

**Quarterly Report for the period ending 31 March 2021**

[www.cullenresources.com.au](http://www.cullenresources.com.au)

ASX:CUL

29 April 2021

**HIGHLIGHTS**

**WONGAN HILLS PROJECT**

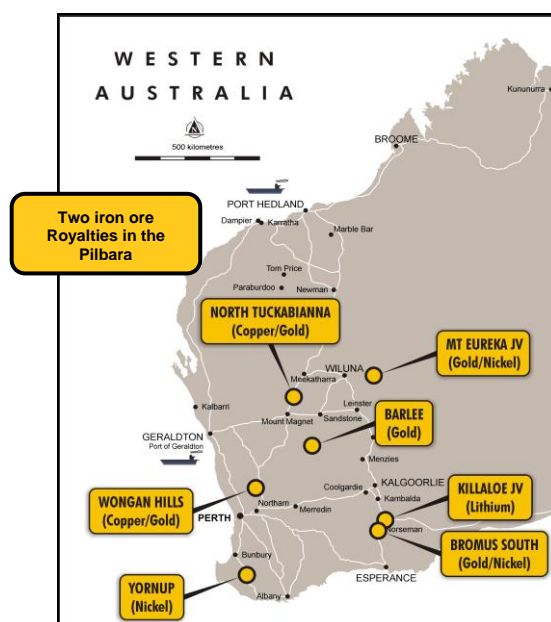
- ✓ **A new, strong ground EM conductor (Model C3)**, with a 340m strike length detected at the **Rupert Cu-Zn-Ag-Au VHMS prospect** - RC drilling planned to commence in the coming week; and,
- ✓ Identified **prospectivity for Ni-Cu-PGE** mineralisation hosted in mafic-ultramafic stratigraphy at the **Jackaby Prospect**, with ground EM to proceed as a first stage, subject to landowner access.

**BARLEE PROJECT**

- ✓ Outlined auger geochemical anomalies with follow-up mapping and rock-chip sampling to commence next week: targeting **Penny West-type gold lodes**.

**YORNUP PROJECT**

- ✓ E70/5405 (Cullen 100%) granted, data compilation and first pass soil and rock-chip sampling planned.
- ✓ Adjoins Chalice/Venture Minerals project: which is exploring for “Julimar lookalike” Ni-Cu-PGE mineralisation.

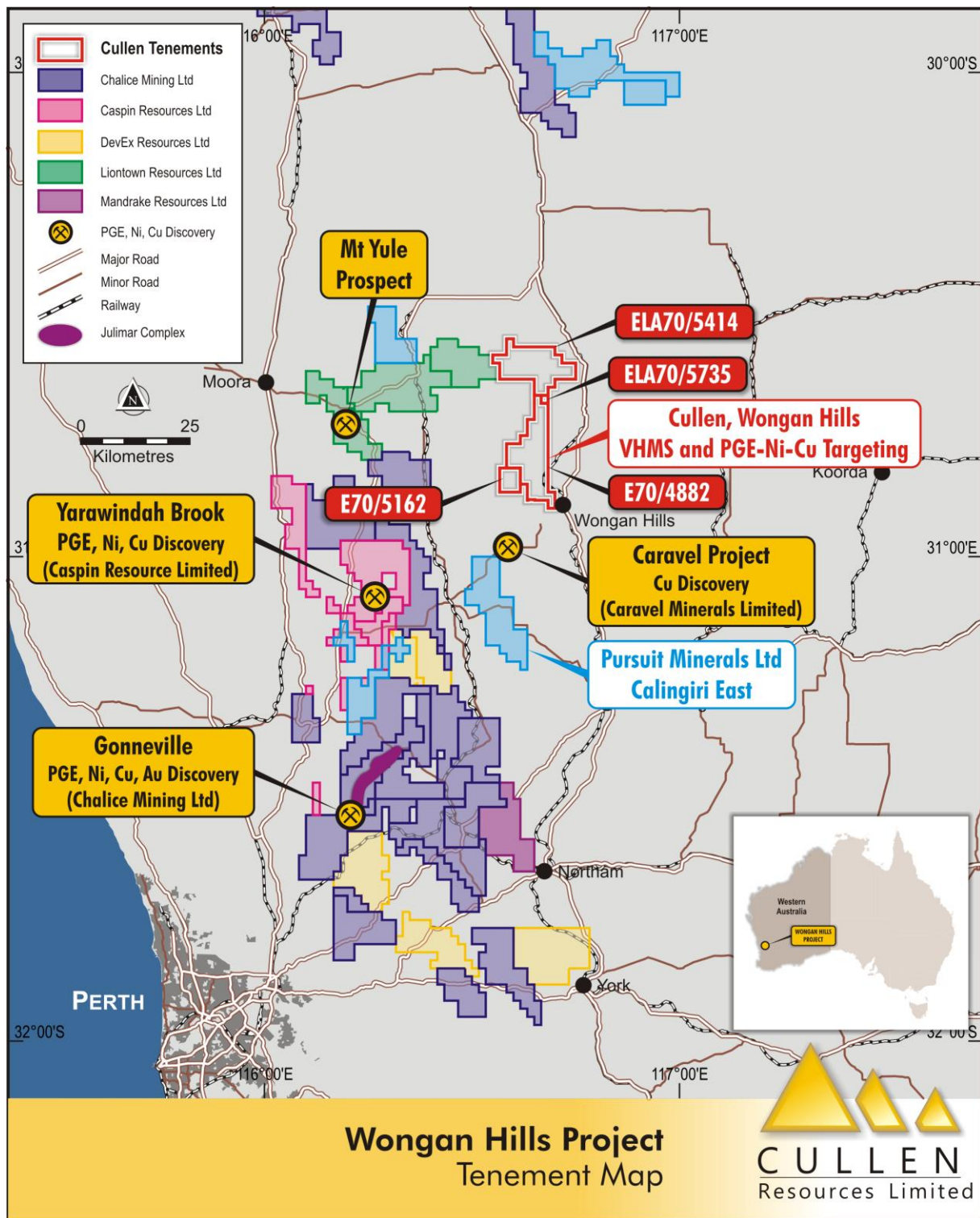


**Fig.1**

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**Fig.2 Wongan Hills Project Location Map**

Wongan Hills Project set amongst significant **Regional Exploration Activity** with industry attention focused on what may be an emerging Nickel - Copper - PGE province to the north east of Perth. There is also a notable copper resource near Calingiri (see Caravel Minerals Limited, ASX:CVV, “Caravel Copper Project”) just south of the Wongan Hills project.

**WONGAN HILLS PROJECT, EL's 70/4882 and 5162, ELA's 70/5414, 5735  
(Cullen 90% - Tregor Pty Ltd 10%)**

**Targeting Volcanic-Hosted Massive Sulphide (VHMS) Cu-Zn-Ag-Au  
mineralisation**

**Rupert Prospect**

The February 2021, FLEM survey has generated a new priority drill target, the C3 conductor, located to the south of hole WHRC004, which was sited just off the northern flank of C3. RC drilling is about to commence to test the conductor and an overlying Au-Ag soil anomaly, and also the east-west section that includes RC hole WHRC004 (Figs. 3-6).

C3 is the largest of the three conductors detected to date and reflects a deeper and flatter dipping source with a 340m strike length (Fig.4). Soil sample results received show **coincident anomalies of Au** anomalies (up to 38ppb, 19 x background of 1-2 ppb) and **Ag** (maximum 230ppb, background 50ppb) over the core of C3 (Figs. 5-6). Weakly anomalous copper values (up to 5 x background of 40ppm) border these Au-Ag anomalies to the west (ASX: CUL, 15-3-2021).

Previously, two RC holes tested the northern and southern C1 and C2 conductor plates below historic Au and Ag soil geochemistry (Fig.3). Both intersected sediment-hosted, semi-massive to massive pyrite with minor pyrrhotite at mafic volcanics-sediment interfaces, from 141m down-hole (3m thick) and 115m down-hole (5m thick). These sulphide intersections are interpreted to be the source of the conductors, which are either two separate horizons or a single faulted unit.

Assays for air core and RC drilling along the section including WHRC004, which tested the southernmost conductor, show broad anomalous geochemistry, including elevated: As, Sb, Zn, Ag and Au pathfinders (Fig.3). In RC hole WHRC004, elevated Cu (5m @ 606ppm), Zn (5m @ 799ppm), As (5m @ 287ppm As) and Ag (15m at 1.01 ppm) were received.

In summary, reported assays for the RC and Air core holes completed in December, 2020 and January 2021 at the **Rupert, and Wongan VHMS prospects** (ASX: CUL, 2-3-2021) together with the geological framework and geochemical results support **Volcanic-Hosted Massive Sulphide (VHMS) mineralisation** prospectivity.

Results are awaited for soil sampling along the southern extension of the Rupert Trend (ASX:CUL, 15-2-2021, see Fig.11).

