

16 May 2025

### Herberton Project VTEM Survey Underway

Silver and base metals explorer **Iltani Resources** (ASX: ILT, “Iltani” or “the Company”) is pleased to announce a helicopter borne VTEM (Versatile Time Domain Electromagnetic) survey has commenced at its Herberton Project, which includes Orient, Australia’s largest known silver-indium deposit, located in northern Queensland.

#### HIGHLIGHTS:

- Helicopter borne VTEM (Versatile Time Domain Electromagnetic) survey has commenced over the Herberton Project, QLD
- Iltani will receive funding of up to \$230,375 through Round 9 of the Collaborative Exploration Initiative (CEI) scheme, which is part of the Queensland Government’s Queensland Resources Industry Development Plan to carry out the survey
- Survey will consist of approximately 480 line kilometres and will cover multiple targets with a focus on the Orient silver-indium project and extend into the Boonmoo Sag Caldera Complex to target a potential porphyry system plus Iltani’s recent Boonmoo epithermal gold discovery
- Survey will be completed in 1-2 days with data passed to Mitre Geophysics for processing which is expected to take 4-6 weeks to complete

Figure 1 Helicopter borne VTEM Survey underway at Orient Silver-Indium Project





**Iltani Managing Director Donald Garner** commented: *"After a couple of days waiting for optimal weather conditions, it is great to get the Herberton Project VTEM Survey underway.*

*We are grateful for the ongoing support of the Queensland Government, with Iltani receiving \$230,375 in funding through Round 9 of the Collaborative Exploration Initiative (CEI) scheme, which is part of the Queensland Government's Queensland Resources Industry Development Plan, enabling us to undertake the survey.*

*The survey will cover the Orient Silver-Indium deposit at a 100m line spacing then extend out into the Boonmoo Sag Caldera Complex at a 200m line spacing.*

*We know from the down hole EM survey undertaken on the deep diamond hole at Orient West that we completed last year, that the Orient mineralisation has a strong response to EM – so the survey will enable us to better understand the Orient System, in particular the target areas where we know there is mineralisation such as the zone between Orient East and West, Orient North and South and Deadman Creek plus the extensive zone of mineralisation likely to be under cover to south of Orient West, allowing us to target the next round of drilling at known EM anomalies.*

*Then, with the survey extending into the Boonmoo Sag Caldera Complex, we will target the historical copper-lead-zinc workings at Boonmoo Bonanza, Snake Creek and Union Jack, plus the tourmaline breccia pipes mapped by Iltani, and extend over Iltani's recent Boonmoo low sulphidation epithermal gold discovery.*

*We anticipate that that results of the survey will be a game changer for Iltani and deliver multiple high-priority drill targets at Orient and within the Boonmoo Sag Caldera Complex."*

