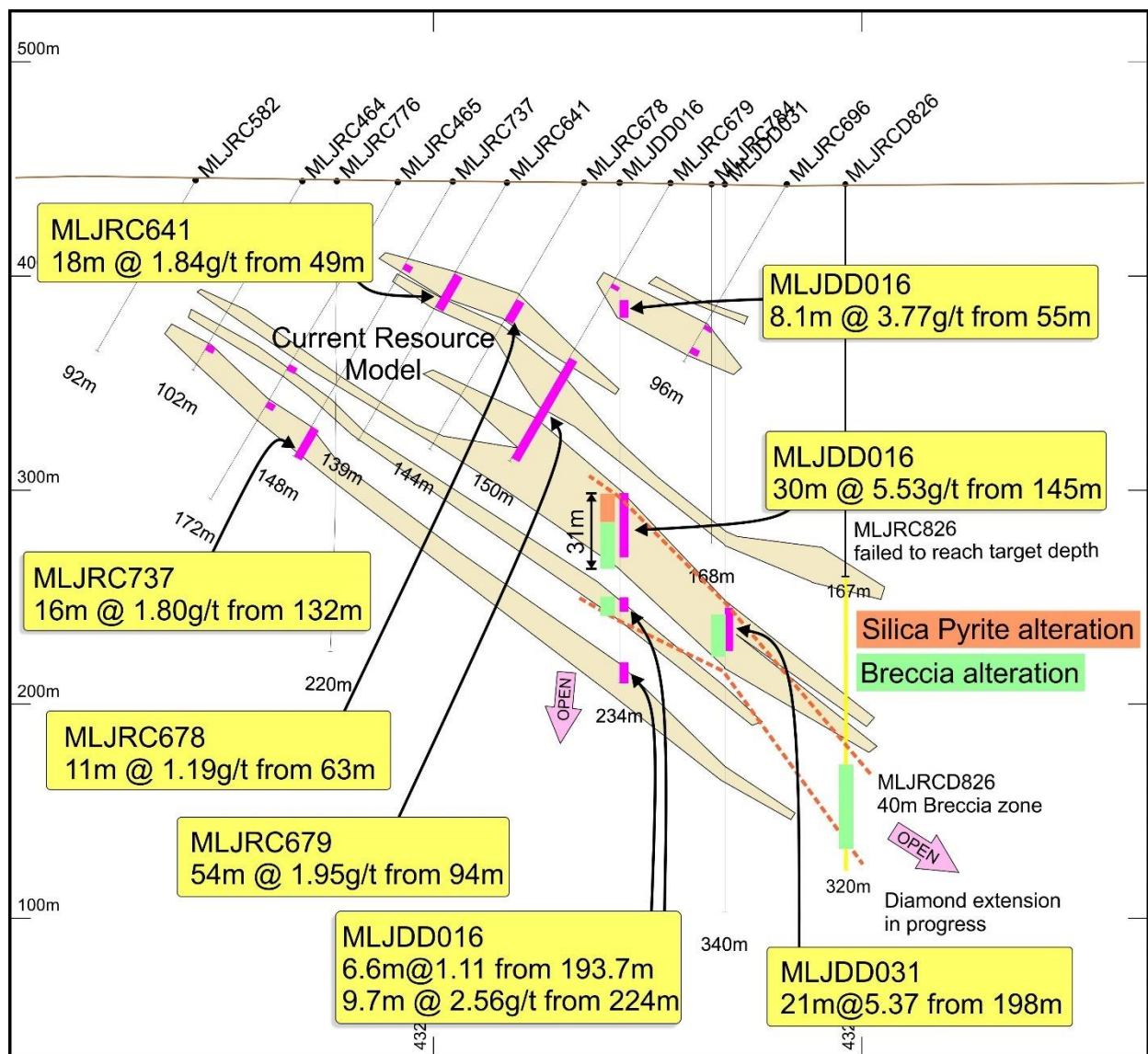
**Figure 12. Cross section for LNJ4 central area showing high-grade dipping gold zone containing resource model outline and MLJDD033 being a down dip extension of over 200m and being part of a very large 550m interpreted down dip extension.**

MLJRCD826 is a large step out and is outside the current resource. MLJRCD826 intersected a 40m-thick breccia zone from 270 to 310m, which has assays pending (Figures 13). It is directly 65m down dip from MLJDD031, which intersected 21m at 5.37g/t Au from 198m within a breccia. This is in turn 50m down dip from MLJDD016, which intersected 30m at 5.53g/t Au from 145m, which is also within a breccia. MLJRCD826 is still open down dip and to the south and diamond holes are being planned to follow up this thick breccia zone.

MLJRCD802 intersected our best intersection to date, of 133m at 2.87g/t from 173m, which includes 61m at 4.68g/t from 243m (1m splits). Assays are pending for the down dip extension within MLJRC820 from 290m to 453m (Figure 14).

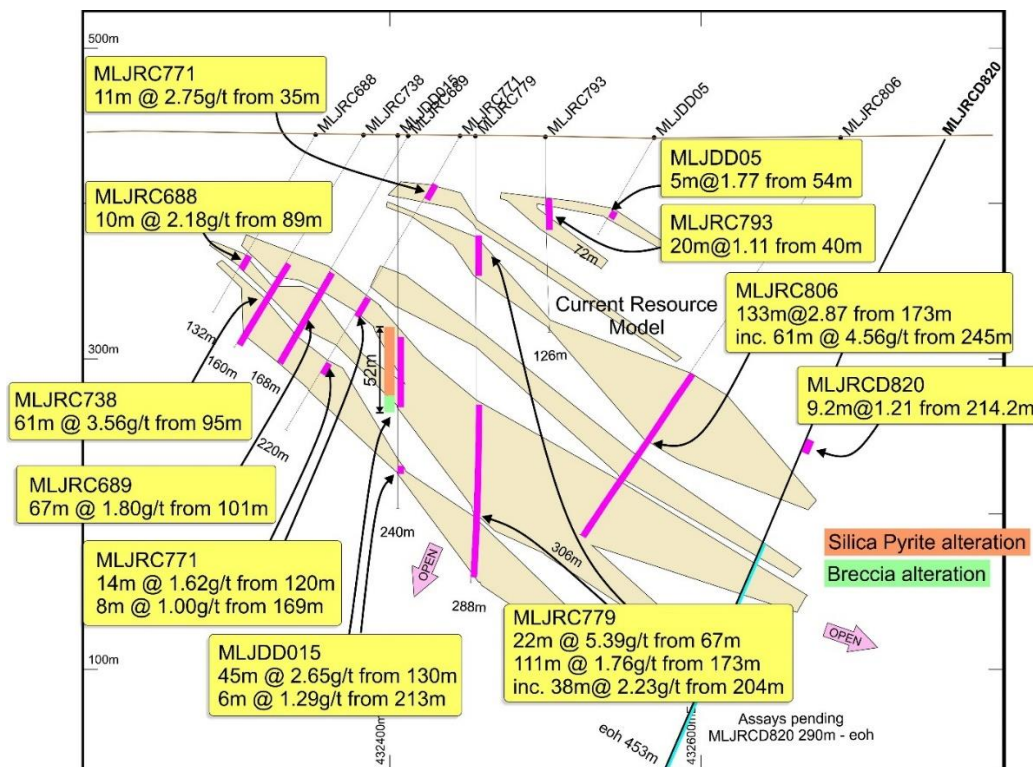
MLJDD034 intersected 6.8m @12.06g/t from 151m (contained within a 11.5m zone with 4.8m of core loss) in a gossanous chert breccia.

