

Artificial Intelligence Partner Earth AI Drilling Nickel-Copper-PGE Targets at the Fontenoy Project

Legacy Minerals Holdings Limited (ASX: LGM, “LGM”, “the Company” or “Legacy Minerals”) is pleased to announce the commencement of diamond drilling by its exploration alliance partner, Earth AI at the Fontenoy Project, NSW.

Rig Mobilised and Onsite

- Earth AI’s diamond drill rig has arrived onsite at Fontenoy and drilling is underway.
- 3,600m of diamond drilling has been approved by the Resource Regulator (NSW Government)
 - This includes up to **six diamond holes at approximately 600m per hole.**

Significant Drilling Campaign Underway

- Earth AI has been implementing its artificial intelligence deposit targeting system at Fontenoy and has generated a range of drill targets across the tenement.
- Drilling will be targeting the recently identified nickel-copper sulphides at the Project^{i,1} with the **identification of nickel sulphides at surface the first known occurrence in the district.**
- NSW is known to host nickel laterite deposits, however nickel sulphide systems are rare and are greatly prized for their potentially higher grades and lower extraction costs.
- The drilling will also follow up on historical copper and gold intersections includingⁱⁱ:
 - 79m at 0.27% Cu from 1.5m and 22m at 0.67g/t Au and 0.34% Cu

Drilling Timeframes

The drill program is expected to run for two months with results expected later in the year.



Figure 1: Diamond Drill Rig onsite at the Fontenoy Project.

¹ See ‘Endnotes’ on Page 9 for references

Management comment - Legacy Minerals CEO & Managing Director, Christopher Byrne said:

“After implementing its artificial intelligence program at Fontenoy, diamond drilling is an exciting next step in our exploration partnership with Earth AI.

Following the identification of nickel-iron sulphide mineralisation in fresh rock in June by Earth AI, the team has moved rapidly to get drilling underway to test this newly identified mineral style.

The ultramafic belt that hosts Fontenoy is widely known for its nickel laterite systems which are some of the biggest nickel and cobalt deposits in Australia. Earth AI’s new search for nickel-copper sulphides and PGE’s (platinum group elements) is frontier exploration in this part of NSW. Excitingly this potential for nickel-sulphides has remained untested until now with little previous exploration or drilling in the priority target areas.

In addition to the imminent drilling at Bauloora, this drill campaign at Fontenoy provides Legacy Minerals shareholders with another fully funded exploration front and discovery opportunity.”

