Dotted Lake: 3D Inversion Modelling of Targets Commissioned

written by Raj Shah | July 10, 2024

July 10, 2024 (Source) – Panther Metals PLC (LSE:PALM) the company focused on developing critical minerals projects in Ontario, Canada is pleased to announce the appointment of Abitibi Geophysics Ltd. ("Abitibi") a well-respected Canada headquartered international geophysical survey company, to provide geophysical modelling services for Panther's Dotted Lake Project located upon the North Limb of the Schreiber-Helmo Greenstone Belt, Ontario.

In advance of a planned ground geophysical survey Abitibi have been retained to undertake three-dimensional (3D) inversion modelling of the airborne high-resolution magnetic and time-domain electromagnetic ("TDEM") geophysical data resulting from the Prospectair Geosurvey Inc ("Prospectair") survey flown for Panther in 2020 [1].

Abitibi will be undertaking 3D Inversion Modelling and advanced processing (CET Grid Analysis) of the magnetics data as well as 3D conductive plate modelling of the TDEM data.

The Abitibi Deliverables will include: complete digital files; colour levels maps of the magnetics data inversion at 3 depths of the total magnetic intensity (TMI) reduced to the pole and its derivatives (1st vertical derivative, analytic signal, tilt; colour maps of the frequency migration of the EM responses into early, mid, and late times and of the energy envelope; maps of the recommended targets, conductors, magnetic trends, and interpreted structures; maps of the structural analyses and

predictive targeting; and ground geophysics follow-up and drilling recommendations.

Whilst the Abitibi work will include the entire Dotted Lake Project area, the focus of the work will be the eastern side of the project where Panther has delineated a 4.2 km long trend of high priority soil geochemical and geophysical anomalies in association with the Dotted Lake ultramafic intrusion. The soil geochemistry in this area shows very anomalous levels of multiple elements including nickel (up to 614ppm Ni), cobalt (214 ppm Co),copper (up to 861 ppm Cu) and zinc (128 ppm Zn). See Figures 1, 2, 3 and 4 below for additional context.

Darren Hazelwood, CEO, commented:

"We are now vectoring into our drill targets on possibly the most exciting undrilled geological target area in Ontario based on the successes by GT Resources on the Tyko zone to our east.

The geological model developed and executed by GT Resources won the company discovery of year for Ontario in 2020 and the north shore of Dotted Lake shows every element required for a discovery based on that model.

The quantity, abundance and grade of copper, nickel and cobalt in soils is exceptional, allowing me to remove the usual caution expressed in greenfield exploration and say it would be a huge disappoint, when factoring in all the knowns into our programme, not to make a discovery in this area.

I look forward to updating the market on our next steps once this data has been processed."