The multiple very thick intersections which often contain silica-pyrite and breccia alteration, are up to 50m thick. These are mainly within a 250m long central zone, which is still open to the south and east.



**Figure 13. Cross section for LNJ4 centre area showing thickened high-grade dipping gold zone containing breccia and silica-pyrite alteration, resource model outline, thickened mineralisation in drill hole MLJRC679, breccia zone in MLJDD016 and MLJDD031 and depth extensions downdip with a 40m thick breccia in MLJRCD826, which is still open to the east with assays pending.**

The follow up deeper RC/diamond holes tested and are looking to extend two and in some cases three stacked lodes found in the central, southern and northern parts of LNJ4. Many of these are outside the existing resource and have potential for the enlargement of the LNJ4 (Indicated and Inferred) of 13.1Mt at 2.02g/t for 852,600oz at a 0.5g/t cutoff (Table 2).



**Figure 14. Cross section for LNJ4 centre area showing thickened high-grade dipping gold zone containing breccia and silica-pyrite alteration, upper mineralised zone, resource model outline, thickened mineralisation in drill hole MLJRC779 and MLJRC806, Breccia zone in MLJDD015 and potential depth extensions downdip to the east and south**

The recent diamond drilling at LNJ4 has revealed four distinct types of mineralisation:

- Vuggy silica and/or silica-pyrite mineralisation: this intense alteration destroys the nature of the protolith and comprises a porous network of silica veins and masses, with or without disseminated pyrite, in a clayey to sandy matrix.
- Polymictic breccia: a mixed breccia of chert, felsic porphyry, and ironstone (possibly after ferruginous or pyritic chert), sometimes with quartz or silica clasts, in a siliceous, ferruginous or pyritic matrix. The pyrite content is highly variable ranging up to semi-massive to massive in places.
- Silicified ultramafic: the footwall ultramafic sequence at LNJ4 is mineralised in pale, bleached and silicified zones showing intense deformation (informally termed “visceral” texture) with or without quartz stockwork veining and with minor disseminated pyrite.
- Pyritic zones in crystalline sedimentary carbonate: This is a more subtle style of mineralisation comprising disseminations and irregular stringers of pyrite in the chert-carbonate sequence overlying the footwall ultramafics. Better intercepts of this style include 9.75m @ 2.56g/t from 224m at end of hole in MLJDD016 (section 6826310N) and 16m @ 4.51g/t from 411m in MLJDD033 (section 6826480N).

The recent intersection of the carbonate-hosted mineralisation at depth in MLJDD033 suggests that this style may become more important in the deeper parts of the LNJ4 mineralised system, which has yet to be fully explored and defined.

Photos of the mineralisation types are attached and some examples of both breccia mineralisation and silica pyrite alteration in the MLJDD015 core trays with an overlaid gold content for each interval of core measured (Figure 15 to 23).



The mineralisation appears to occur in a series of moderately east-dipping (45-50°) zones ranging from a few metres up to 52m in true width. Sometimes these zones appear to coalesce to form broader mineralised zones. The silica-pyrite and breccia mineralisation occur in an interdigitated sequence of massive chert and carbonate intruded by felsic porphyries. This sequence also dips moderately to the east.

Strong thick breccia zones are also present within the Sunrise Dam Deposit owned by Anglo Ashanti where the breccia lodes carry significant higher-grade mineralisation are associated with a number of internal deposits. In most cases they are near vertical and link the sub horizontal major shear zones and can also be subparallel to the major mineralised shear zones near surface. The silicified ultramafic mineralisation occurs in an ultramafic unit in the footwall of the chert-carbonate sequence.



