



DISTRICT-SCALE DISCOVERY POTENTIAL

Exploring in the shadows of headframes

TSX-V: KLDC | US-OTC: KKLKF

December 2024

Historical Tourn Mine – Kirkland Lake, ON

DISCLAIMER



This presentation contains certain forward-looking statements within the meaning of Canadian securities legislation (the “Forward-looking Statements”). The Forward-looking Statements relate to future events or Kirkland Lake Discoveries Corp. (“Kirkland Lake Discoveries” or “KLDC”), future performance, business prospects or opportunities. Any statements that express or involve discussions with respect to predictions, expectations, beliefs, plans, projections, objectives, assumptions or future events or performance (often, but not always, using words or phrases such as “seek”, “anticipate”, “plan”, “continue”, “estimate”, “expect”, “forecast”, “may”, “will”, “project”, “predict”, “potential”, “targeting”, “intend”, “could”, “might”, “should”, “believe”, “outlook” and similar expressions) are not statements of historical fact and may be Forward-looking Statements.

Forward-looking Statements in this presentation include, but are not limited to, statements with respect to KLDC’s future plans and exploration programs, including the timing of such plans and programs, and the merits of KLDC’s mineral properties.

Although Kirkland Lake Discoveries believes that these Forward-looking Statements are based on reasonable assumptions, all Forward-looking Statements involve known and unknown risks, uncertainties and other factors that may cause the actual results, performance, achievements, events, or circumstances of KLDC to be materially different than expressed or implied by the Forward-looking Statements. Such risks include, among others, uncertainties related to fluctuations in metal prices; uncertainties inherent in the exploration of mineral properties; risks associated with the interpretation of drilling results and other tests; changes in planned work resulting from weather, logistical, technical or other factors; the possibility that results of work will not fulfill expectations and realize the perceived potential of KLDC’s mineral properties; the possibility that required permits may not be obtained in a timely manner or at all; risk of accidents, equipment breakdowns or other unanticipated difficulties or interruptions; the possibility of cost overruns or unanticipated expenses in work programs; the risk of environmental contamination or damage resulting from the exploration operations; the need to comply with environmental and governmental regulations; and the availability, or lack thereof, of capital and financing.

These Forward-looking Statements speak only as of the date of this presentation. Except as required by applicable securities laws, KLDC undertakes no obligation to update these Forward-looking Statements if management’s beliefs, estimates or opinions, or other factors, should change.

For more information on Kirkland Lake Discoveries, readers should refer to KLDC’s website at www.kirklandlakediscoveries.com.

QUALIFIED PERSON

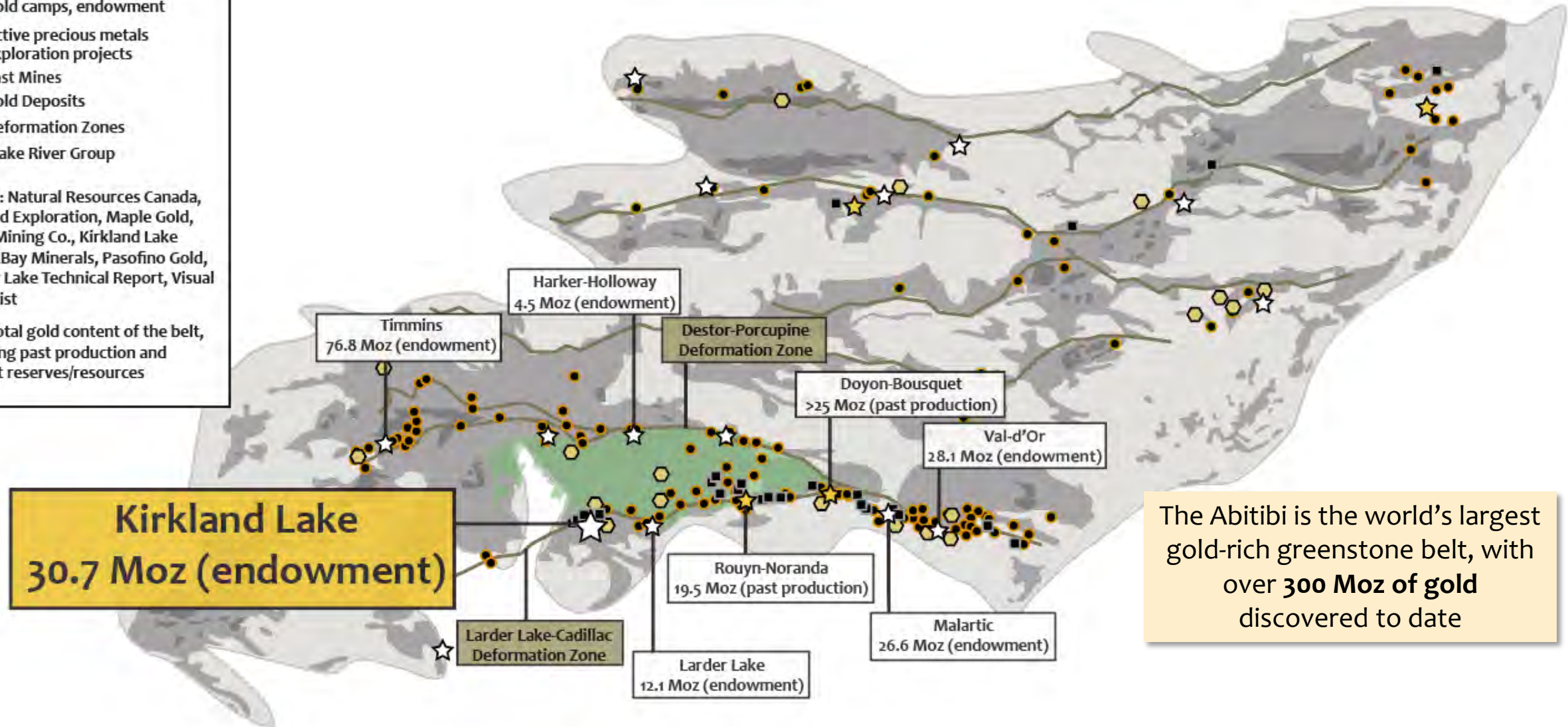
Mike Kilbourne, P. Geo., a qualified person as defined in National Instrument 43-101, has reviewed and approved the technical content of this presentation on behalf of the Company.

REMARKABLE GEOLOGICAL SETTING

- ★ Gold camps, past production
- ☆ Gold camps, endowment
- Active precious metals exploration projects
- Past Mines
- Gold Deposits
- Deformation Zones
- Blake River Group

Source: Natural Resources Canada, Midland Exploration, Maple Gold, Hecla Mining Co., Kirkland Lake Gold, CBay Minerals, Pasofino Gold, Detour Lake Technical Report, Visual Capitalist

*The total gold content of the belt, including past production and current reserves/resources



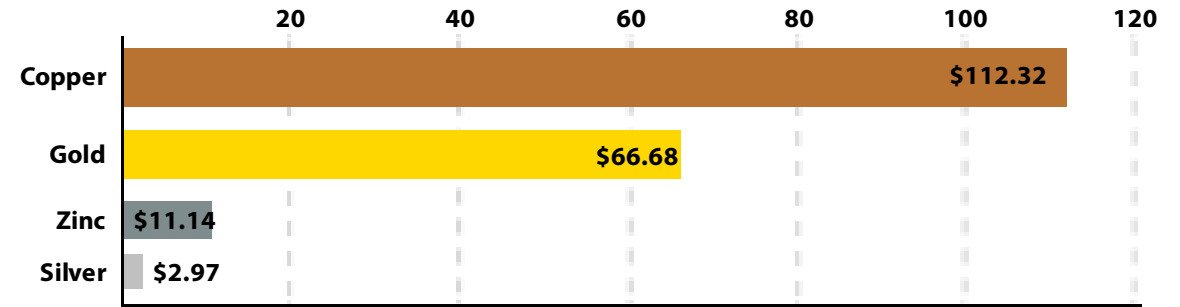
The Abitibi is the world's largest gold-rich greenstone belt, with over **300 Moz of gold** discovered to date

BLAKE RIVER GROUP – OVERLOOKED POTENTIAL IN ONTARIO?