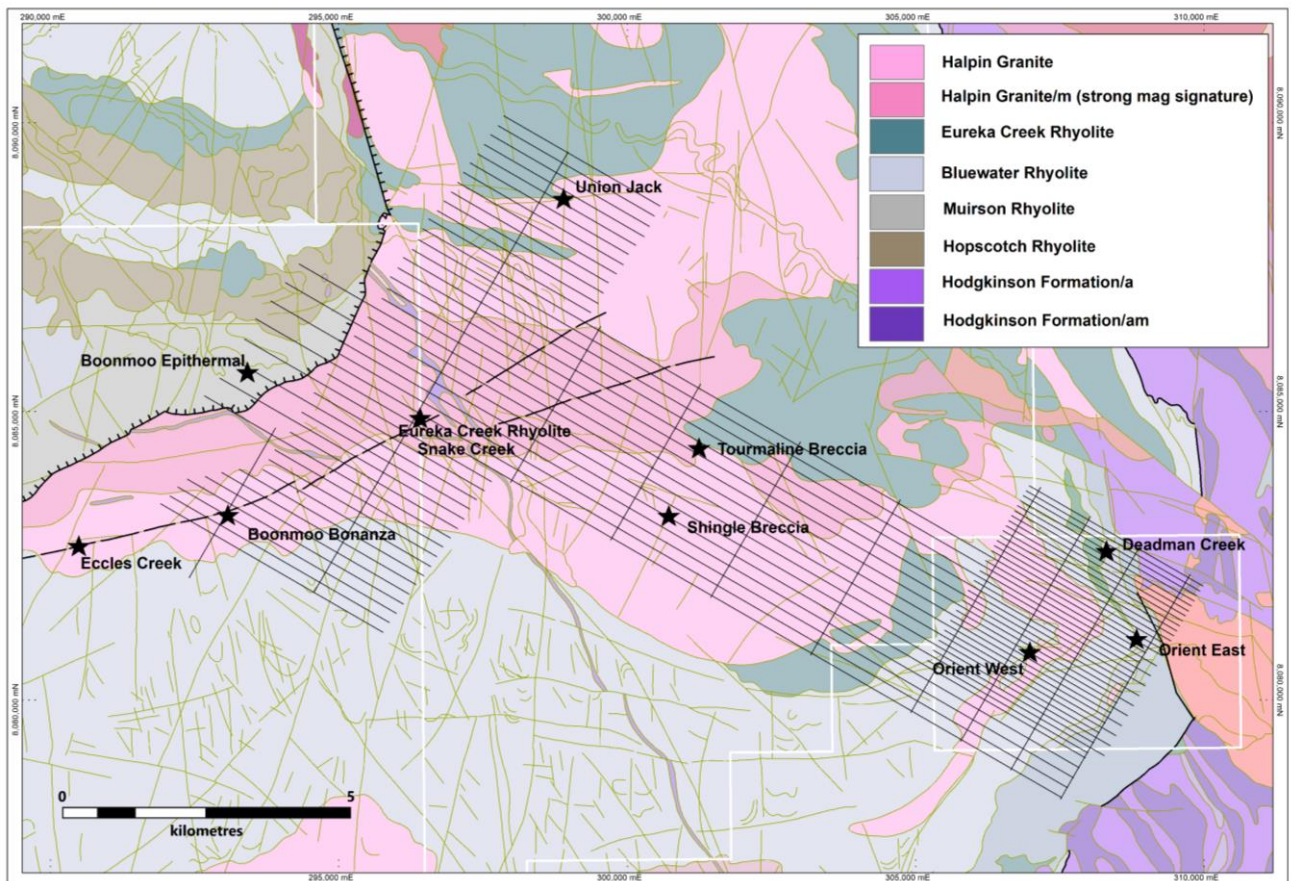
## 1. Herberton Project VTEM Survey

Iltni was awarded \$230,375 funding, through Round 9 of the Collaborative Exploration Initiative (CEI) scheme, which is part of the Queensland Government's Queensland Resources Industry Development Plan to fly an airborne geophysical survey comprising VTEM (Versatile Time Domain Electromagnetic) and magnetics over the Herberton Project area (Orient and extend out into the Boonmoo Sag Caldera Complex).

VTEM generates currents that diffuse into the earth and, similar to water, always take the path of least resistance. Conductive material absorbs the currents and releases a secondary field that the VTEM system measures. A strong conductor absorbs and releases more or all of the VTEM signal. A weak conductor absorbs and releases some or none of the VTEM signal.

The survey is approximately 480 line kilometres and will cover the targets as per Figure 2.

