



Lefroy Exploration

Acquisition Provides Pathway to Growth and Development

- Advanced Kalgoorlie-Kambalda based gold, nickel and copper projects
- Commanding land position in Tier 1 location
- Pipeline of activity provides pathway to development
- Premier mining jurisdiction provides low capital development optionality

Wade Johnson, Managing Director

SOUTH-WEST CONNECT PRESENTATION | OCTOBER 2023

ASX: **LEX**

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This presentation contains “forward-looking statements”. Forward-looking statements are often, but not always, identified by the use of words such as “seek”, “anticipate”, “believe”, “plan”, “expect”, “predict”, “forecast”, “estimate”, “target” and “intend” and statements that an event or result “should”, “could”, “may”, “will” or “might” occur or be achieved and other similar expressions. Indications of, and guidance on, future earnings and financial position performance are always forward-looking statements. Forward-looking statements are subject to business, legal and economic risks and uncertainties and other factors that could cause actual results to differ materially from those contained in forward-looking statements. Forward-looking statements, opinions and estimates provided in this presentation are based on assumptions and contingencies at the date the statements are made and are subject to change without notice, as are statements about market and industry trends, which are based on interpretations of current market conditions. Forward-looking statements including estimates or projections as to events that may occur in the future (including projections of revenue, expense, net income and performance) are provided as a general guide only and should not be relied upon as an indication or guarantee of future performance and may or may not occur. The statements involve known and unknown risks, uncertainties and other factors associated with LEX and the mining exploration industry such as resource risk, environmental and regulatory risks, metals price volatility, currency fluctuations, increased production costs and variances in ore grade or recovery rates and operational risks. Many of risks these are beyond the control of LEX. It is believed that expectations reflected in the statements are reasonable but they may be affected by market conditions and a range of other variables which could cause actual results or trends to differ materially from those stated.

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NICKEL ASSETS

➤ **LAKE JOHNSTON**

- JORC 2012 Resource **(392,000t @ 3.78% Ni for 14,780t Inferred)**

- Proximal to Emily Ann and Maggie Hayes nickel mines.

 GLENAYLE

- Early Mover Greenfields Nebo-Babel style prospectivity.

➤ KAMBALDA (LOCATION 45) - MT MARTIN

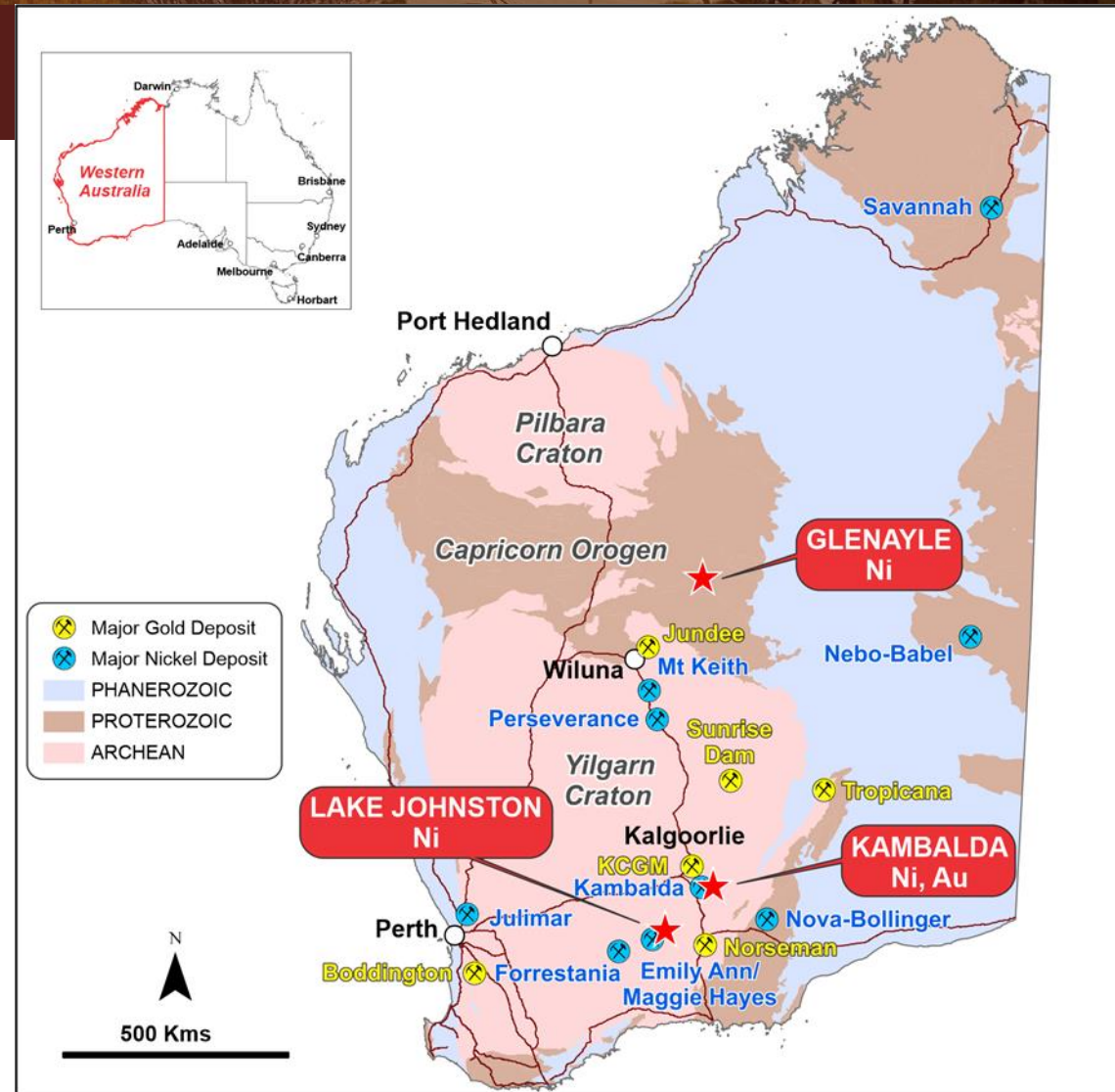
- 8.72Mt @ 1.79g/t Au for 501,000oz
- Significant near-term development opportunity.

