



MELROSE UPDATE: EM SURVEY HAS COMMENCED

EM Survey is targeting two high priority targets where magnetic inversion modelling defined two large anomalies lying directly below shallow historical air-core drill-holes which returned elevated levels of nickel and copper

Key Points

- Electromagnetic (EM) Survey has commenced - UTS Geophysics is surveying Cauldron's high-priority Targets, including Targets 01 and 04, where magnetic inversion modelling has defined large anomalies lying directly below shallow historical air-core drill-holes which returned elevated levels of nickel and copper, along with other Targets and areas of interest.
- Anomalous nickel and copper in mafic/ultramafic rocks as observed at Targets 01 to 04 including 339 ppm of cobalt and traces of platinum at Target 01 at Melrose. Nickel, copper, cobalt and platinum group elements were essential in the discovery by Chalice of the Gonneville Ni-Cu-PGE Deposit at its Julimar Project, which has become one of the largest ortho-magnetic nickel-copper-PGE sulphide deposits in the world.
- In total, Cauldron's EM Survey will cover 321-line kilometres, and aims to better define existing targets, and to help identify new targets for future drilling.
- Cauldron's Melrose Project lies near to the western margin of the Yilgarn Craton, ~125kms north of Julimar and ~15kms immediately south of Chalice's Barrabarra Project.
- Melrose Project covers an area of approximately 1,507 km² and is the largest contiguous Nickel-Copper-PGE prospective land-holding in the Barrabarra Greenstone Belt portion of the West Yilgarn Craton; and is on accessible private farmland, containing sealed road frontage where native title has been largely extinguished.
- This region of the West Yilgarn Craton is receiving increasing activity from various minerals explorers and is of increasing interest to investors.
- An EM Survey recently conducted by neighbour NickelX (ASX: NKL) at its Dalwallinu Project lying immediately east of Melrose, identified 'two very strong basement hosted anomalies' with the conductance 'consistent with massive sulphide mineralisation' according to NickelX, refer NKL ASX announcement of 25 May 2023.
- Cauldron is hoping to achieve similar or better results to that of NickelX.
- Cauldron's Melrose Recent successful site visits and consultation with landowners; highly supportive of the Cauldron future work plan.
- Survey expected to take approx. 10 days of flying time; initial results in early September.

Cauldron Energy Limited (**Cauldron** or the **Company**) (ASX: CXU) is pleased to provide this brief update on the **Melrose Project**.

As detailed above, the EM Survey has now commenced with the survey over Targets 01 to 04 as high priority targets together with a number of other targets identified from historical geochemical results and an airborne magnetic survey.

In total, the survey will consist of 321 line kilometres comprising 92E-W lines, spacing 150 metres N-S from each other (Figure 1).