## Wongan Prospect

Further RC drilling is planned along the target “Stratigraphic Corridor”, defined by a Golden Grove-type laterite geochemical anomaly and a cluster of VTEM anomalies (Fig.7). The drilling is planned to test: down-dip of 20WHD001 on section 6591300mN (Fig.8) and along strike to the south ~1km, to test beneath previous air core Cu-Au anomalies.

## **E70/4882, ELA 70/5735, and Ballidu West, ELA70/5414, (Cullen 90%): targeting Ni-Cu-PGE**

### Jackaby Prospect

The prospectivity for Ni-Cu-PGE mineralisation hosted in mafic-ultramafic stratigraphy in the northern part of E70/4882 and part of ELA 70/5414 is considered by Cullen to be high (ASX:CUL, 2-3-2021). This follows a positive review of previous company exploration, imaging of regional magnetics data and field reconnaissance. The target areas are located approximately 12kms north of the Rupert Prospect.

Highlights of this review include:

- Air magnetic images indicate a chain of anomalies along a 3km trend in E70/4882, interpreted to be concealed ultramafics (see Figs. 9 and 10).

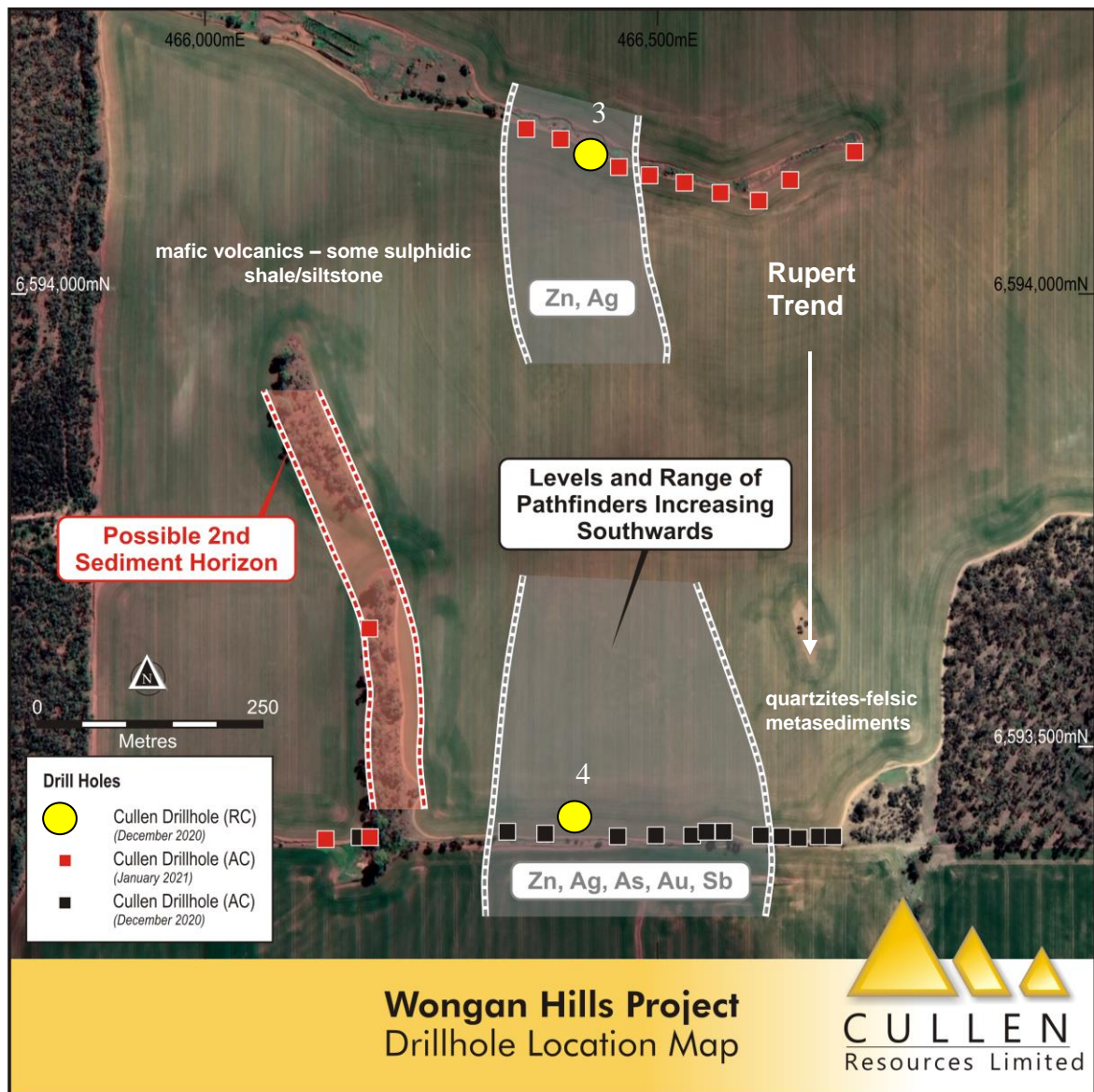
Historical exploration in the northern part of E70/4882 was gold-focused, centered on the Paynes Shaft gold prospect (Fig. 9), but a corridor of mafic/ultramafic rocks trending for approximately 8 kms N to NW, from Paynes Shaft into ELA 70/5414 (Fig. 9), is interpreted from air magnetics.

- Significantly, previous company gold air core and three RC drill holes north of Paynes Shaft (Independence Group, **WAMEX report A77767**) included assays of **50 ppb Pt, 1250 ppm Cu and 100 ppm Ni, in 4m composite from 28-32m (Hole WNA002, assays by Aqua Regia, ICP-OES, Fig.10)**. Also, reported lithologies included a gabbroic intrusive.
- One key target comprises a N-S magnetic anomaly extending for over ~1km, (see detailed air mag image, Fig.10), previously interpreted as a ultramafic body with nickel sulphide potential (**WAMEX A66562**). It lies in a wheat paddock, with no outcrops, and is untested.

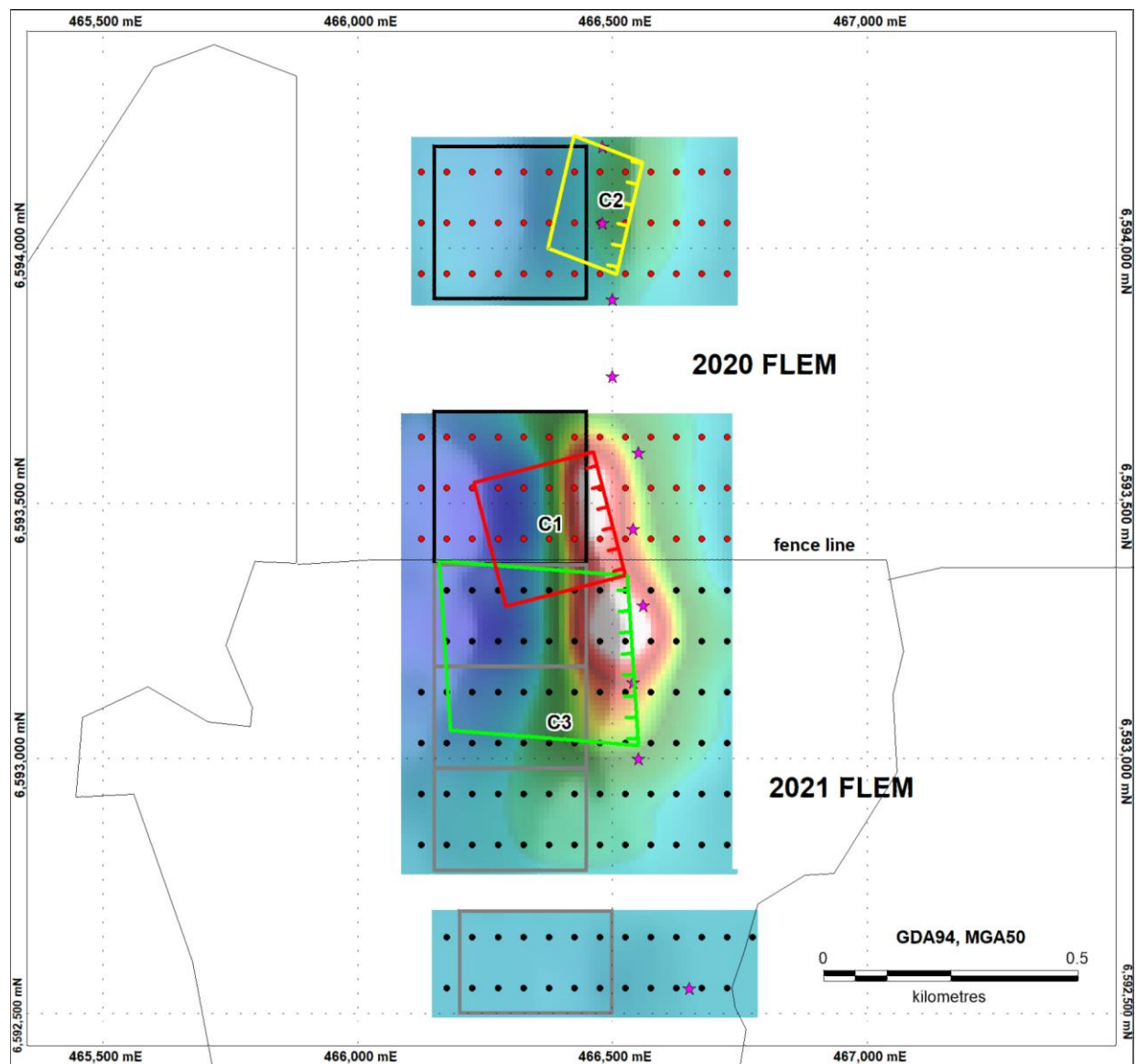
Permission for a ground EM survey, targeting magnetic anomalies (interpreted to be ultramafic bodies) and further soil sampling is being sought with landowners. Preliminary discussions with the relevant private landowners to allow for future drilling programs are also in progress.