➤ **KAMBALDA - BURNS (Au, Cu)**

- 43Mt @ 0.36 g/t & 0.14% Cu for 497,000oz Au & 58,000t Cu

➤ **KAMBALDA - LUCKY STRIKE / RED DALE (Au)**

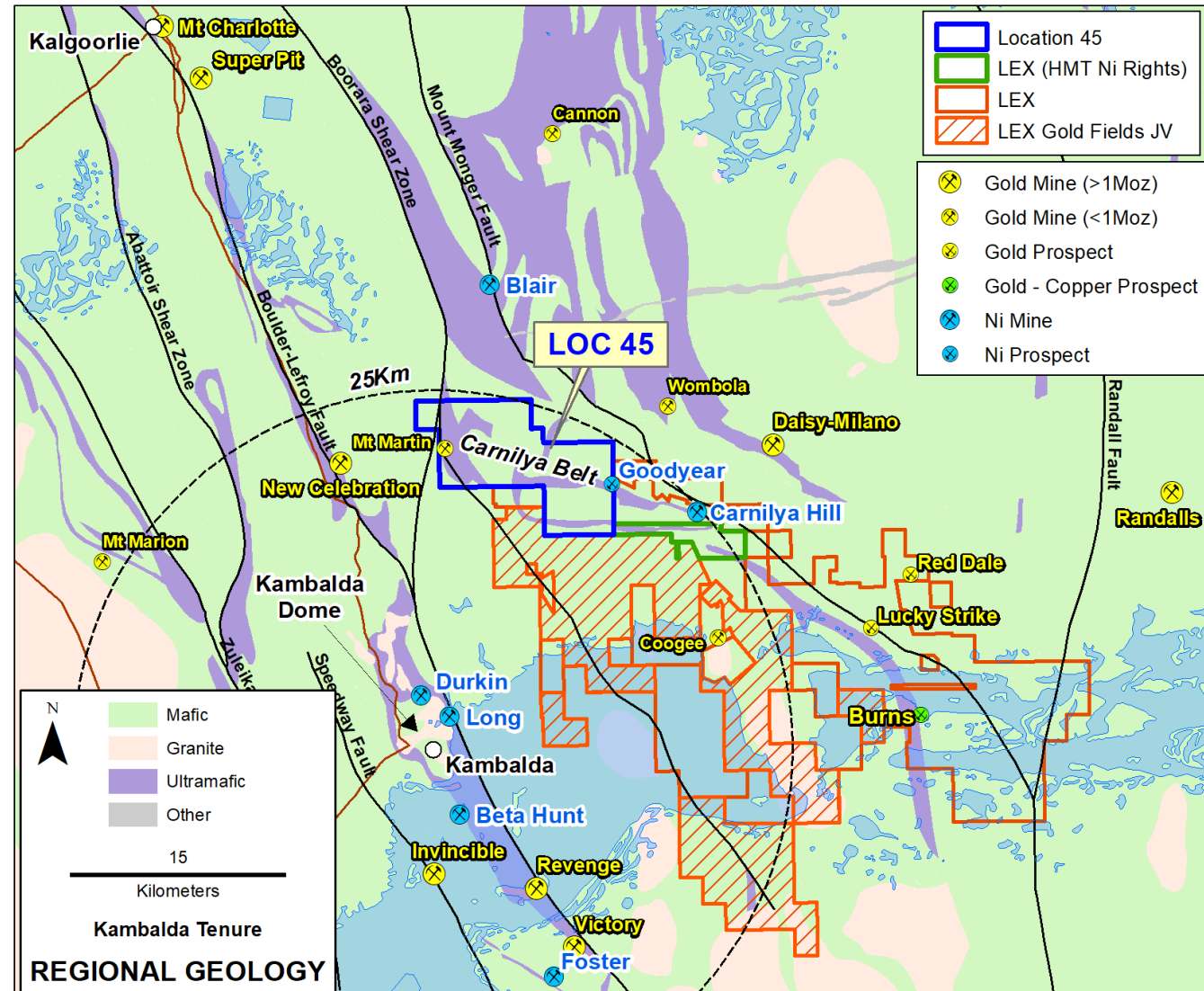
- **1.94Mt @ 1.71 g/t for 104, 830oz Au**



COMMANDING KAMBALDA LAND HOLDING

KALGOORLIE-KAMBALDA FOCUSED ASSETS

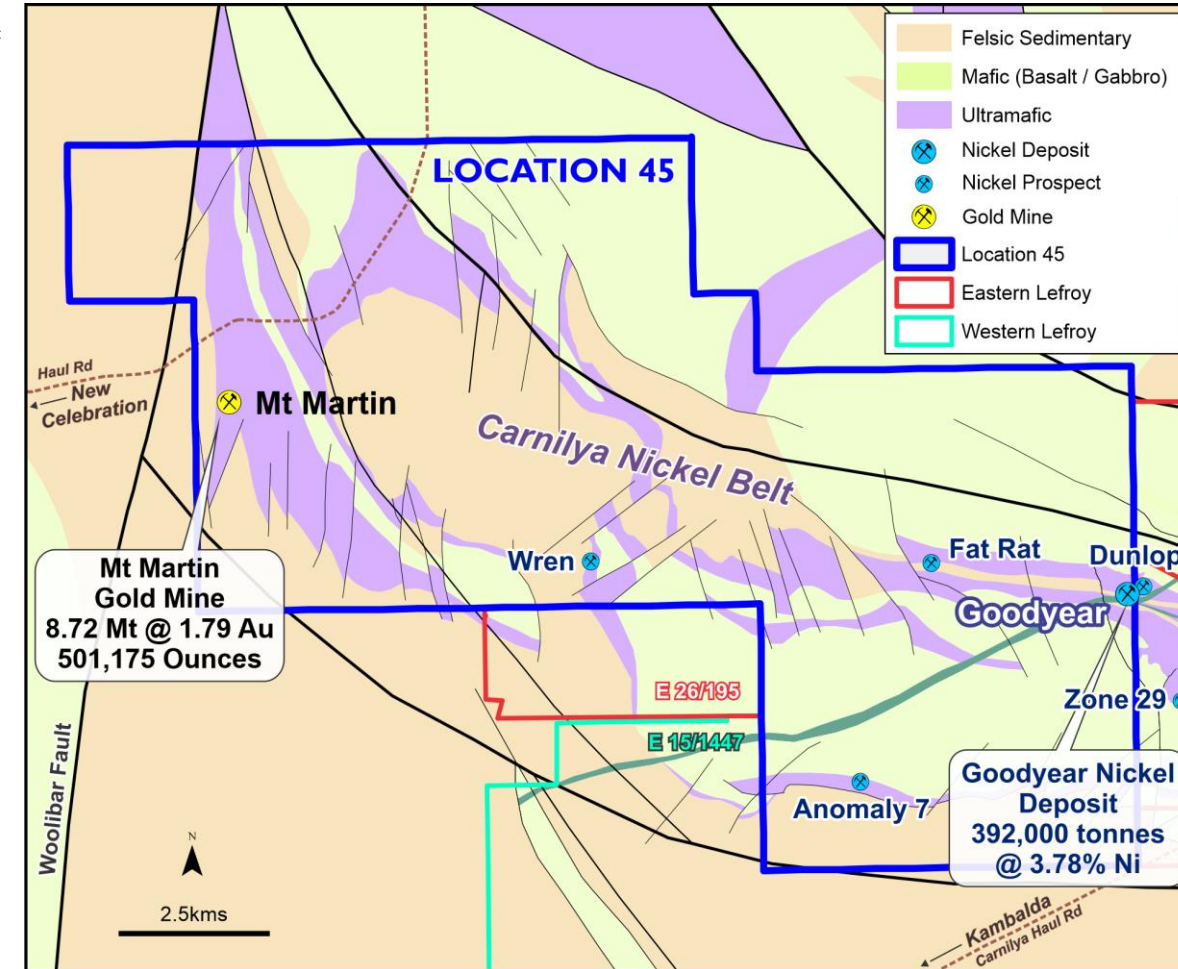
- Large **635km² contiguous package of tenure**
- 20km north of Kambalda and 35km south of Kalgoorlie
- Close to existing developed infrastructure (road, haul roads, power, water, towns)
- Nearby gold and nickel processing facilities provide an opportunity to fast-track development of resources with low capex requirements
- Strategic transaction rewarded **transformational acquisition** of the mineral rights over Location 45 that includes:
 - Mt Martin Gold Mine
 - Goodyear Nickel deposit