**Figure 15. MLIDD020\_178.0m\_Polymictic Breccia with silica-pyrite clast**



**Figure 16. MLIDD018\_77.5m\_Polymictic Breccia**





**Figure 17. MLJDD018\_164.5m\_Massive pyrite in Breccia**



**Figure 18. MLJDD018\_198.0m Vuggy Silica Alteration**



**Figure 19. MLJDD019\_148.4m\_visceral texture in bleached, silicified ultramafic.**



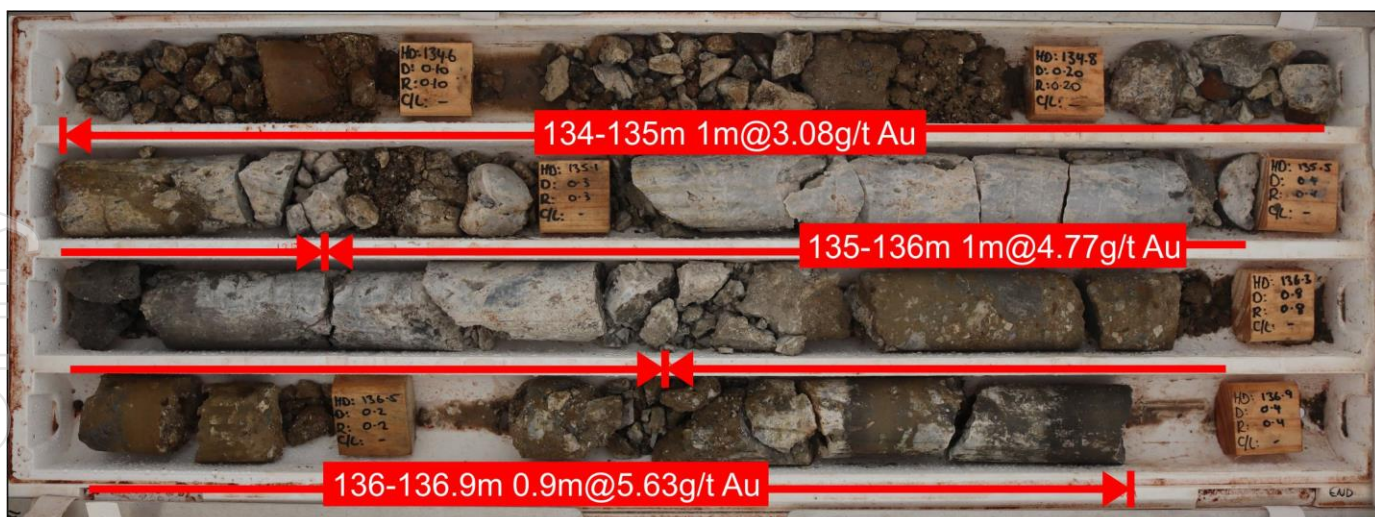


Figure 20. MLJDD015 Silica-pyrite alteration

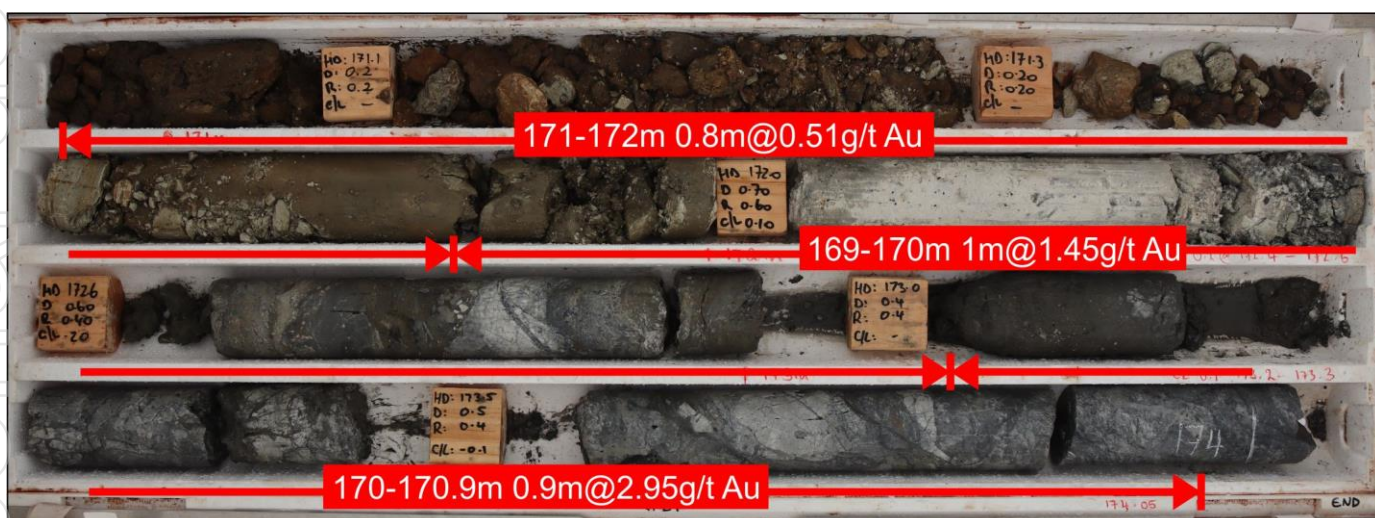


Figure 21. MLJDD015 Breccia alteration

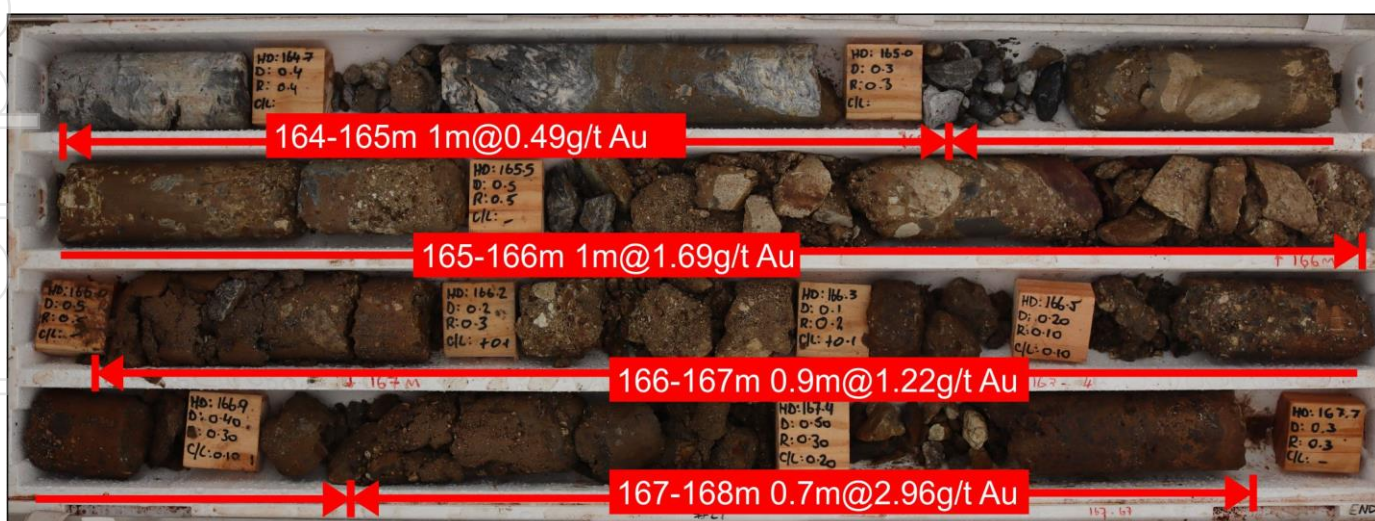
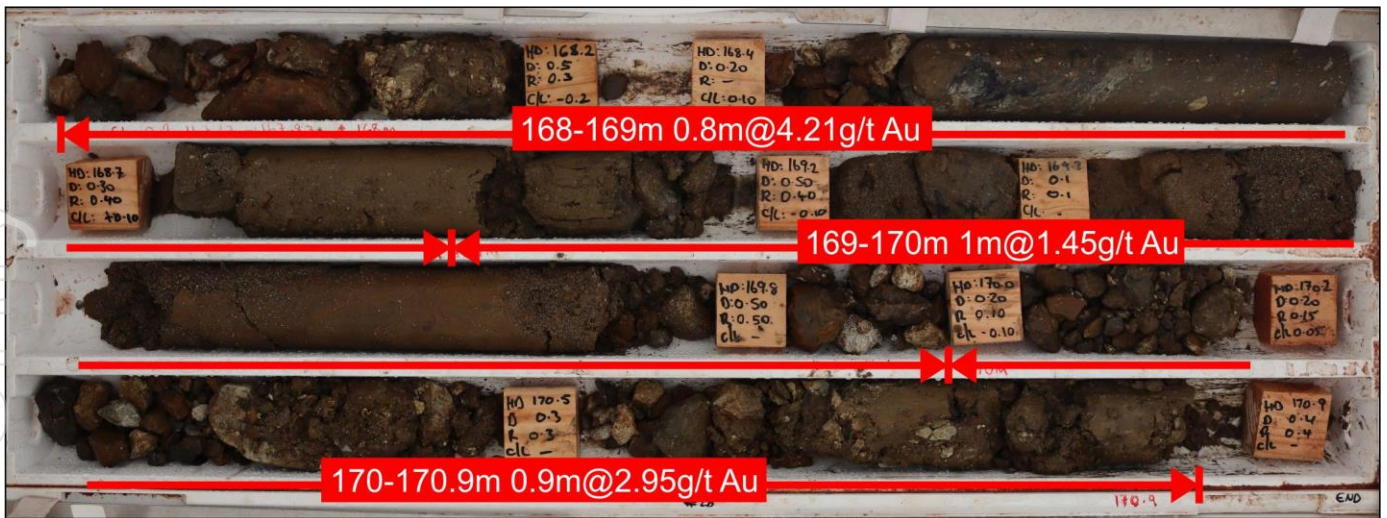