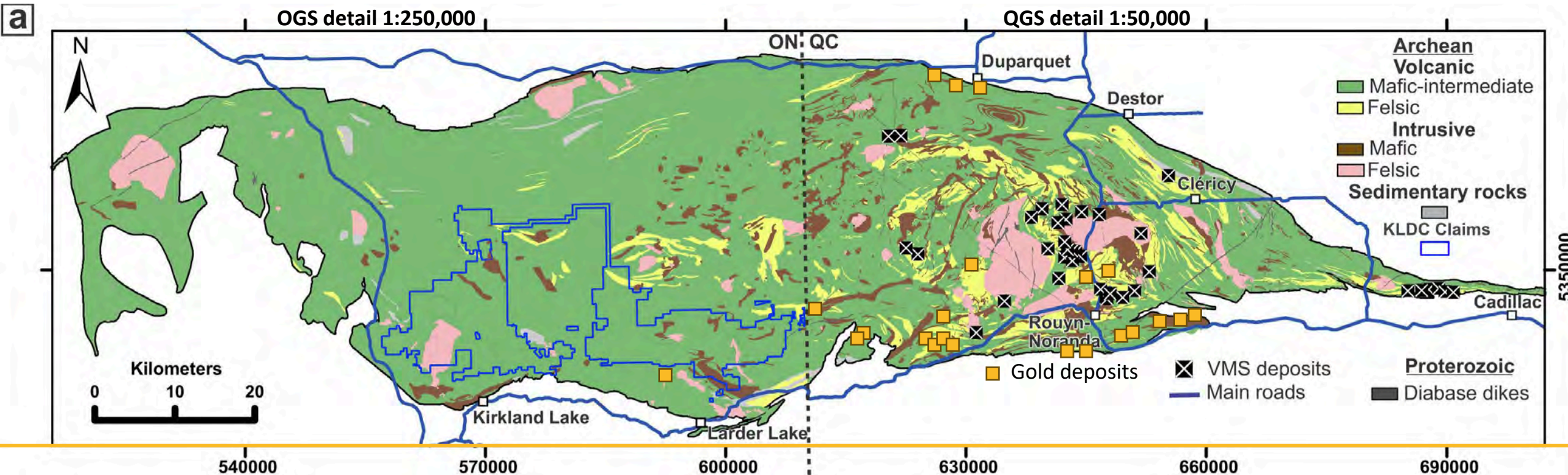


Located in one of the world's most well-known mining belts, our property covers a significant area of geologically promising ground.

The scale of our land package allows us to apply modern exploration techniques across the entire property, targeting areas that have not been fully explored in the past.

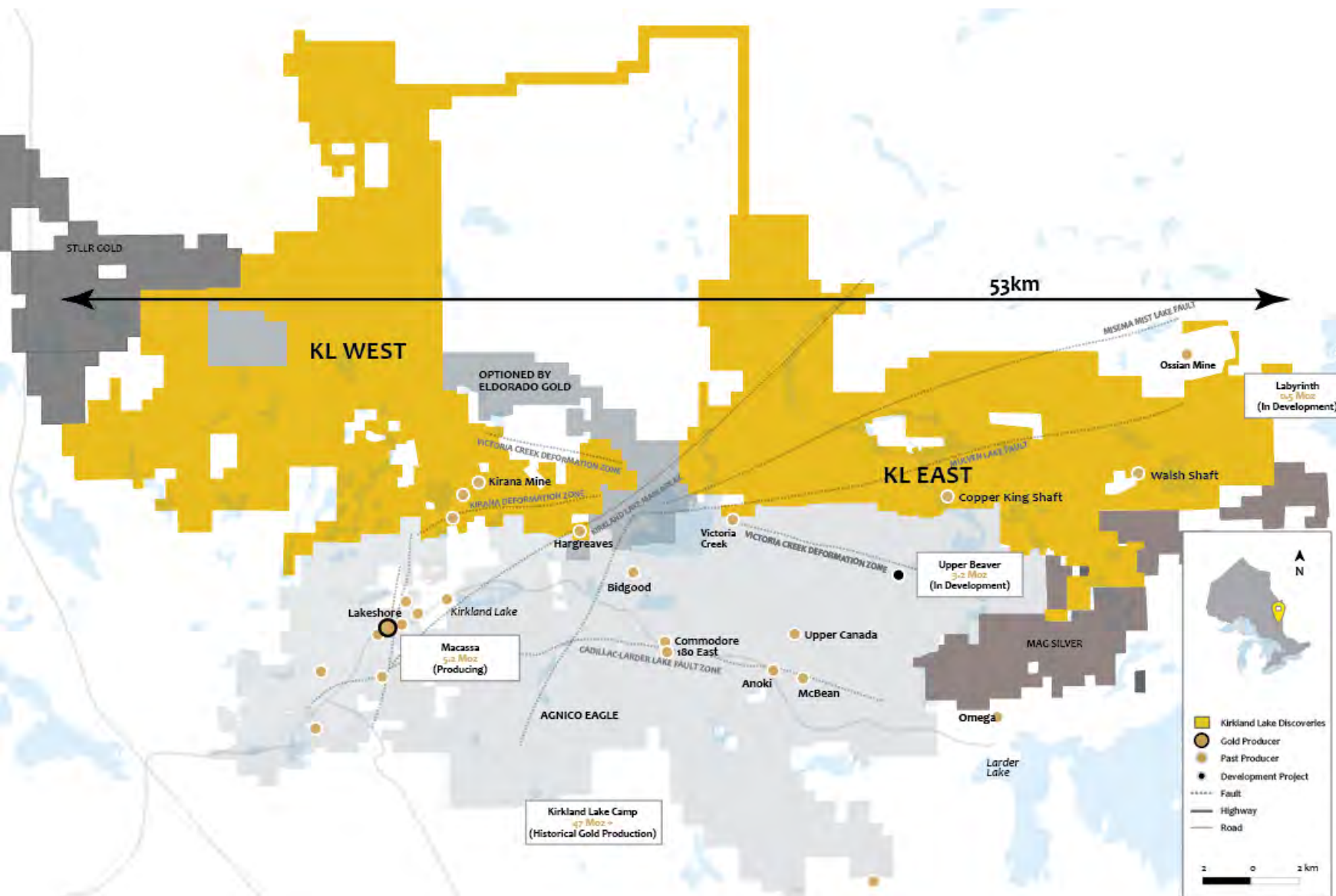


Québec Blake River Group Total Production Value in \$ CDN Billion



a-Mafic to intermediate volcanic rocks of the Blake River Group, Abitibi greenstone belt, Canada: Geochemistry, petrogenesis and relation with VMS deposits. Vite-Sanchez, Ross, Mercier-Langevin - <https://www.sciencedirect.com/science/article/pii/S0301926824000445>