Planned Diamond Drilling

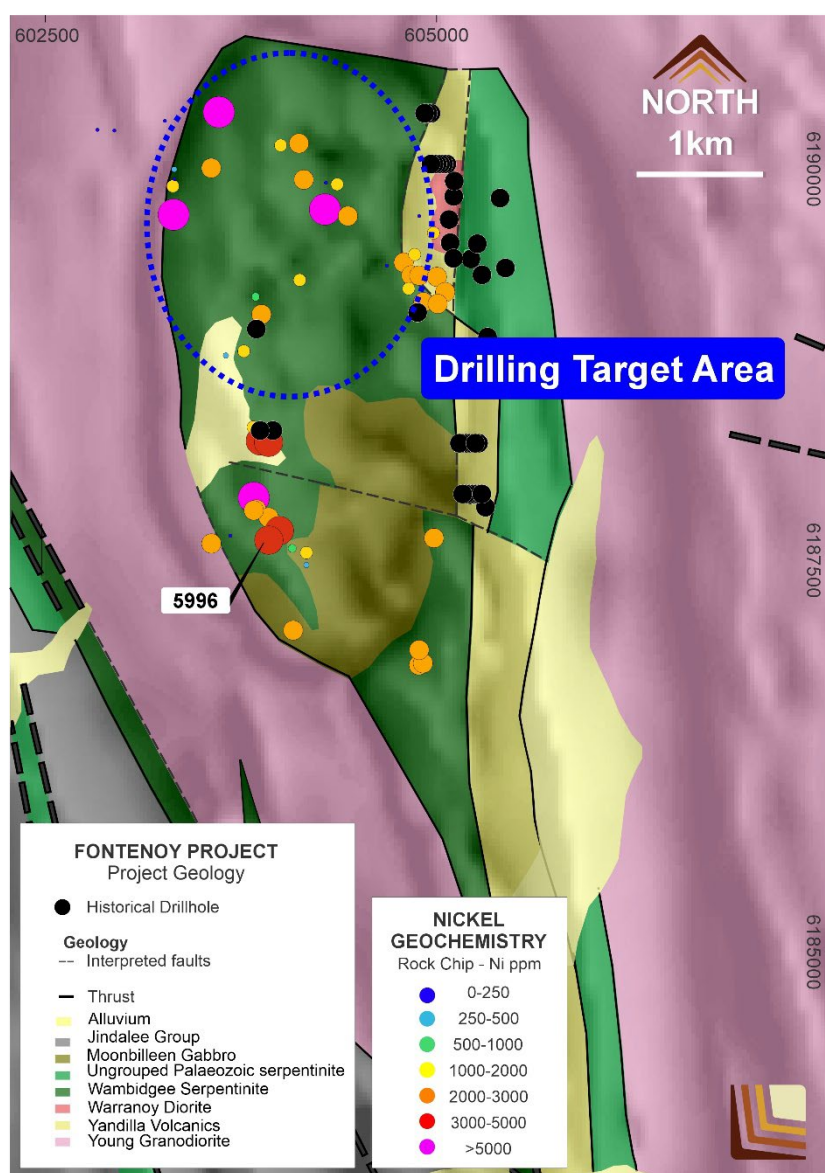


Figure 22: Fontenoy map showing the recent rock chip locations and historic drillingⁱⁱⁱ

The Earth AI team have steadily worked on building a greater understanding of the Fontenoy geology. Diamond drill testing is now underway to test the new geological thinking and targets that have been defined across this project. Detailed mapping, petrographic studies and soil and rock chip analysis have been completed in the latest field campaigns. In following up indications of anomalous copper, nickel and platinum group element mineralisation, pentlandite (nickel-iron sulphide) has been identified for the first time in fresh rock.



Figure 3: Earth AI field team conducting soil sampling at Fontenoy (left), and rock sample 5996 (top right), and nickel sulphides (pn - pentlandite), copper sulphides (cpy - chalcopyrite) confirmed in serpentinite/gabbro through SEM and petrographic analysis (bottom right)ⁱ.

Ni-laterites have been previously identified at Fontenoy and were the focus of previous nickel-cobalt exploration drilling. These residual deposits were thought to have been formed as a result of serpentinite weathering solely and as such the exploration for nickel-iron sulphides did not occur. The recognition of Ni-sulphides in association with copper and PGEs (platinum group elements) however highlights the prospectivity of the Fontenoy Project for Ni-Fe sulphide deposits and presents an opportunity for the Company to be the first to apply exploration methods and systems thinking for this style of mineralisation.

Nickel in New South Wales

There are numerous nickel occurrences located in three main NSW ultramafic belts^{iv}. These occurrences are predominantly in the form of residual nickel-cobalt laterites, less commonly hydrothermally-enriched nickel sulphide deposits, and orthomagmatic nickel sulphide deposits in layered mafic and ultramafic bodies.



Figure 43: Significant projects and nickel occurrences within the major ultra-mafic and mafic belts of NSW^{v,vi,vii}

About Fontenoy

The Fontenoy Project contains a number of prospective units within the Project area which include the Yandilla Volcanics, Warrenoy Diorite and ultramafic rocks of the Wambidgee Serpentine for copper-nickel and cobalt. Stratabound manganese mineralisation occurs in the Cambro-Ordovician Jindalee Group, while the Wambidgee Serpentine contains a number of chromite deposits, and this differentiated ultramafic sequence is prospective for both chromite and platinum group element (PGE) mineralisation. Disseminated and veined copper-gold mineralisation hosted within the Yandilla Volcanics has a strike length of approximately 8km. Mineralisation here is interpreted to represent McPhillamys-style volcanogenic hosted massive sulphide (VHMS) mineralisation, however the potential for intrusion related copper-gold mineralisation is being investigated.

The Project has had a significant amount of surface geochemical work completedⁱⁱ with extensive soil sampling focused on the Yandilla Volcanics and a bulk cyanide leach stream sediment survey conducted across the tenement. Rock chip sampling has also been conducted across the tenement for Mn and Talc assessment and for Au-Cu mineralisation in the Yandilla Volcanics and Warrego Diorite. This work defined an 8km long Cu and Au soil anomaly centred over the Yandilla Volcanics with rock chips grading up to 0.73g/t Au and 0.47% Cu.

