ASX Announcement

ASX: **LEX**



Quarterly Activities Report

For the three months ended 30 September 2024

HIGHLIGHTS

- Engagement with multiple regional operators and prospective developers along a pathway to commercialise advanced gold resource projects (refer ASX release 23 October 2024)
- Completion of a large regional air core drilling program across the broader Lefroy Project, comprising 324 drillholes for 12,164m.
- Mineral Resources updated for Burns Central and Mt Martin in line with strategy to unlock value.
- At Burns Central, a high-grade zone has been defined (refer ASX release 3 October 2024) of 159,285oz gold, comprising:
 - o Indicated 4.11Mt at 1.19g/t Au, 0.22% Cu and 0.62g/t Ag
 - Inferred 0.10Mt at 0.63g/t Au, 0.18% Cu and 0.38g/t Ag
- For Mt Martin, a new interpretation and drilling results (refer ASX release 10 October 2024) reporting a mineral resource (refer ASX release 10 October 2024), comprising:
 - Indicated 5.60Mt at 1.40g/t Au for 247.5koz Au
 - o Inferred 3.70Mt at 1.60g/t Au for 191.5koz Au
- The Company received a \$755k R&D tax refund for work undertaken at the Burns Project

Lefroy Exploration Limited (ASX:LEX)(**Lefroy** or **the Company**) is pleased to present its quarterly activities report for the three months ended 30 September 2024.

In line with the Company's strategy to unlock value from the Lefroy Project, the Company undertook updates to the Mineral Resource Estimates (**MRE**) for the Burns Central and Mt Martin deposits.

The Company also embarked on a major regional exploration drilling program during the quarter, with 12,164m of air core drilled across a number of target areas, all aimed at identifying high priority targets for follow up in 2025.



EXPLORATION ACTIVITIES

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The key exploration activities during the quarter were a major aircore program across the broader Lefroy Project (assays pending) and completion of mineral resource updates for Burns Central and Mt Martin, both announced post quarter end.

BURNS CENTRAL

The Burns Central Deposit forms part of the Burns Gold-Copper Project ('Burns' or 'Project'), 70km southeast of Kalgoorlie in the highly prospective Kalgoorlie Terrane of Western Australia (Figure 3 & 4). Burns is located within the broader Lefroy Gold Project, proximal to the St Ives gold camp (Gold Fields Ltd JSE: **GFI**) and the Daisy Milano and Mt Monger gold operations (Red 5 Limited ASX: **RED**).

High-Grade Shallow Mineral Resource Defined

Post-quarter end, the Company released details of a mineral resource update at the Burns Central deposit, part of the Lefroy Project. This is in keeping with Lefroy's focus to progress and commercialise the Company's portfolio of shallow advanced gold deposits (refer ASX release 27 March 2024).

Following an internal review of the high-grade potential of the Burns Central resource, a high-grade zone has been delineated within the Burns Central Mineral Resource Estimate (MRE). Reporting only blocks within 200m of surface and applying a cut-off grade of 0.5 g/t Au, this zone reports 4.22Mt @ 1.18 g/t Au for 159,285 contained ounces (Table 1), reported across oxide, transitional and fresh mineralisation categories.

Significantly, this high-grade zone is reported at over 98% Indicated resource classification, with combined oxide and transitional material representing over 34% of the total resource.

Table 1: Mineral Resource Statement for Burns Central, including Gold (Au), Copper (Cu) and Silver (Ag), (0.5 g/t Au cut-off) and maximum 200m depth from surface. Small discrepancies may occur due to the effect of rounding