THE LARGEST CONSOLIDATED LAND PACKAGE IN THE HISTORY OF THE CAMP



+38,000 ha claim package in an established brownfields camp



Intrusive, Shear/Lode gold, and **VMS** signatures

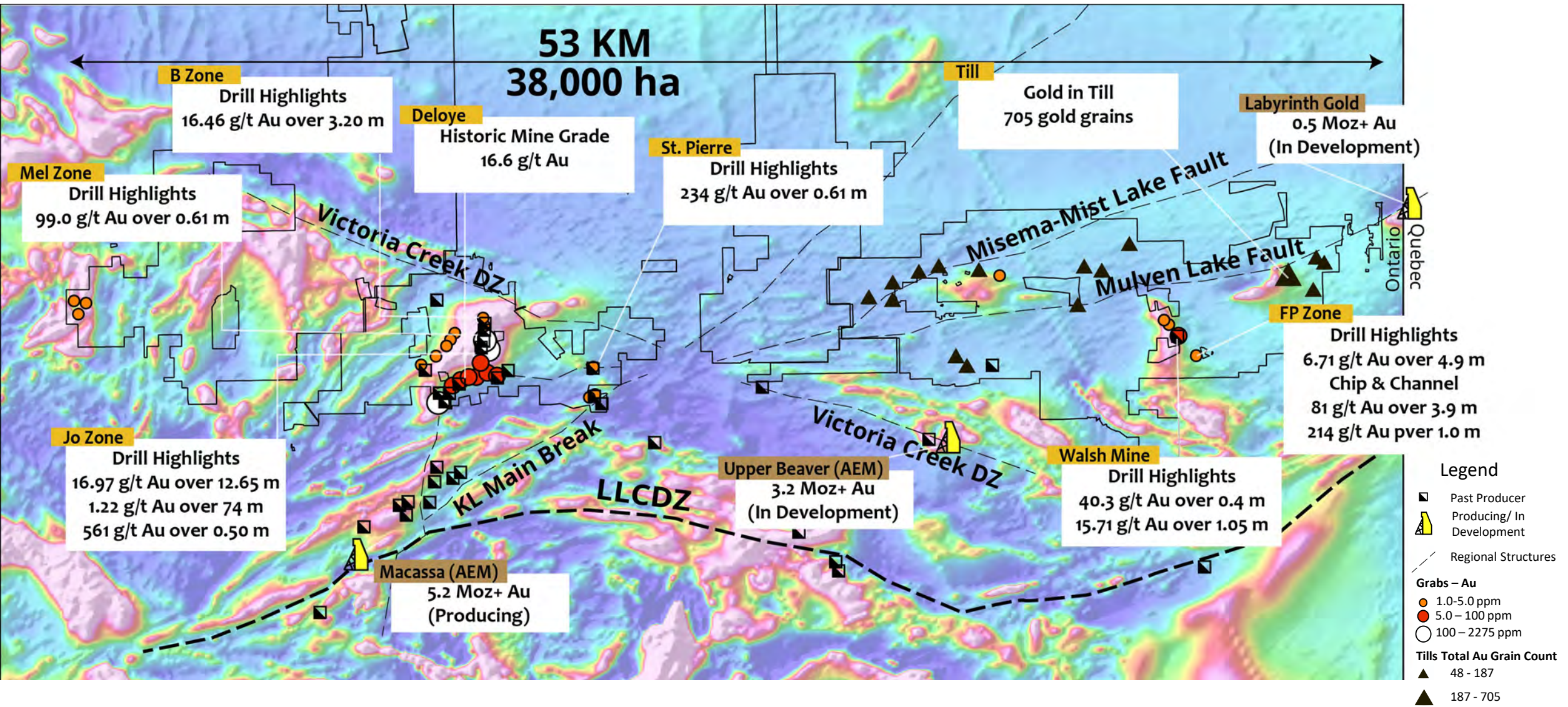


Property-scale soil grid to vector exploration

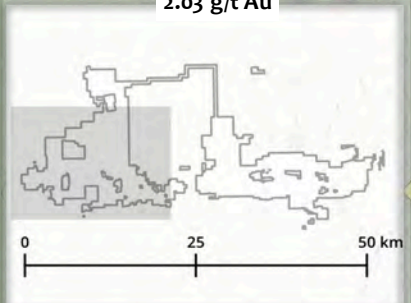
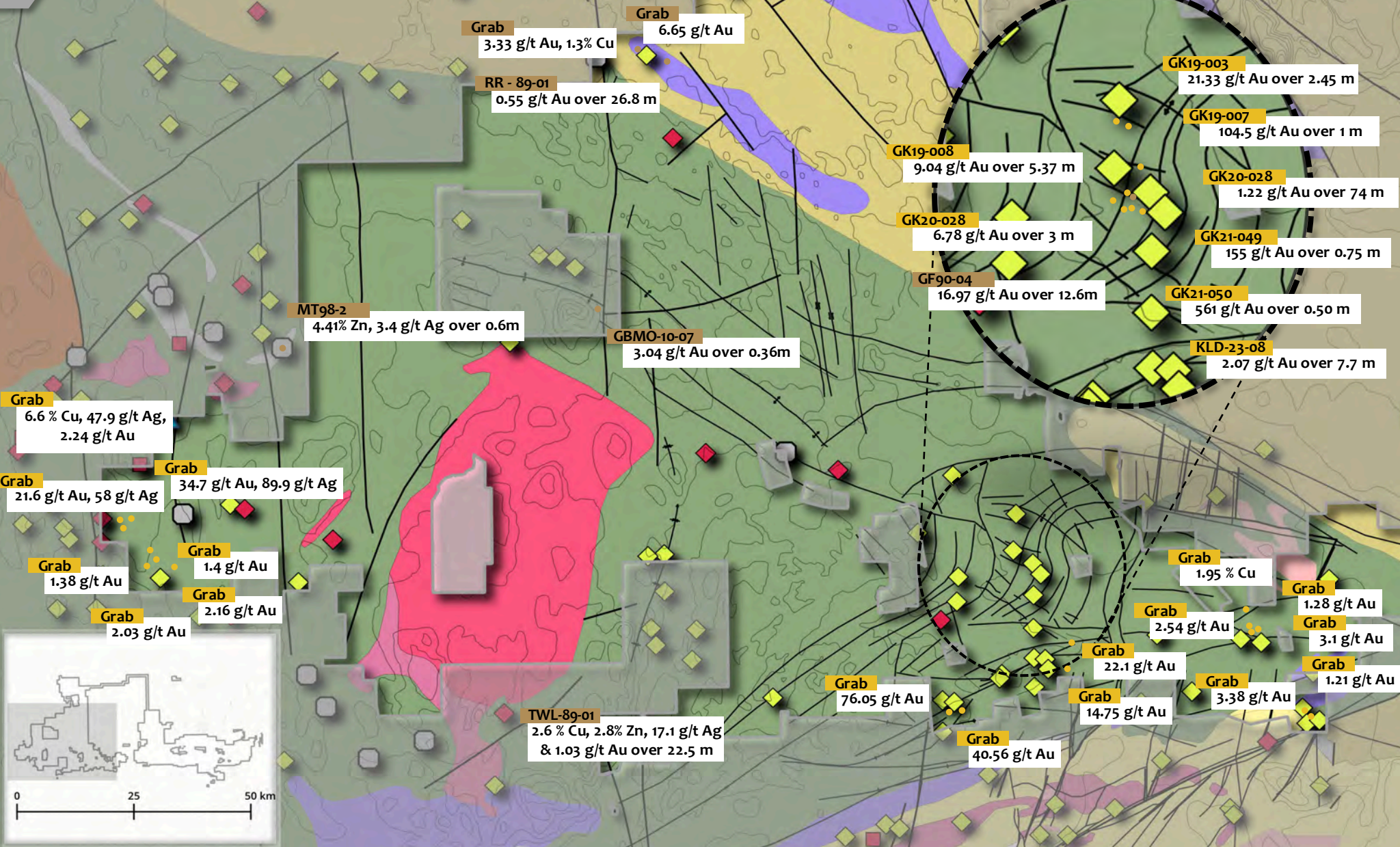


Ontario is a **Tier 1 Mining Friendly** Jurisdiction

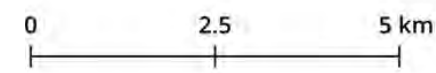
EXPLORING A DISTRICT RICH WITH MINERALIZATION