Reconnaissance rock chip and soil sampling of ELA70/5414 were completed in February, with results awaited.

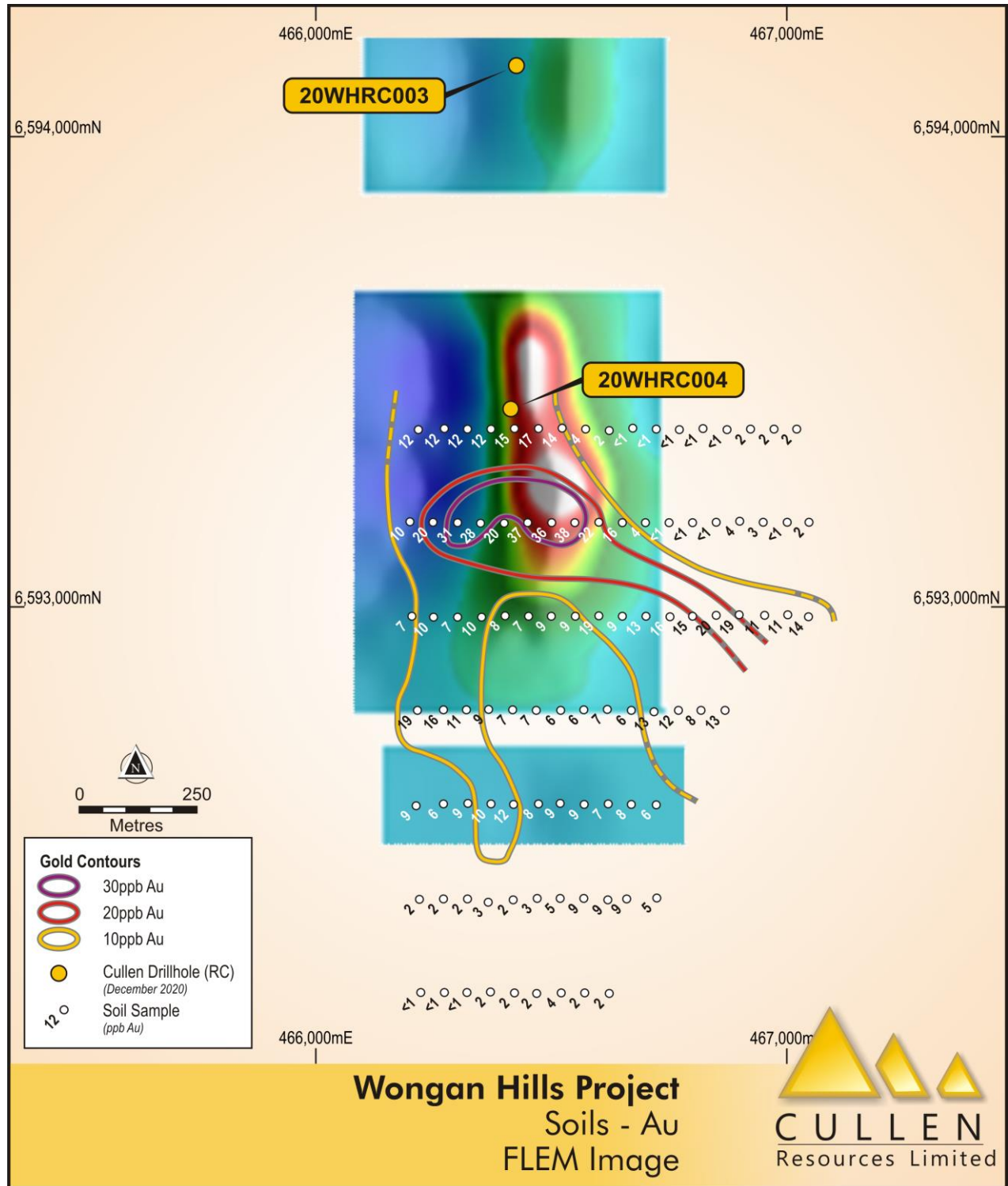




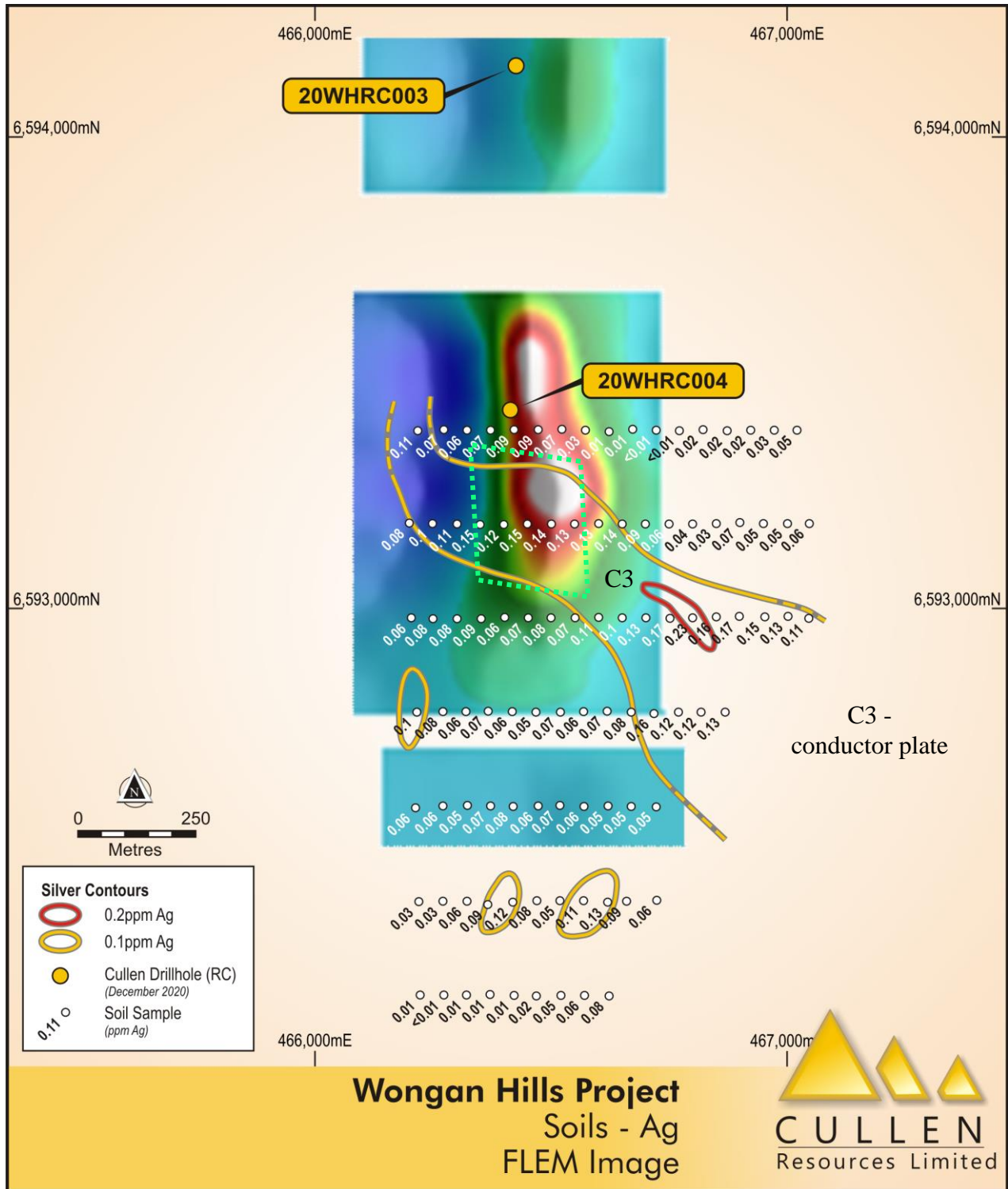
**Fig.3** Interpreted zones of anomalous geochemistry in drilling, Rupert.