			Average Value			Ma	Material Content			
Mineralisation	Category	Mass	Au	Cu	Ag	Au	Cu	Ag		
		Mt	g/t	%	g/t	OZ	t	OZ		
	Indicated	1.06	1.35	0.21	0.56	46,122	2,219	19,280		
Oxide	Inferred	0.02	0.70	0.32	0.77	416	59	462		
	Total	1.08	1.34	0.21	0.57	46,538	2,279	19,741		
	Indicated	0.27	0.93	0.56	1.29	8,152	1,532	11,269		
Transitional	Inferred	0.00	0.57	0.08	0.08	2	0	0		
	Total	0.27	0.93	0.56	1.29	8,154	1,532	11,269		
	Indicated	2.78	1.15	0.19	0.57	102,941	5,368	51,104		
Fresh Rock	Inferred	0.08	0.62	0.15	0.29	1,652	124	769		
	Total	2.86	1.14	0.19	0.56	104,593	5,492	51,873		
	Indicated	4.11	1.19	0.22	0.62	157,215	9,119	81,653		
Total	Inferred	0.10	0.63	0.18	0.38	2,070	184	1,231		
	Total	4.22	1.18	0.22	0.61	159,285	9,303	82,883		



Furthermore, the contained gold ounces (159,285 oz) within this recently calculated high grading central core represents 32% of the entire gold ounces (497,472 oz) reported in the May 2023 original MRE. Expressed differently, 32% of the contained gold ounces at Burns Central are contained within 10% of the defined tonnes (159,258 oz within 4.2Mt versus 497,472 oz within 42.95Mt).

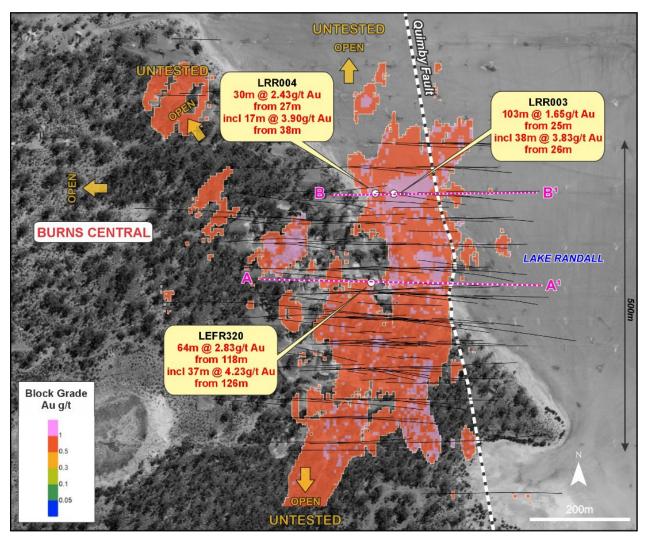


Figure 1: Burns Central Location depicting resource cut to 0.5g/t Au

As reported in the maiden MRE for Burns in May 2023 (refer ASX release 4 May 2023), the Company recognised the importance of a significant north-south trending structure (now named the Quimby Fault).

This fault coincides with and strikes sub-parallel to the eastern edge of the recognised high-grade Au zone at Burns (Figure 1).

Significant gold intersections are associated with this north-south trending fault, with the system remaining open to the north and south (Figure 1).



Several historical significant drillhole intersections were returned by the Company within previous phases of drilling at Burns, with notable intercepts (using a 0.5g/t cut-off) reported including:

- 61m@ 2.96 g/t Au (from 120m), including 37m @ 4.23 g/t Au (from 126m) in LEFR320
- 39m @ 3.87 g/t Au (from 26m) in LRR003; and
- 30m @ 2.43 g/t Au (from 27m), including 17m @ 3.9 g/t (from 38m) in LRR004

These highly significant Au intersections, coupled with a sound understanding of the structural controls to high-grade gold mineralisation at Burns, and with the system remaining open north and south, represents a compelling exploration target for growing the high-grade mineral resource. Further details can be found in the ASX Announcement dated 3 October 2024.

MT MARTIN

Growth in Near Surface Mineral Resources

Also, post-quarter end, the Company announced an update to the MRE for the Mt Martin deposit, located in the Location 45 freehold property within the Lefroy Project.

Along with the Burns Central update, the update to Mt Martin was focussed on unlocking value from its significant near-surface mineral resources.

The Company has undertaken a significant work program at Mt Martin since acquisition of the project in May 2023, with key activities including:

- Target generation and execution of a 29-hole RC drilling program, testing shallow extensions to the Mt Martin resource (refer to LEX ASX release 18 January 2024), with intersections including:
 - 8m @ 3.98 g/t Au from 38m (East Shear) in LEFR395
 - 35m @ 1.78 g/t Au from 209m (Main Shear) in LEFR379
- Reinterpretation and wireframing of the main geological resource domains using Leapfrog software.
- Completion of down-hole density surveys on six RC drillholes at Mt Martin, which has
 resulted in an upgrade of density values applied to tonnage calculations across the
 deposit.