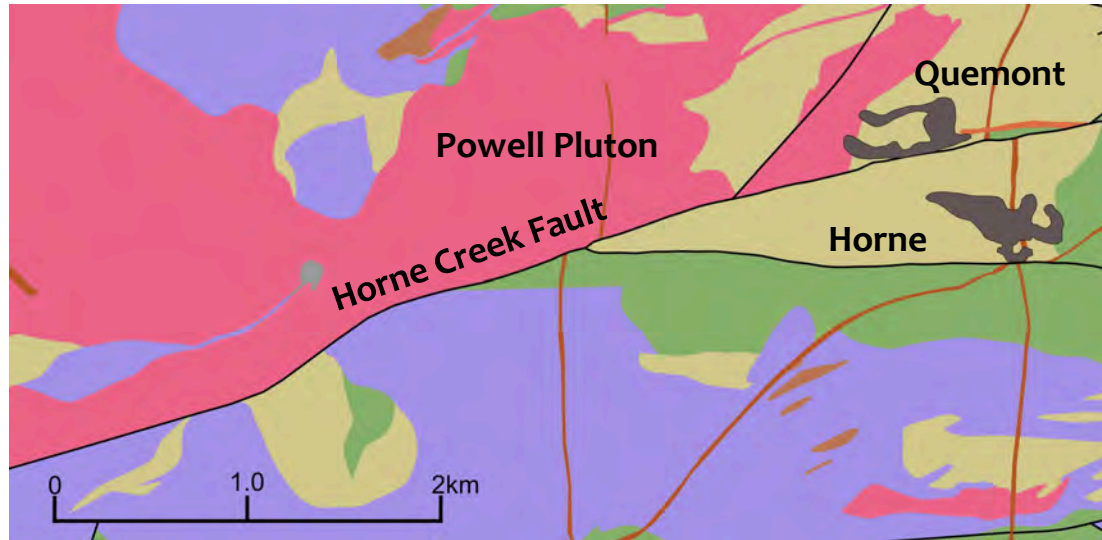
KL WEST - HIGHLIGHTS



NAD83 Zone 17N



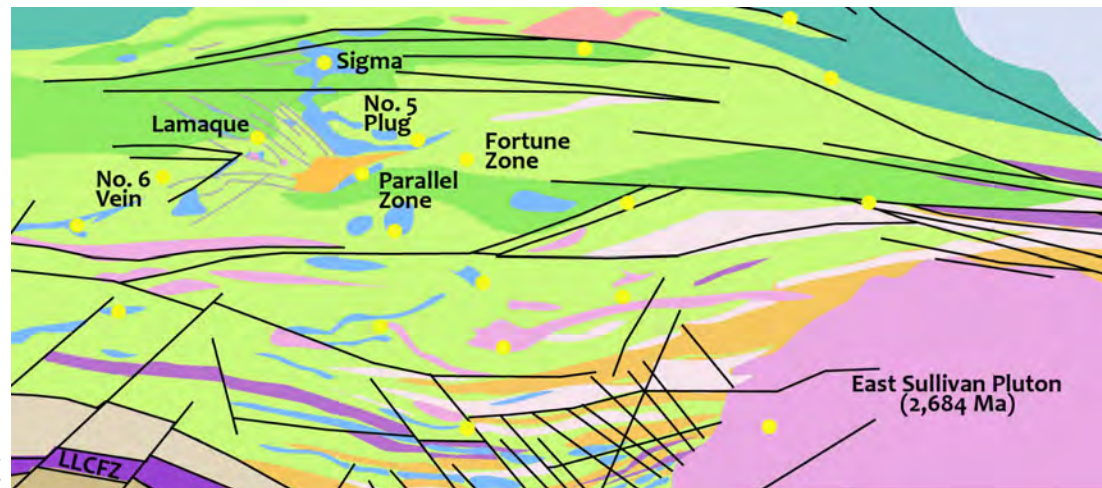
BLAKE RIVER POTENTIAL



VMS

Horne Mine

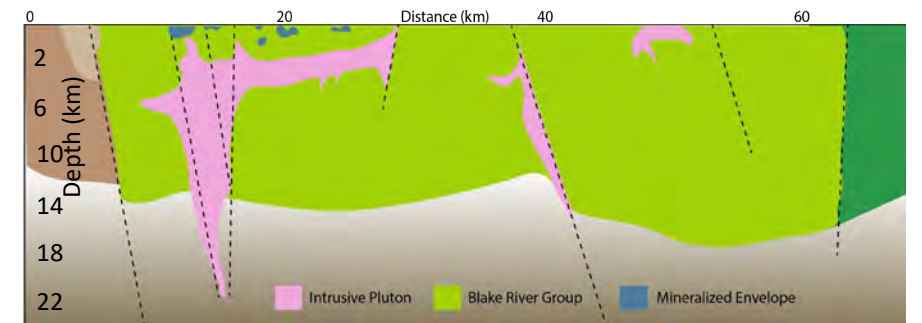
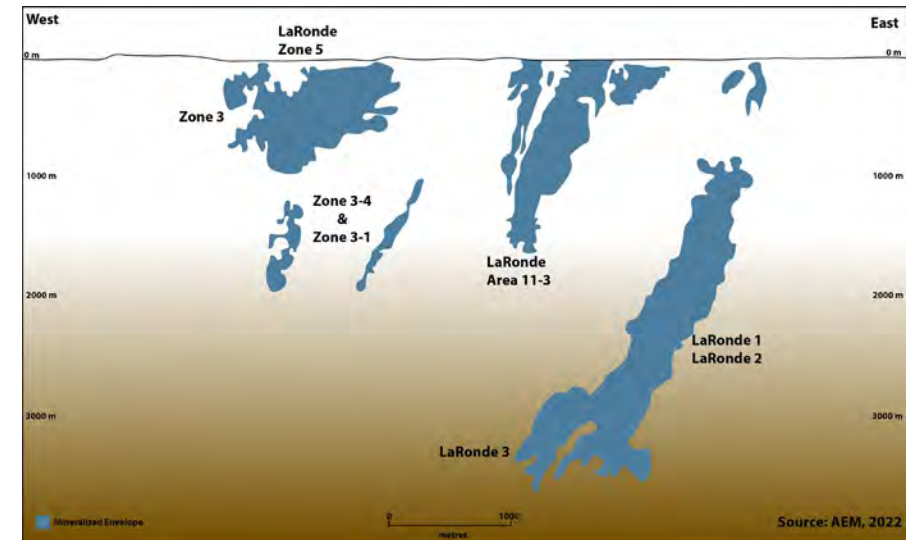
53.7 Mt ore | 6.1 g/t Au | 2.2% Cu



LODE GOLD

SIGMA-LAMAQUE

~35.6 Mt ore | 4.81 g/t Au



INTRUSION INFLUENCED VMS – LA RONDE MINE
 ~18.9 Mt ore | 5.2 g/t Au | .23% Cu | 16.65 g/t Ag | 0.84% Zn

Mineral Prospectivity Quantile

70th 80th 90th

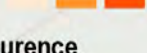
Shear/Lode Gold



VMS



Intrusion-Related



Mineral Occurrence

Gold Copper, Nickel
Copper Polymetallic VMS

Ontario Geological Survey Data

Interpreted Fault



Anticline



Syncline



Syenite to monzonite



Massive granodiorite to granite



Foliated tonalite suite



Mafic and ultramafic



Coarse clastic metasedimentary



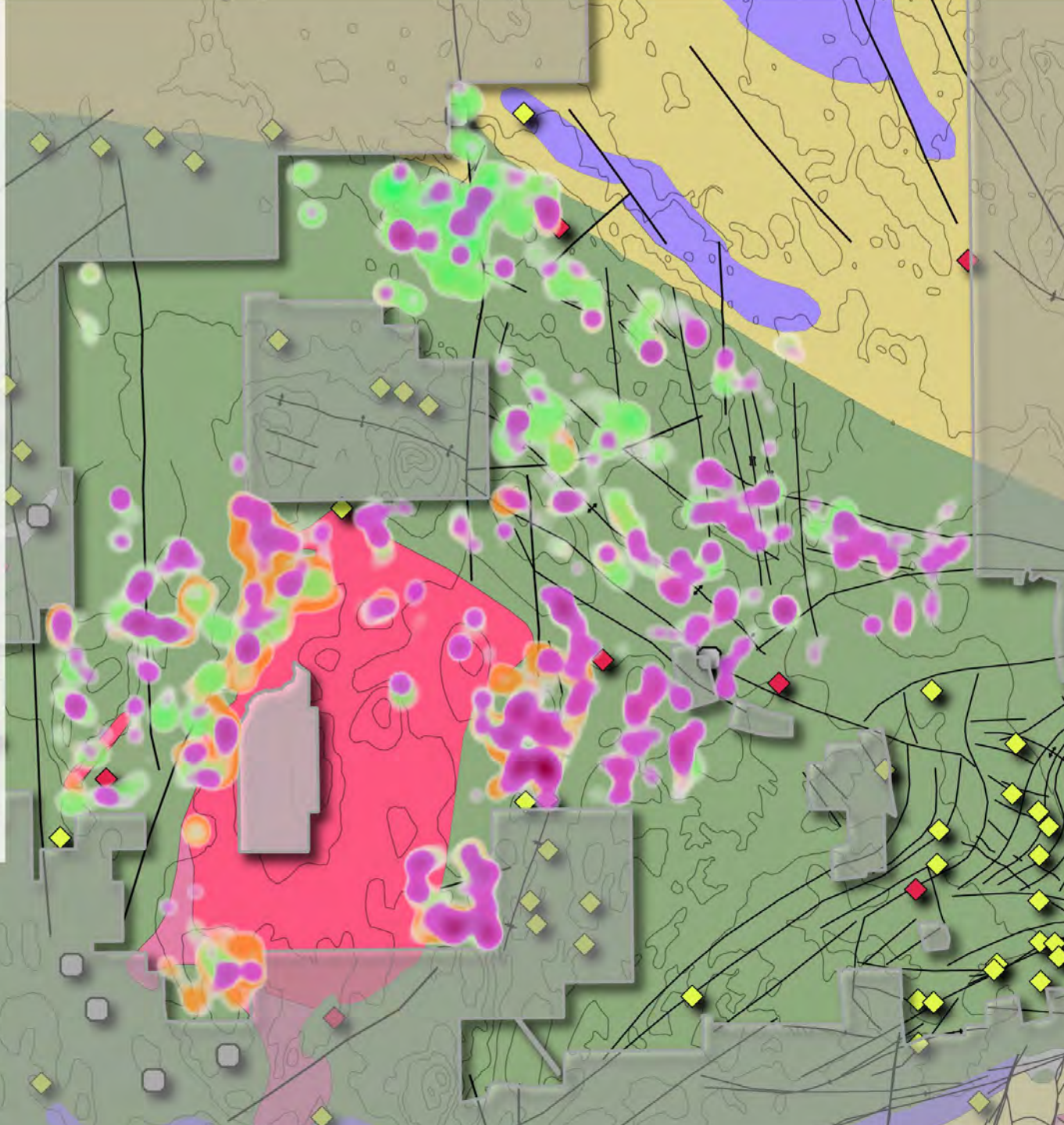
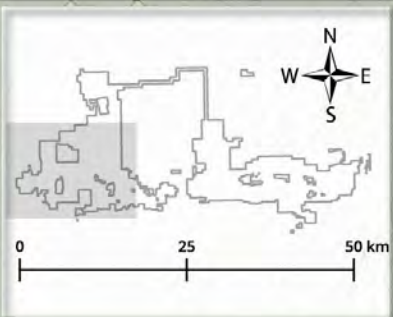
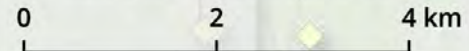
Metasedimentary