Figure 22. MLJDD015 Breccia alteration



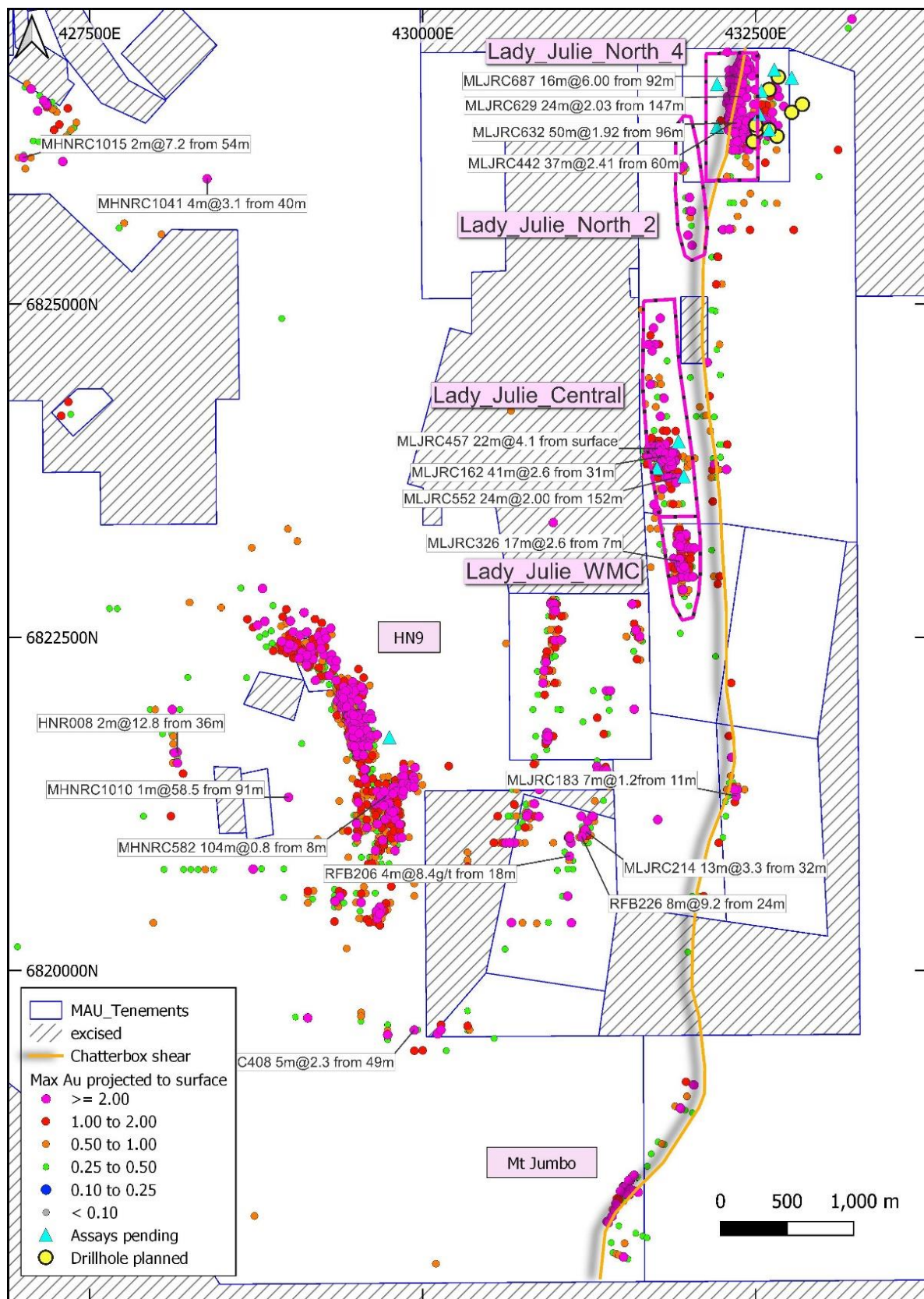


**Figure 23. MLJDD015 Breccia alteration**

The Lady Julie North 4 deposit is only 2.5km North of the Lady Julie Central deposit which in turn is 2.5km NE of the HN9 deposit (Figure 24). These three areas are all shallow deposits and Lady Julie Central and HN9 start from surface and Lady Julie North 4 from 30m depth, which provide low strip ratios and potential for economic ore that is open-cuttable and are effectively part of one mining centre.

Gold mineralisation at LNJ4 is hosted in a sequence of ultramafics, massive carbonate (marble) and chert intruded by felsic porphyries. This sequence is cut by a major N-S braided shear complex known as the Chatterbox Shear Zone (CSZ) which is known to host significant mineralisation to the north. Petrological studies are in progress to determine if the carbonate and chert units are in fact forms of intense carbonate and silica alteration associated with the CSZ.

The Chatterbox shear zone is a complex N to NNE-trending, east-dipping structural corridor which can be traced for some 22km extending from Magnetic Resources' southern boundary at Mt Jumbo and through Lady Julie North 4 and as far north as the Beasley Creek gold deposit on Magnetic's NE boundary (Figure 25).