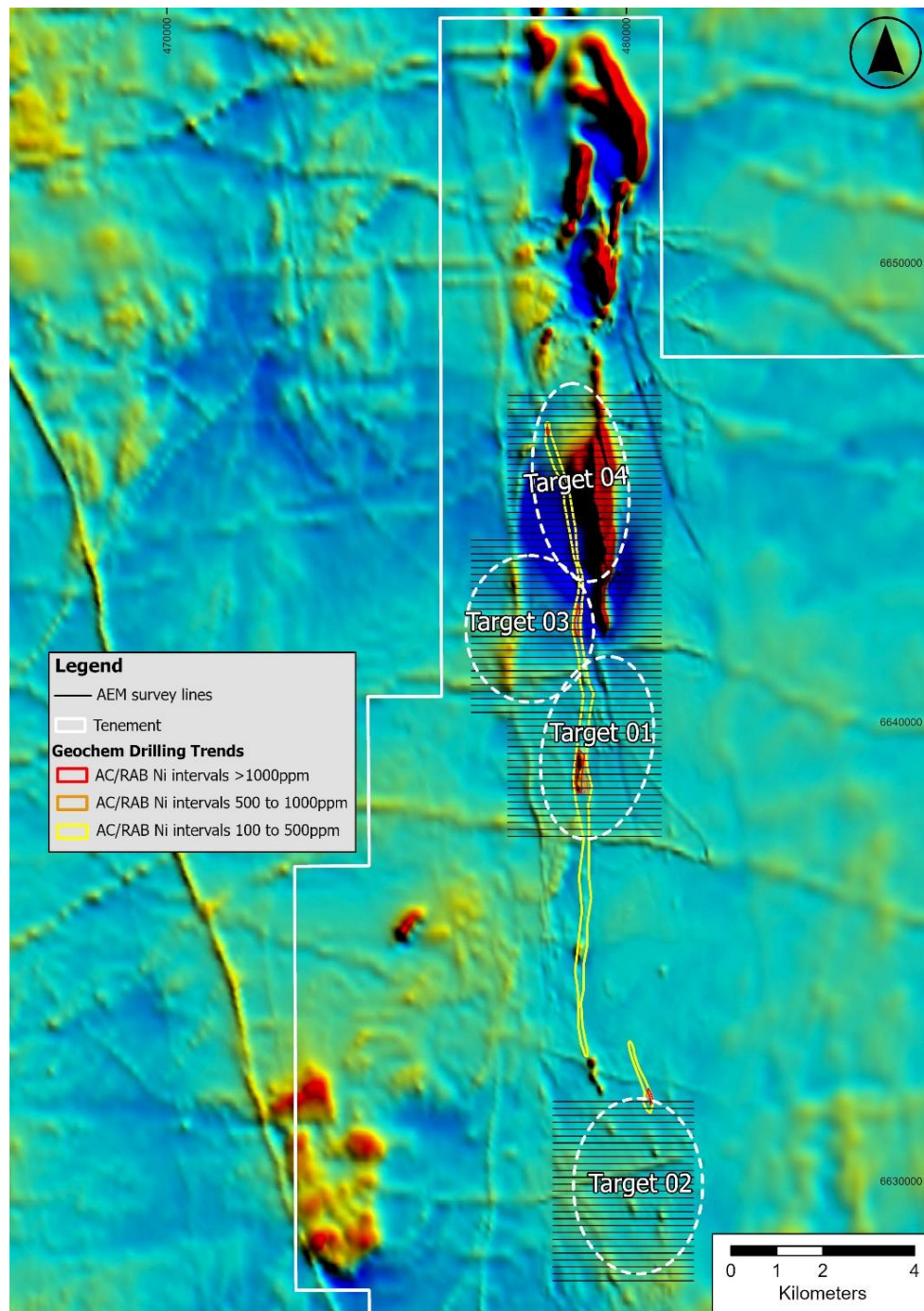


Figure 1: Planned AEM lines over targets

Target 01

Magnetic inversion modelling performed by Newexco Geophysics has implied the presence of a magnetic body at Target 01 (previously reported ASX: CXU 11 May 2023) (Figure 2).

The top of the magnetic body is interpreted to lie between 110m and 160m below surface, which is approximately 60m beneath historic shallow air-core holes, which returned elevated levels of nickel and copper including nickel grades of up to 0.47% (Figures 2 & 3).

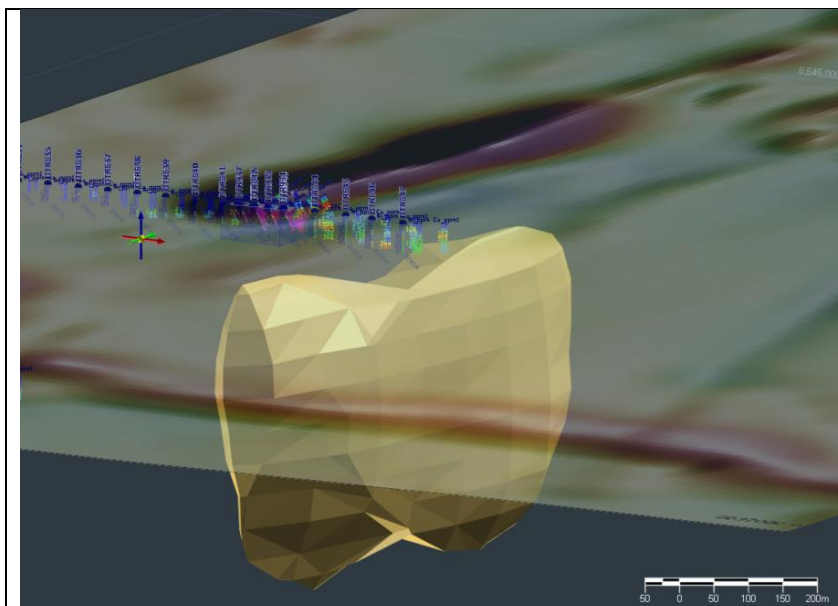


Figure 2: 3D view of the inverted magnetic anomaly at Target 01

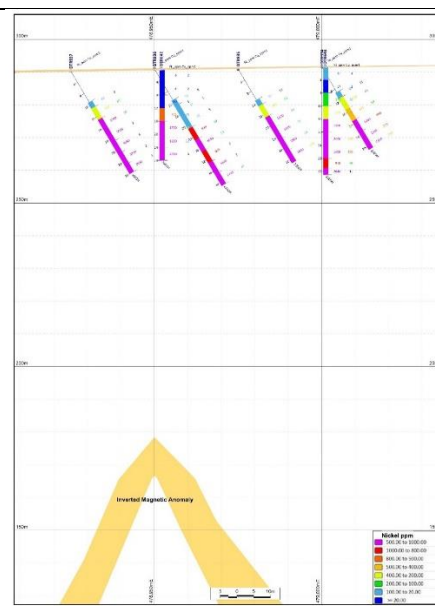


Figure 3. Cross-section 6638570m North showing anomalous nickel and copper air-core drill hole intervals in relation to the interpreted magnetic body

Target 04

Magnetic inversion modelling performed by Newexco Geophysics has modelled the presence of a magnetic body at Target 04 (refer ASX: CXU 11 May 2023) (Figure 4).

The top of the magnetic body is interpreted to lie at approximately 184 metres below surface, around 150 metres beneath historic shallow air-core holes, which returned elevated levels of copper (750ppm) and nickel (592ppm).

The alignment of the modelled magnetic body with the Ni and Cu geochemical anomaly and the interpreted mafic-ultramafic bedrock, provides the Company confidence to drill-test Target 04 at the earliest opportunity. The modelled magnetic body is at similar depth and strike to that at Target 01 (which was also coincident with anomalous drill results from historical shallow air-core drilling).

The magnetic inversion results for Target 04 are interpreted to be robust since several inversion models were run by Newexco, each yielding consistent susceptibilities and geometries.