Felsic to intermediate metavolcanic



Mafic to intermediate metavolcanic



MINERALIZATION PROSPECTIVITY ON KL WEST 2024 SOILS

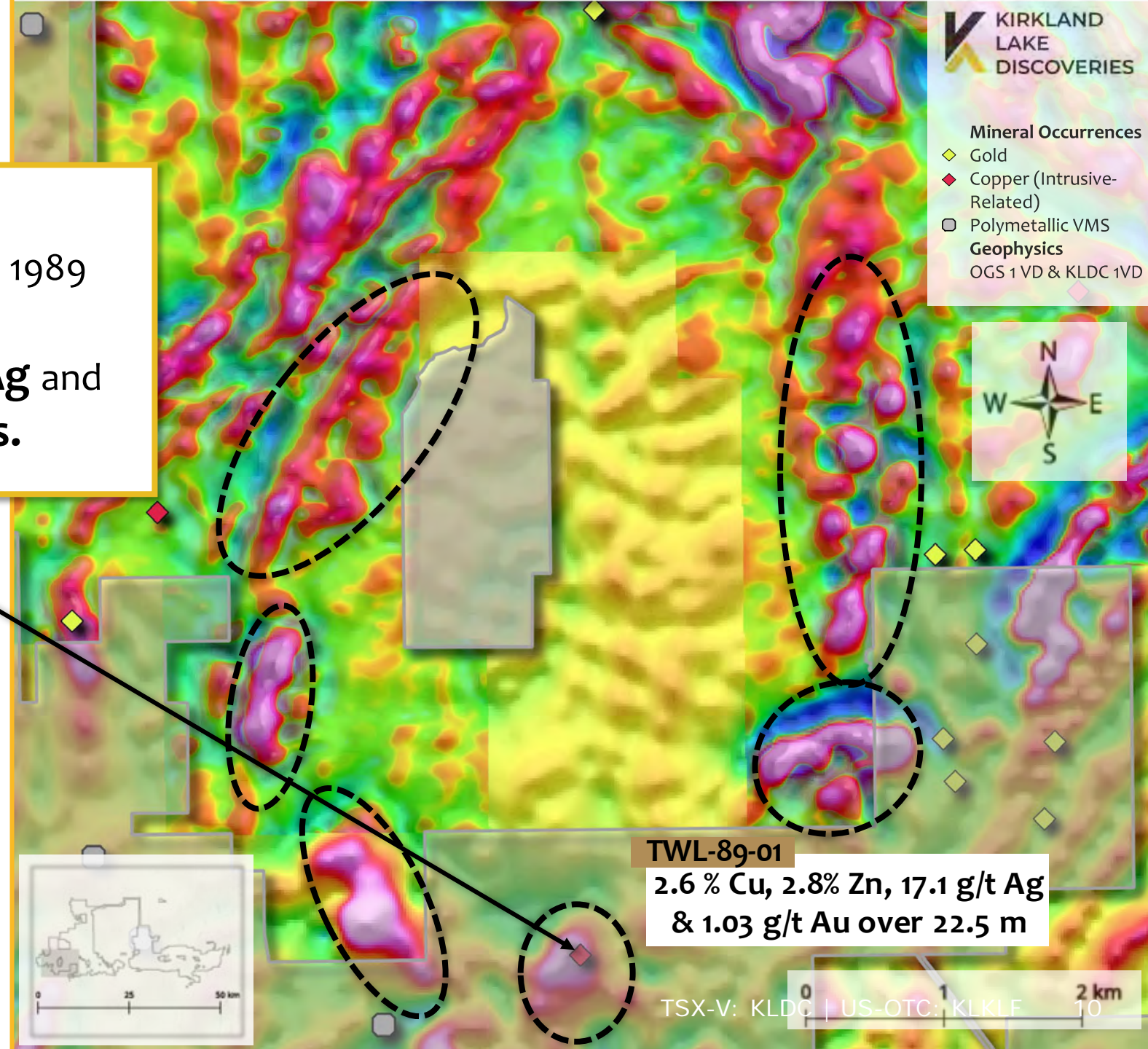
- Shear/Lode Gold (Purple)**
Indicative of structurally controlled gold mineralization trends.
- VMS Potential (Green)**
Areas with significant signatures for volcanogenic massive sulfide mineralization.
- Intrusion-Related Mineralization (Orange)**
Strongly associated with the massive granitoid intrusion, which appears to play a critical role in localizing mineralization trends.

GEOPHYSICAL ANOMALIES

Winnie Lake Showing is VMS in nature, with historical drilling in 1989 encountering grades of 2.6% copper, 2.8% zinc, 17.1 g/t Ag and 1.03 g/t Au over 22.5 meters.

Soil sampling from 2024 indicates significant mineralization at the contact zone of the granite intrusion.

The **magnetic highs** around the granite intrusion indicate possible **hydrothermal alteration and mineralization**, making these zones high-priority exploration targets for interpretation and drilling.



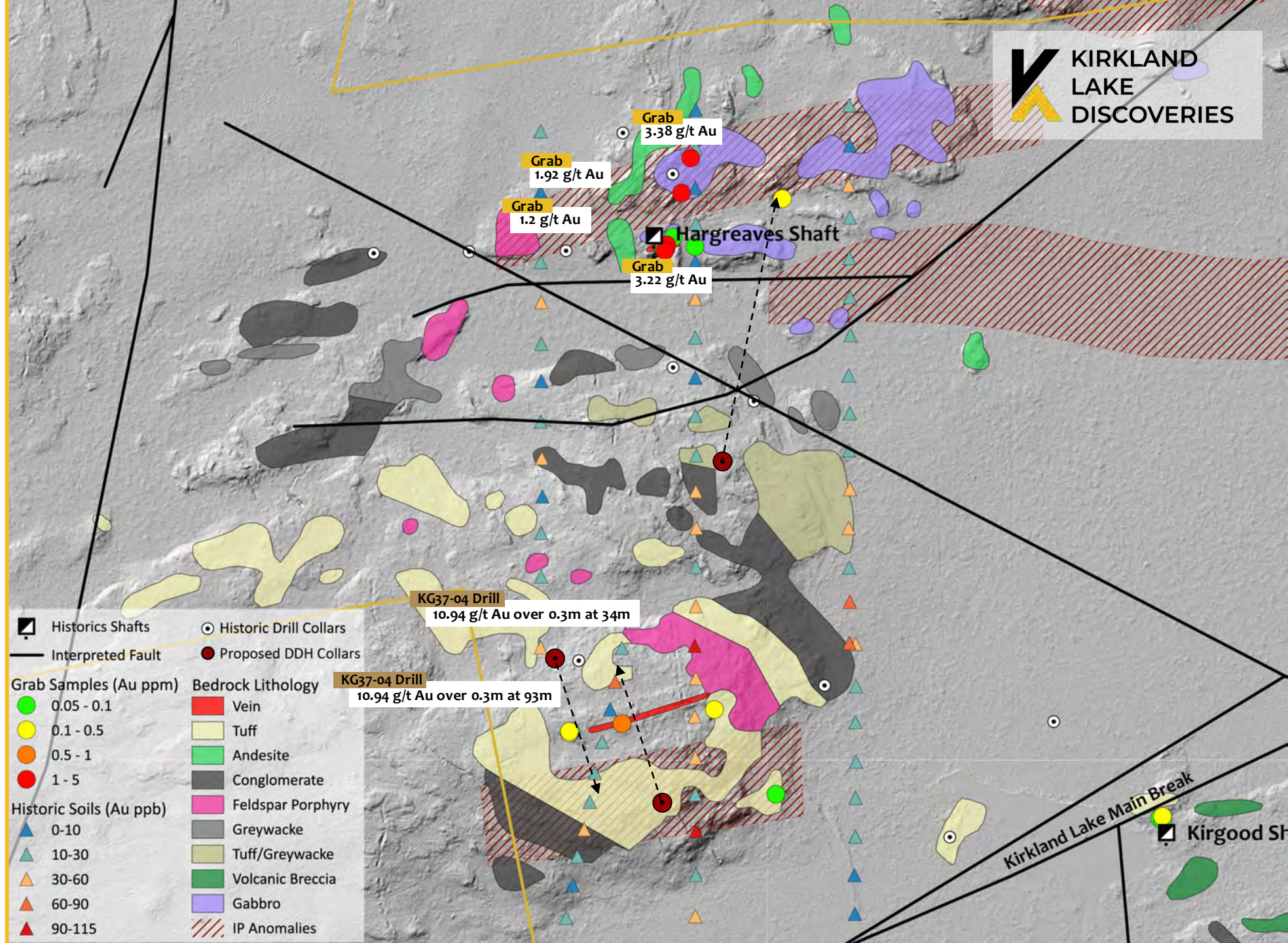
TWL-89-01
2.6 % Cu, 2.8% Zn, 17.1 g/t Ag
& 1.03 g/t Au over 22.5 m

2024 DRILLING - HARGREAVES



Two historical shafts, proximity to **Kirkland Main Break**, contact of **Blake River Group** with Timiskaming Sediments, Historical drill hole with multiple **high-grade** intercepts