**Figure 24. Gold intersection overview covering the Lady Julie North4, Lady Julie Central, Lady Julie WMC, HN9 and Mt Jumbo Projects showing some highlighted intersections (white label), significant historical and Magnetic intercepts (maximum Au projected to surface), planned holes in yellow and highlighted Chatterbox shear extending south from the Lady Julie North 4 Deposit**



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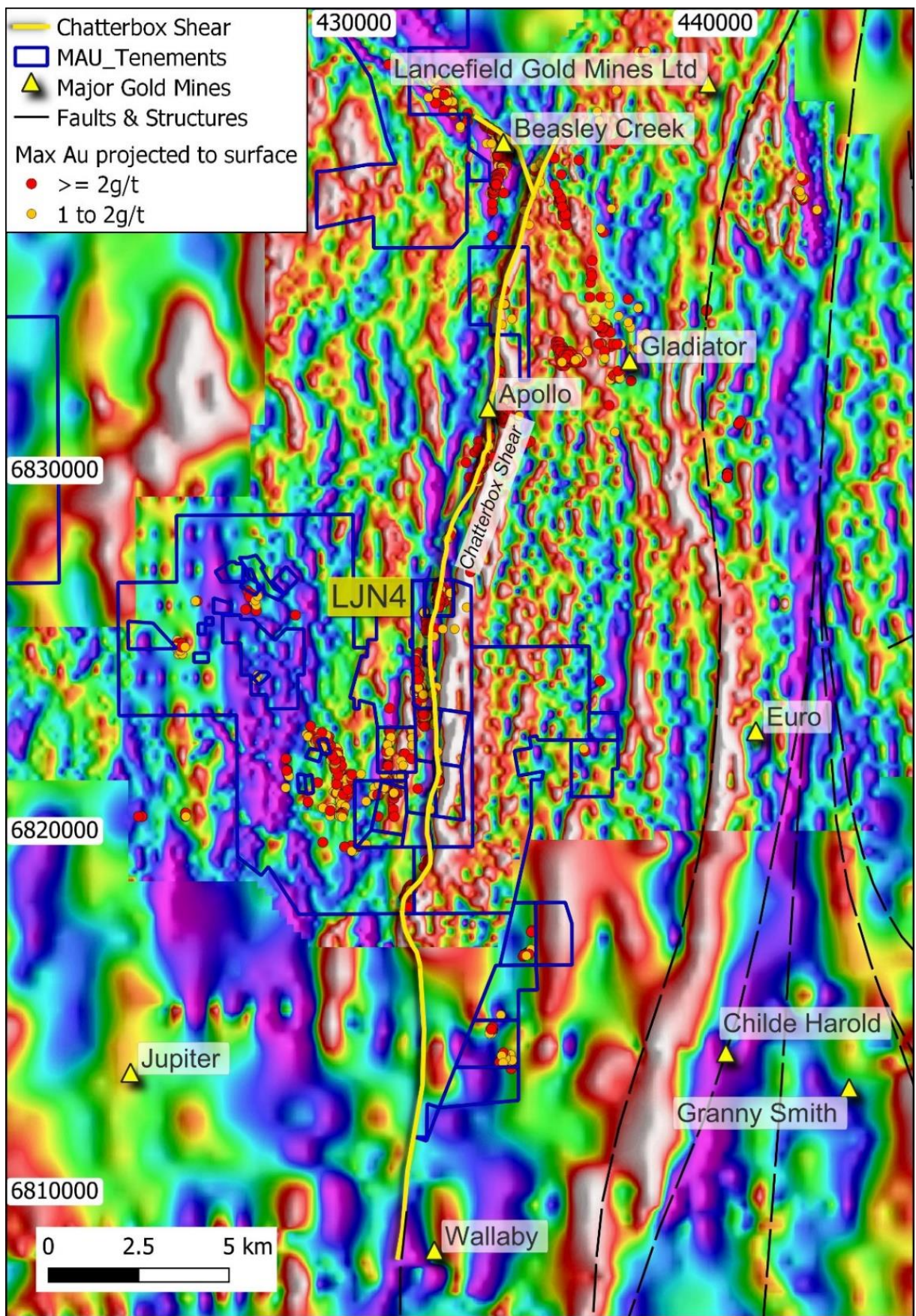


Figure 25. The Lady Julie North 4 Chatterbox Interpreted Shear shown on a Gravity image with major gold deposits.

Within Magnetic's tenements the shear zone can be traced for a distance of 12km. The shear zone is interpreted to comprise a series of braided faults and shears within a corridor ranging from 100m to 250m wide and is interpreted to have formed as a reverse fault on the limb of the regional Margaret Anticline during the latter stages of its folding.

Importantly, this shear zone is closely associated with, gold mineralisation at several locations along its length including Magnetic's LNJ4 and Mt Jumbo deposit (Figure 25). This shear is gold rich and gold deposits further north of Magnetics tenements contains the Beasley Creek and Apollo deposits and is interpreted to extend south towards the world class Wallaby deposit. It is evident in aeromagnetic imagery and in gravity images (Figure 25), Previous seismic work completed by Magnetic also shows up the Chatterbox shear which has great depth extent of this 45 degree east dipping shear with a number of associated vertical faults.

Within the HN5, HN6, HN9 and Lady Julie areas there are many new shallow intersections (see previous ASX announcements) with a total of 2,590 intersections (ranging from 1 to 44m) greater than 0.5g/t Au, which includes 1221 greater than 1g/t Au, 471 greater than 2g/t Au, 246 greater than 3g/t Au and 152 greater than 4g/t Au.

At Hawks Nest 5, 6, 9 and Lady Julie extensive drilling programmes have been completed, including 1,883 RC/RCD holes totalling 148,829m (average 79m depth), 37,455 1–5m composites and 26,252 1m splits, 302 AC holes totalling 12,125m, 3,049 2-6m composites and 294 1m splits and 20 Diamond holes totalling 4,702. The Geotech programme comprised 12 RC/RCD drillholes totalling 1,098m and 8 diamond holes totalling 776m and Hydrology programme comprising 6 RC drillholes totalling 874m.

This release is reporting on 1,066 2-4m composite samples and 1,047 1m splits from 31 RC drillholes (MLJRC795-800,802-816,821,823,825-827,831-835) and 1,770 ~1m core samples from 6 Diamond drillholes (MLJRCD820, MLJDD031 to 35).

Assays are pending for MLJRC818, 819, 820 (290m to 453m), 826 and 828.

The nearby Sunrise Dam, Wallaby and Jupiter Gold Deposits have persistent internal shallow-dipping mineralised lodes that are often called shear zones or thrust zones, which are ubiquitous throughout these deposits and have been defined down to 1500m depth at the Wallaby deposit. At Sunrise Dam there are breccia zones which are associated with the deeper vertical deposits and also some of the shallower dipping deposits near surface. In addition, many discoveries in recent times have been made by drilling below 100m because the historical drilling was far too shallow. At HN5, 6, 9 and Lady Julie the average hole depth is only 79m providing tremendous scope for upside potential.