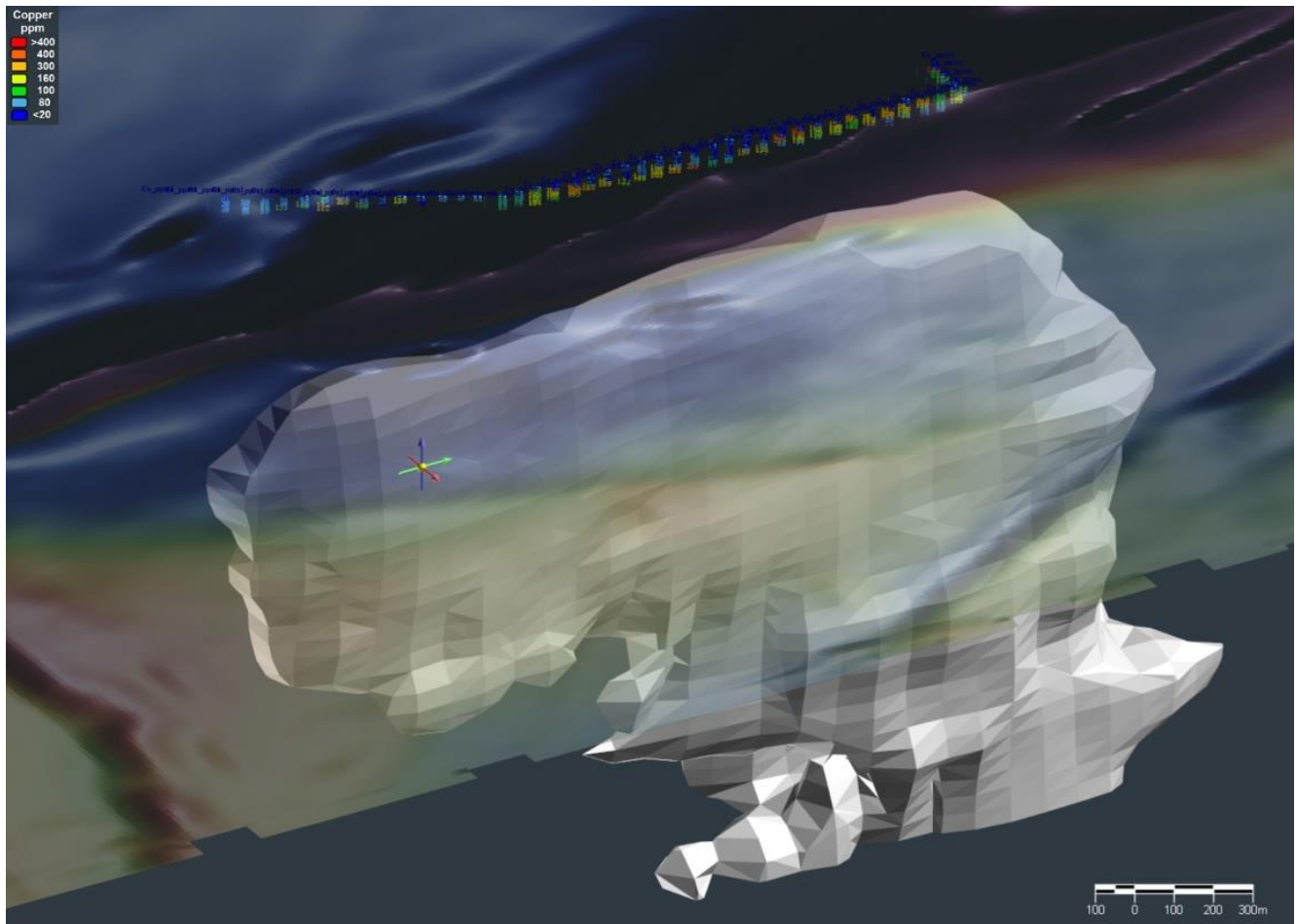


Figure 4: 3D view of the inverted magnetic anomaly at Target 04, including the air-core drill holes and original magnetic survey image before inversion (shaded).

Melrose Project – Background and New Tenements Granted

The Melrose Project is located in the Dalwallinu region of Western Australia, approximately 250 km north of Perth (Figure 5).



Figure 5: Location Map - Melrose Project

The Melrose Project covers an area of approximately 1,507 km² and comprises E70/6160 covering an area of ~169 km² and the area immediately west and south of E70/6160 covering a further area of ~1,338 km² (pegged by Cauldron; represented by Applications E70/6463, 6466, 6467, 6468 and 6469).

Of the areas pegged, two have recently been granted (E70/6467 and E70/6468), and three remain as tenement applications (E70/6463, 6466, and 6469).

Cauldron's Melrose Project is the largest contiguous Nickel-Copper-PGE prospective land-holding in the Barrabarra Greenstone Belt portion of the West Yilgarn Craton.

The Melrose Project area is 13 km south of Chalice's Barrabarra Ni-Cu-PGE project. Chalice have described Barrabarra as containing a ~15 km long unexplored interpreted mafic-ultramafic complex, with anomalous Ni-Cu in soils, and a similar geophysical signature to the Julimar Complex. Barrabarra is about 140 km north of Chalice's Julimar project.

Nickel X is another important player in the region, having identified two very strong EM conductors associated with magnetic anomalies that they plan to drill test soon. Both Chalice and Nickel X are targeting Julimar style Ni-Cu-PGE deposits in the region (Figure 6).