Figure 2 Herberton Project VTEM Survey



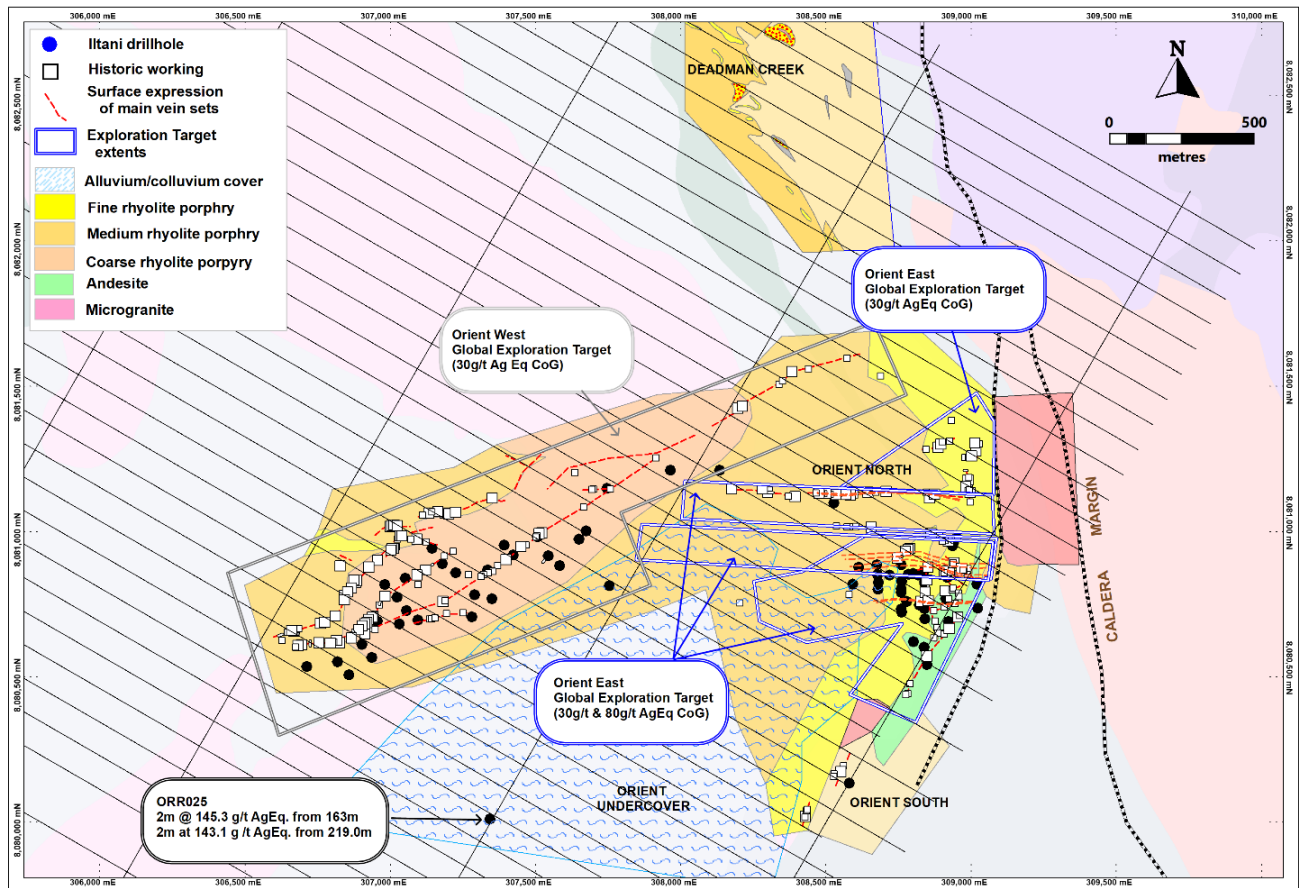


### 1.1. Orient Silver-Indium Project

Iltani has designed the VTEM Survey cover the Orient Silver-Indium project area at a 100m line spacing (Figure 3) and will cover the entirety of the project area plus any possible extensions.

Iltani carried out a down-hole EM survey in August 2024 which confirmed that the Orient silver-lead-zinc-indium mineralisation is highly responsive to EM, allowing Iltani to have a high degree of confidence in the positive response of the Orient mineralisation to the airborne VTEM survey.

Figure 3 Orient Silver-Indium Project VTEM Survey



The Orient VTEM Survey will:

- Enable Iltani to better understand the full extent on the Orient system, particularly the extensions to the north (Orient North and Deadman Creek), to the south (Orient South) and the zone between Orient West and East, particularly where the mineralisation is likely to be under a thin layer of more recent cover (Orient Undercover);
- Target the next round of exploration drilling where Iltani will seek to materially grow the tonnage and grade of the Orient System outside of the areas already drilled at Orient West and East;
- Target deeper extensions of the known mineralisation (mineralisation should be able to modelled to approximately 400m depth; and
- By gaining a better understanding the Orient System to 400m depth, this will enable us to better target the source(s) (feeder zones) of the metals at depth.



Orient is Australia's largest silver-indium discovery, and Iltani has defined a material Exploration Target for Orient West and East (refer to Table 1 and 2) with a total Exploration Target of 32-42 Mt @ 110 – 124 g/t Ag Eq. at an 80 g/t Ag Eq. cut-off grade.

Iltani is currently carrying out a drilling program to convert the Exploration Targets to a JORC Resource plus increase the overall tonnes and grade.

Table 1 Orient Global Exploration Target (30 g/t Ag Eq. Cut-Off Grade)

		Mt	Ag Eq g/t	Ag g/t	In g/t	Pb %	Zn %
Orient East	Min	25	77	22	4	0.6	0.7
	Max	35	95	27	5	0.7	0.8
Orient West	Min	74	55	15	11	0.3	0.5
	Max	100	65	20	13	0.5	0.6
<b>Orient Global</b>	<b>Min</b>	<b>99</b>	<b>61</b>	<b>17</b>	<b>9</b>	<b>0.4</b>	<b>0.6</b>
	<b>Max</b>	<b>135</b>	<b>73</b>	<b>22</b>	<b>11</b>	<b>0.6</b>	<b>0.7</b>

Table 2 Orient Global Exploration Target (80 g/t Ag Eq. Cut-Off Grade)

		Mt	Ag Eq g/t	Ag g/t	In g/t	Pb %	Zn %
Orient East	Min	12	110	32	7	0.8	0.9
	Max	18	130	39	9	1.0	1.1
Orient West	Min	20	110	28	20	0.7	0.9
	Max	24	120	35	24	0.8	1.1
<b>Orient Global</b>	<b>Min</b>	<b>32</b>	<b>110</b>	<b>30</b>	<b>15</b>	<b>0.7</b>	<b>0.9</b>
	<b>Max</b>	<b>42</b>	<b>124</b>	<b>37</b>	<b>18</b>	<b>0.9</b>	<b>1.1</b>

**The potential quantity and grade of the Exploration Target is conceptual in nature. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource. The Exploration Target has been prepared in accordance with the 2012 Edition of The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ('the JORC Code')**

This announcement refers to an Exploration Target estimate which was announced on 18 July 2024 (Iltani Defines Orient West Exploration Target) and 24 February 2025 (Iltani Defines Orient East Exploration Target). Iltani confirms that it is not aware of any new information or data that materially affects the information included in the release and that all material assumptions and technical parameters underpinning the results or estimates in the release continue to apply and have not materially changed. For additional disclosures please refer to the Appendices attached to this ASX release

## 1.2. Boonmoo Sag Caldera Targets

The VTEM survey will also cover multiple targets within the Boonmoo Sag Caldera Complex (refer to Figure 2).

Reconnaissance mapping carried out by Iltani in 2023 discovered a tourmaline breccia pipe complex with associated large scale sericitic alteration system plus confirmed the presence of high-grade base metal mineralisation at multiple small scale historical base metal workings (Boonmoo Bonanza, Snake Creek, Eccles Creek and Union Jack) - refer to ASX release dated 23 August 2023 – Iltani discovers epithermal vein system prospect at Boonmoo, QLD.