**Table 6. Planned/in-progress Drilling at Lady Julie North 4**

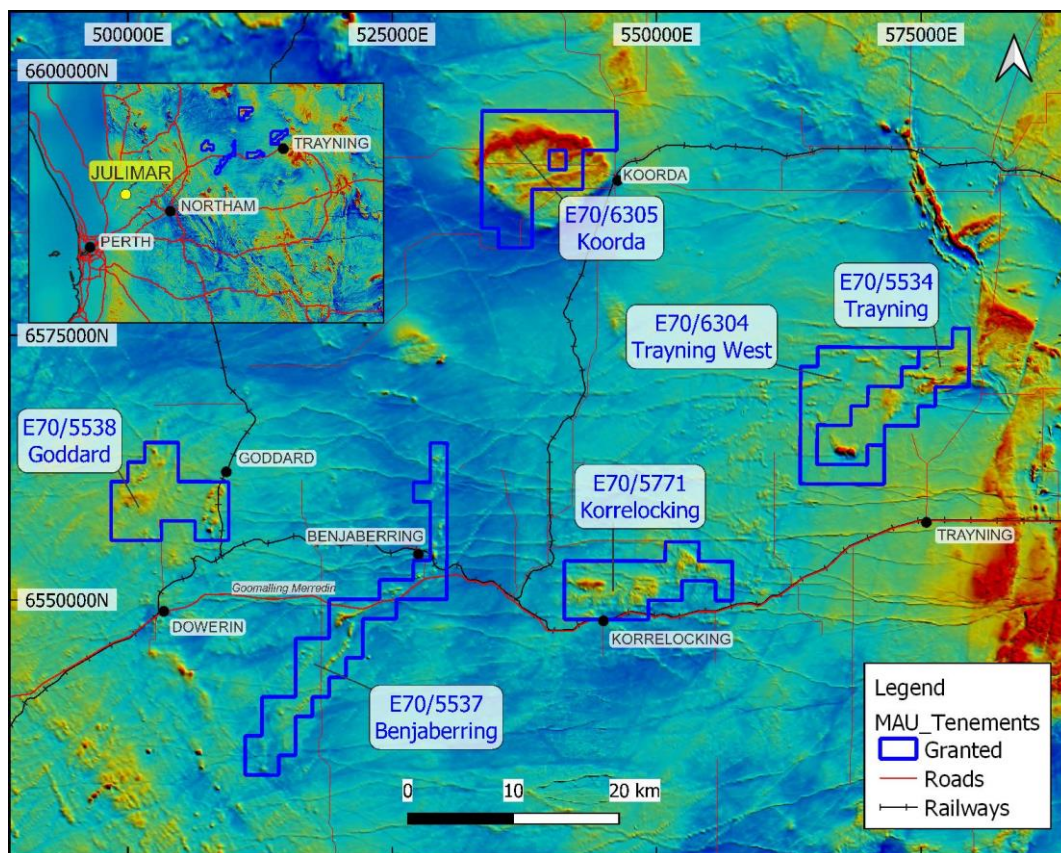
Hole_ID	Easting	Northing	Depth	Dip	Azimuth	Hole Type	Tenement	Project
	<b>MGAz51</b>	<b>MGAz51</b>	<b>metres</b>	<b>degrees</b>	<b>degrees</b>			
MLJRC836	432770	6826440	200	-60	270	RC	E38/3127	LJN4
MLJRC837	432850	6826500	250	-60	270	RC	E38/3127	LJN4
MLJRCD679	432511	6826310	240	-60	270	DDH Tail	P38/4170	LJN4
MLJRCD773	432600	6826611	300	-60	270	DDH Tail	P38/4170	LJN4
MLJRCD788	432480	6826220	280	-90	0	DDH Tail	P38/4170	LJN4
MLJRCD793	432500	6826345	300	-90	0	DDH Tail	P38/4170	LJN4
MLJRCD807	432660	6826260	400	-60	270	DDH Tail	P38/4170	LJN4
MLJRCD826	432600	6826310	320	-90	0	DDH Tail	P38/4170	LJN4
MLJRCD829	432670	6826705	370	-60	270	RCD	P38/4170	LJN4
MLJRCD830	432925	6826386	550	-60	270	RCD	E38/3127	LJN4
2 DDH for 920, 6 DDH Tails for 1,840m, 2 RCD for 690m 2 RC for 450m								



## Nickel-Cu-PGE and REE Projects

These projects were selected based on aeromagnetic interpretation after noting the structural setting of the Julimar complex and the Gonneville mineralised discrete magnetic mineralised Ni-Cu-PGE rich intrusion. The Julimar discovery in March 2020 has led to a massive pegging rush covering 30,000 sq. km. The Julimar Intrusive Complex flags the existence of a new and unexplored West Yilgarn Ni-Cu-PGE Province along the western margin of the Archean Yilgarn Craton.

The western tenements Benjaberring and Goddard are prospective for nickel, PGE elements, Cu and Au. A 570 soil-sampling programme is being carried out on the northern part of Benjaberring with sample spacings of 50m x 200m and 50m x 400m over the main magnetic targets. The eastern tenements are prospective for REE after shallow, thick, strong REE intersections were made within the Trayning project (Figure 26). Access to various targets throughout the six tenements is ongoing and currently there are four access agreements over parts of the Trayning, Benjaberring and Goddard projects.



**Figure 26. Coverage of Magnetics six projects NE of Julimar overlaid on the regional aeromagnetics**

### Other Projects

The Company actively reviews other projects and tenements for acquisition and development within the Leonora–Laverton region.

### Iron Ore

The Company has an agreement signed with Northam Iron Pty Ltd (now Northam Resources Pty Ltd) regarding the sale of the Company's iron ore assets, with a sliding scale royalty with payments starting at \$0.25/t for a sale price of \$80.00/t or less, and thereafter, for every increase in the sale price of \$10.00/t



## Corporate

On 28 November 2023, shareholders approved all resolutions at the Annual General Meeting.

For the purpose of Section 6 of the Appendix 5B, all payments made to related parties have been paid in relation to director fees.

This announcement has been authorised for release by Managing Director George Sakalidis.

For more information on the company visit [www.magres.com.au](http://www.magres.com.au)

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The information in this report is based on information compiled by George Sakalidis BSc (Hons), who is a member of the Australasian Institute of Mining and Metallurgy. George Sakalidis is a Director of Magnetic Resources NL. George Sakalidis has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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'. George Sakalidis consents to the inclusion of this information in the form and context in which it appears in this report.

The Information in this report that relates to:

1. Promising 200m wide 0.7g/t soil geochemistry associated with extensive 1km long NS porphyries at newly named Hawks Nest 9. MAU ASX Release 15 October 2018
2. 1.1km NNW Mineralised Gold Intersections at HN9. MAU ASX Release 7 November 2018
3. Surface drilled Mineralisation extends to significant 1.5km at HN9. MAU Release 20 November 2018
4. Hawks Nest Delivers with 8m@4.2g/t Gold from 4m MAU Release 29 January 2018
5. Robust Near Surface High-grade Zone of 7m @ 4.5g/t Gold from 5m from 1m splits. MAU Release 5 March 2018
6. Hawks Nest Geochemical Survey Outlines Potential Extensions to the Prospective 7m @ 4.5g/t Gold Intersected. MAU Release 20 March 2018
7. An 865m RC drilling programme started testing promising 7m at 4.5g/t gold and eight separate anomalous soil geochemical targets at HN5. MAU Release 10 May 2018
8. Large Gold Mineralised Shear Zone Greater Than 250m at Hawks Nest 5. MAU Release 9 June 2018
9. Gold Geochemical Target Zone Grows to Significant 2km in Length at HN9. MAU Release 7 January 2019
10. Significant 2km Gold Target is open to the East on 83% of the 24 Lines Drilled at HN9. MAU Release 4 February 2019
11. Significant 2.1km Gold Target Still open to North, South, East and at Depth. MAU Release 25 March 2019
12. Gold Target Enlarged By 47% to Significant 3.1km and is still open to the North, East and at Depth. MAU Release 22 May 2019
13. HN9 Prospective Zone Enlarged by 170% with Lady Julie Tenements. MAU Release 24 June 2019
14. 200m-Wide Gold Zone Open to The Northeast and Very Extensive Surface Gold Mineralisation Confirmed at HN9 Laverton. MAU Release 27 June 2019
15. 200m Wide Gold Zone Open to the North and New 800m Anomalous Gold Zone defined at HN9 Laverton. MAU Release 4 September 2019
16. Highest Grades Outlined at HN9 and are being Followed Up and Lady Julie Shallow Drilling Commencing Shortly. MAU Release 14 October 2019
17. Central Part of HN9 Shows Significant Thickening of The Mineralised Zone to 28m. MAU Release 28 November 2019
18. Multiple Silicified Porphyry Horizons from Deep Drilling and 57m Mineralised Feeder Zone at MAU Release 17 January 2020
19. Very High-Grade Intersection of 4m at 49g/t Adjacent to 70m Thick Mineralised Feeder Zone MAU Release 5 February 2020
20. 20 km of thickened porphyry units outlined by ground magnetic interpretation at Hawks Nest 9. MAU Release 9 March 2020
21. Further Thick Down Plunge Extensions and NW Extension Shown up at HN9. MAU Release 18 May 2020
22. Four Stacked Thickened Porphyry Lodes at HN9. MAU Release 3 August 2020
23. High-Grade Intersections in Thickened Zone at HN9. MAU Release 18 September 2020
24. Follow up of 16m at 1.16g/t gold from 64m at Lady Julie MAU Release 2 November 2020
25. Shallow Seismic searching for multiple thickened lodes MAU Release 16 November 2020
26. New thickened zone in southern part of Hawks Nest 9. MAU Release 1 December 2020
27. Two RC rigs now operating at HN9 and Lady Julie. MAU Release 11 January 2021
28. Nine gold targets defined over 14km at HN5, HN6, HN9 and Lady Julie MAU Release 3 June 2021
29. Lady Julie Delivers with best wide intersection of 38m at 3.6g/t gold from 32m MAU Release 23 June 2021
30. Lady Julie North expanded to 4.6km with addition of P38/4170 MAU Release 8 July 2021.
31. Multiple thick and high-grade zones located at Lay Julie MAU Release 16 August 2021
32. Multiple thick high-grade intersections from surface located at Lady Julie MAU Release 14 September 2021
33. Thick high-grade intersections are open to the SE at Lady Julie MAU Release 22 October 2021
34. Thick high-grade intersections at Lady Julie4 MAU Release 17 November 2021
35. Homeward Bound South shapes up with 20m at 3g/t from 64m MAU Release 28 November 2021
36. Thick high-grade intersections and very high-grade vertical shoots at Lady Julie MAU Release 10 January 2022
37. Strategic Review MAU Release 27 January 2022
38. Thicker intersections continue to grow Lady Julie 1 and 4 and Homeward Bound MAU Release 21 February 2022
39. Ten new high priority targets and thick intersections at Lady Julie MAU Release 12 April 2022
40. Second parallel mineralised structure at Lady Julie Central MAU release 11 May 2022
41. Lady Julie North 4 delivers with thick intersections. MAU release 30 May 2022.
42. Maiden Mineral Resource Estimate. MAU Release 27 June 2022.
43. Thick intersection 56m at 2.2g/t Au from 96m at Lady Julie North 4. MAU release 20 July 2022.
44. Drilling commences at Lady Julie North 4. MAU Release 15 August 2022

45. Mineralisation expands both to north and south at Lady Julie North 4. MAU Release 27 September 2022
46. 52m at 1.096ppm TREO in scout drilling at Trayning. MAU Release 29 September 2022
47. High Grade Thick Intersections at Lady Julie North 4 and Lady Julie Central. MAU Release 17 November 2022
48. 52m at 1343 TREO in Scout Drilling at Trayning. MMAU Release. 24 November 2022
49. Thickest Intersections to date at Lady Julie North 4 MAU Release. 21 December 2022
50. Spin-Off of Western Australian Nickel and REE Asset to form Aureole Resources. MAU Release. 28 December 2022.
51. Positive metallurgical results from Lady Julie. MAU Release 25 January 2023
52. Expands mineral resource estimate. MAU Release 3 February 2023
53. Early works good progress at Laverton project. MAU Release 15 February 2023
54. Thick intersections remain open at depth at Lady Julie North 4. MAU Release 20 February 2023
55. Thickest intersection of 96m at 1.23g/t Au at Lady Julie North 4. MAU Release 11 April 2023
56. Further thick intersections and deeper drilling completed at Lady Julie North 4. MAU Release 14 June 2023
57. Best thick intersections to date of 60m at 3.6g/t from 96m at lady Julie North 4. MAU Release 23 June 2023
58. High-grade of 30m at 5.53g/t within 52m thick breccia zone. MAU Release 14 July 2023
59. Intersection of 31m at 3.5g/t from 160m extends Lady Julie. MAU Release 31 July 2023
60. 112m at 1.8g/t gold from 172m extends Lady Julie North 4. MAU ASX Release 7 August 2023
61. 40m at 7.2g/t Au from 192m extends Lady Julie North 4. MAU ASX Release 22 August 2023
62. 50m thick gold rich breccia and silica pyrite zones at LJN4. MAU ASX Release 8 September 2023
63. Thick intersections extend mineralised zones at Lady Julie North 4. MAU ASX Release 26 September 2023
64. Best thick intersection to date 126m at 2.8g at LJN4. MAU ASX Release 19 October 2023
65. Large Grade-Thickness Zone Highlighted at LJN4. MAU ASX Release 2 November 2023
66. Significant 107% increase of Resource at Laverton Project. MAU Release 23 November 2023
67. Mining Lease Application over the Lady Julie North 4 Deposit. MAU ASX Release 13 December 2023
68. 550m down dip extension at Lady Julie North 4. MAU ASX Release 24 January 2024

All of which are available on [www.magres.com.au](http://www.magres.com.au)

This announcement contains forward-looking statements which involve a number of risks and uncertainties. These forward-looking statements are expressed in good faith and believed to have a reasonable basis. These statements reflect current expectations, intentions or strategies regarding the future and assumptions based on currently available information. Should one or more of the risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary from the expectations, intentions and strategies described in this announcement. No obligation is assumed to update forward looking statements if these beliefs, opinions and estimates should change or to reflect other future developments.