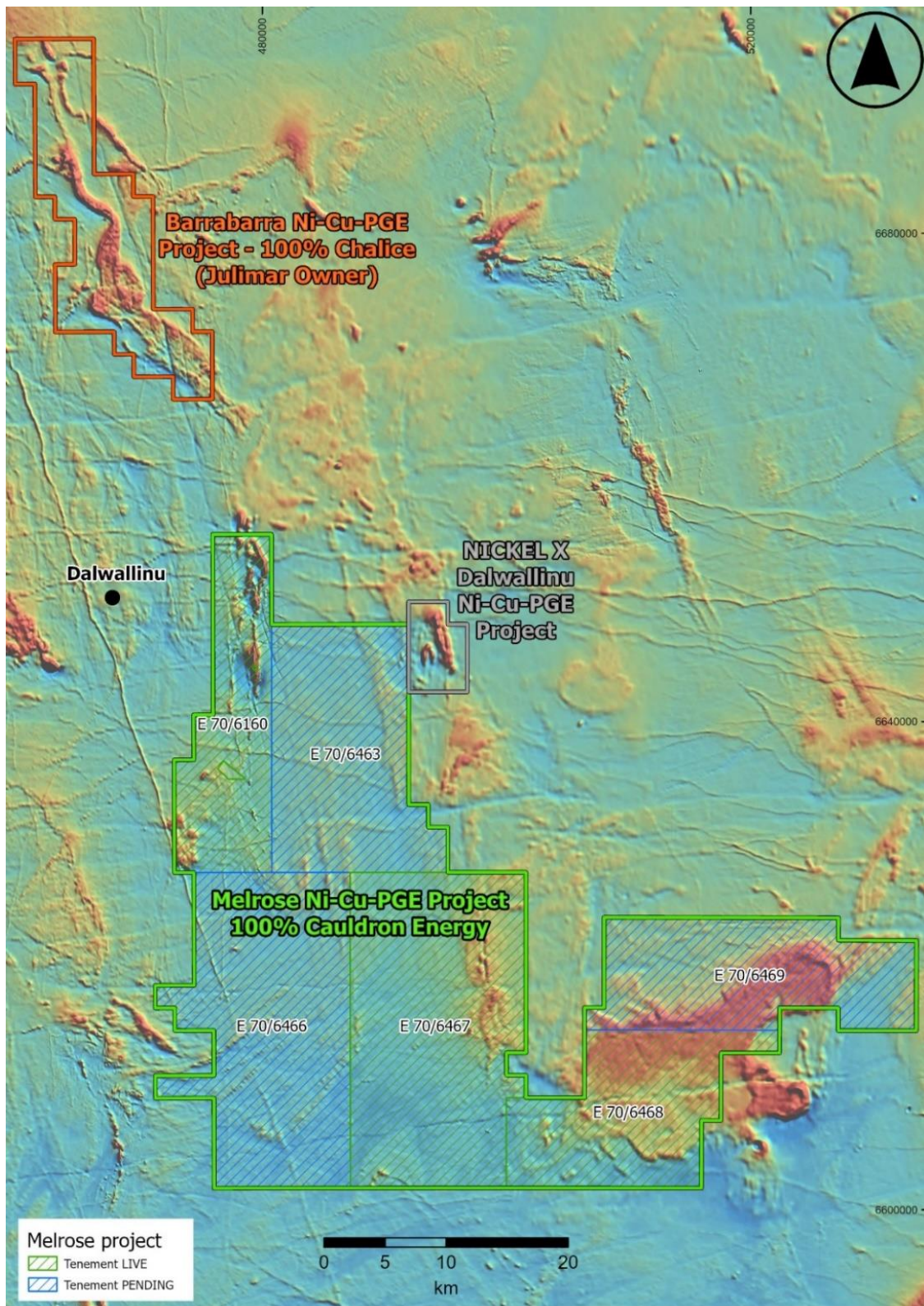


Figure 6: Melrose project - nearby projects over regional aeromagnetics

The Melrose Project area is also known to host historical gold production – at the Pithara gold deposit, discovered by IGO in 2005, which is excised from the Project tenements. In addition, Cauldron's technical team has undertaken a thorough review of the available historical information which has highlighted significant Ni results from first pass reconnaissance Air Core and RAB drilling undertaken by IGO in 2006 in the Project area.

IGO was the first company to undertake gold exploration over the area. IGO drilled ~496 shallow first pass air-core holes, 508 shallow first pass RAB holes, 11 RC holes and 1 diamond hole. Most of these holes were drilled at the Pithara prospect as the exploration focus was centred on the discovery of the Pithara gold deposit (excised area in the centre of the Tenement E70/6160, refer Figure 6).

After reviewing this historical data, Cauldron has delineated four (4) nickel (Ni) targets, with continuous drill hole intervals assaying from 0.10% to 0.47% Ni, sometimes with accompanying anomalous Cu or Au. (Figures 7 to 12). Since these are first pass reconnaissance drill results in shallow air core drilling, they are highly prospective, with levels similar to those that led to the discovery of other nickel deposits in WA.

Many other untested magnetic anomalies also exist in the Project and recently pegged areas, that could be related to Ni mineralisation.

High-Priority Nickel Targets identified from Historical Exploration

There are four high-priority nickel targets that CXU aims to test as soon as possible, which have been identified from historical air-core drilling geochemistry listed in order of nickel grades.

- Target 01: One line of previous Air Core drilling has been drilled across this target, which has a magnetic trend extending over 2km in length north-south and 300m east-west (Figures 5 & 6). Highly anomalous drill results included:
- 19m @ 0.32% Ni from 17m downhole, incl. 4m @ 0.41% from 25m (hole DTR937), and
 - 4m @ 0.47% Ni from 25m downhole (hole DTR936)
- Target 02: One previous hole (Figures 5 & 7) intersected:
- 12m @ 0.26% Ni from 32m downhole (hole DTR850)
- Target 03: Two parallel magnetic anomalies extending over 3km each north-south, with only the eastern one tested by previous Air Core drilling (Figures 5 & 8). Best results were:
- 3m @ 0.19% Ni from 42m downhole (hole DTR931), and
 - 2m @ 203 ppb Au from 36m downhole (hole DTR466)
- Target 04: A large and complex magnetic anomaly (Figures 5 & 9) extending over 3km with anomalous previous drill results:
- 2m @ 0.13% Ni and 213 ppm Cu from 36m downhole (hole DTR466)
 - 8m @ 536 ppm Ni from 36m downhole (hole DTR417), and
 - 2m @ 749 ppm Cu from 48m downhole (hole DTR407)