LOCATION 45 – A Transformational Acquisition



- Acquired Mineral Rights¹ from Franco-Nevada Australia Pty Ltd* for nil upfront consideration and a minimum 21-year term, which includes:
 - **14,780t Goodyear nickel resource (JORC 2012)**
 - **501,000oz Mt Martin gold resource (JORC 2012)**
- Mineral Rights divided between Lefroy wholly owned subsidiaries:
 - Hampton Metals Ltd (HMT)- Ni, Li and REE
 - Monger Exploration Pty Ltd (MEX)- Au and all other minerals
- Mineral rights are privately owned (freehold) and exempt from 2.5% State Royalty and Mining Act Provisions
- Agreed to 4% Production Royalty with Franco-Nevada on all minerals and annual minimum exploration commitment



** Franco Nevada Corporation, the worlds leading Gold focused royalty and streaming Company*

LOCATION 45 - Mt Martin Gold Mine



SIGNIFICANT NEAR TERM DEVELOPMENT OPPORTUNITY

- High-grade underground shaft mining operation in 1980's
- Last open pit mining completed in 2009 by Dioro Exploration for 743kt @ 1.5g/t gold
- Previous total production of ~200Koz gold
- Majority of ore processed at neighboring former New Celebration Mill and Jubilee Mill (NST)
- Remaining shallow gold indicated & Inferred resource of:
501Koz Au (8.7Mt @ 1.79 g/t Au) reported to JORC 2012 below existing open pit
- 700,000oz gold endowment that presents significant resource growth upside
- Haul roads in place that provide alternate routes to nearby gold processing facilities
- ***Under-explored asset that has missed 10 years of exploration***



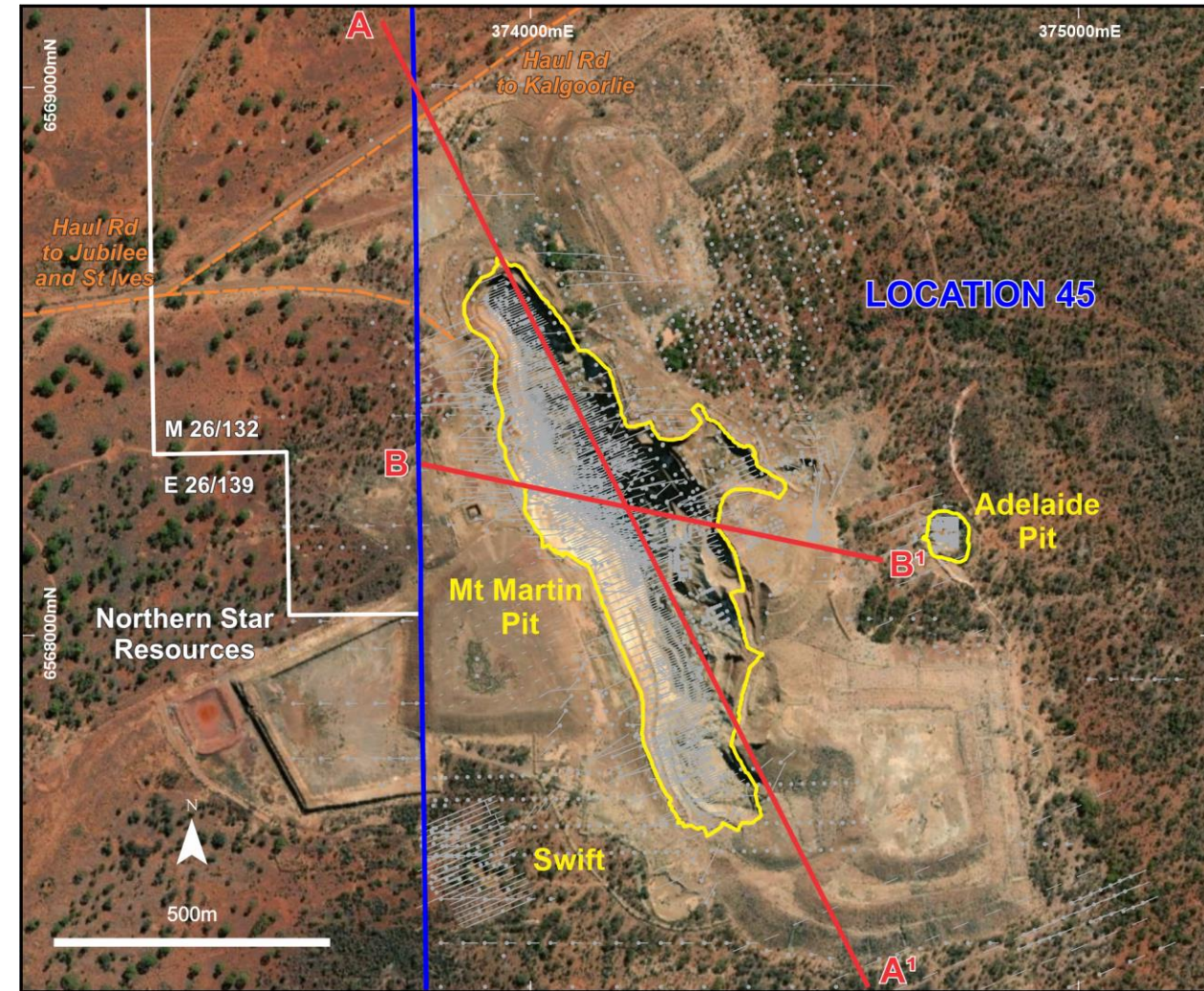
Mt Martin open pit looking south.