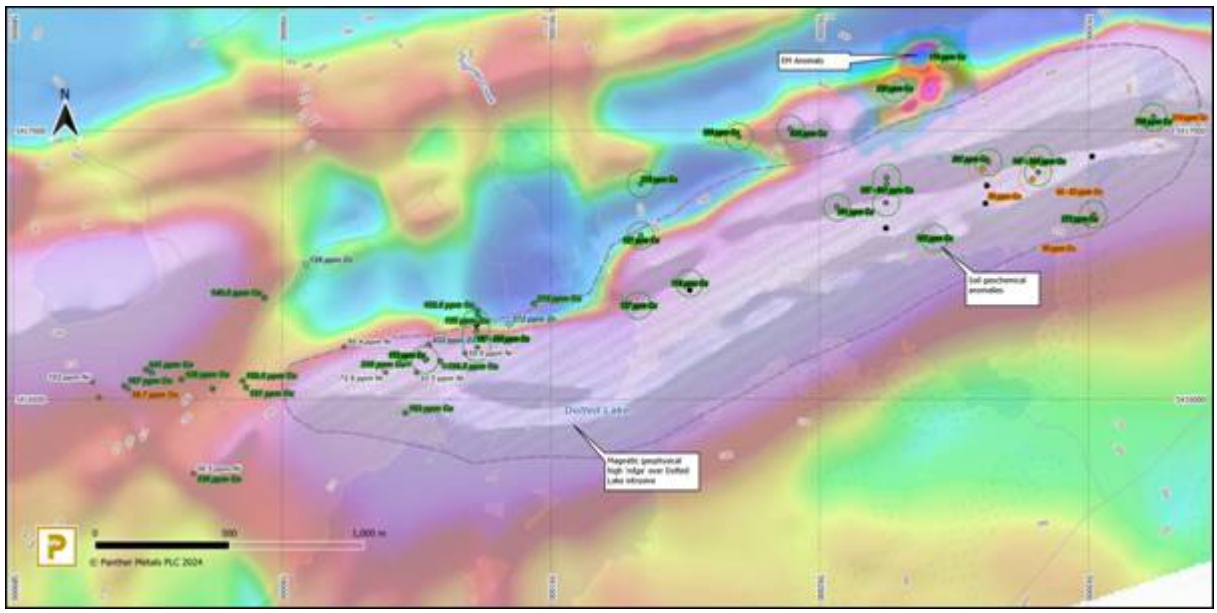


Figure 1: Map Showing Highly Anomalous Soil Geochemical Results over Airbourne Total Magnetic Intensity Magnetics and Electromagnetic Imagery

Dotted Lake Airbourne Geophysics Survey Details

Canadian airborne geophysics survey company Prospectair flew the 818 line-km survey utilising helicopter-borne sensors over a series of seven flights conducted between 9th -11th December 2020. A total of 138 geophysical anomalies were identified by the survey [1].

The survey was flown with traverse lines at 50m spacing and control lines spaced every 500m. The survey lines were oriented 162degN with control lines oriented perpendicular to traverse lines. The nominal flying height aimed by the pilot was 85m, but the active topography resulted in the average helicopter height above ground of 86m, with the mag sensor and receiver coil at 61m, and the transmitter loop at 36m above the ground. The average survey flying speed (calculated equivalent ground speed) was 31.1m/s.

Dotted Lake Project Background: Critical Mineral Potential

· Total Area: 36.9 km^2

· Prospective for: Base Metals (Nickel, Cobalt, Copper, Zinc) and Precious Metals (gold, silver, and Platinum Group Metals)

· Significant Neighbours: Barrick Gold (Hemlo Mine) to south, GT Resources (TSXV: GT) (Glencore 16.7% stake) to east.

The Dotted Lake Project encompasses a substantial 36.9 km^2 within the North Limb of the Schreiber-Helmo Greenstone Belt, situated 16 km north of Barrick Gold's Hemlo Gold Mine which has produced over 22 Moz of gold over 30 years to date and 9 km from GT Resources recent discovery at West Pickle Lake. The area is considered very prospective for ultramafic intrusive related nickel and base metal mineralisation as well as gold.

The Dotted area has undergone Panther's airborne electromagnetic and magnetics geophysics survey, extensive soil sampling and stratigraphic drilling, laying the groundwork for potential discoveries.



Figure 2: Location of the Dotted Lake Project, East of Thunder Bay, Ontario, Canada

Panther Metals acquired 100% of the Dotted Lake Project in July 2020. An extensive soil programme conducted in 2021 identified numerous gold and base metal targets, all within the same geological footprint as Hemlo. Following the reopening of a historical trail providing direct access to the target location, an initial drilling programme in the autumn of 2021 confirmed the presence of gold mineralisation within this system with anomalous gold continuing along strike and present within the surrounding area.

Dotted Lake sits upon 2.7 billion year old, Archaean age, rocks that form the north-eastern ‘Dotted Lake Arm’ of the Schreiber-Hemlo Greenstone Belt. Geology consists sequences of foliated, fine grained, dark green, amphibole rich metavolcanic rocks

situated within an east-northeast trending isoclinal syncline. The metavolcanics have been intruded by granitoid rocks of the Dotted Lake Batholith in the southeast of the property whilst In the northeast an ultramafic intrusive complex flanks the two.