A dipole-dipole induced polarisation (DDIP) survey has been completed at 200m and 800m line spacing along the length of the Yandilla Volcanicsⁱⁱ. Further to this, ground electromagnetic (EM) survey traverses and airborne EM at 150m line spacing has also been completed by earlier explorers. Induced polarisation (IP) surveying highlighted several known zones of Cu and Au mineralisation with a number of anomalies yet to be drilled.

A total of 16 diamond core holes for 4,014 metres and an additional 28 reverse circulation percussion (RC) drill holes for 1,667m were historically completedⁱⁱ. Drilling has confirmed soil anomalism is associated with broad Au-Cu mineralisation intersected along the entire 8km strike and provides encouragement for a number of drill ready target zones.

Historical Drill intercepts at the Project includeⁱⁱ:

1-2-10D:	79m at 0.27% Cu	from 1.5m
WRC9:	22m at 0.67g/t Au and 0.34% Cu	from 20m
WRC21:	24m at 0.17g/t Au and 0.24% Cu	from surface
WRC3:	26m at 0.44g/t Au and 0.11% Cu	from surface
1-2-15D:	14m at 0.72g/t Au and 0.37% Cu	from 108m

The large amount of historical data has provided Earth AI with significant base of information to utilise in their artificial intelligence and machine learning software for the delivery of compelling drill targets in a data rich environment.

Earth AI Exploration Alliance

Legacy Minerals signed an Exploration Alliance Agreement (Agreement) with Earth AI covering its Fontenoy (EL8995) tenement (**Strategic Alliance**)^{viii}. The Strategic Alliance allows for a co-funding model, whereby Earth AI will contribute up to \$4.5M AUD of total exploration costs across the tenement over a two-year period, with an option to extend for a further year. Subject to a qualifying drilling intersection (as defined within the Agreement) being subsequently identified, Earth AI Pty Ltd is entitled to a net smelter return royalty (Royalty) up to 3% in connection with a to be agreed upon area surrounding the discovery (Area of Interest). Legacy Minerals will retain 100% ownership over the tenement covered under the Agreement.

Legacy Minerals is under no obligation to explore, develop or mine the tenement during the period of the Strategic Alliance. However, whereafter the second anniversary of the Royalty Trigger Date, if no mineral resource has been defined and the combined annual exploration development and mining expenditure in the Area of Interest falls below \$250,000 USD, Earth AI will have the option to assume operational control and buy the Royalty Tenement that overlaps with the single Area of Interest under the Minerals Royalty Deed, for a cash purchase price equal to \$1,000,000 USD plus a 2% net smelter royalty granted to the Legacy Minerals.

Earth AI Exploration Strategy

Earth AI is a vertically integrated metals exploration company based in San Francisco, USA. It's NSW based operations are located at Young, 15km from Legacy Minerals' Fontenoy tenement. Earth AI plans to implement its artificial intelligence deposit targeting system to generate drill targets across the tenement. Once identified, Earth AI will follow up with on ground geophysical and geochemical work before drill testing.

Approved by the Board of Legacy Minerals Holdings Limited.

For more information:

Chris Byrne

CEO & Managing Director

chris.byrne@legacyminerals.com.au

+61 (0) 499 527 547

DISCLAIMER AND PREVIOUSLY REPORTED INFORMATION

Information in this announcement is extracted from reports lodged as market announcements referred to above and available on the Company's website <https://legacyminerals.com.au/>. The Company confirms that it is not aware of any new information that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed.

This announcement contains certain forward-looking statements. Forward looking statements are only predictions and are subject to risks, uncertainties and assumptions which are outside of the control of Legacy Minerals Holdings Limited (LGM). These risks, uncertainties and assumptions include commodity prices, currency fluctuations, economic and financial market conditions, environmental risks and legislative, fiscal or regulatory developments, political risks, project delay, approvals and cost estimates. Actual values, results or events may be materially different to those contained in this announcement. Given these uncertainties, readers are cautioned not to place reliance on forward-looking statements. Any forward-looking statements in this announcement reflect the views of LGM only at the date of this announcement. Subject to any continuing obligations under applicable laws and ASX Listing Rules, LGM does not undertake any obligation to update or revise any information or any of the forward-looking statements in this announcement to reflect changes in events, conditions or circumstances on which any forward-looking statements is based.