Mt Martin Gold Mine

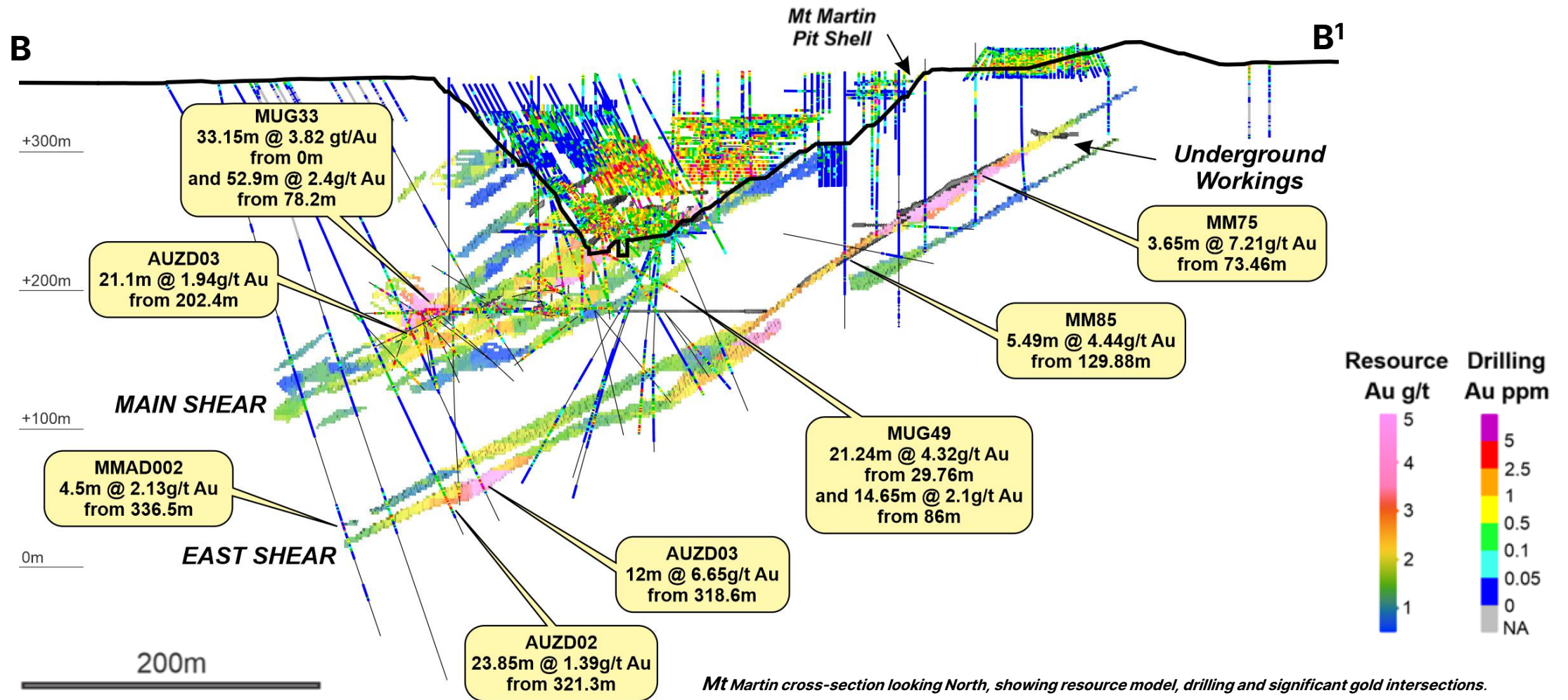


SCALE OF SYSTEM YET TO BE DETERMINED

- Multiple high-grade shoots in broad controlling shear structures
- Significant depth potential
- Limited drilling outside 1km long open pit
- East lode sits 50m below Main Shear had minimal underground mining in 1980s – 1990s
- Strong potential for parallel structures in virgin unexplored ground surrounding the mine
- Staged resource definition drilling planned to upgrade and expand resource
- Planning underway for exploration drilling in broader Location 45 project area