Table 2 below shows the updated MRE (October 2024), compared to the previous MRE calculated in 2013¹, with both reporting at a 0.5g/t cut-off, and only reporting resource blocks within 200m of surface.

Further details can be found in the ASX Announcement dated 10 October 2024.



Table 2: Mineral Resource estimate comparison for Mt Martin (between April 2013 and Oct 2024) reported at a 0.5g/t cut-off and reporting all block within 200m of surface. Small discrepancies may occur due to the effect of rounding.

		April 2013			Oct 2024			
	Category	Tonnes	Au	Oz	Tonnes	Au	Oz	
			g/t			g/t		
Takal	Indicated	4,356,486	1.81	253,937	5,597,000	1.40	247,500	
Total Resource*	Inferred	2,484,081	1.68	134,493	3,698,000	1.60	191,500	
	Total	6,840,567 ¹	1.77	**388,430	9,295,000	1.47	439,000	

^{*}Incorporating Mt Martin, Swift and Adelaide resource numbers

¹Refer to ASX Announcement – Alacer Gold Corp, April 2013 (AQG), "Alacer Gold Announces December 2012 Resource & Reserves Statement"

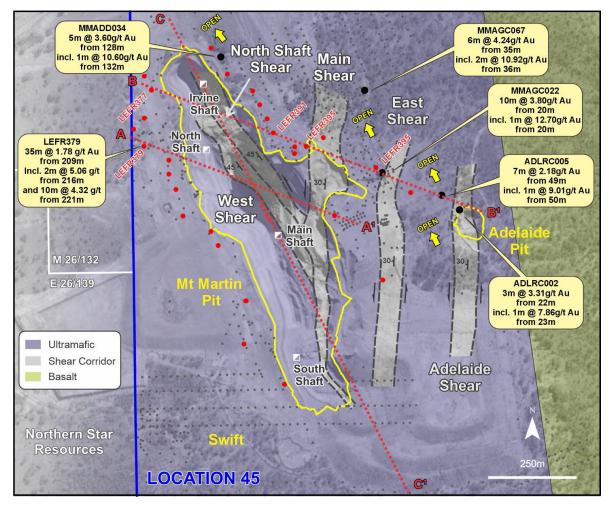


Figure 2: Mt Martin Geology (Plan View)

^{**} The tonnes, grade and ounces reported relate to only blocks filtered within 200m of surface.



REGIONAL

Major Aircore Program Across Lefroy Project

In July, the company commenced a major regional aircore drilling program across its broader Lefroy Project, located 35km southeast of Kalgoorlie-Boulder.

The program comprised 324 holes for 12,164m across a 40km zone along the Mt Monger and Talcum Faults corridor, a trend that hosts three separate >400koz deposits at Mt Martin, Salt Creek and Burns, but which remains vastly underexplored (Figure 3).

The gold targets are within the prolific Boulder-Lefroy to Mount Monger Fault district, host to multiple gold mining centres including St Ives, Daisy Milano and Mt Belches.

The Company believes there is potential for numerous new gold discoveries, especially within the vicinity of the Talcum Fault, and within the broader corridor north and south of the Mt Martin pit.