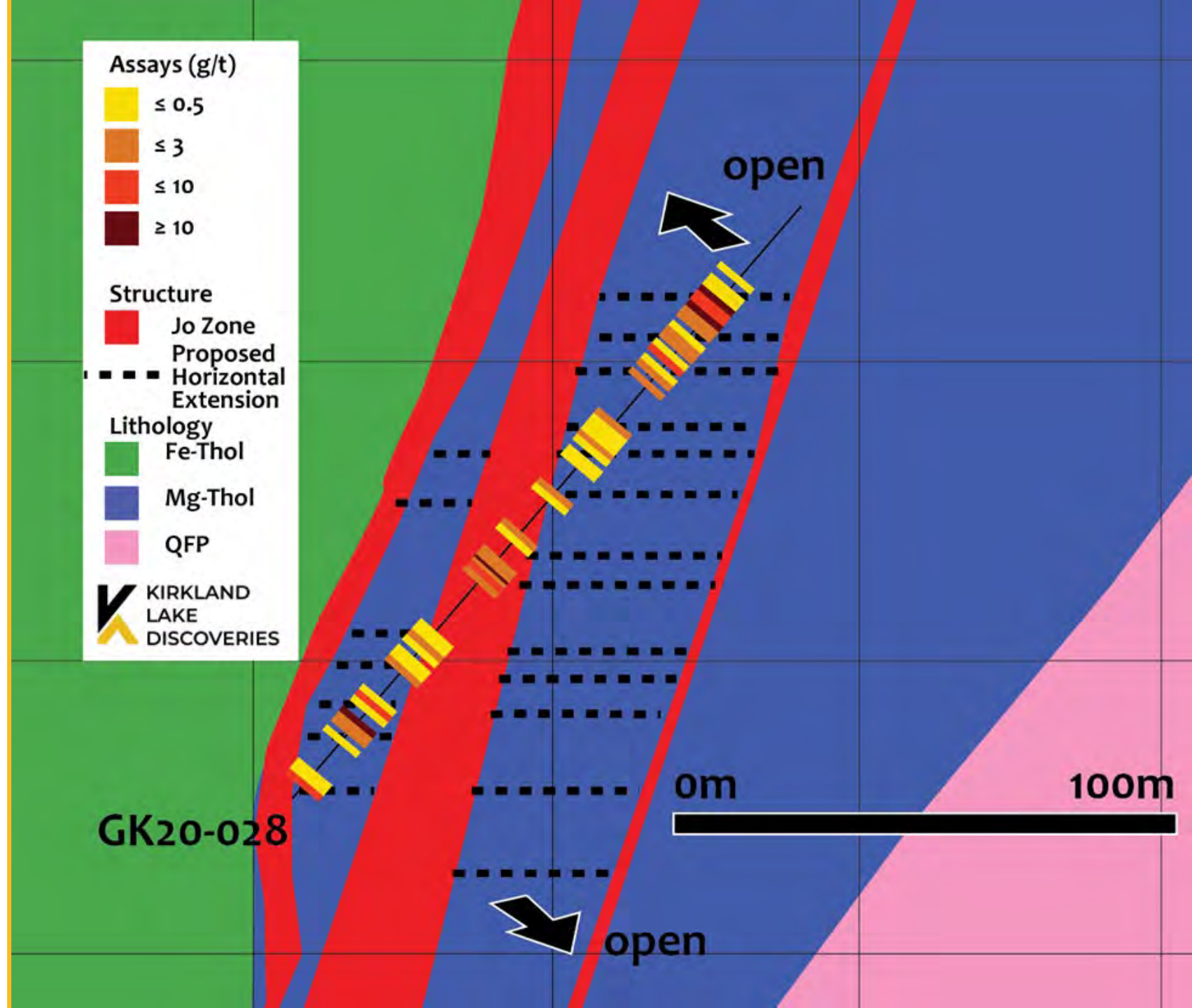
~1000m drill program to test **mineralized vein** at depth, **IP anomalies**, elevated soil anomalies, and multiple intersecting structures



2024 DRILLING - JO ZONE FOOTWALL

Hole GK20-028 from a 2020 drill program intersected **1.22 g/t Au over 74 m** starting at **87 m** depth. This near surface intersection lies in the footwall to the Jo Zone and is interpreted to be an **extensional vein system**

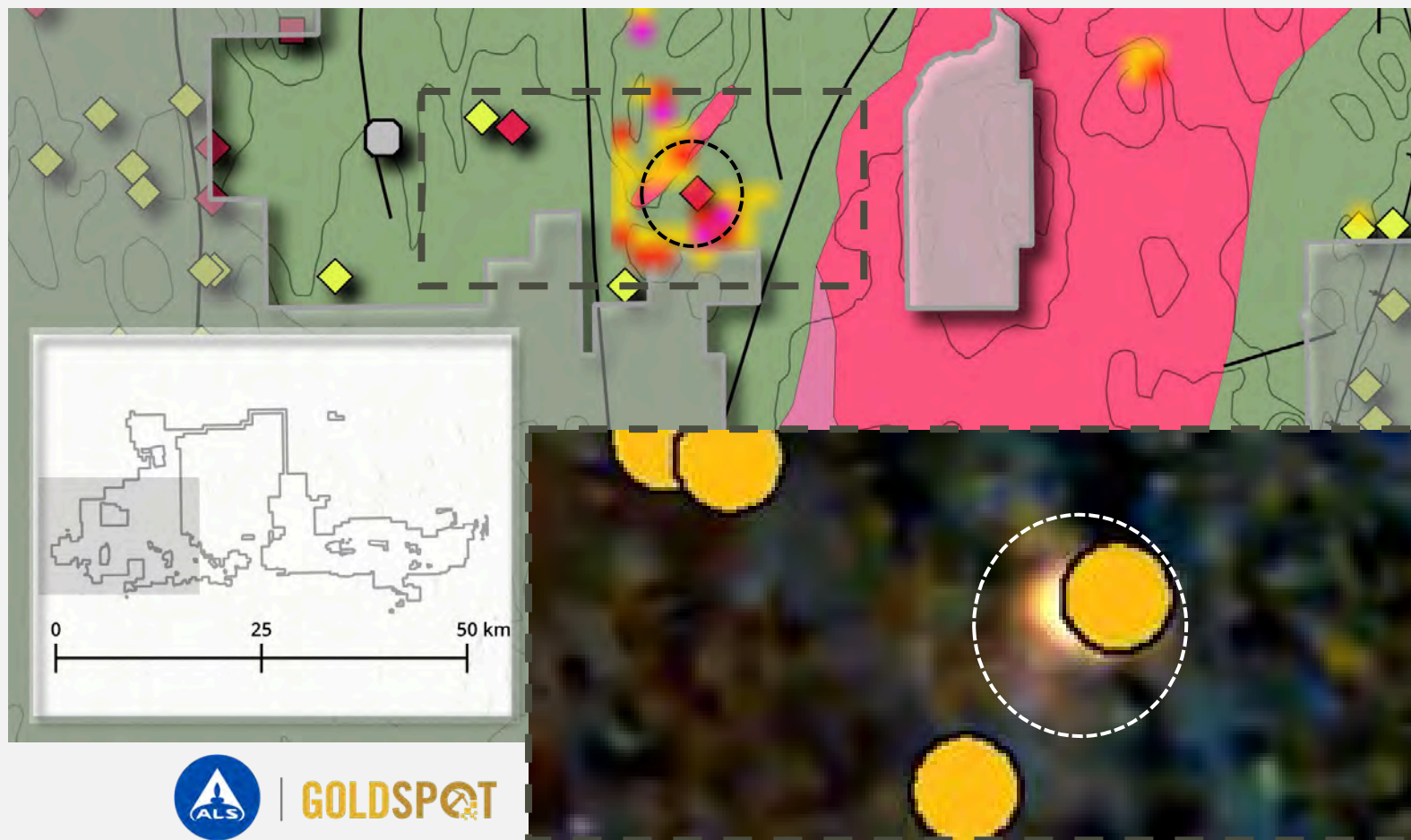
~**500m** drill program to test designed to investigate this **gold mineralization** along **strike** and at **depth**.



ANOMALY DETECTION USING AI AND HUMAN EXPERTS

Preliminary analysis of existing electromagnetic (EM) data shows a correlation of **chargeability highs** with elevated VMS prospectivity from initial soil analysis

ALS GoldSpot will conduct anomaly pattern detection and matching on over **7,000-line km of EM data**. When combined with further analysis of soil data, magnetics and bedrock mapping will provide drill targets for 2025 drilling



2024 EXPLORATION SUMMARY

COMPLETED WORK



Mapping, sampling & prospecting

- Over **750 samples** taken
- Over **450 km** of ground traversed



Property-wide soil sampling program complete

- Over **6,000 samples** taken
- Infill and extension grids completed



Follow-up on prospective hot spots with **boots-on-the-ground mapping and prospecting**



UPCOMING CATALYSTS



In-depth soil geochemistry analysis and targeting



ALS GoldSpot conductor analysis for targeting using **machine learning** and human experts using **EM, Mag, soil, and bedrock mapping** data



~ 1,500m Drilling at **Hargreaves and Jo Zone Footwall**

KLDC TREASURE HUNT: A JOURNEY TO DISCOVERY

- **Behind-the-Scenes Access:** Follow our journey as we unearth hidden potential—capturing every step, from fieldwork to drilling, through dynamic updates.
- **Join the Hunt:** Weekly or bi-weekly videos will immerse you in the treasure hunt, revealing the highs, lows, and key decisions behind our discoveries.
- **Omniscient Storytelling:** Each update offers a complete narrative, breaking down why and how we make critical decisions along the way.
- **Engaging and Transparent:** Bite-sized content designed to inform, disclose, and entertain—experience the thrill of the hunt with KLDC as we chase our big discovery!