Mt Martin Gold Mine-Growth Opportunity



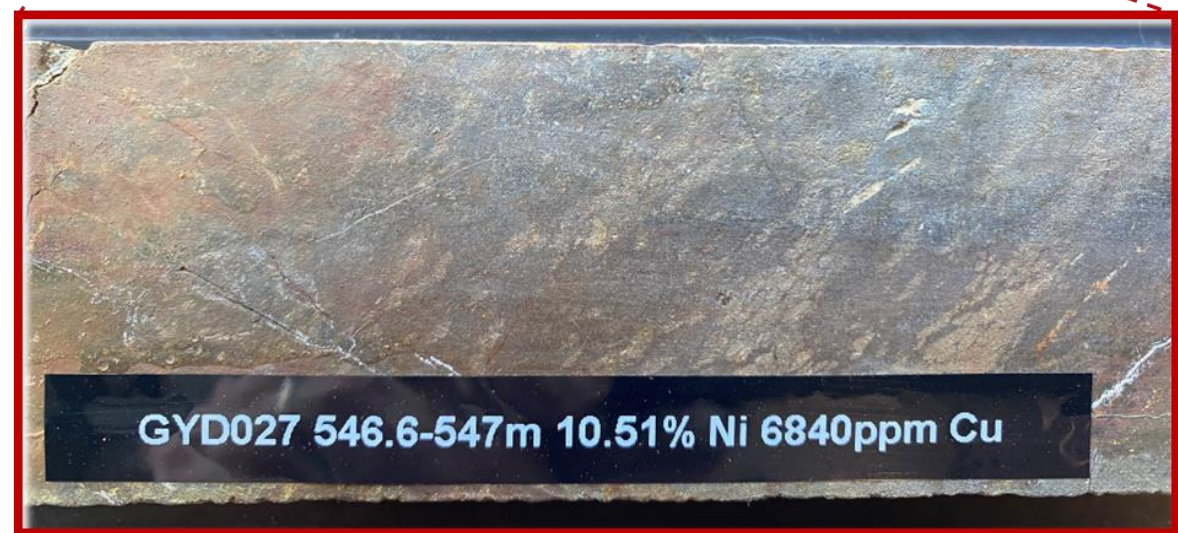
OPPORTUNITY FOR MULTIPLE UNTESTED PARALLEL STRUCTURES AT DEPTH

LOCATION 45 – Goodyear Nickel Deposit

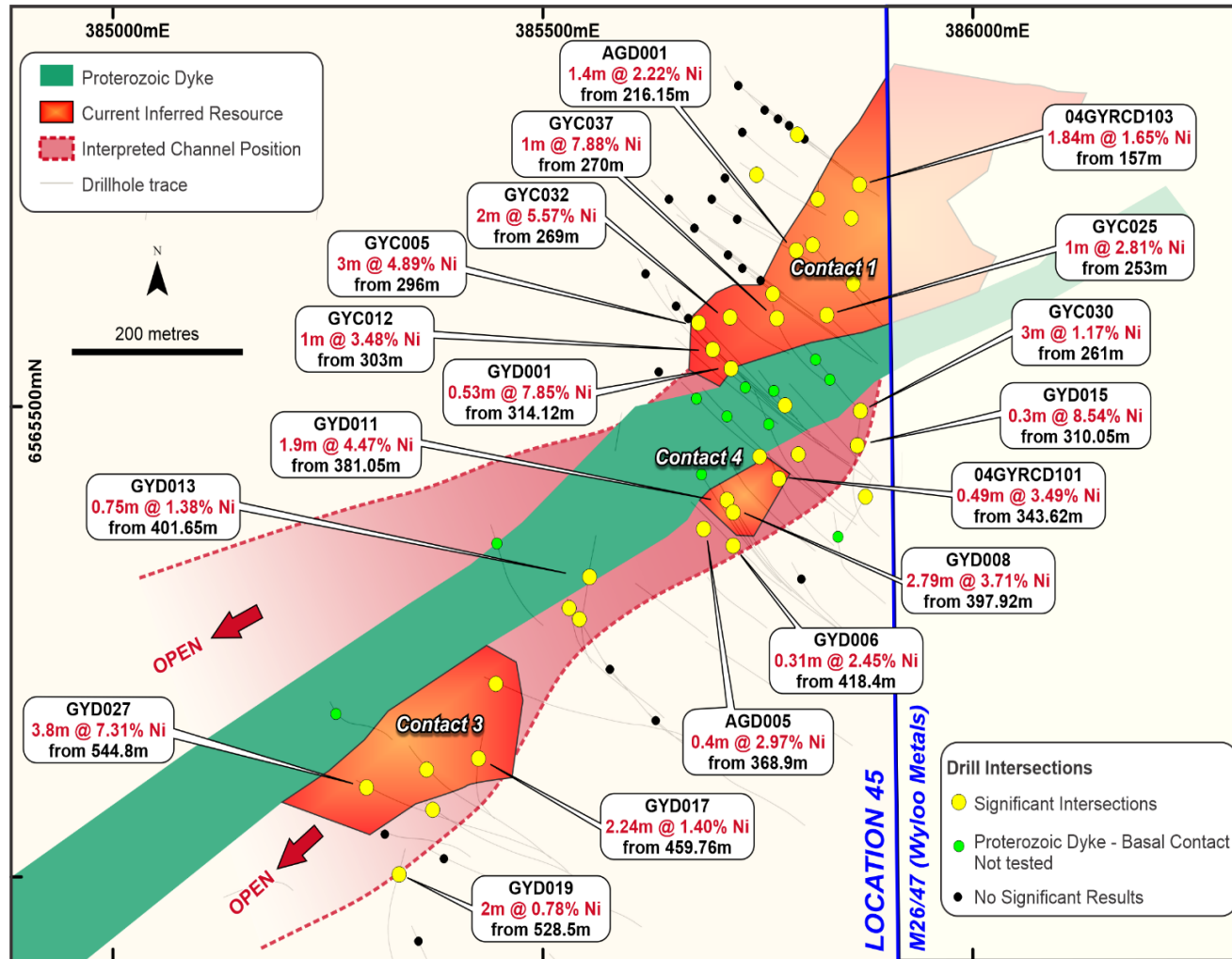


HIGH GRADE NICKEL – GROWTH FOCUS

- Hosted by underexplored Carnilya Belt 20km northeast of Kambalda (produced >1.6 Mt Ni in 50 years)
- 4km west of Wyloo Metals' high-grade Carnilya Hill nickel deposit (produced 1.7Mt @ 3.3% Ni)
- Goodyear Nickel Deposit: **392,000t @ 3.78% Ni for 14,780t** (Inferred) contained nickel (JORC Code 2012) 100m from surface¹
- Mineralisation identified at 100m to 450m depth from surface, and importantly is open both along strike to the west and down-plunge
- No nickel exploration drilling completed since 2008



GOODYEAR RESOURCE - OPEN AT DEPTH



Plan view projection of nickel resource and previous drill hole data at Goodyear.

HIGH GRADE – HIGH TENOR – SYSTEM OPEN

Significant opportunities to advance and grow the **14,780t Ni** Goodyear resource, with near-term Stage 1 drilling program focused on:

1. Infill diamond drilling to upgrade categories of Inferred resource to Indicated status; and
2. Explore and add to resource base via extensional drilling along strike and down-plunge outside existing resource envelopes

A Stage 2 drilling program to be designed pending exploration outcomes from Stage 1