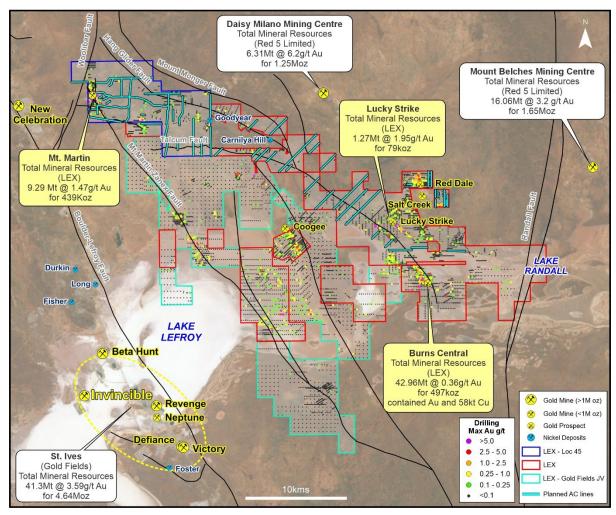


Figure 3: Lefroy Project tenure and regional air core drilling lines



CORPORATE

Cash Position

As at 30 September 2024, the Company had cash reserves of \$0.85 million and no debt (refer to section 4.6 of Appendix 5B September 2024 quarterly cash flow report).

During the September 2024 quarter, the Company's total outgoings on its operating activities were \$353K (refer to section 1.9 of the Appendix 5B).

Net cash used in investing activities was \$129K, which was primarily attributed to exploration and evaluation (refer to section 2.6 of Appendix 5B). This total included \$884K directly attributed to exploration and evaluation, offset by a Research and Development (R&D) tax incentive refund of \$755K (see section below).

The most significant outgoing amount contributing to the total exploration and evaluation for the September quarter related to the Company's regional air core (AC) drilling program and associated field and assay program costs.

R&D Tax Refund

During the quarter, the Company received a tax refund of A\$755,000 from the Australian Tax Office (**ATO**) for the financial year ending 30 June 2023.

The refund was granted through the ATO's research and development (**R&D**) tax incentive program, recognising technical progress achieved by Lefroy at its wholly-owned Burns Gold-Copper Project (**Burns**), located 70km from Kalgoorlie in the Eastern Goldfields Province (**EGP**) of Western Australia.

A collaborative research program to advance the geological understanding of the Burns system was launched during 2021 with the Centre of Exploration Targeting (**CET**) at the University of Western Australia (**UWA**). This followed initial work completed by the Geological Survey of Western Australia (**GSWA**).

The R&D program advanced the Company's geological understanding at Burns and also the broader EGP region.

Commercialisation of Gold Resources

The Company remains focused on commercializing its existing gold resources.

This includes both internal assessment of mining options and engagement with multiple regional operators and prospective developers along its pathway to commercialise advanced gold resource projects within the broader Lefroy Gold Project (refer post-quarter ASX release 23 October 2024).



Post Quarter End Activity

Subsequent to the September quarter end, the Company received firm commitments to raise \$3.3 million (before costs) in an oversubscribed share placement to institutional and sophisticated investors (refer post-quarter ASX release 28 October 2024).

Directors of Lefroy have committed to participate in the Placement for a total of \$270,000, subject to shareholder approval.

The Company is now well-funded to proceed down its pathway via its advanced conversations towards an outcome of commercialising its advanced gold projects, with the clear goal of unlocking the value of its gold assets, through a strategic partnership.



SIGNIFICANT ASX ANNOUNCEMENTS

The following announcements were lodged with the ASX and further details (including supporting JORC Tables) for each of the sections noted in this announcement can be found in the following releases. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements. In the case of all Mineral Resource Estimate's (MRE), the Company confirms that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.

The Company released a number of significant ASX announcements in the last quarter and post-quarter end:

17 July 2024	Lefroy Boosts Cash Balance Through \$755K R&D Refund
25 July 2024	Lefroy Launches Major Gold Focussed Air Core Drilling Program
3 October 2024	High Grade Shallow Resource to Unlock Value at Burns Central
10 October 2024	Lefroy Builds Near-surface Gold Resources at Mt Martin – Update
16 October 2024	South-West Connect – Investor Presentation October 2024
23 October 2024	Commercialising Resources to Advance Exploration Targets
28 October 2024	\$3.3M Raised to Commercialise Resources & Target Discoveries

-Ends-

This announcement has been authorised for release by the Board of Directors.