COMPETENT PERSON'S STATEMENT

The information in this Report that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Thomas Wall, a Competent Person who is a Member of the Australian Institute of Geoscientists. Mr Wall is the Technical Director and a full-time employee of Legacy Minerals Pty Limited, the Company's wholly-owned subsidiary, and a shareholder of the Company. Mr Wall has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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. Mr Wall consents to the inclusion of the matters based on his information in the form and context in which it appears in this announcement.

About Legacy Minerals

Legacy Minerals is an ASX listed public company that has been involved in the exploration and development of gold, copper, and base-metal projects in the Lachlan Fold Belt since 2017. The Company has seven projects that present significant discovery opportunities for shareholders.

<p>Au-Cu (Pb-Zn) Cobar (EL9511)</p> <p>Undrilled targets next door to the Peak Gold Mines. Several priority geophysical anomalies and gold in lag up to 1.55g/t Au.</p>	<p>Au Harden (EL8809, EL9257)</p> <p>Large historical high-grade quartz-vein gold mineralisation. Drilling includes 3.6m at 21.7g/t Au 116m and 2m at 17.17g/t Au from 111m.</p>
<p>Au-Ag Bauloora (EL8994, EL9464) Newmont JV</p> <p>One of NSW's largest low-sulphidation epithermal systems with a 27km² epithermal vein field and 15km² gold zone.</p>	<p>Au-Cu Fontenoy (EL8995) Earth AI-Alliance</p> <p>An 8km long zone of Au and Cu anomalism defined in soil sampling and drilling. Significant drill intercepts include 79m at 0.27% Cu from 1.5m.</p>
<p>Cu-Au Rockley (EL8296)</p> <p>Prospective for porphyry Cu-Au and situated in the Macquarie Arc Ordovician host rocks with historic high-grade copper mines that graded up to 23% Cu.</p>	<p>Au-Ag Black Range (EL9466, ELA6613)</p> <p>Extensive low-sulphidation epithermal system with limited historical exploration. Epithermal preservation across 7km² of intense silicification</p>
<p>Cu-Au Drake (EL6273, ELA6640)</p> <p>Large collapsed caldera (~150km²) and associated mineralisation bears similar geological characteristics to other major pacific rim settings and deposits.</p>	