On 22 February 2021, Panther Metals announced the receipt of the processed high-resolution Airborne TDEM and Mag geophysics survey data and associated maps and report over the Dotted Lake Property on the north limb of the Schreiber-Hemlo greenstone belt in Ontario, Canada. Prospectair Geosurveys had conducted the helicopter 818 line-km survey over a series of seven flights between 9-11 December 2020. A total of 138 geophysical anomalies were identified by the survey, with high priority anomalies prioritised for follow-up ground investigation.

In June 2021, Panther Metals contracted the experienced Thunder Bay based Fladgate Exploration Consulting Corporation to commence a soil geochemistry sampling programme over a 1.60km by 0.85km target area coinciding with the Dotted Lake Exploration Permit area. The soil geochemistry survey was designed to build out and in-fill the westerly strike extensions of high grade gold mineralisation intersected by historical trenching undertaken by a previous licence holder in 2010 (Tr-10-4) and as confirmed during Panther Metals’ reconnaissance sampling (gold up to 18.9g/t Au) announced 5 November 2020. The soil survey provided important geochemical coverage of target structures outlined by Panther’s airborne geophysical survey.



Figure 3: Dotted Lake Geochemical Soil Sampling Anomalies

The Dotted Lake soil sampling survey results became available in early November 2021, the 480 sample survey data delineated a 1.3km long shear-related gold anomaly striking westward from the site of Panther's Dotted Lake drill hole. Other structural features were identified for a total of 18 multi-element anomalies which may provide exploration vectors towards deposits.

Nickel and Cobalt Targets

In September 2022 Panther digitised historical exploration data in conjunction with the airborne and soil survey data. This work defined a new area, in the northeast of the Dotted Lake property, which is considered very prospective zone for nickel (Ni) mineralisation (the "Ni Target") and which is underlain by an ultramafic intrusive complex. Panther has digitised historical geochemical soil survey report data based on work undertaken by Clear Mines Ltd in August 1983 (the "Clear Mines Survey"). These results show a 2.8km long linear broadly east-west striking zone of elevated nickel in soil coinciding with a

mapped ultramafic / gabbro intrusive unit and a distinct geophysical anomaly.

The Clear Mines Survey consisted of 577 soil samples analysed for 27 elements, collected on a series of north-south lines directly to the east of the Panther 2021 soil survey area. Nickel is elevated across the prospect area defined by highs ranging 137 – 235 ppm Ni and peaking at 614ppm Ni in the eastern end. Other soil anomalies across the Ni Target include cobalt (Co) up to 214 ppm Co and copper (Cu) up to 861 ppm Cu.

The western end of the ultramafic intrusive is shown on government mapping to lie beneath the lake, however the geophysics survey and the Panther soil survey data indicates that the intrusive rocks extend further to the west and may underlie the soil survey Anomaly A and Anomaly C as reported 9 November 2021.

Panther’s Ni Target is located 9km west of a new zone of massive nickel-copper sulphide mineralisation drilled by GT Resources (TSXV: GT) at their Tyko Project, West Pickle Lake joint venture property with First Class Metals (LSE:FCM).