Graeme Gribbin

Growne Guller

CFO

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DISCLAIMER CAUTION REGARDING FORWARD-LOOKING INFORMATION

This document contains forward-looking statements concerning Lefroy Exploration Limited. Forward-looking statements are not statements of historical fact and actual events and results may differ materially from those described in the forward-looking statements as a result of a variety of risks, uncertainties and other factors. Forward-looking statements are inherently subject to business, economic, competitive, political and social uncertainties and contingencies. Many factors could cause the Company's actual results to differ materially from those expressed or implied in any forward-looking information provided by the Company, or on behalf of, the Company. Such factors include, among other things, risks relating to additional funding requirements, metal prices, exploration, development and operating risks, competition, production risks, regulatory, including environmental regulation and liability and potential title disputes.

Forward-looking statements in this document are based on the Company's beliefs, opinions and estimates of Lefroy Exploration Limited as of the dates the forward-looking statements are made, and no obligation is assumed to update forward-looking statements if these beliefs, opinions and estimates should change or to reflect other future developments.

COMPETENT PERSON STATEMENT

The information in this announcement that relates to exploration targets and exploration results is based on information compiled by Graeme Gribbin, a competent person who is a member of the Australian Institute of Geoscientists (AIG). Mr Gribbin is employed by Lefroy Exploration Limited. Mr Gribbin has sufficient experience that is relevant to the style of mineralisation and type of deposits under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 edition of the JORC Code. Mr Gribbin consents to the inclusion in this announcement of the matters based on his work in the form and context in which it appears.



ABOUT LEFROY EXPLORATION

Lefroy Exploration Limited (ASX:LEX) is an active West Australian exploration company focused on developing its growing gold and critical minerals projects. The Company's portfolio of high-quality projects includes the Lefroy Project (Figure 1), located in the heart of the world-class Kalgoorlie and Kambalda gold and nickel mining districts, the Lake Johnston Project 120km west of Norseman, and the large 2,872km² Glenayle Project 210km north of Wiluna.

The Lefroy Project is a contiguous land package of 635km² with a growing mineral resource inventory of greater than 1 million ounces of gold, 58,000 tonnes of contained copper and 14,780 tonnes of contained nickel, (refer to Table 3).

In May 2023, Lefroy signed a Mineral Rights Agreement with title holder Franco-Nevada Pty Ltd, to acquire the mineral rights to Hampton East Location 45 (Location 45) (Refer ASX release 23 May 2023). Location 45 is a freehold property, located within 25km of Kambalda and 35km southeast of Kalgoorlie. The property hosts the historic Mt Martin gold mine, which has historically produced approximately 200,000 ounces of gold grading at 2.8g/t and which includes an existing resource of 439,000 oz gold (9.29Mt @ 1.47g/t Au) (refer to ASX release 10 October 2024).

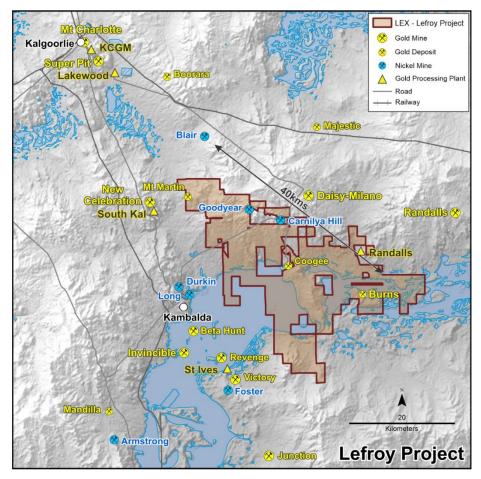


Figure 4: Regional location map of the Lefroy Project



Table 3: Total Indicated and Inferred Mineral Resources (small discrepancies may occur due to the effect of rounding)

Orogenic Gold Style									
	Indicated				Inferred		Total Resource		
Deposit	Mt	Au (g/t)	Oz	Mt	Au (g/t)	Oz	Mt	Au (g/t)	Oz
Red Dale	0.64	1.21	24,660	0.03	0.60	570	0.67	1.18	25,230
Lucky Strike	0.70	1.93	43,400	0.57	1.97	36,200	1.27	1.95	79,600
Mt Martin	5.60	1.40	2.47,500	3.69	1.61	191,500	9.29	1.47	439,000
TOTAL	6.94	1.41	315,560	4.29	1.66	228,270	11.23	1.51	543,830