Figure 4 Union Jack Copper Mine (sampling up to 2.33% Cu, 25.0 g/t In 0.25 g/t Au & 39.5 g/t Ag)



The VTEM survey will allow Iltani to model whether there are any strong conductive targets associated with the tourmaline breccia pipe complex and the small scale historical base metal workings within the Caldera Complex and then follow these up with further exploration (ground truth the conductive targets then drilling to test the conductive targets).

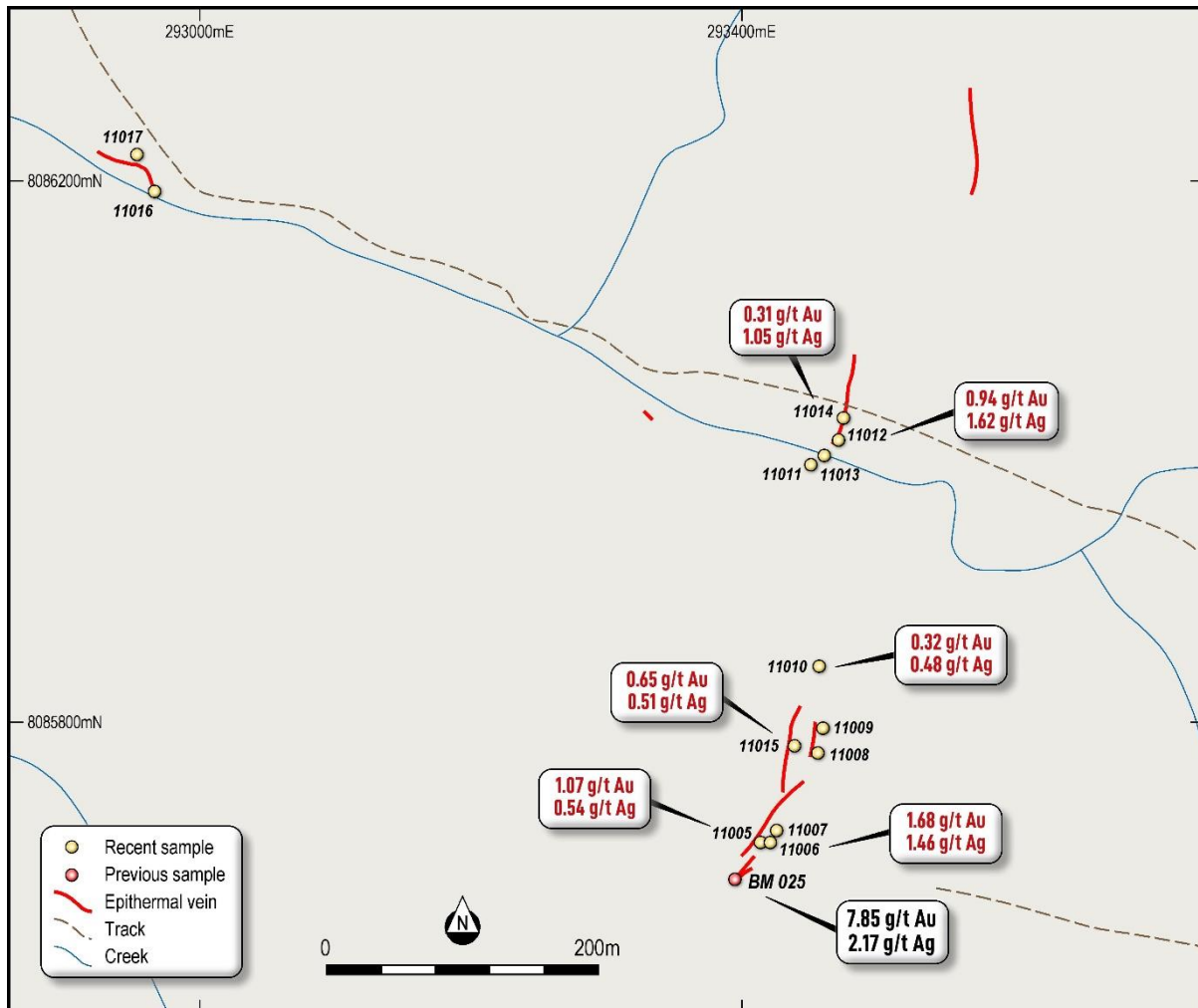


### 1.3. Boonmoo Low Sulphidation Epithermal Gold System

Iltani discovered the Boonmoo low sulphidation epithermal gold system in August 2023, with the discovery sample (BM025) returning 7.85 g/t Au and 2.17 g/t Ag. Follow up mapping and sampling (Figure 5 and refer to ASX release dated 4 October 2023 – Iltani confirms extensive epithermal gold mineralisation at Boonmoo, QLD) confirmed the presence of a low sulphidation vein system hosting gold mineralisation.

The Herberton Project VTEM survey has been extended to cover the Boonmoo low sulphidation epithermal system. The survey will return both EM and magnetic data enabling Iltani to better understand the extent of the epithermal system and plan follow up mapping and sampling.