**Fig .4** x-component channel 24 highlights the strong anomaly associated with the C1 and C3 Modelled conductor plates with drilling planned for new C3, Loop size is 300 x200m.



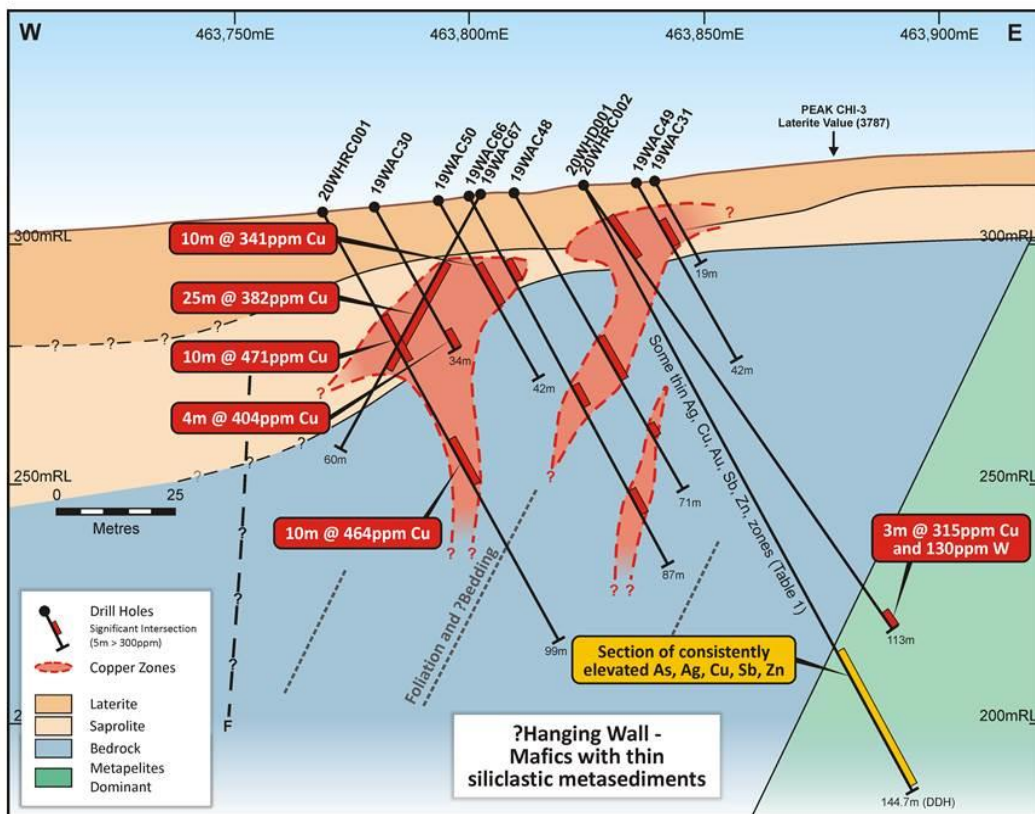
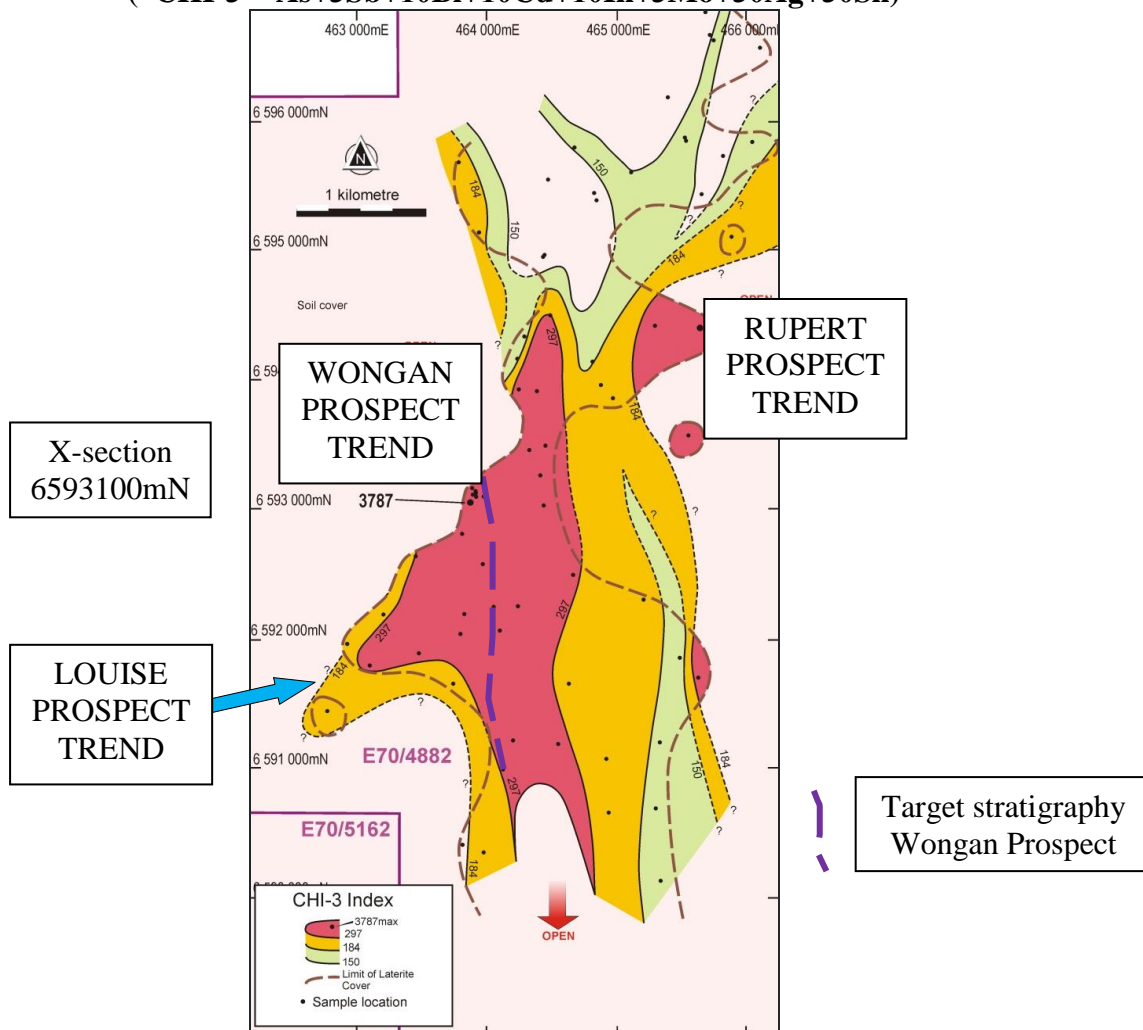
**Fig. 5** Gold (Au) soil assays on image from FLEM