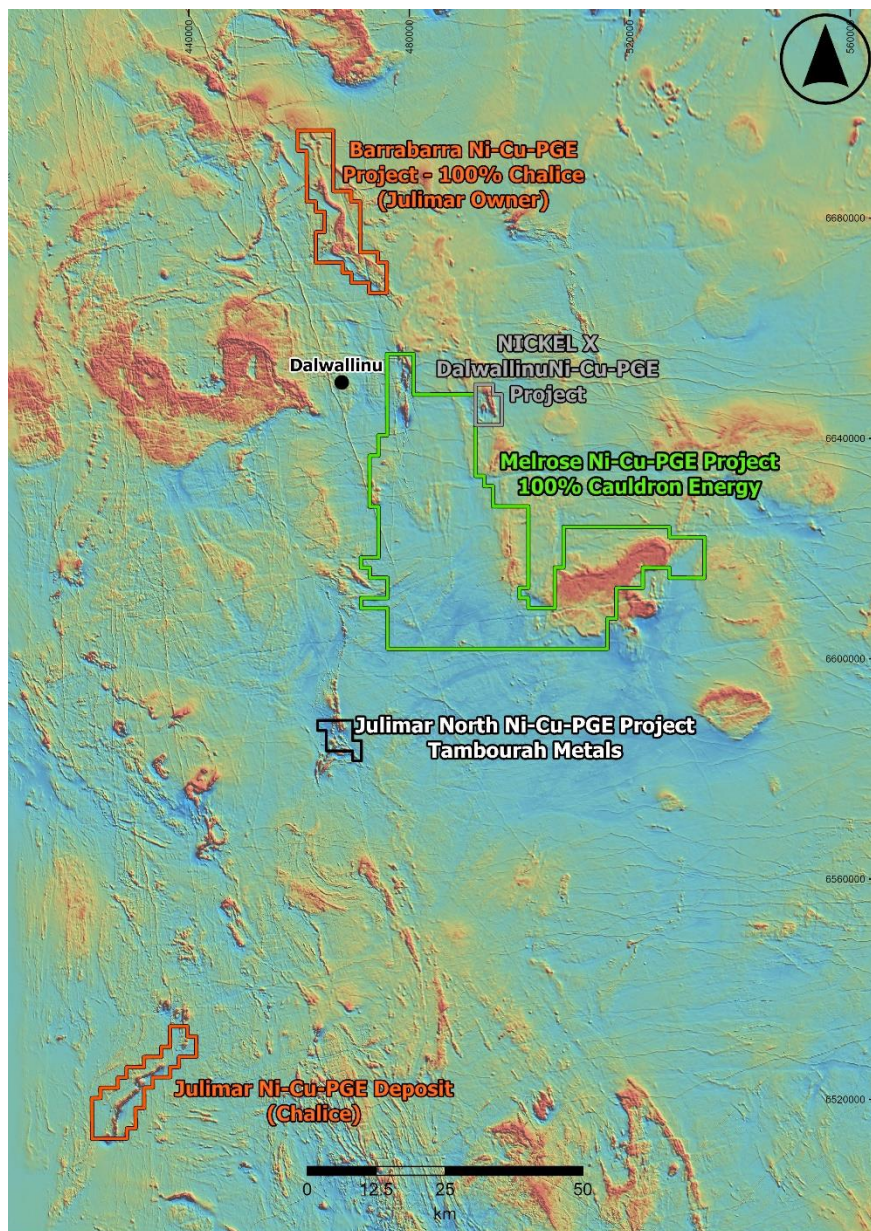


Figure 7: Main explorers in the West Yilgarn Ni-Cu-PGE province

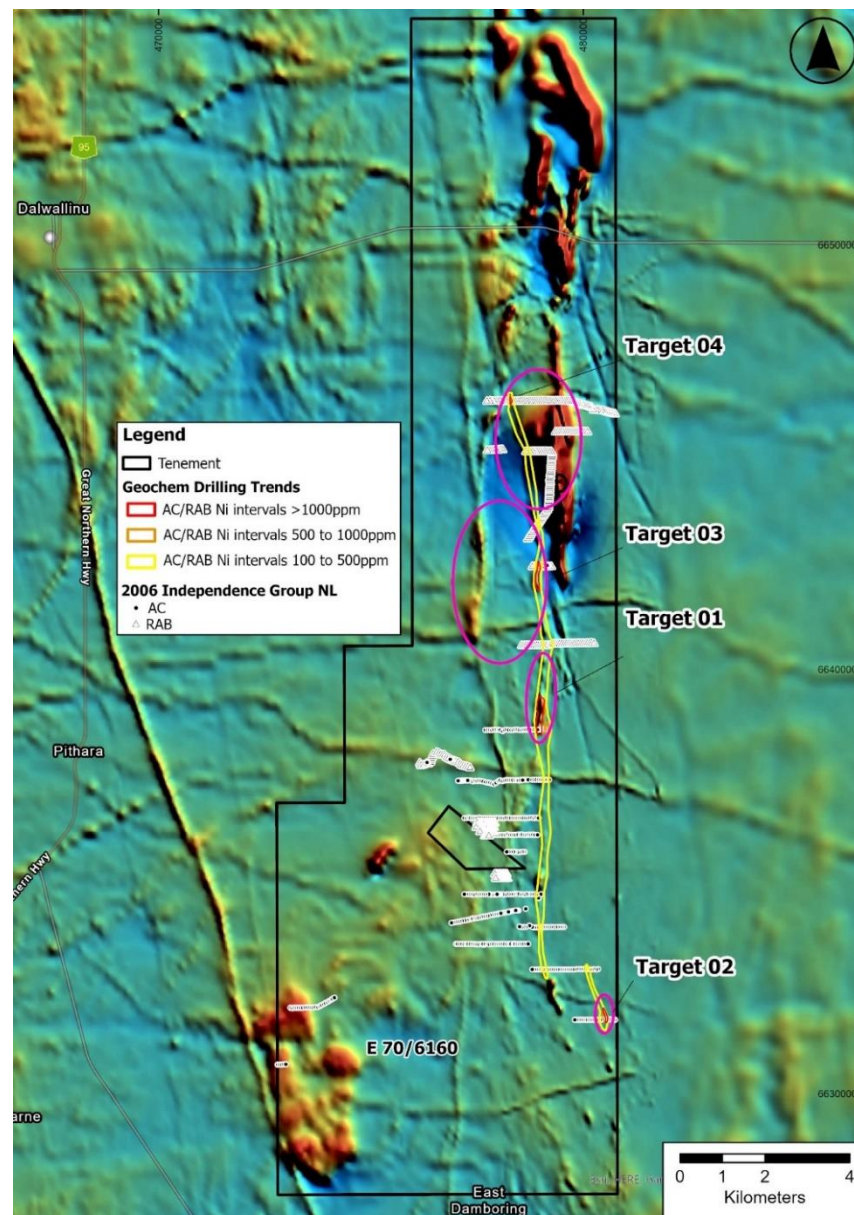


Figure 8: Melrose Project nickel targets

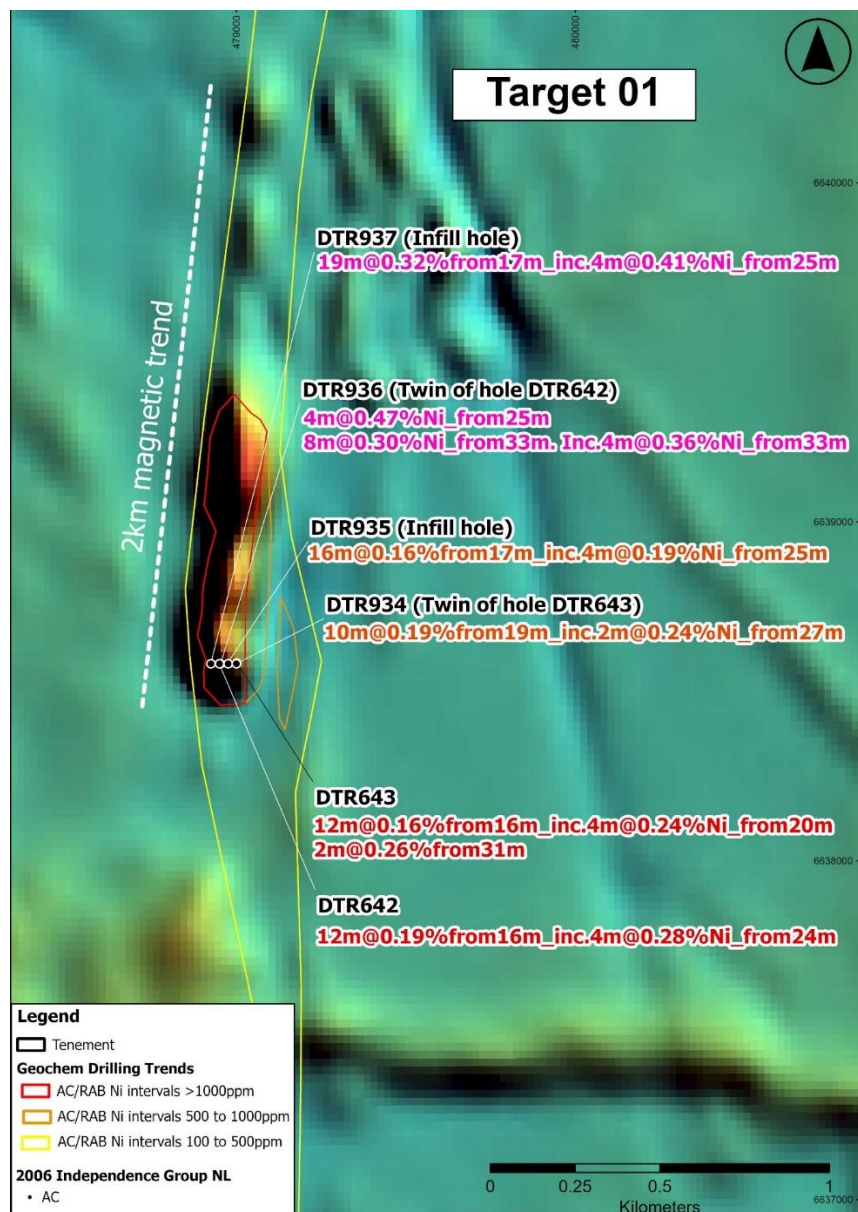


Figure 9: Target 01 details

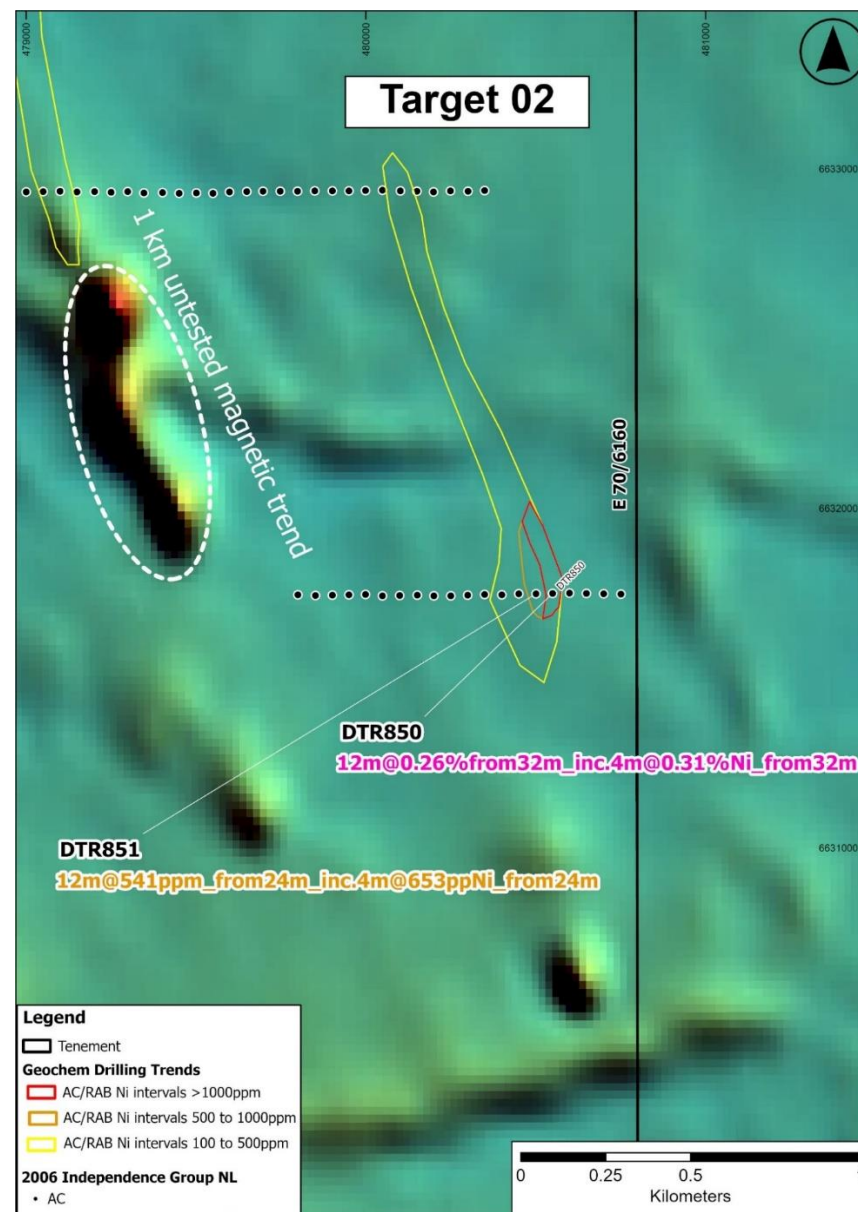


Figure 10: Target 02 details