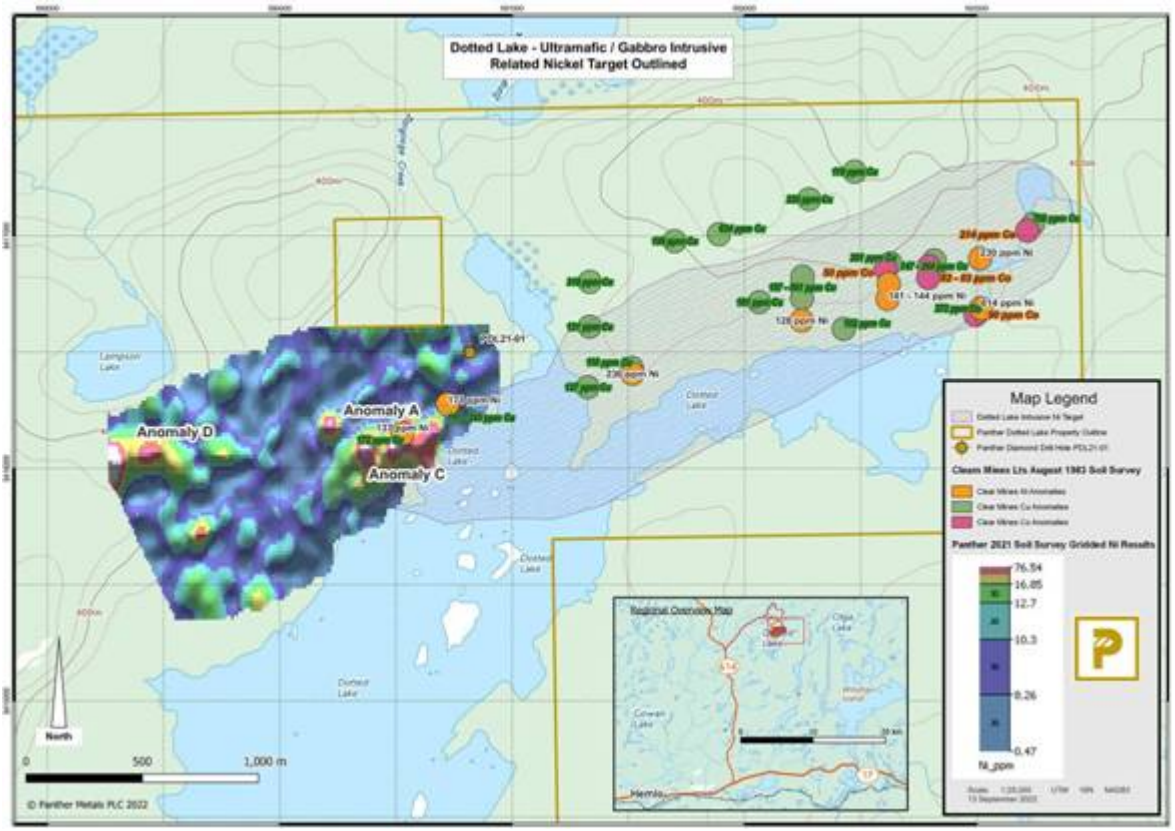


Figure 4: Panther Soil Nickel Results and Clear Mines Survey Historical Soil Assay Results

Reference

1 Company announcement dated 22 February 2021

(https://polaris.brighterir.com/public/panther_metals/news/rns/story/xpp329x)

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Notes to Editors

Panther Metals PLC is an exploration company listed on the main market of the London Stock Exchange. Panther is focussed on the discovery of commercially viable mineral deposits. The Company's operational focus is on established mining jurisdictions with the capacity for project scalability. Drill targets are assessed rapidly utilising a combination of advanced technologies and extensive geological data to decipher potential commercial viability and act accordingly. Panther's current geological portfolio comprises of three highly prospective properties in Ontario, Canada while the developing investment wing focuses on the targeting of nickel and gold in Australia.

Obonga Project

Panther Metals acquired the Obonga Greenstone Belt in July 2021 and have already identified five prospective primary targets: Wishbone, Awkward, Survey, Ottertooth and Silver Rim. A successful Phase 1 drilling campaign at Wishbone in Autumn 2021

revealed the presence of significant VMS-style mineralised systems on the property – the first such discovery across the entire greenstone belt. Intercepts include 27.3m of massive sulphide in hole one, and 51m of sulphide-dominated mineralisation in hole two. Both drill holes contained multiple lenses. Anomalous high-grade copper in lake sediment close to the target area has also been identified, increasing confidence in the prospectivity of the location.