**Fig. 6** Silver (Ag) soil assays on image from FLEM



**Fig. 7** Laterite anomaly plan – Wongan Hills  
(\*CHI-3 = As+3Sb+10Bi+10Cd+10In+3Mo+30Ag+30Sn)



**Fig. 8** (from ASX:CUL, 15-7-2020)

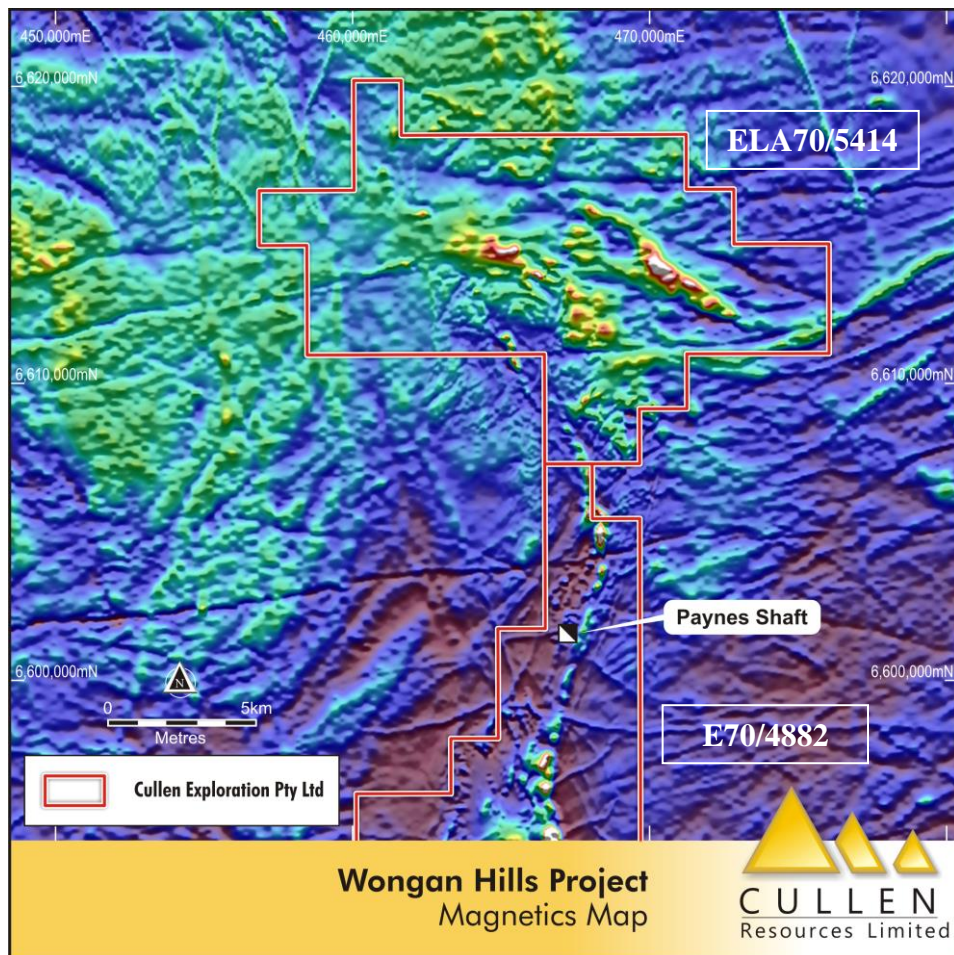


Fig. 9

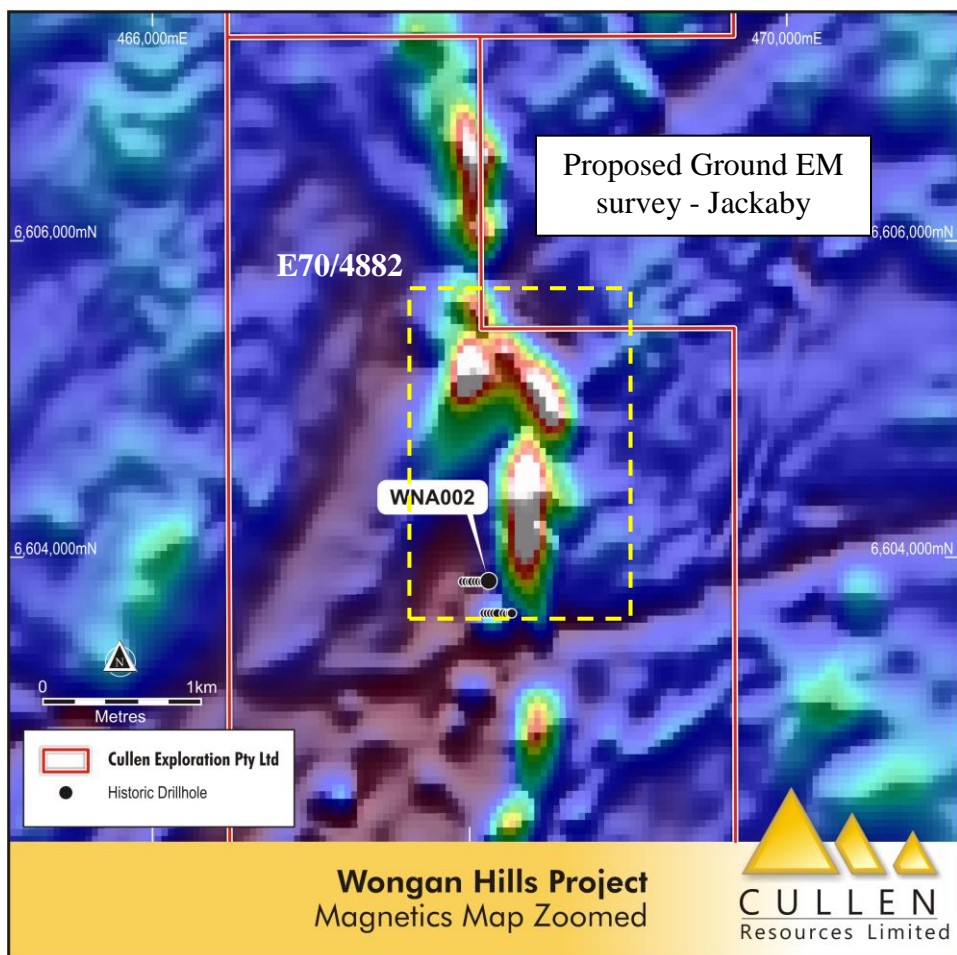
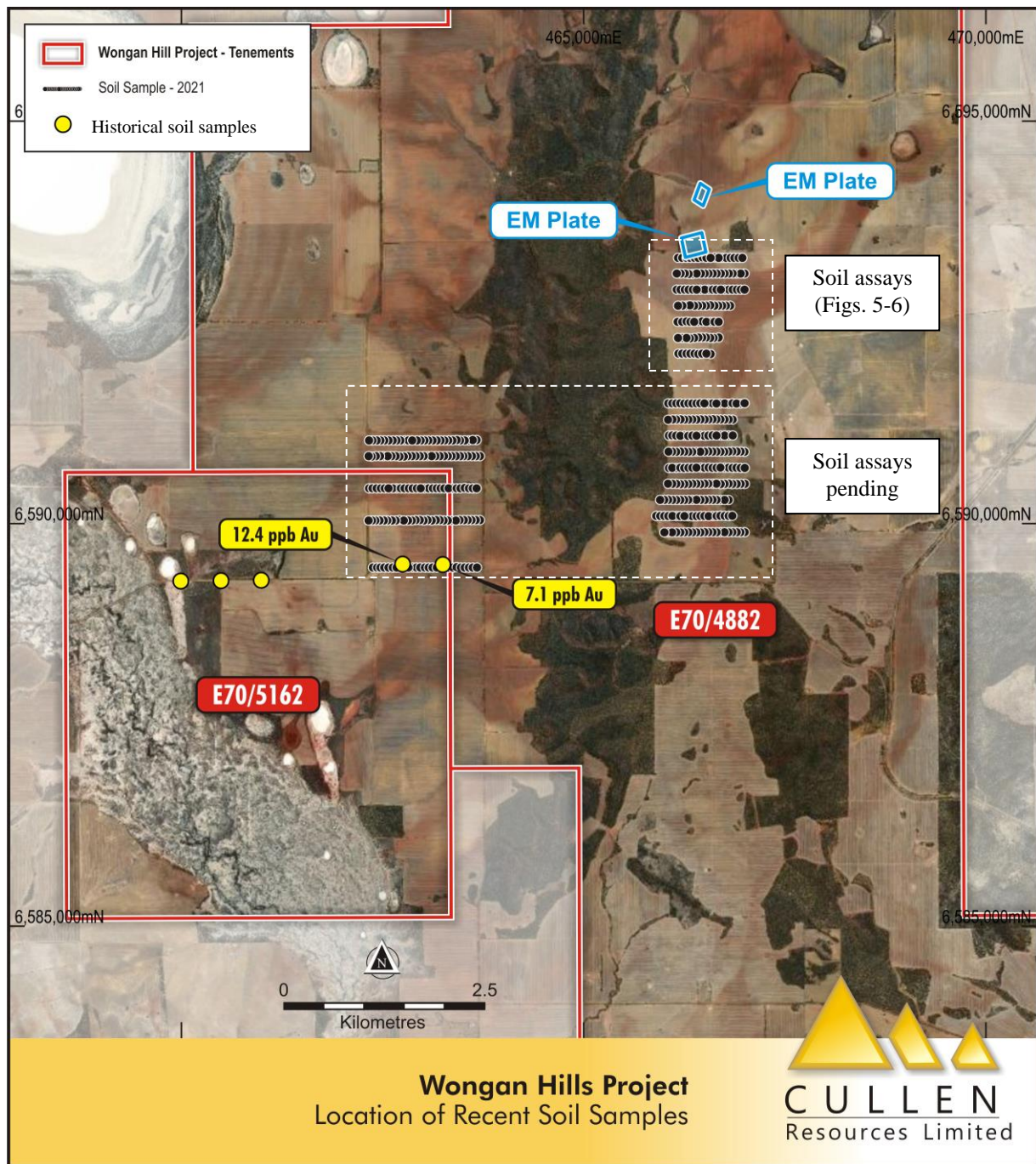


Fig. 10.





**Fig.11 Pioneer and Rupert South Prospects**  
Position of historical soil samples shown,  
(WAMEX Report A108542; [www.geoview.dmp.wa.gov.au](http://www.geoview.dmp.wa.gov.au))  
as is the position of Cullen's recent soil sampling.

**BARLEE PROJECT** - ELs 77/2606, 57/1135, and ELA 77/2688 (Cullen 100%): targeting Penny West - type Gold

Auger sampling completed within E77/2606 (ASX:CUL, 8-3-2021) identified key target areas with gold lode potential for further investigation. Reconnaissance soil sampling (569 samples) was also completed within E57/1135, with assays pending.