EXPERIENCED BOARD OF DIRECTORS



**Denis
Laviolette**

Non-Executive Chairman

Mr. Laviolette has over 15 years of experience in mining and capital markets; worked as a production and exploration geologist in Northern Ontario (Timmins, Kirkland Lake and Red Lake), Norway and Ghana. Later worked as a mining analyst with Pinetree Capital. Founder, Director and Executive Chairman of EarthLabs Inc. (formerly GoldSpot Discoveries Corp.) (TSX.V: SPOT); Co-Founder, Director and President of New Found Gold Corp. (TSX.V: NFG); and serves as a Director for Xtra-Gold Resources Corp. (TSE: XTG) and Radio Fuels Energy Corp. (CNSX: CAKE).



**Gary
Nassif**

Director

Mr. Nassif is a professional geologist with 30+ years' experience in gold, base-metal and diamond exploration in Canada, United States and sub-Saharan Africa. He is the former Senior Vice President of Jerritt Canyon Gold, previously privately owned by Sprott Mining Inc. and recently acquired by First Majestic Silver Corp. He is also President & CEO of Argentum Silver Corp., a TSX-V listed explorer, and a director of Inventus Mining. He was previously Manager of Exploration Services for Kerr Mines, Northern Gold Mining, and Trelawney Mining & Exploration prior to its sale to IAMGOLD for \$608 million in 2012.



**Christina
McCarthy**

Director

Ms. McCarthy is a geologist with over 15 years of experience in the resource capital markets. Ms. McCarthy is the former President and CEO of Paycore Minerals Inc., recently acquired by i-80 Gold Corp for \$90 million. She previously held the position of Vice President of Corporate Development for New Operu Resources Inc., which was acquired by Anacortes Mining Corp. in 2021. Ms. McCarthy served as Director of Corporate Development for McEwen Mining from 2014 to 2019. She spent the past 15 years in various roles, including management and board roles, equity research at Euro Pacific, and Institutional Sales at Haywood Securities, as well as building an exempt market dealer focusing on resources.



**Vincent
Dubé-Bourgeois**

Director

Vincent Dubé-Bourgeois is Co-Founder and President of EarthLabs Inc. and a board member at Harfang Exploration Inc. Under his leadership, EarthLabs sold the ExplorTech Division, including GoldSpot Discoveries, to ALS Limited for \$30 million. In 2015, at the Integra Gold Rush Challenge, Mr. Dubé-Bourgeois combined his machine learning and geology expertise to lead his team successfully to a share of the \$1 million prize. Mr. Dubé-Bourgeois was previously with the Ontario Geological Survey and Noront Resources Ltd. He holds a BSc in Geology from the University of Ottawa and is recognized for innovative contributions to data science and geoscience, particularly in mineral exploration.



PASSIONATE AND DISCOVERY-FOCUSED TEAM



Management

Stefan Sklepowicz
CEO

Natalia Samartseva
CFO

Technical Team

Mike Kilbourne
Senior Project
Geologist

Drake Hyden
Senior Project
Geologist

Bill Doerner
Geophysical
Advisor

Danièle Spethmann
Technical Advisor
Founder



CAPITAL STRUCTURE



88.6M

Shares Outstanding

\$4.3M

Market cap @ \$.05

8.62M

Options

32M

Warrants | avg. \$.39

Insiders

EARTHLABS

High Net Worth and Retail



Eric Sprott



\$750K

Working Capital



Kirklandlakediscoveries.com

FOR MORE INFORMATION

TSX-V: KLDC | US-OTC: KCLKF

STEFAN SKLEPOWICZ

Chief Executive Officer

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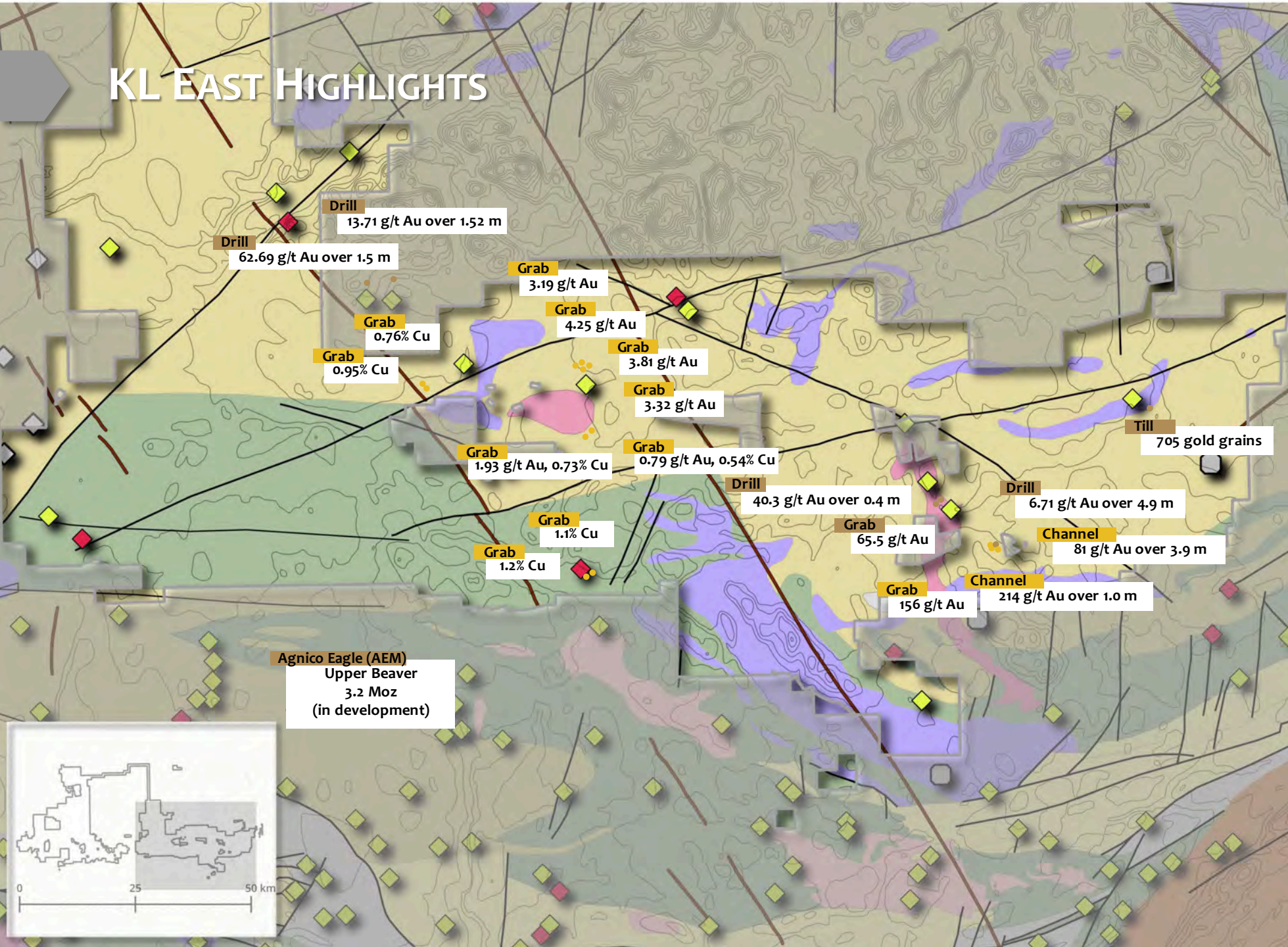
KL EAST HIGHLIGHTS

Mineral Occurrences

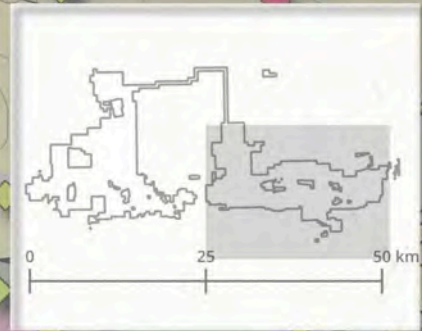
- Gold 
- Copper (Intrusion Related) 
- Polymetallic VMS 
- Kimberlite 

Ontario Geological Survey Data

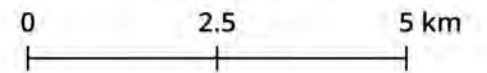
- Dike 
- Interpreted Fault 
- Syenite to monzonite 
- Foliated tonalite suite 
- Mafic and ultramafic rocks 
- Coarse clastic metasedimentary rocks 
- Metasedimentary rocks 
- Felsic to intermediate metavolcanic rocks 
- Mafic to intermediate metavolcanic rocks 



Agnico Eagle (AEM)
Upper Beaver
3.2 Moz
(in development)