Porphyry Gold-Copper Style														
	Indicated				Inferred			Total Resource						
Deposit	Mt	Au (g/t)	Cu (%)	Au (Oz)	Cu (t)	Mt	Au (g/t)	Cu (%)	Au (Oz)	Cu (t)	Mt	Au (g/t)	Au (Oz)	Cu (t)
Burns Central	32.31	0.38	0.16	394,308	50,253	10.65	0.3	0.08	103,165	8,047	42.96	0.36	497,472	58,300
Total	32.31	0.38	0.16	394,308	50,253	10.65	0.3	0.08	103,165	8,047	42.96	0.36	497,472	58,300

Nickel									
	Indicated				Inferred Total Resor			Total Resour	ce
Deposit	tonnes	Ni (%)	Ni metal	tonnes	Ni (%)	Ni metal	tonnes	Ni (%)	Ni metal
Goodyear	-	-	-	392,000	3.78	14,780	392,000	3.78	14,780
TOTAL	-	-	-	392,000	3.78	14,780	392,000	3.78	14,780



LEFROY EXPLORATION – TENEMENT SCHEDULE (as at 30 September 2024)

Tenement Id	Project	Status	Holder	Interest %
P26/3765	Western Lefroy JV	Live	HOGANS RESOURCES PTY LTD	100(1)
P26/3764	Western Lefroy JV	Live	HOGANS RESOURCES PTY LTD	100(1)
E26/0134	Western Lefroy JV	Live	HOGANS RESOURCES PTY LTD	100(1)
E26/0193	Western Lefroy JV	Live	HOGANS RESOURCES PTY LTD	100(1)
E26/0150	Western Lefroy JV	Live	HOGANS RESOURCES PTY LTD	100(1)
E15/1615	Western Lefroy JV	Live	HOGANS RESOURCES PTY LTD	100(1)
E26/0131	Western Lefroy JV	Live	HOGANS RESOURCES PTY LTD	100(1)
E26/0184	Western Lefroy JV	Live	HOGANS RESOURCES PTY LTD	100(1)
E15/1447	Western Lefroy JV	Live	HOGANS RESOURCES PTY LTD	100(1)
M26/0842	Western Lefroy JV	Live	HOGANS RESOURCES PTY LTD	100(1)
M26/0850	Western Lefroy JV	Pending	HOGANS RESOURCES PTY LTD	100(1)
M26/0851	Western Lefroy JV	Pending	HOGANS RESOURCES PTY LTD	100(1)
E15/1498	Lefroy	Live	MONGER EXPLORATION PTY LTD	100(1)
E26/0195	Lefroy	Live	MONGER EXPLORATION PTY LTD	100(1)
E15/1497	Lefroy	Live	MONGER EXPLORATION PTY LTD	100(1)
P25/2488	Lefroy	Live	MONGER EXPLORATION PTY LTD	100(1)
P26/4423	Lefroy	Live	MONGER EXPLORATION PTY LTD	100(1)
P26/4437	Lefroy	Live	MONGER EXPLORATION PTY LTD	100(1)
P26/4438	Lefroy	Live	MONGER EXPLORATION PTY LTD	100(1)
P25/2317	Lefroy	Live	MONGER EXPLORATION PTY LTD	100(1)
P25/2316	Lefroy	Live	MONGER EXPLORATION PTY LTD	100(1)
E25/0517	Lefroy	Live	MONGER EXPLORATION PTY LTD	100(1)
E25/0518	Lefroy	Live	MONGER EXPLORATION PTY LTD	100(1)
P25/2421	Lefroy	Live	MONGER EXPLORATION PTY LTD	100(1)
E15/1715	Lefroy	Live	MONGER EXPLORATION PTY LTD	100(1)
E26/0182	Lefroy	Live	MONGER EXPLORATION PTY LTD	100(1)
E25/0587	Lefroy	Live	MONGER EXPLORATION PTY LTD	100(1)
E26/0183	Lefroy	Live	MONGER EXPLORATION PTY LTD	100(1)
E25/524	Lefroy	Live	MONGER EXPLORATION PTY LTD	100(1)
E 63/2395	Lake Johnston	Pending	MONGER EXPLORATION PTY LTD	100(1)
E 63/2396	Lake Johnston	Live	MONGER EXPLORATION PTY LTD	100(1)
E 63/2402	Lake Johnston	Live	MONGER EXPLORATION PTY LTD	100(1)
E 74/792	Lake Johnston	Live	MONGER EXPLORATION PTY LTD	100(1)
M25/0362	Lefroy	Live	MONGER EXPLORATION PTY LTD	100(1)
M25/0363	Lefroy	Live	MONGER EXPLORATION PTY LTD	100(1)
M25/0366	Lefroy	Live	MONGER EXPLORATION PTY LTD	100(1)