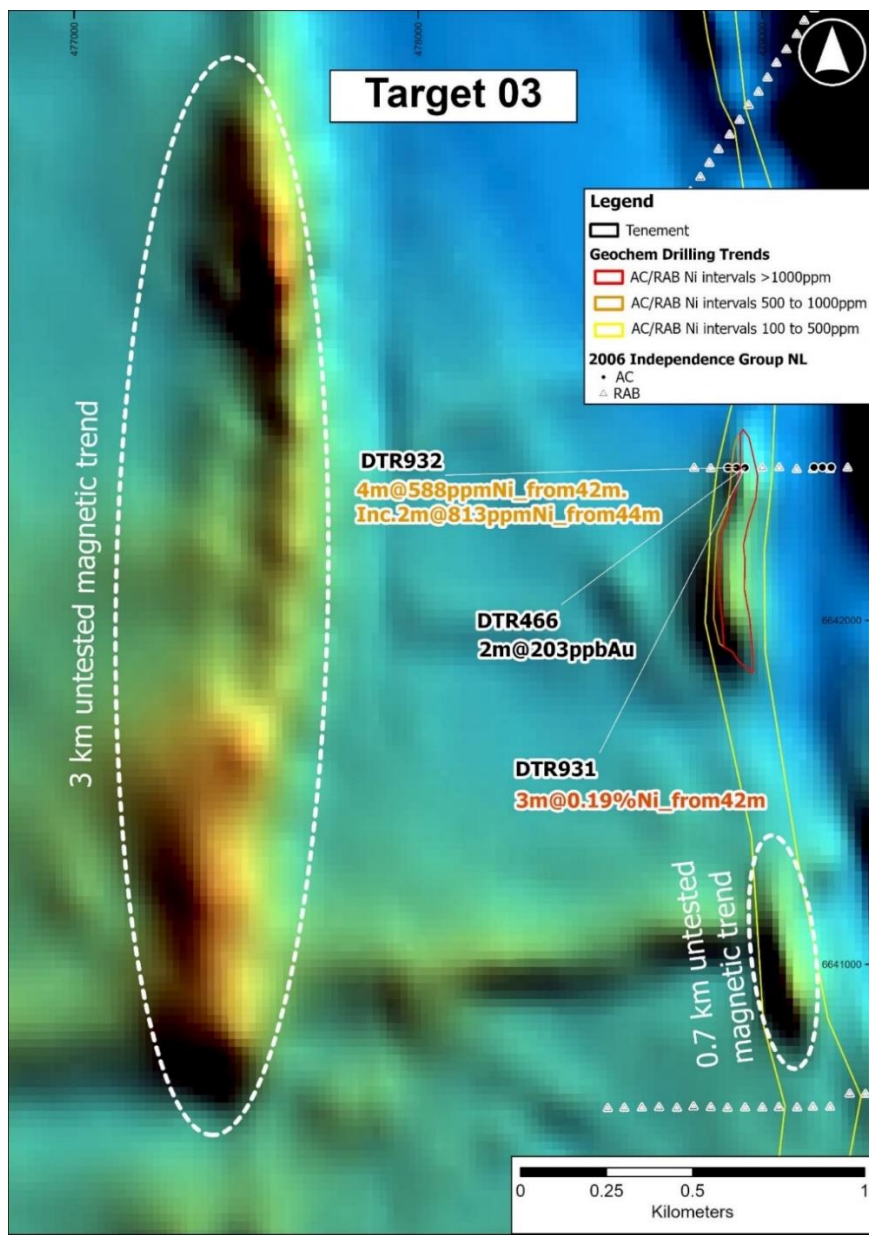


Figure 11: Target 03 details

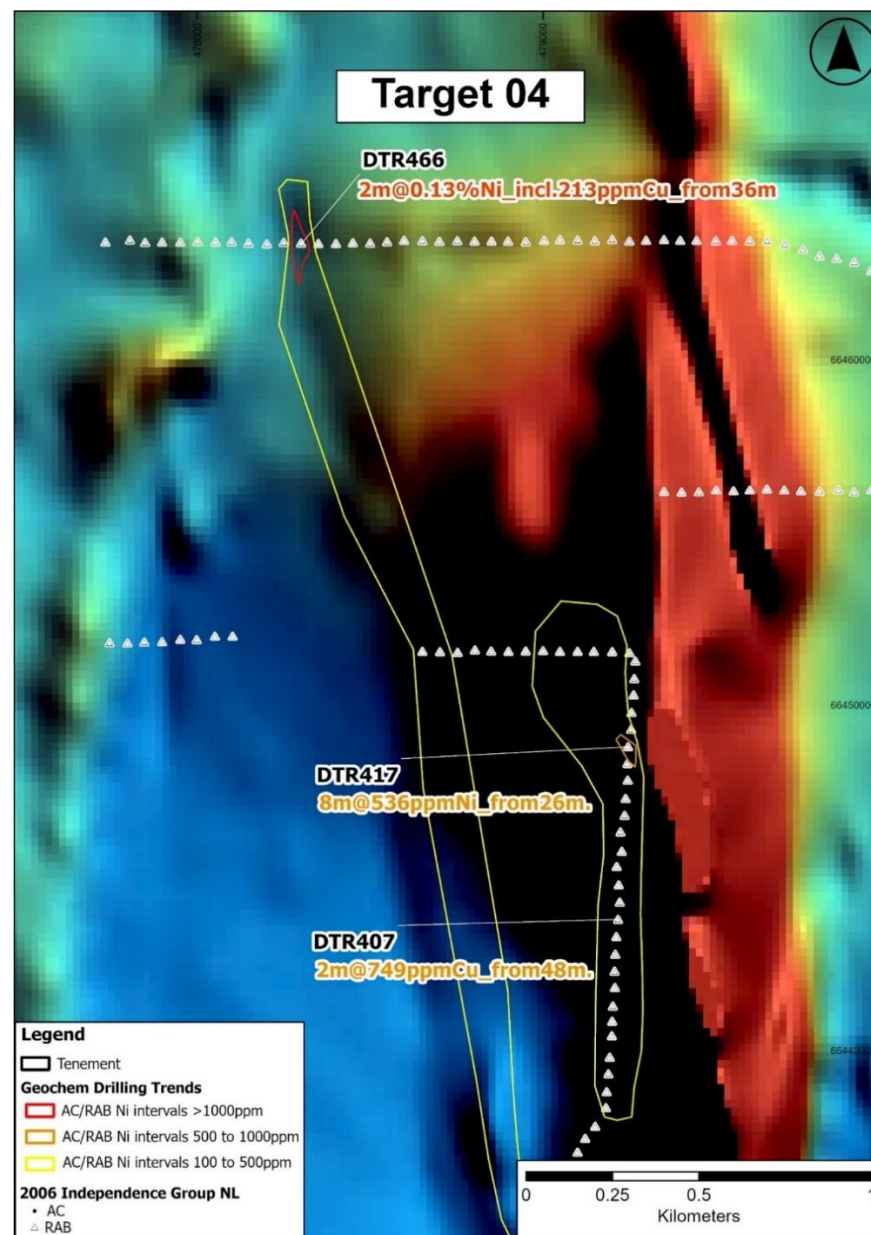


Figure 12: Target 04 details

Authorisation For Release

Authorised for release by Mr Ian Mulholland, Non-Executive Chairperson of Cauldron Energy Limited

For further information please contact:

Jonathan Fisher
Chief Executive Officer
Cauldron Energy Limited
T: (08) 6270 4693
M: +61 407 981 867
jonathan.fisher@cauldronenergy.com.au

Michael Fry
Director, Company Secretary
Cauldron Energy Limited
T: (08) 6260 4693
M: +61 417 996 454
michael.fry@cauldronenergy.com.au

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Date of Release	Title
11-May-2023	Option over Melrose Project, Dalwalinu, WA
11-May-2023	Additional Information - Melrose Project
03-Jul-2023	Highly promising Geophysical Response at Melrose Project
26-Jul-2023	Another Highly promising Geophysical Response at Melrose Project

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