## Tenement Schedule in accordance with ASX Listing Rule 5.3.3

Tenements held at the end of the Quarter

Location	Tenement	Nature of Interest	Project	Equity (%) held at start of Quarter	Equity (%) held at end of Quarter
WA	E70/3536	Granted	JUBUK	-	Royalty Retained
WA	E70/4243	Granted	RAGGED ROCK	-	Royalty Retained
WA	E70/4508	Granted	KAURING	-	Royalty Retained
WA	E70/4692	Granted	MT JOY	-	Royalty Retained
WA	E70/5276	Granted	KAURING	-	Royalty Retained
WA	E70/5277	Granted	KAURING	-	Royalty Retained
WA	E37/1331	Granted	MALCOLM	-	2% Royalty Retained
WA	E37/1419	Granted	MALCOLM	-	2% Royalty Retained
WA	E37/1367	Granted	MELITA	-	2% Royalty Retained
WA	P37/8905	Granted	RAESIDE EAST	-	2% Royalty Retained
WA	P37/8906	Granted	RAESIDE EAST	-	2% Royalty Retained
WA	P37/8907	Granted	RAESIDE EAST	-	2% Royalty Retained
WA	P37/8908	Granted	RAESIDE EAST	-	2% Royalty Retained
WA	P37/8909	Granted	BRAISER	-	2% Royalty Retained
WA	P37/8910	Granted	BRAISER	-	2% Royalty Retained
WA	P37/8911	Granted	BRAISER	-	2% Royalty Retained
WA	P37/8912	Granted	BRAISER	-	2% Royalty Retained
WA	P37/9204	Granted	MALCOLM	-	2% Royalty Retained
WA	P37/9205	Granted	MALCOLM	-	2% Royalty Retained
WA	P37/9206	Granted	MALCOLM	-	2% Royalty Retained
WA	P37/9207	Granted	MALCOLM	-	2% Royalty Retained
WA	E37/1177	Granted	MERTONDALE	100%	100%
WA	E37/1258	Granted	MERTONDALE	100%	100%
WA	P37/8687	Granted	CHRISTMAS WELL	100%	100%
WA	P37/8688	Granted	CHRISTMAS WELL	100%	100%
WA	P37/8689	Granted	CHRISTMAS WELL	100%	100%
WA	P37/8690	Granted	CHRISTMAS WELL	100%	100%
WA	P37/8692	Granted	CHRISTMAS WELL	100%	100%
WA	P37/8693	Granted	CHRISTMAS WELL	100%	100%
WA	P37/8694	Granted	CHRISTMAS WELL	100%	100%
WA	E38/3100	Granted	MT JUMBO	100%	100%
WA	E38/3127	Granted	HAWKS NEST	100%	100%
WA	E38/3205	Granted	HAWKS NEST EAST	100%	100%
WA	E38/3209	Granted	MT AJAX	100%	100%
WA	M38/1041	Granted	NICHOLSON WELL	100%	100%
WA	P38/4126	Granted	HN9 WEST	100%	100%
WA	P38/4170	Granted	DEFIANT BORE	100%	100%
WA	P38/4317	Granted	MT JUMBO EAST	100%	100%
WA	P38/4318	Granted	MT JUMBO EAST	100%	100%
WA	P38/4319	Granted	MT JUMBO EAST	100%	100%
WA	P38/4320	Granted	MT JUMBO EAST	100%	100%
WA	P38/4321	Granted	MT JUMBO EAST	100%	100%



Location	Tenement	Nature of Interest	Project	Equity (%) held at start of Quarter	Equity (%) held at end of Quarter
WA	P38/4322	Granted	MT JUMBO EAST	100%	100%
WA	P38/4323	Granted	MT JUMBO EAST	100%	100%
WA	P38/4324	Granted	MT JUMBO EAST	100%	100%
WA	P38/4346	Granted	LADY JULIE	100%	100%
WA	P38/4379	Granted	LADY JULIE	100%	100%
WA	P38/4380	Granted	LADY JULIE	100%	100%
WA	P38/4381	Granted	LADY JULIE	100%	100%
WA	P38/4382	Granted	LADY JULIE	100%	100%
WA	P38/4383	Granted	LADY JULIE	100%	100%
WA	P38/4384	Granted	LADY JULIE	100%	100%
WA	P37/9144	Granted	HOMEWARD BOUND SOUTH	100%	0%
WA	P39/5455	Granted	HOMEWARD BOUND SOUTH	100%	100%
WA	P39/5928	Granted	HOMEWARD BOUND SOUTH	100%	100%
WA	P39/5929	Granted	HOMEWARD BOUND SOUTH	100%	100%
WA	P39/5932	Granted	HOMEWARD BOUND SOUTH	100%	100%
WA	P39/5933	Granted	HOMEWARD BOUND SOUTH	100%	100%
WA	P39/5934	Granted	HOMEWARD BOUND SOUTH	100%	100%
WA	P39/6175	Granted	HOMEWARD BOUND SOUTH	100%	100%
WA	E39/2125	Granted	LITTLE WELL	100%	100%
WA	P39/6134	Granted	LITTLE WELL	100%	100%
WA	P39/6135	Granted	LITTLE WELL	100%	100%
WA	P39/6136	Granted	LITTLE WELL	100%	100%
WA	P39/6137	Granted	LITTLE WELL	100%	100%
WA	P39/6138	Granted	LITTLE WELL	100%	100%
WA	P39/6139	Granted	LITTLE WELL	100%	100%
WA	P39/6140	Granted	LITTLE WELL	100%	100%
WA	P39/6141	Granted	LITTLE WELL	100%	100%
WA	P39/6142	Granted	LITTLE WELL	100%	100%
WA	P39/6143	Granted	LITTLE WELL	100%	100%
WA	P39/6144	Granted	LITTLE WELL	100%	100%
WA	E70/5534	Granted	TRAYNING	100%	100%
WA	E70/5537	Granted	BENJABERRING	100%	100%
WA	E70/5538	Granted	GODDARD	100%	100%
WA	E70/5771	Granted	KORRELOCKING	100%	100%
WA	E70/6304	Granted	TRAYNING WEST	100%	100%
WA	E70/6305	Granted	KOORDA	100%	100%
WA	M38/1315	Application	LADY JULIE NORTH 4	0%	100% pending grant
WA	P38/4581	Application	LADY JULIE NORTH 4 NE	0%	100% pending grant
Tenements acquired in the quarter					
WA	M38/1315	Application	LADY JULIE NORTH 4	0%	100% pending grant
WA	P38/4581	Application	LADY JULIE NORTH 4 NE	0%	100% pending grant
Tenements surrendered in the quarter					