Figure 5 Boonmoo Low Sulphidation Epithermal Gold System



## 2. Herberton Project Overview

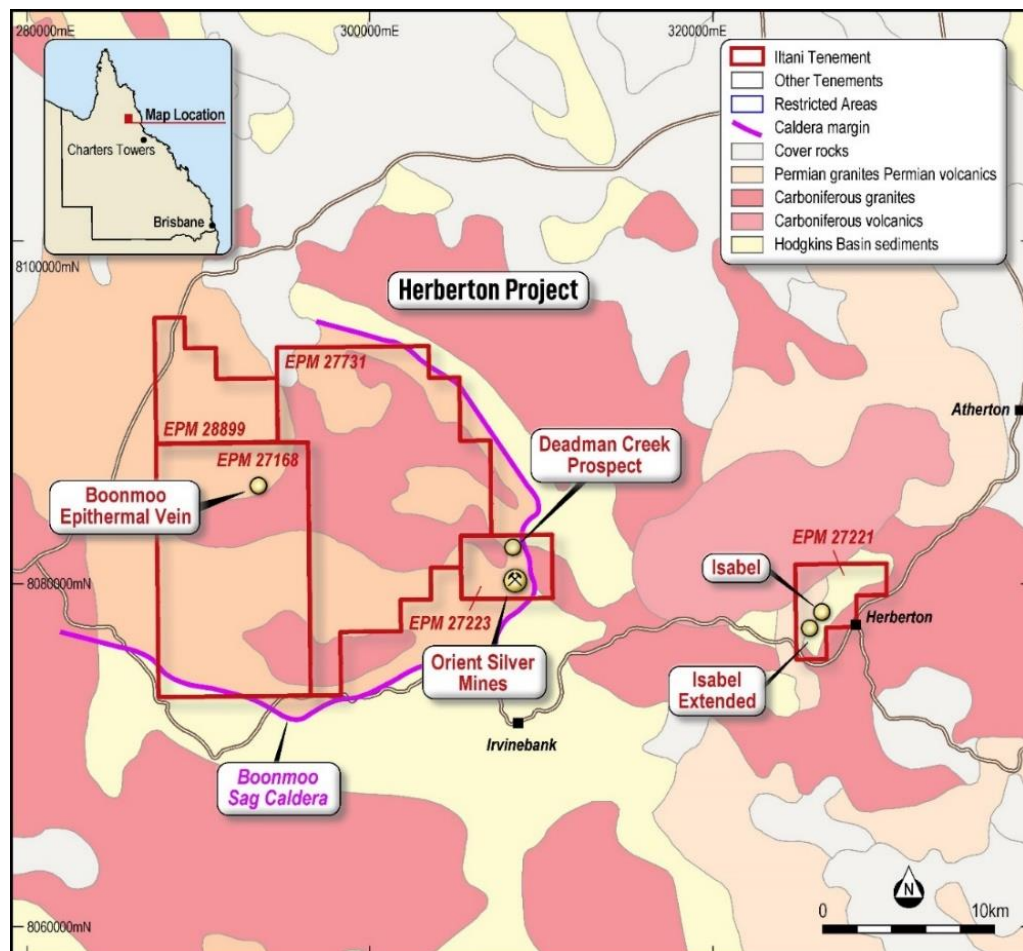
The Herberton Project consists of approximately 367km<sup>2</sup> of wholly owned tenements in the Herberton Mineral Field, with the majority of tenements located approximately 20km west of the historic mining town of Herberton (Figure 6) in Northern Queensland.

The Herberton Mineral Field is a highly prospective terrain with a long history of mining. Tin deposits discovered in 1880; more than 2,400 historic mines and prospects known in the Herberton-Mt Garnet region. The area has been mainly worked for tin, but also tungsten, copper and silver-lead-zinc plus bismuth, antimony, molybdenum and gold.

Iltani's tenement holdings cover the area of the Boonmoo Sag Caldera, which includes Australia's largest silver-indium discovery at Orient plus several historic Cu, Ag-Pb-Zn mines and Au targets.

Iltani also holds a tenement over the Isabel deposit (a small exceptionally high-grade Cu-Pb-Zn-In-Ag rich massive sulphide deposit) and the high grade Cu-rich massive sulphide target at Isabel Extended.

Figure 6 Herberton Project Location







**Authorisation**

This announcement has been approved for issue by Donald Garner, Iltani Resources Managing Director.