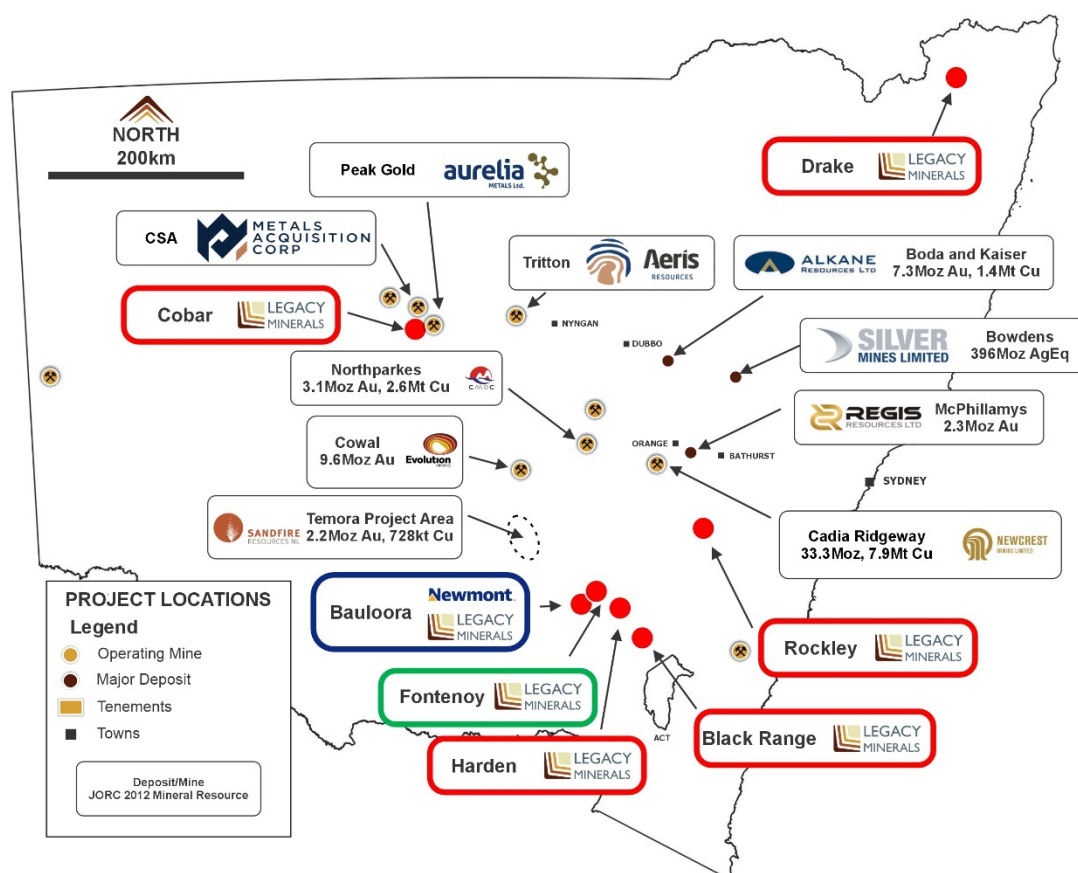


Figure 5: Regional setting of Legacy Minerals Projects^{ix, x, xi, xii, xiii}

Endnote

- ⁱ ASX: LGM June 2022 Nickel-Copper Sulphide and PGEs found at Fontenoy
- ⁱⁱ Company's Prospectus dated 28 July 2021 lodged 9 September 2021 (ASX: LGM)
- ⁱⁱⁱ Company's Prospectus dated 28 July 2021 lodged 9 September 2021 (ASX: LGM)
- ^{iv} Nickel exploration opportunities in New South Wales, Australia (Industry and Investment, NSW Government)
- ^v Platina Resources Annual Report 30 June 2022 ASX: 28 February 2023, Ionick Metals Established, Option Agreement Executed to Accelerate Nickel-Cobalt Venture, Scandium International Mining Corp. FEASIBILITY STUDY - NYNGAN SCANDIUM PROJECT April 15, 2016
- ^{vi} Alchemy Resources, <https://alchemyresources.com.au/investor-centre/resources/#west-lynn>
- ^{vii} ASX: HLX 28 February 2023 Ionick Metals Established and Option Agreement executed
- ^{viii} LGM ASX 3 May 2022: Strategic Exploration Alliance with AI Explorer
- ^{ix} CMOC Northparkes Mining and Technical Information, <http://www.northparkes.com/wp-content/uploads/2022/05/northparkes-mining-and-technical-information.pdf>
- ^x Alkane Resources Kaiser Resource Estimate of ~4.7M Gold Equivalent 27 February 2023
- ^{xi} Newcrest Mining Annual Mineral Resources and Ore Reserves Statement 17 February 2022
- ^{xii} Regis Resources Annual Mineral Resource and Ore Reserve Statement 8 June 2022
- ^{xiii} Evolution Mining 2022 Annual Report

Table 1: Major Mineral Resources of NSW

Project & Company	Mineral Resource	Measured Resource	Indicated Resource	Inferred Resource
Boda-Kaiser, NSW (Alkane Resources Ltd)	7.26Moz Au, 1.38Mt Cu	-	-	7.26Moz Au, 1.38Mt Cu
Tomingley, NSW (Alkane Resources Ltd)	1.75Moz Au	0.13Moz Au	1.019Moz Au	0.59Moz
McPhillamys, NSW (Regis Resources Ltd)	2.29Moz Au		2.28Moz Au	0.001Moz Au
Cadia-Ridegway, NSW (Newcrest Mining Ltd)	33.31Moz Au, 7.9Mt Cu	0.31Moz Au, 0.041Mt Cu	33Moz Au, 7.3Mt Cu	0.75Moz, 1.1Mt Cu
Cowal, NSW (Evolution Mining Limited)	9.618Moz Au	0.367Moz Au	7.33Moz Au	1.92Moz Au
Nth Parkes, NSW (CMOC Mining Pty Ltd)	3.09Moz Au, 2.63Mt Cu	1.64Moz Au, 1.2Mt Cu	1.1Moz Au, 1.1Mt Cu	0.35Moz Au, 0.33Mt Cu