Awkward is a highly anomalous magnetic target, interpreted to be a layered mafic intrusion and magmatic conduit based on mapped geology and airborne geophysics. Historic sampling in the area returned anomalous platinum and palladium (Pt, Pd) values, while historic drilling on the periphery of the target intersected non-assayed massive sulphide and copper (assumed to be chalcopyrite), non-assayed disseminated pyrite and chalcopyrite in coarse gabbro, and non-assayed 'marble cake' gabbro (matching the description of the Lac des Iles Mine varitexture gabbro ore zone).

Two additional named targets, Survey and Ottertooth, both displays further coincident magnetic and electromagnetic anomalies and are adjacent to the contact between intrusive and extrusive mafic rocks. Historic drilling at Survey intersected several meters of massive sulphides in multiple intersections (main parts of the anomaly remain untested) while Ottertooth remains untested in its entirety.

Dotted Lake Project

Panther Metals acquired the Dotted Lake Project in July 2020, it is situated approximately 16km from Barrick Gold's renowned Hemlo Gold Mine. An extensive soil programme conducted in 2021 identified numerous gold and base metal targets, all within the same geological footprint. Following the installation

of a new trail providing direct access to the target location, an initial drilling programme in Autumn 2021 confirmed the presence of gold mineralisation within this system with anomalous gold continuing along strike and present within the surrounding area.

Manitou Lakes Project

The Manitou Lakes gold project is located approximately 300km's east of Thunder Bay, Ontario and covers a total area of around 98sq km's.

There are over 200 known gold occurrences on the Manitou Lakes project area with the wider Eagle/Manitou Lakes greenstone belt hosting numerous historic gold producers and is prospective for Archean age orogenic gold and associated base metal deposits.

Exploration work conducted by Shear Gold on the Project to date has identified numerous gold bearing structures and favourable geological host rocks through early-stage mapping and surface sampling. The work has focussed on two target areas, being the West Limb Gold Property and the Glass Reef Gold Property, both of which host historic gold mines which have never been systematically explored using modern techniques or drill tested

Fulcrum Metals Plc

Fulcrum Metals PLC (LON: FMET) is an AIM listed exploration company which finances and manages exploration projects focused on Canada, widely recognised as a top mining jurisdiction.

FMET currently holds a beneficial 100% interest in highly prospective gold and base metals projects in Ontario and Uranium projects in Saskatchewan.

Fulcrum's strategy is to focus on discovery and commercialisation of its Projects through targeted exploration

programmes. The primary focus is to make an economic discovery on the flagship Schreiber-Hemlo Properties and establishing the prospectivity of its wider Ontario and Saskatchewan portfolio with a view to securing potential joint venture and/or acquisition interest.

Panther Metals Plc own 15% of the issued share capital of Fulcrum Metals Plc and a 2% NSR on the Big Bear project.

Panther Metals Australia

Following the listing of Panther Metals' Australian assets on the Australian Securities Exchange ("ASX") in December 2021. The ASX listing has provided the Australian projects with the necessary capital to advance drill-ready targets focused on nickel and gold (within the Tier 1 Mining Districts of Laverton WA and in the NT). Through this spin-out Panther holds an attractive investment prospect, without any disruption to the Company's capital structure and without any financial obligations.

Conclusion

Panther Metals understand that the commercial realities of building an exploration company requires expertise in geology, finance, and the markets within which they operate. The Company's extensive network of industry leaders allows it to meet these objectives. Ultimately however, drilling success is the only route to discovery: the fundamental objective of any exploration company. Once Panther's world-class geological team identify the anomalies, they work hard to get drilling. The drill hole is the only place where substantial and sustained capital growth originates and it's with that operational focus Panther Metals will continue to advance.

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