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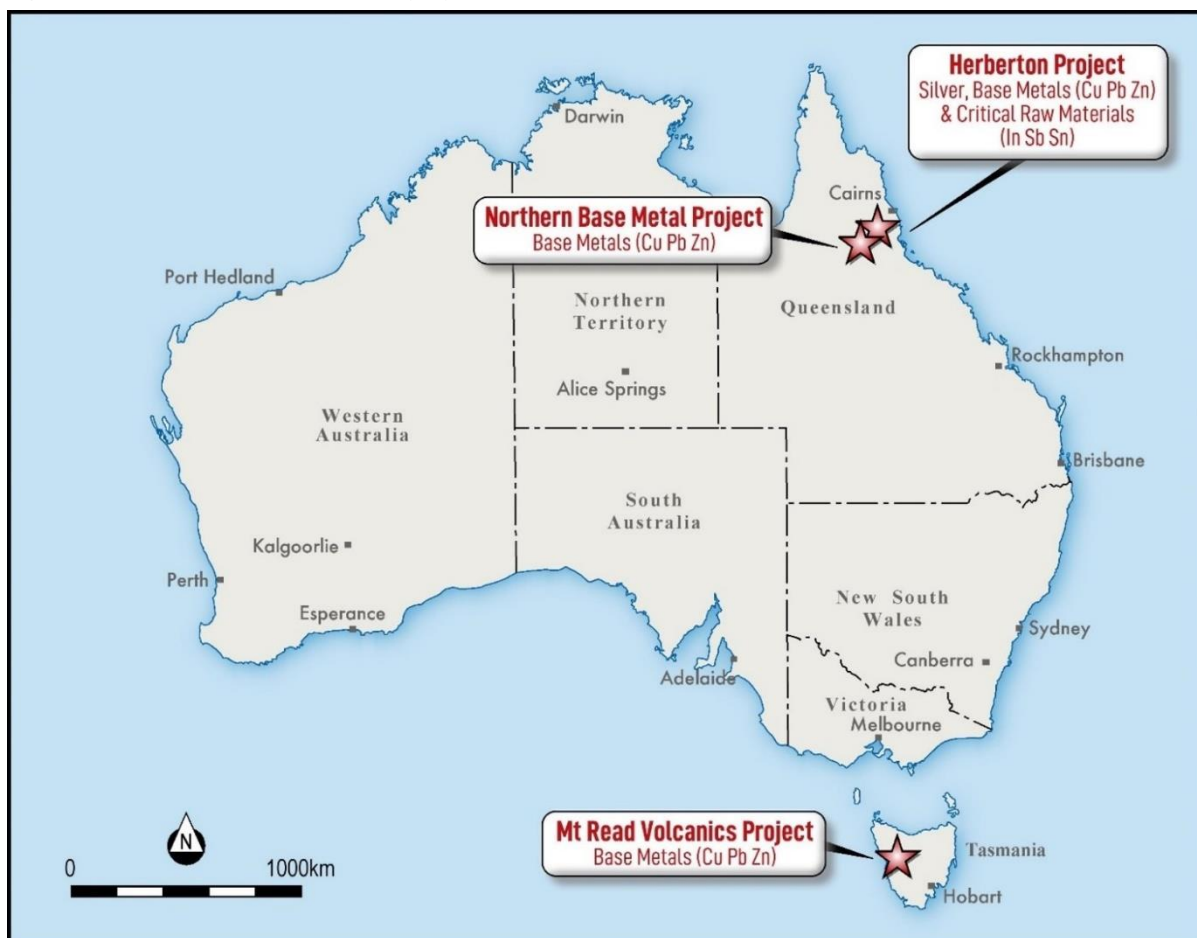
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### About Iltani Resources

Iltani Resources (ASX: ILT) is an ASX listed company focused on exploring for and developing the precious metals and base metals projects to deliver the metals and critical minerals required to create a low emission future. It has built a portfolio of advanced exploration projects in Queensland and Tasmania with multiple high quality, drill-ready targets. Iltani has completed drilling at the Orient Silver-Indium Project, part of its Herberton Project, in Northern Queensland. The drilling has returned outstanding intercepts of silver-lead-zinc-indium mineralisation, positioning Orient as Australia's most exciting silver-indium discovery.

Other projects include the Northern Base Metal Project in Northern Queensland plus the Mt Read Volcanics Project in Tasmania.

Figure 7 Location of Iltani Resources' projects in Queensland and Tasmania





## Competent Persons Statement

### Exploration Target

The Exploration Target estimate has been prepared by Mr Stuart Hutchin, who is a Member of the Australian Institute of Geoscientists. Mr Hutchin is a full time employee of Mining One Consultants. Mr Hutchin has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity for which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves".

Mr Hutchin consents to the inclusion in the release of the matters based on his information in the form and context in which it appears.

### Exploration Results

The information in this report that relates to Exploration Results is based on information compiled by Mr Erik Norum who is a member of The Australasian Institute of Geologists (AIG), and is an employee of Iltani Resources Limited., and who has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activities being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves' (JORC Code).

Mr Norum consents to the inclusion in this report of the matters based on the information in the form and context in which it appears.

Information in this report that relates to previously reported Exploration Results has been cross-referenced in this report to the date that it was reported to the ASX. Iltani Resources Limited confirms that it is not aware of any new information or data that materially affects information included in the relevant market announcements.




**Metallurgical Equivalent Calculation – Additional Disclosure**

The equivalent silver formula is  $\text{Ag Eq.} = \text{Ag} + (\text{Pb} \times 35.5) + (\text{Zn} \times 50.2) + (\text{In} \times 0.47)$

Table 3 Metal Equivalent Calculation - Recoveries and Commodity Prices

Metal	Price/Unit	Recovery
Silver	US\$20/oz	87%
Lead	US\$1.00/lb	90%
Zinc	US\$1.50/lb	85%
Indium	US\$350/kg	85%

Please refer to the release dated 14 November 2023 (Test Work Confirms Silver-Indium Production Potential) detailing the historical test work which Iltani is using to support the metal equivalent calculation.