Cullen has reported assays for 579 auger samples collected on a 400 x 100m grid over a section of N - S trending stratigraphy within E77/2606 (ASX:CUL, 8-3-2021). This ~7 x 4km target area is interpreted from air magnetics to include underexplored shear zones and numerous sections of greenstone in contact with granites (Figs. 12 and 13), which Cullen considers has potential to host quartz gold lodes of the Penny West-type. This is the first systematic field test within the project area, that extends from 10 - 55 km SSE of the Penny Gold (previously "Penny West") deposit and the Youanmi greenstone belt towards the NW tip of the Marda - Diemals greenstone belt (Fig.12).

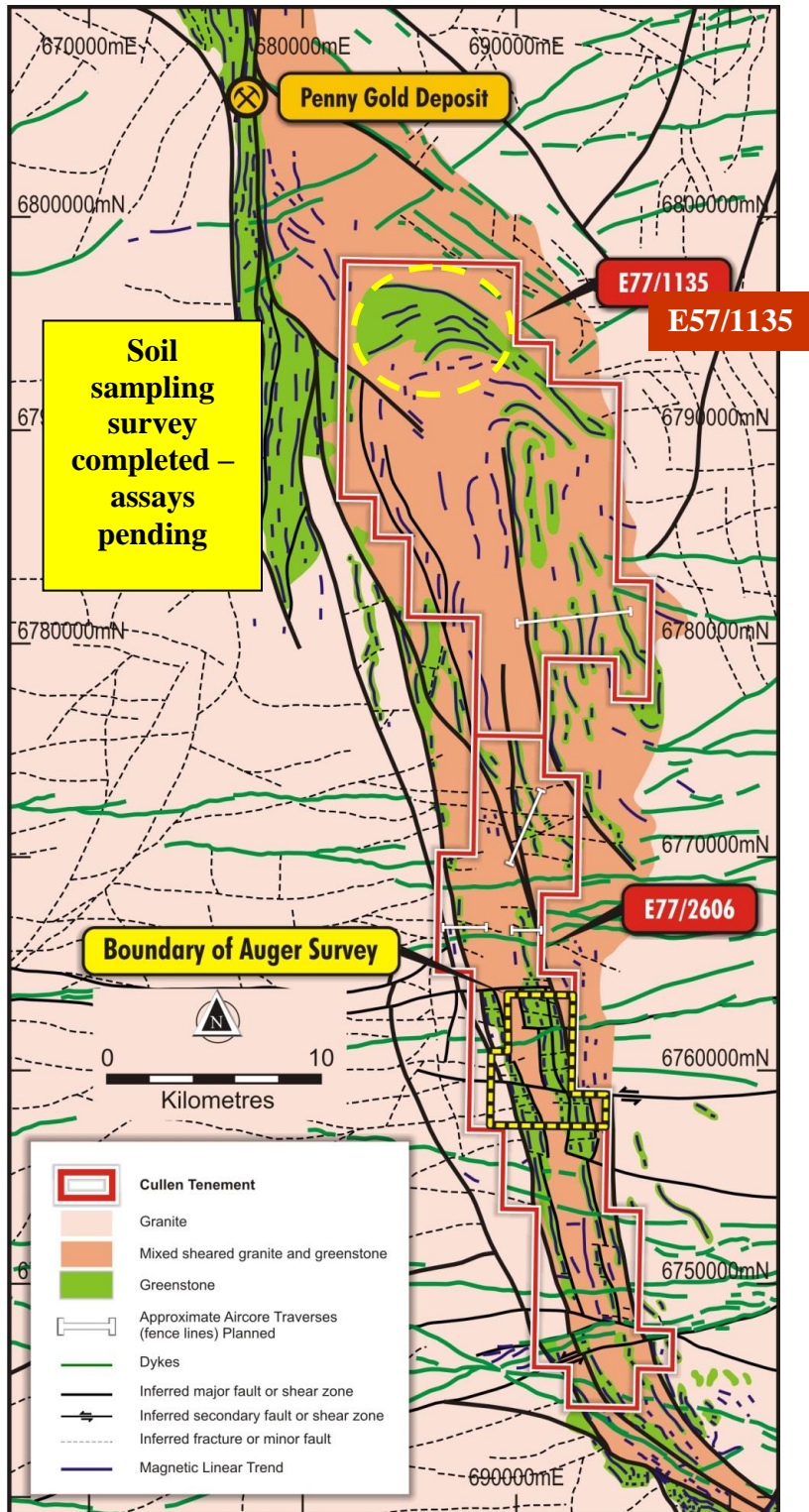
These first-pass auger sampling results are considered to be highly encouraging, with three key target areas outlined for further investigation (Areas 1-3, Figs.14 - 15).

- Target Area 1 : Gold values of **2-10ppb** form a coherent zone of interest overlying interpreted greenstone and coincident with an anomaly of **Ag (to 110ppb)** and elevated pathfinder elements - As, Bi, Mo, Pb, and Te;
- Target Area 2: Elevated levels of As, Bi, Mo, Pb, and Te over ~2.5km in strike length, over a zone of greenstones interpreted from air magnetics images;and,
- Target Area 3: A single, notable value of **430ppb Ag** along the southern boundary of the survey (Ag values are generally below detection, <10ppb), with a gold assay of **11ppb** nearby – close to western granite-greenstone contact.

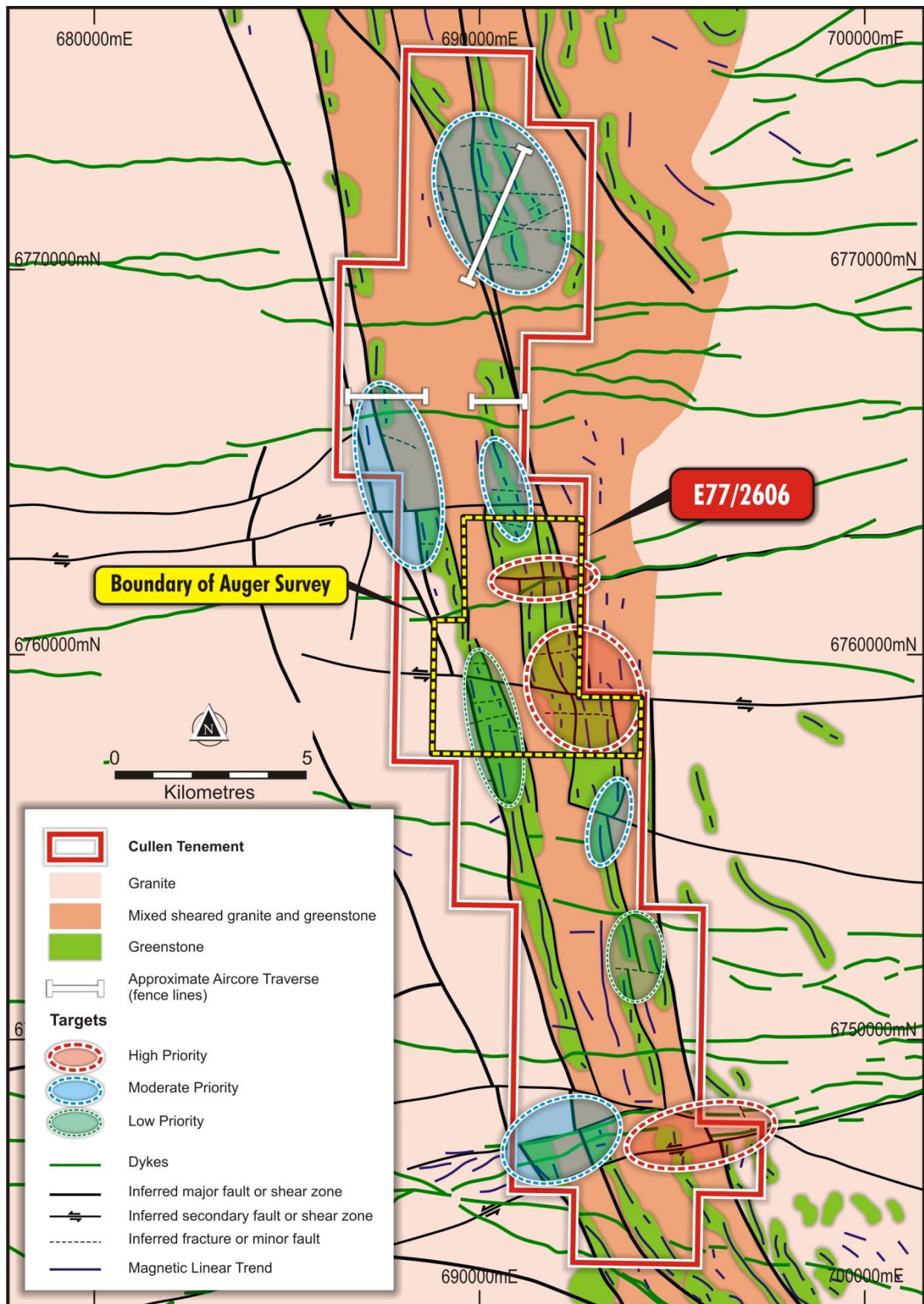
Target Area 1 is interpreted by Cullen to represent an overprint of felsic intrusives and/or hydrothermal alteration on greenstones. Target Area 2 to the south-east , ~2.5 km in strike length, overlies greenstones cut by a major E-W fault, as interpreted from air magnetics images. The western Ag-Au anomaly (Target Area 3) is open to the south and possibly to the north.