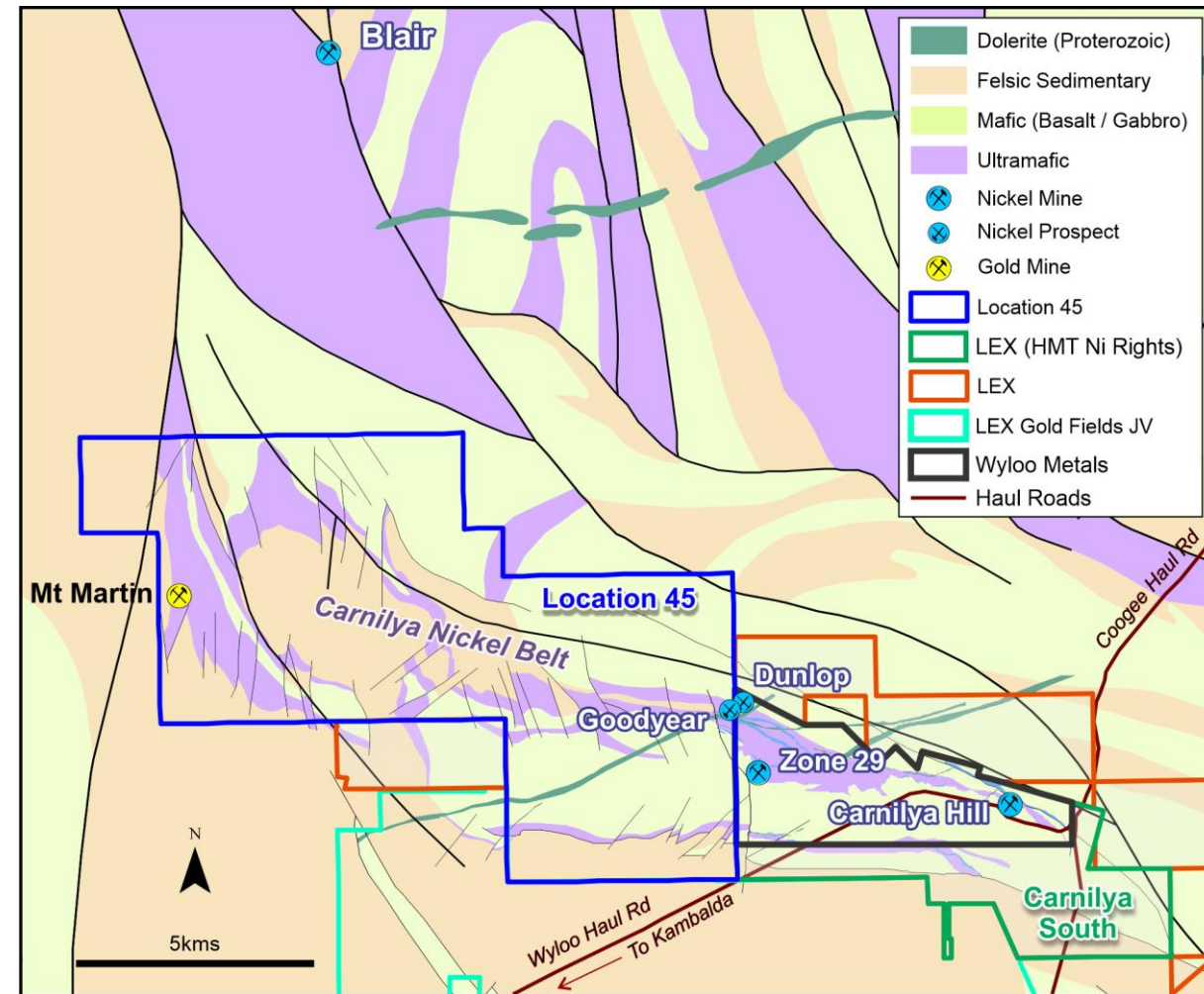
Deepest drillhole **GYD027** returned **3.8m @ 7.31% Ni** on the edge of the resource, completely open down-plunge¹

Drilling to commence in November, pending heritage surveys

CARNILYA BELT NICKEL UPSIDE

A NEW KAMBALDA DOME?

- The same highly-fertile ultramafic host rock and similar scale to Kambalda Dome but significantly underexplored for the last 3 decades
- **Over 30km of largely untested ultramafic highly prospective for nickel**
- Numerous surface nickel anomalies recognised by past explorers that remain untested at depth
- Diamond and RC drilling largely limited to eastern corridor near Goodyear
- Modern surface and down-hole electro-magnetic (DHEM) surveys can unlock regional nickel upside
- Regional focused drill programs prepared, and heritage survey scheduled for November



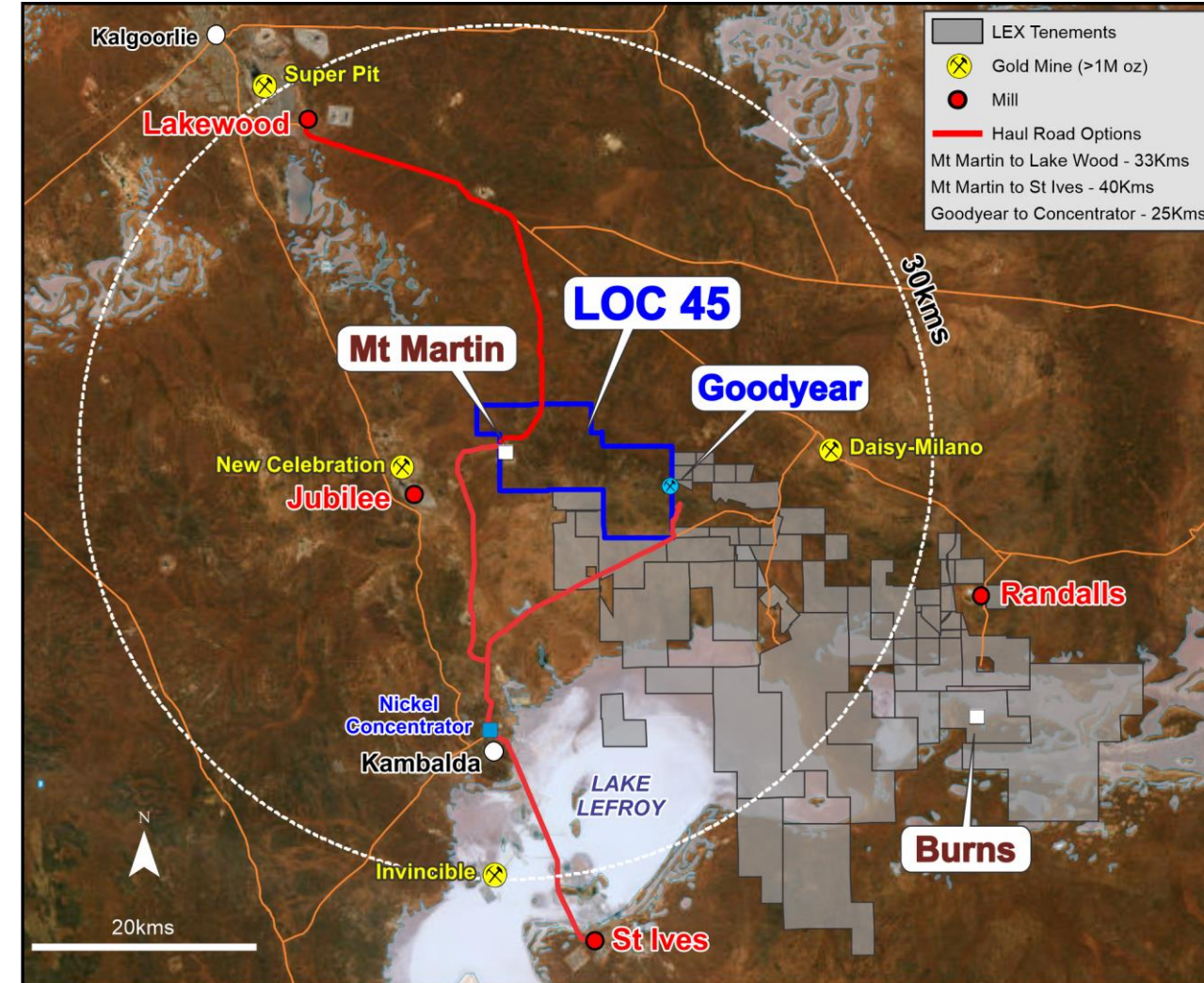
Map of Location 45, including Goodyear Nickel Deposit and surrounding tenure held by LEX & Wyloo Metals of which LEX commands 30km strike of highly-prospective Carnilya komatiite.