The metal equivalent calculation (Ag Eq.) assumes lead and silver will be recovered to a lead concentrate and zinc, silver and indium will be recovered to a zinc concentrate. It is Iltani's opinion that all the elements included in the metal equivalent calculation have a reasonable potential to be recovered and sold.

It should be noted that there are other metals present, notably antimony and tin, which have the potential to be included in the metallurgical equivalent calculation, but at this stage, Iltani has chosen not to do so. These metals will likely also be recovered to the concentrates, notably the lead concentrate, however Iltani is currently assuming that these metals will not be payable, so are excluded from the metallurgical equivalent calculation.

Should this situation change, and the antimony and tin become payable in the lead concentrate and/or metallurgical test work indicates that the antimony or tin can be recovered to a separate concentrate where they are payable, then the metallurgical equivalent calculation could be expanded to include these metals.

## **Orient West Exploration Target – Additional Disclosure**

### **1. Summary of Relevant Exploration Data**

The Exploration Target is based on the interpretation of the following geology and mineralisation data that has been collated as of the date of this announcement, which includes previously reported exploration results, and information in this report that relates to previously reported exploration results has been cross-referenced in this report to the date it was reported to the ASX. Exploration data is comprised of:

- 22 reverse circulation (RC) drill holes completed for 4,406 metres drilled
- 2,773 assay results from RC drill hole samples
- Detailed surface geological mapping
- Wireframing and 3D block modelling of the Orient West mineralised vein systems.

Historical exploration completed at Orient includes:

- 255 rock chip assay results from Orient East and Orient West
- Geophysical data sets (14km<sup>2</sup> drone mag survey over the Orient area plus 7.18 line km of a dipole-dipole Induced Polarisation survey)
- Great Northern Mining Corporation (GNMC) completed 16 diamond drill holes at Orient West in the 1970s. Drilling did not delineate the margins of mineralisation, leaving it open to extension in all directions. GNMC undertook limited assay of the drill samples (core and percussion) with a focus on the high grade vein system. Extensive low grade mineralisation was logged, usually forming halos around the higher grade veins but this was not assayed. The assay data was not used in the Exploration Target estimation process (due to lack of certainty of the data), and the geological data was used in the wireframing process.

### **2. Methodology to Determine the Grade and Tonnage Range for the Exploration Target**

Iltni engaged Mining One Consultants to build a 3D model of the Orient System (Orient West and East) to better understand the size and scale of the mineralised vein systems, allowing Iltni to optimise drill hole design. This model has been continually updated as drilling has been completed and was used as the basis for estimating the Exploration Target.

Mineralised intercepts in downhole drilling align from section to section along structures that can be assumed to be continuous between drillholes. Mineralised zones broadly pinch and swell but can be linked together across drilled sections. Some areas of interpretation, especially regarding thin and lower grade lenses, should be considered initial and linkages between drillholes may change with further information, however the current interpretation holds true with concurrent surface geological observations and areas of denser drilling.

Apart from drilling, strike extents of the exploration model are also based on soil anomalism above the mineralised veins and the extent of historic workings which have been rock chip sampled. Mineralisation extends 2.6km from SW to NE and dips approximately 55° → 150°. The stacked system ranges from 270 – 330m in thickness from the footwall of the northern-most structure to the hanging wall in the south. The 13 modelled mineral domains (sulphide veins) range from 2 – 55 m in thickness.

Assays were composited in each domain to 1m which is the nominal assay interval. Domains were snapped to assay intervals and Ag, Pb, Zn & In were estimated from the composites constrained by each domain using hard boundaries and using inverse distance squared (ID<sup>2</sup>) estimation in four passes.

Search ellipsoids were oriented according to the mineralised trend 55° → 150° or 153°. The Block Model has parent blocks 20m x 20m x 10m. It is sub-blocked using an octree method 8 x 8 x 16 resulting



in sub-blocks as small as 2.5 m x 2.5m x 0.625m to honour the vein geometry even as they pinch out or splay against each other.

Drilling intersects the mineralised structures at 60m intervals in the area of closest drilling. Grades were not capped. The highest grades are in the core of the deposit where the estimate uses up to 50 samples to estimate grade. High grades including outliers will impact local grades in the core of the deposit but will have very little influence on blocks away from drilling.

Global approximated exploration target figures were generated using a 30 g/t Ag equivalent cut off and the high-grade core target figures were approximated using an 80 g/t Ag equivalent cut off.

An assumed density of 2.7 g/cc was applied to determine the tonnes. Density vs sulphide content was inspected at other multi-commodity deposits to understand the effect of similar grades to density. At similar average grades to Orient, the result is negligible. Some high sulphide zones likely have a higher density, however the volume of this material is very low and deemed negligible for consideration in the current study.

The Exploration Target Estimation for Orient West has utilised the more rigorous methodology that is generally utilised for Mineral Resource Estimation without a more constrained statistical approach required for the latter. This is to ensure the Exploration Target Estimation result is meaningful and, with further drilling, will be used as a basis for a Mineral Resource Estimate.