Tenement Id	Project	Status	Holder	Interest %
P26/4392	Lefroy - JLN (Ni rights)	Live	MONGER EXPLORATION PTY LTD	100(1)
P26/4393	Lefroy - JLN (Ni rights)	Live	MONGER EXPLORATION PTY LTD	100(1)
P26/4394	Lefroy - JLN (Ni rights)	Live	MONGER EXPLORATION PTY LTD	100(1)
P26/4391	Lefroy - JLN (Ni rights)	Live	MONGER EXPLORATION PTY LTD	100(1)
E26/0176	Lefroy - JLN (Ni rights)	Live	MONGER EXPLORATION PTY LTD	100(1)
L25/0061	Lucky Haul Road	Pending	MONGER EXPLORATION PTY LTD	100(1)
L25/0063	Mulga Haul Road	Pending	MONGER EXPLORATION PTY LTD	100(1)
E63/2073	Lake Johnson	Live	HAMPTON METALS PTY LTD	100(1)
E63/1723	Lake Johnston – CHR (Li rights)	Live	HAMPTON METALS PTY LTD	100(2)
E63/1722	Lake Johnston – CHR (Li rights)	Live	HAMPTON METALS PTY LTD	100(2)
E63/1777	Lake Johnston – CHR (Li rights)	Live	HAMPTON METALS PTY LTD	100(2)
E69/3945	Glenayle	Live	HAMPTON METALS PTY LTD	100(1)
E69/3946	Glenayle	Live	HAMPTON METALS PTY LTD	100(1)
E69/3947	Glenayle	Live	HAMPTON METALS PTY LTD	100(1)
E69/3948	Glenayle	Live	HAMPTON METALS PTY LTD	100(1)
E69/3949	Glenayle	Live	HAMPTON METALS PTY LTD	100(1)
E69/4045	Glenayle	Live	HAMPTON METALS PTY LTD	100(1)
E26/240	Lefroy	Live	MONGER EXPLORATION PTY LTD	100(1)
E26/241	Lefroy	Live	MONGER EXPLORATION PTY LTD	100(1)
E26/264	Lefroy	Pending	MONGER EXPLORATION PTY LTD	100(1)
E15/1954	Lefroy	Pending	MONGER EXPLORATION PTY LTD	100(1)
E15/1955	Lefroy	Pending	MONGER EXPLORATION PTY LTD	100(1)
E26/260	Lefroy	Pending	MONGER EXPLORATION PTY LTD	100(1)
E26/261	Lefroy	Pending	MONGER EXPLORATION PTY LTD	100(1)
P26/4798	Lefroy	Pending	MONGER EXPLORATION PTY LTD	100(1)
P26/4799	Lefroy	Pending	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
P26/4800	Lefroy	Pending	MONGER EXPLORATION PTY LTD	100(1)
M15/1907	Lefroy	Pending	MONGER EXPLORATION PTY LTD	100(1)
M25/379	Lefroy	Pending	MONGER EXPLORATION PTY LTD	100(1)

E = Exploration Licence, M = Mining Lease, P = Prospecting Licence, L = Miscellaneous Licence

Notes to accompany tenement listing:

- (1) Hogans Resources Pty Ltd, Monger Exploration Pty Ltd and Hampton Metals Pty Ltd are wholly owned subsidiaries of Lefroy Exploration Ltd.
- (2) E63/1722, E63/1723 and E63/1777 Held under title by HMT. Charger Metals NL (ASX CHR) and Lithium Australia NL (ASX:LIT) have the rights to Lithium.