Premier Mining and Exploration Location

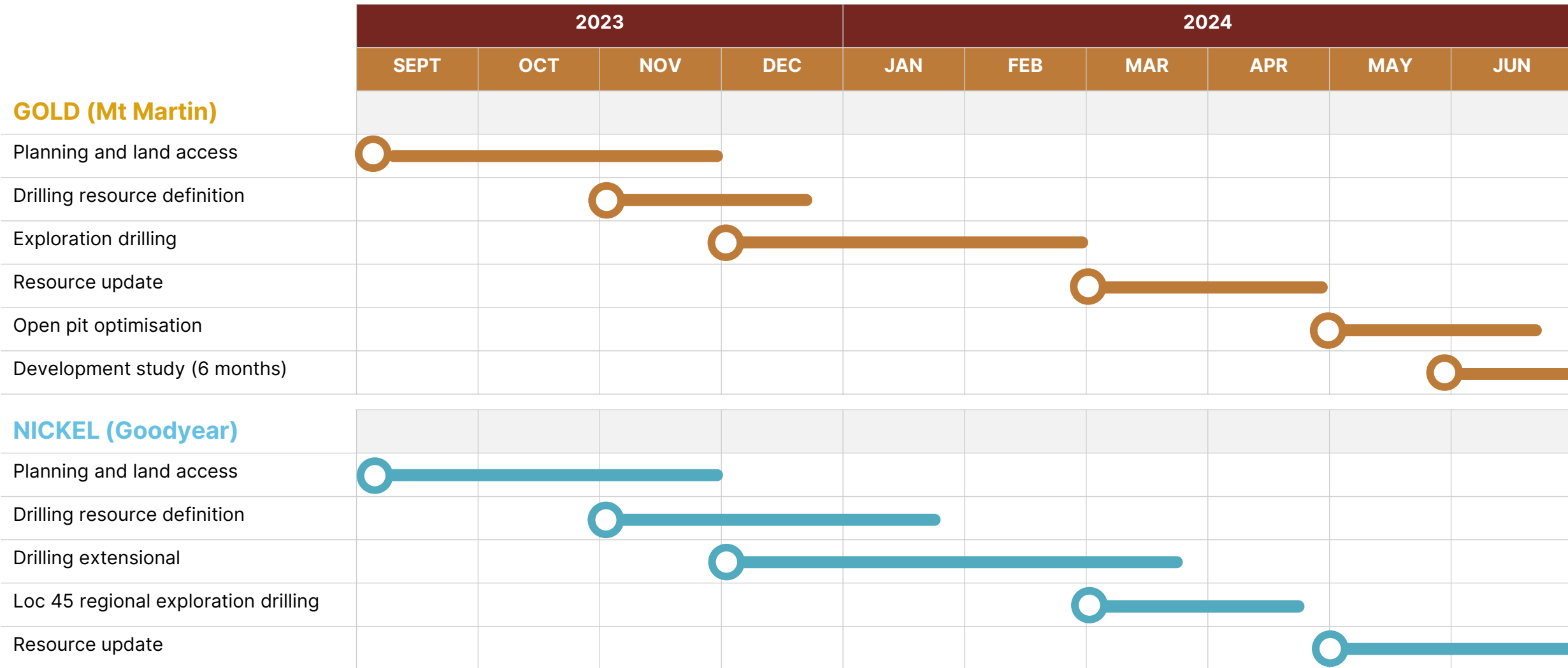


PREMIER MINING JURISDICTION PROVIDES NEAR-TERM, LOW CAPITAL DEVELOPMENT OPTIONALITY

- Situated 7km from Goldfields Hwy linking Kalgoorlie and Kambalda
- On freehold land with simplified regulatory requirements
- 40-year history of prior underground and open-pit mining
- Haul roads to multiple third-party gold mills and 25km's to the Kambalda Nickel Concentrator
- Opportunity for low capital development
- Discussions commenced with third-party mill operators