Cullen is currently negotiating a heritage agreement to allow for the development of access into the area and also clearance for initial air core drilling traverses along existing fence lines, in conjunction with field mapping and follow-up sampling to commence shortly within the targets areas.



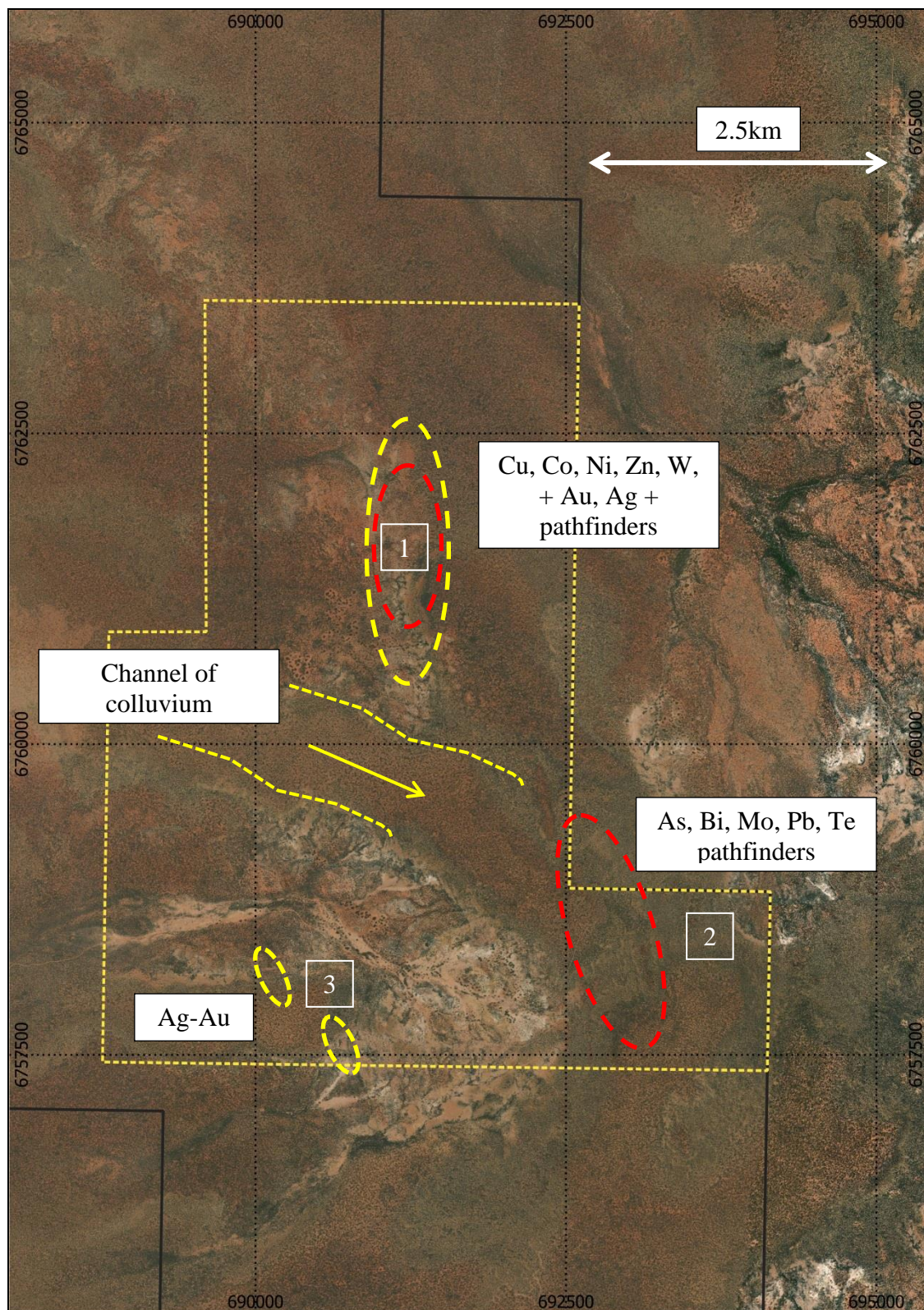


**Fig.12.** Interpretation of air magnetics data, south east of the Youanmi greenstone belt.



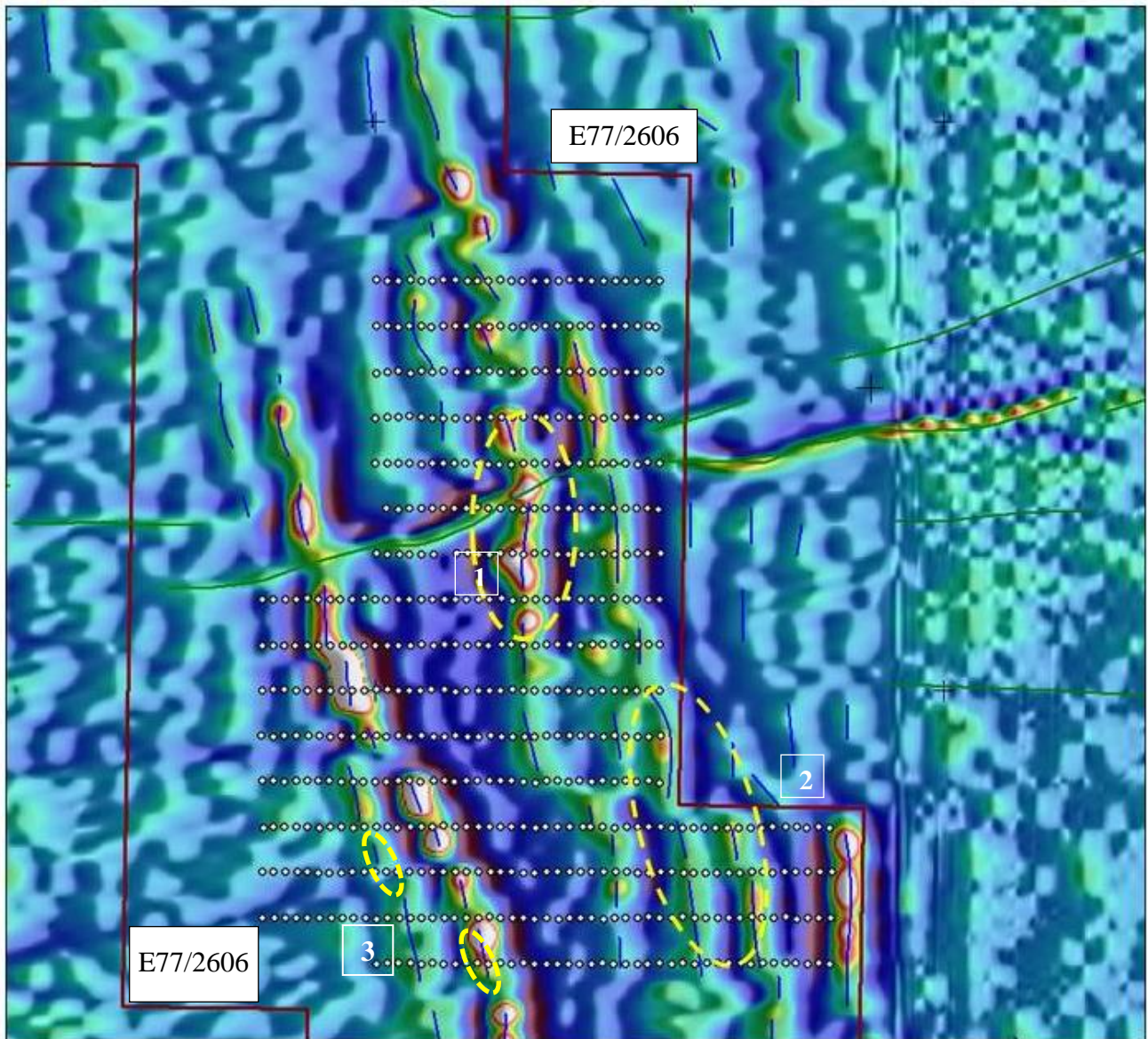
**Fig.13.** Target areas in E2606 as identified from of air magnetics data and now supported by positive auger sample assays.





**Fig.14.** Outlines of zones of interpreted, significant target areas from auger sampling shown on aerial photography for priority follow-up.