### **3. Progress Towards a Mineral Resource Estimate**

Proposed exploration activities designed to progress the Orient West Exploration Target to a Mineral Resource Estimate will consist of an infill drilling program and is planned to take place over the next 6 to 12 months.





## **Orient East Exploration Target – Additional Disclosure**

### **1. Summary of Relevant Exploration Data**

The Orient East Exploration Target is based on the interpretation of the following geology and mineralisation data that has been collated as of the date of this announcement and information in this report that relates to previously reported exploration results has been cross-referenced in this report to the date it was reported to the ASX. Exploration data is comprised of:

- 35 reverse circulation (RC) drill holes completed for 5,154 metres drilled
- 2,522 assay results from RC drill hole samples
- Detailed surface geological mapping
- Wireframing and 3D block modelling of the Orient East mineralised vein systems.

(NB: drill samples comprise 1m cone split samples, 4m composite spear samples, with some samples not submitted for assay as they were first tested with a portable XRF device).

Historical exploration completed at Orient includes:

- 255 rock chip assay results from Orient East and Orient West
- Geophysical data sets (14km<sup>2</sup> drone mag survey over the Orient area plus 7.18 line km of a dipole-dipole Induced Polarisation survey)
- Great Northern Mining Corporation (GNMC) completed 16 diamond drill holes at Orient West and five diamond drill holes at Orient East in the 1970s. Drilling did not delineate the margins of mineralisation, leaving it open to extension in all directions. GNMC undertook limited assay of the drill core samples with a focus on the massive sulphide high grade veins only. Extensive low grade mineralisation was logged, usually forming halos around the higher grade veins but this was not assayed. The historic drill data was not used in the Exploration Target estimation process due to lack of certainty of the data.

### **2. Methodology to Determine the Grade and Tonnage Range for the Exploration Target**

Iltni engaged Mining One Consultants to build a 3D model of the Orient System (Orient West and East) to better understand the size and scale of the mineralised vein systems, allowing Iltni to optimise drill hole design. This model has been continually updated as drilling has been completed and was used as the basis for estimating the Exploration Target.

Mineralised intercepts in downhole drilling align from section to section along structures that can be assumed to be continuous between drillholes. Mineralised zones broadly pinch and swell but can be linked together across drilled sections. Some areas of interpretation, especially regarding thin and lower grade lenses, should be considered initial and linkages between drillholes may change with further information, however the current interpretation holds true with concurrent surface geological observations and areas of denser drilling.

Apart from drilling, strike extents of the exploration model are also based on soil anomalism above the mineralised veins and the extent of historic workings which have been rock chip sampled.

The Exploration Target covers an area of 1,200m north-south by 1,300m east-west. The defined mineralised lenses were divided into two primary domains, the shallow to moderate south dipping Orient East Main Domain and the east-west steeply dipping Orient East Steep Domain.

Assays were composited in each domain to 1m which is the nominal assay interval. Domains were snapped to assay intervals and Ag, Pb, Zn & In were estimated from the composites constrained by each domain using hard boundaries and using inverse distance squared (ID2) estimation in four passes.



The Block Model has parent blocks 20m x 20m x 10m. It is sub-blocked using an octree method 8 x 8 x 16 resulting in sub-blocks as small as 2.5 m x 2.5m x 0.625m to honour the vein geometry even as they pinch out or splay against each other. Grade was estimated using a minimum of five samples and a maximum of ten samples for each block.

Drilling intersects the mineralised structures at 60m intervals in the area of closest spaced drilling. Grades were not capped. The highest grades are in the core of the deposit where the estimate uses up to 50 samples to estimate grade. High grades including outliers will impact local grades in the core of the deposit but will have very little influence on blocks away from drilling.

Global approximated exploration target figures were generated using a 30 g/t Ag equivalent cut off and the high-grade core target figures were approximated using an 80 g/t Ag equivalent cut off.

An assumed density of 2.9 g/cc was applied to determine the tonnes. Density vs sulphide content was inspected at other multi-commodity deposits to understand the effect of similar grades to density. At similar average grades to Orient, the result is negligible. Some high sulphide zones likely have a higher density however, the volume of this material is very low and deemed negligible for consideration in the current study.

The high-grade estimates (200 g/t Ag Eq. cut-off and 300 g/t Ag Eq. cut-off), which is dominated in much narrower units, was limited to a minimum of 2 samples and maximum of five within 50m to reduce dilution from more distant assays. Blocks farther away than 50m from drilling revert to using minimum five and maximum ten to have a more smoothed out distribution.

The Exploration Target Estimation for Orient East has utilised a more rigorous methodology that is generally utilised for Mineral Resource Estimation without a more constrained statistical approach required for the latter. This is to ensure the Exploration Target Estimation result is meaningful and, with further drilling, will be used as a basis for a Mineral Resource Estimate.

### **3. Progress Towards an Orient East Mineral Resource Estimate**

Proposed exploration activities designed to progress the Orient East Exploration Target to a Mineral Resource Estimate will consist of infill drilling and is planned to take place over the next six to twelve months