NAD83 Zone 17N



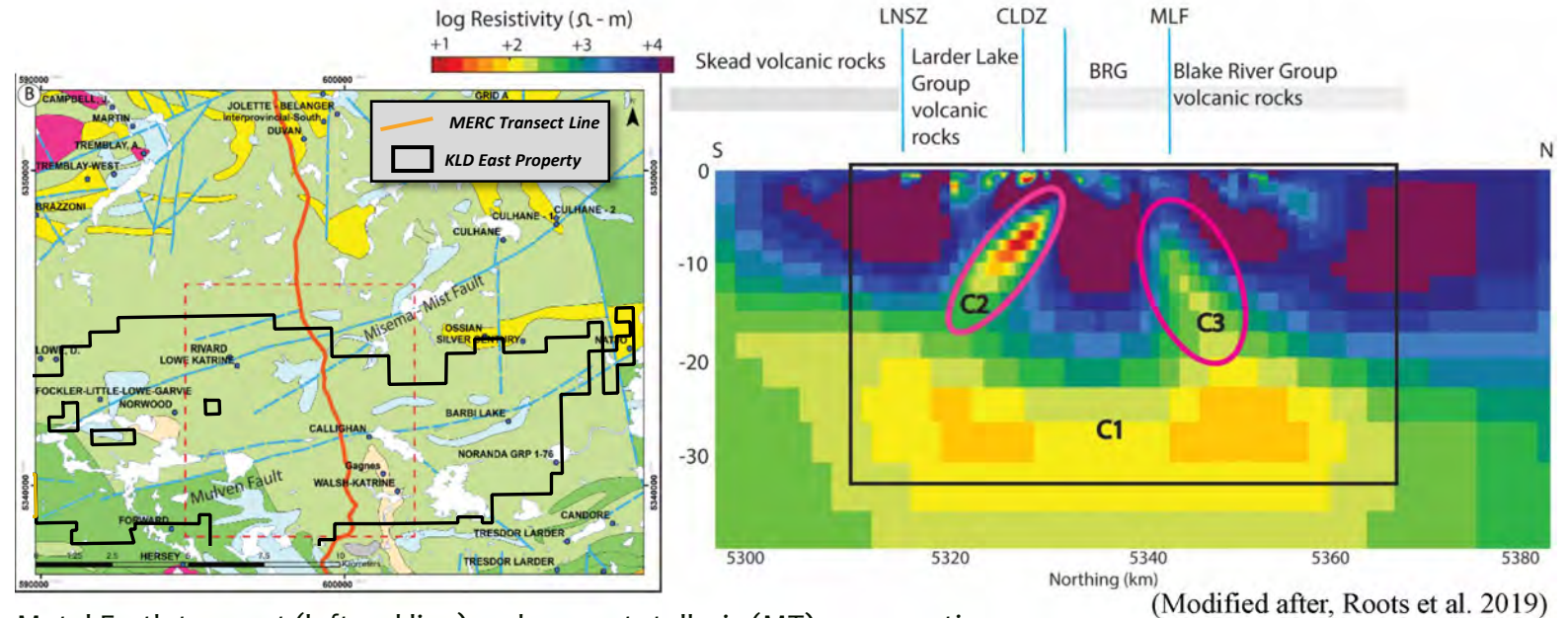
DEEP-SEATED FAULT STRUCTURES AND EXPLORATION ON KL EAST

The **MERC Metal Earth study** revealed that the **Mulven** and **Misema Lake Faults** are deep-seated, similar to the **Cadillac-Larder Lake Fault**.

Deep-seated faults are key conduits for gold-bearing fluids, increasing the potential for major mineralization.

On the **east side of the property**, these faults intersect highly prospective geology, making them prime targets for **orogenic gold** and **intrusion-related deposits**.

Our exploration focuses on testing these fault intersections, where mineralization is most likely to concentrate.



Metal Earth transect (left red line) and magnetotelluric (MT) cross-section (right) of the Larder Lake transect in the Abitibi greenstone belt. LNSZ Lincoln Nipissing Shear Zone; CLDZ Cadillac Larder deformation zone; BRG Blake River Group; MLF Mulven/Misema Lake fault.

(Modified after, Roots et al. 2019)

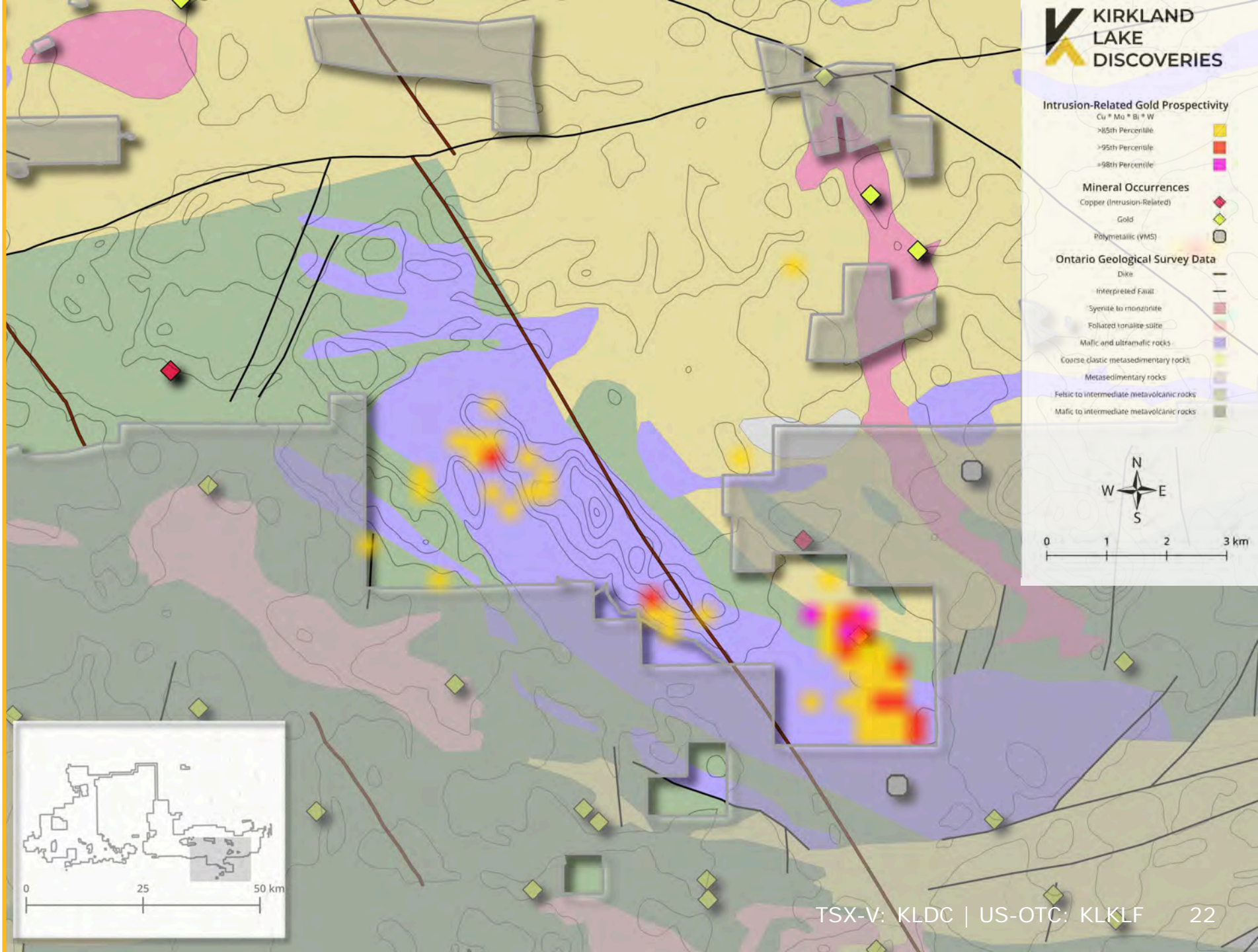


PROSPECTIVITY HEAT MAP DEMONSTRATING INTRUSION- RELATED GOLD ON KL EAST

High prospectivity for **intrusion-related gold systems**, characterized by elevated levels of **bismuth (Bi), copper (Cu), molybdenum (Mo), and tungsten (W)**.

The hot spots are particularly significant due to their proximity to **mafic intrusions**, often associated with mineralization.

The margins of these intrusions are key targets for potential discoveries. The geological team will conduct **ground-truthing** to further assess their significance and refine exploration efforts.



TWL-89-01

**2.6 % Cu, 2.8% Zn, 17.1 g/t Ag
& 1.03 g/t Au over 22.5 m**



0 500 1,000 m

Historic drilling at the Winnie Lake showing intersected significant mineralization, indicating the potential for a robust gold-rich polymetallic VMS system.

Highlights of Intercepts include:

- 22.25 - 22.95 m: Massive sulphides with 70% pyrite (Py), 20% sphalerite (Sph), and 5% chalcopyrite (Cpy) returned grades of 1.65 g/t Au, 23.66 g/t Ag, 2.44% Cu, and 6.96% Zn.
- 34.39 - 36.99 m: Net-textured and silicified andesite with disseminated sulphides and 30% chalcopyrite, assaying 2.47 g/t Au, 34.29 g/t Ag, and 6.20% Cu.

The mineralization is hosted within **silicified and chloritized andesite** and lapilli tuff, typical of VMS systems. High concentrations of **pyrite, chalcopyrite, and sphalerite** are present. Extensive **silica, chlorite, localized epidote alteration, and quartz-carbonate veining** indicate hydrothermal activity critical to VMS formation.