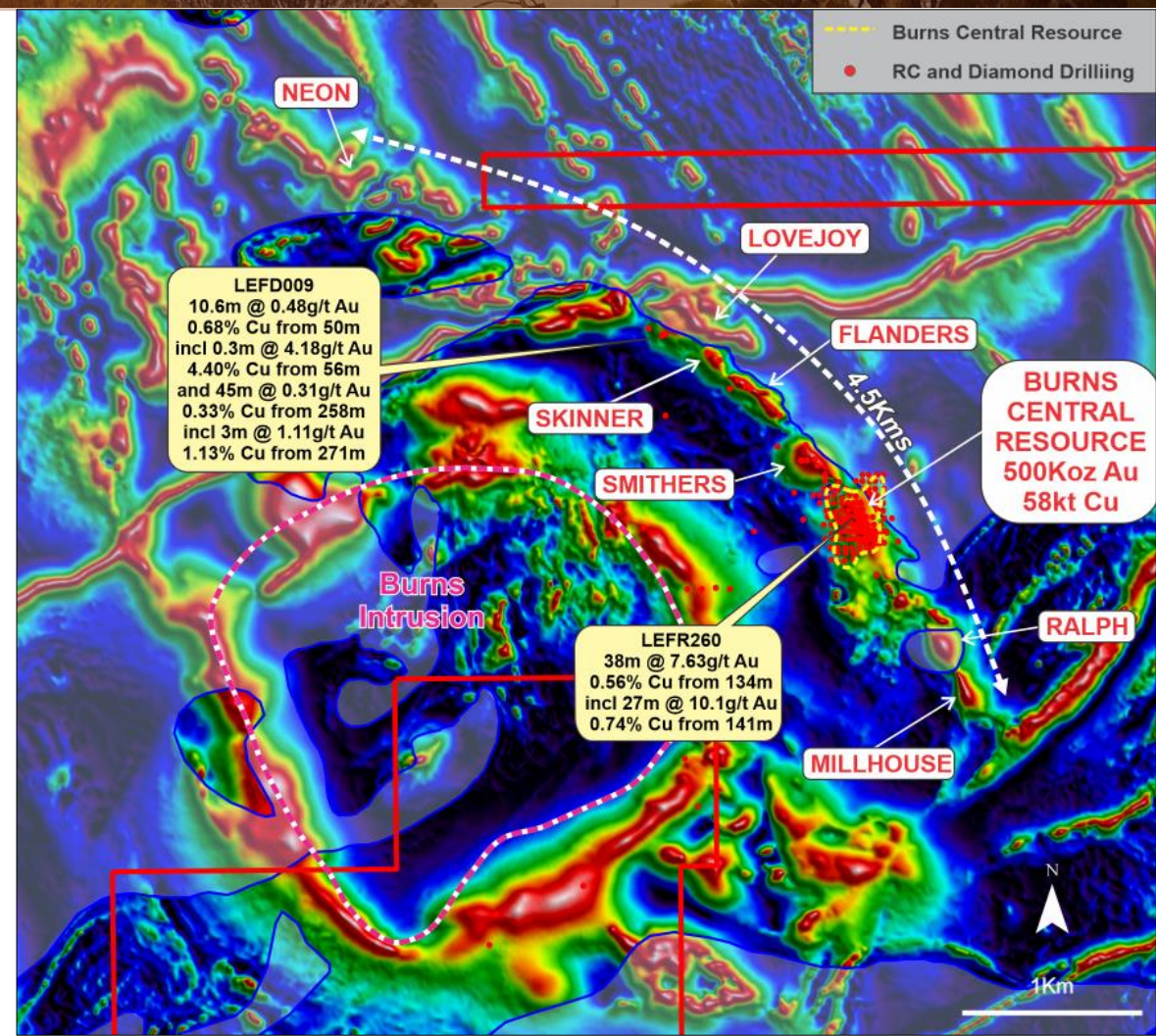
LOCATION 45 ACTIVITY TIMELINE



BURNS GOLD-COPPER PROJECT

A NEW MINERALISATION STYLE IN EASTERN GOLDFIELDS

- An alkalic porphyry-related Au-Cu-Ag-Mo-Co mineral system located 70km southeast of Kalgoorlie
- Burns Central is the most advanced target of multiple anomalies around the broader large Burns Intrusion
- Maiden resource for **Burns Central** (75% Indicated 25% Inferred) released in May 2023:
 - **43Mt @ 0.36g/t Au and 0.14% Cu (497K oz Au, 58kt Cu)**
- Burns Central resource is one part of a new large gold-copper porphyry system with major exploration upside
- 2024 exploration supported by EIS co-funded drilling (up to \$180k) and ongoing research program with UWA
- **Burns has significant upside potential to grow into a large camp-scale mineral system**



Aeromagnetic imaging of Burns Central resource and surrounding targets in the Burns Corridor to the north and south.

CORPORATE OVERVIEW



BOARD & MANAGEMENT

Gordon Galt	Non-Executive Chairman
Wade Johnson	Managing Director
Michael Davies	Non-Executive Director
Tara French	Non-Executive Director
Chris Hesford	Exploration Manager



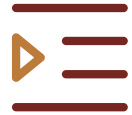
CORPORATE DETAILS

Shares on issue	196.3M
Options	5.6M
Share price ¹	A\$0.18
Market capitalisation	A\$35.3M
Cash (30 September 2023)	A\$5.42M
Debt	Nil

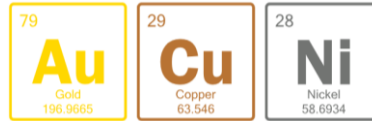
LEX Substantial Shareholders – as of 6 Oct 2023

 Noontide Investments Ltd 17.6%	 LEX Share Plan 3.9%
 LEX Board 12.0%	 Lowell Fund Resources 2.8%
 Gold Fields Ltd 11.0%	 Other Shareholders 52.7%

INVESTMENT SUMMARY



Transformative acquisition of Location 45 that includes the Goodyear nickel and Mt Martin gold resources



Expanding portfolio of precious and critical minerals, including over **1.1 million oz of gold, 58kt of copper and 15kt of nickel**



Location 45 private land title provides Company with a streamlined **pathway to future development**



Kalgoorlie-Kambalda premier mining jurisdiction provides near term, low capital development optionality



Harnessing knowledge base of **experienced board and management** with exploration, development and production success



Well funded, **primed for growth** through active exploration, with significant upside potential identified across multi-commodity assets

Competent Person Statement

Notes Specific-ASX Announcements Investor Presentation

The following announcements were lodged with the ASX (including supporting JORC Reporting Tables) and details for each of the sections noted in this Presentation and can be found in the announcements. Note that these announcements are not the only announcements released to the ASX since the last presentation dated 6 September 2023 but specific to exploration reporting. The Company confirms that it is not aware of any new information or data that materially affects the information previously reported.

- Maiden Lucky Strike Resource Estimate: 20 May 2020
- Red Dale Resource Increases by 28% to 25,230oz: 3 June 2020
- RC Drill Results Outline New Gold Zone at Burns: 25 January 2022
- Burns 1200m Diamond Drill hole Update: 1 August 2022
- Drilling Continues to Define Larger Scale to Burns Au Cu System: 1 September 2022
- Resource RC Drilling Program Underway at Burns: 6 October 2022
- Strong Gold and Copper Intersections Continue to Expand Burns Central: 2 March 2023
- 0.5M Ounces of Gold in Burns Central Maiden Resource: 4 May 2023
- Lefroy Increases Gold Resources to 602,000 oz: 15 May 2023
- Acquisition of Mineral Rights Transforms Lefroy: 23 May 2023
- 2023 Noosa Mining Conference Presentation : 23 May 2023
- Lefroy Confirms High-Grade 15kt Resource at Goodyear: 23 August 2023
- Growth Potential for Mt Martin Gold Mine Confirmed: 5 September 2023
- Western Lefroy Farm-In and Joint Venture Updated: 22 September 2023
- \$6.2M Raise to Advance Nickel and Gold Projects at Location 45: 22 September 2023
- 2023 Annual Report: 2 October 2023

The information in this announcement that relates to exploration targets and exploration results is based on information compiled by Wade Johnson a competent person who is a member of the Australian Institute of Geoscientists (AIG). Wade Johnson is employed by Lefroy Exploration Limited. Wade Johnson 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. Wade Johnson consents to the inclusion in this announcement of the matters based on his work in the form and context in which it appears.



Lefroy Exploration

Appendices

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TOTAL INDICATED & INFERRED RESOURCES



Nickel

Deposit	Indicated			Inferred			Total Resource		
	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

Orogenic Gold Style

Deposit	Indicated			Inferred			Total Resource		
	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	5.31	1.82	311,048	3.41	1.73	190,127	8.72	1.79	501,175
TOTAL	6.65	0.62	379,108	4.01	0.70	226,897	10.66	1.77	606,005

Porphyry Gold-Copper Style

Deposit	Indicated					Inferred					Total Resource			
	Mt	Au (g/t)	Cu (%)	Oz	Cu (t)	Mt	Au (g/t)	Cu (%)	Oz	Cu (t)	Mt	Au (g/t)	Oz	Cu (t)
Burns Central	32.31	0.38	0.16	394,308	50,253	10.65	0.30	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	0.30	0.08	103,165	8,047	42.96	0.36	497,472	58,300

May 2023 Location 45 addition increases total mineral resource inventory to:

1.1Moz

GOLD

58kt

COPPER

15kt

NICKEL

490koz

SILVER