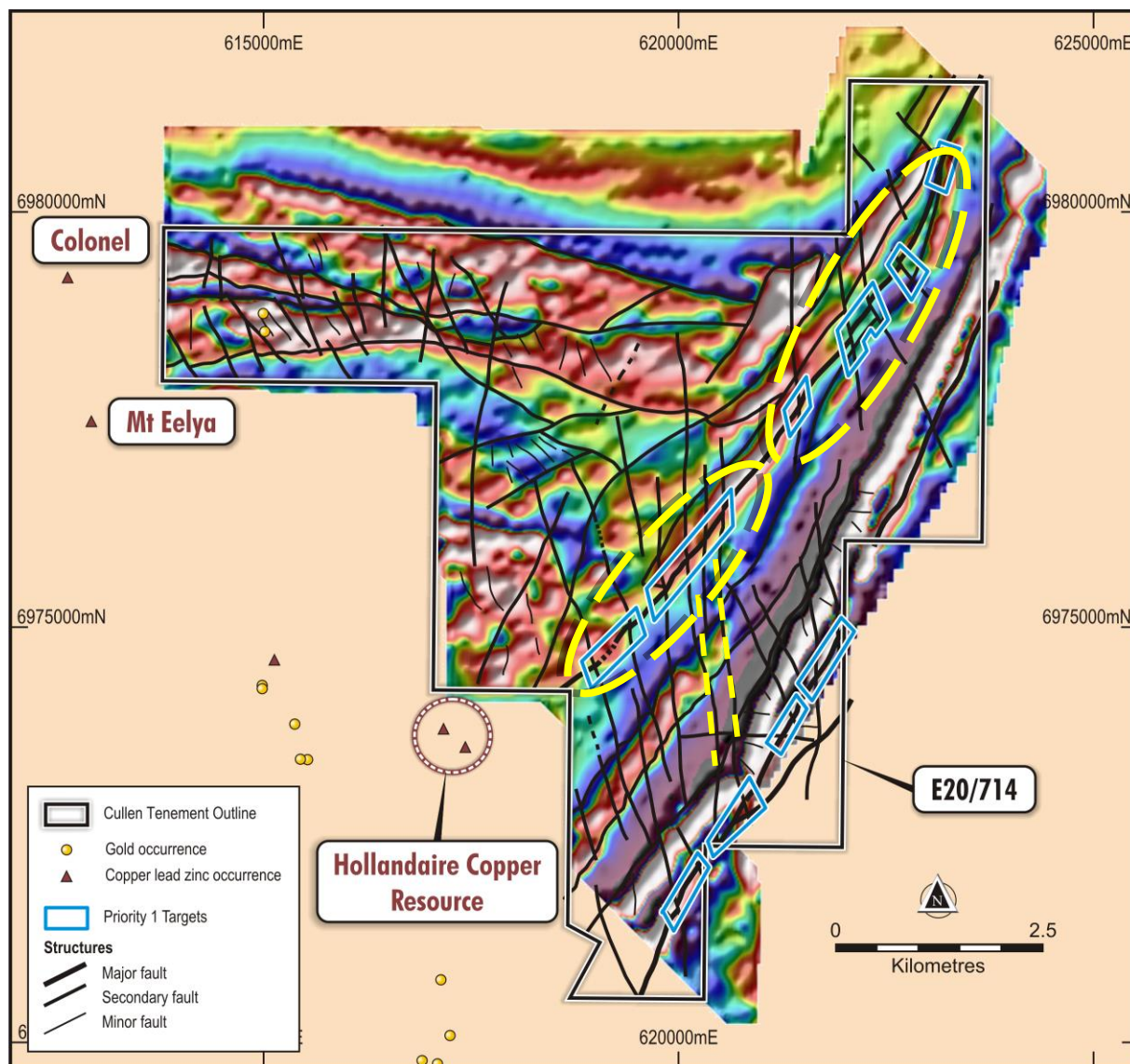


**Fig. 15.** Outlined zones of interpreted, significant target areas on air magnetics image



**NORTH TUCKABIANNA PROJECT, E20/714 (Cullen 100%), centered  
~30km east of Cue, in the Murchison Region, gold and base metals**

Future attention will now focus on the NE-SW major contact between the felsic Eelya Complex and the greenstone belt and its intersections with interpreted N-S structures (Fig. 16) targeting Hollandaire- type, copper-gold mineralisation.

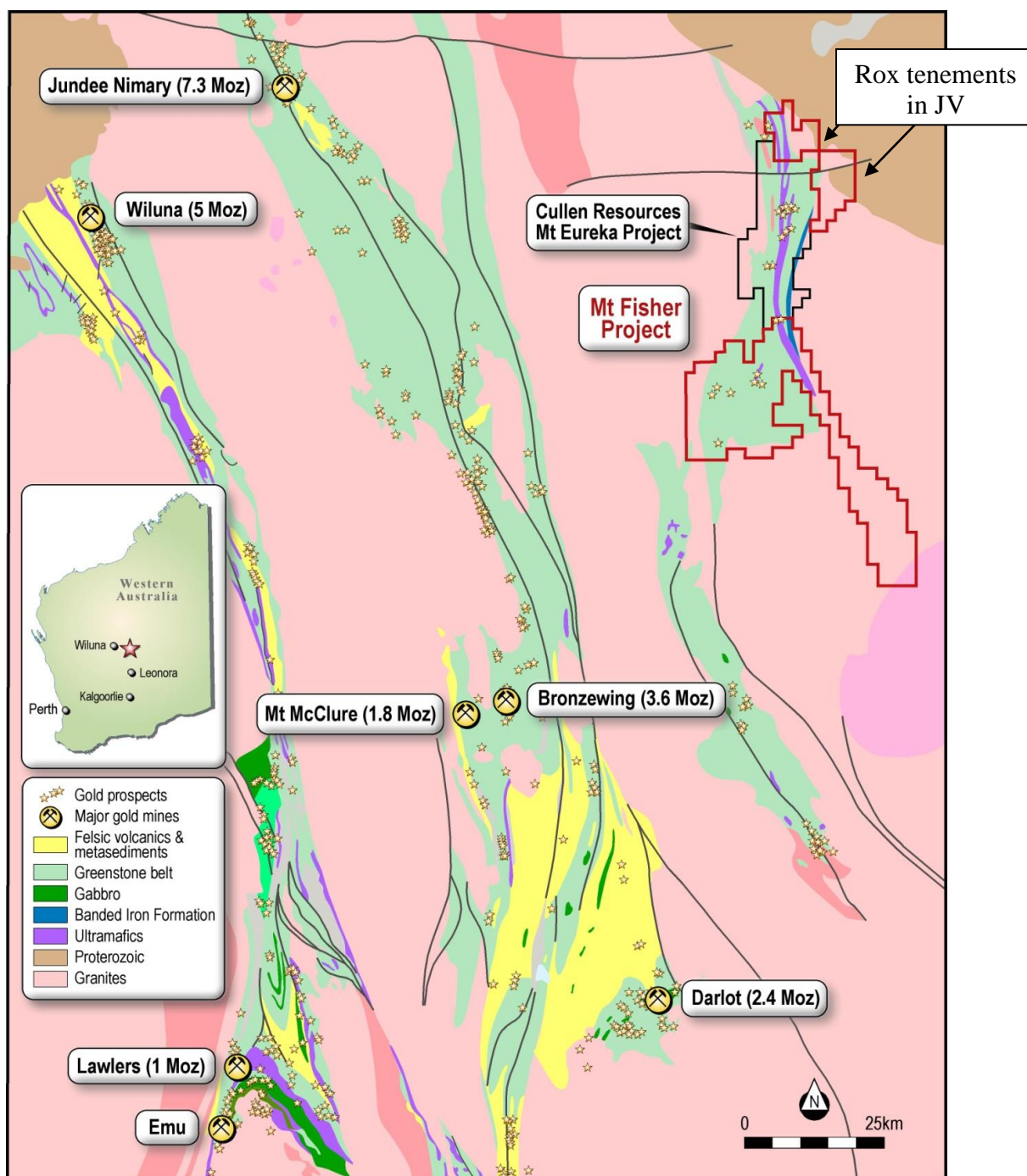


**Fig. 16** Interpreted key, structural lineaments overlain on magnetics image with priority target trend highlighted along the major NE-SW, felsic-mafic boundary.

## Mt EUREKA JV PROJECT, NE GOLDFIELDS, W.A. - gold and nickel

Cullen Resources Limited has signed a Binding Term Sheet with Rox Resources Limited (ASX: RXL – “Rox”) under which Rox has been granted the right to earn up to a 75% interest in Cullen’s Mt Eureka Project tenements and applications (Fig.17). Rox is progressing exploration for gold and nickel and updates on progress will be provided by Rox in due course.

Rox has advised that it met the JV Term Sheet (ASX:CUL, 21-8-2019) minimum expenditure requirement.



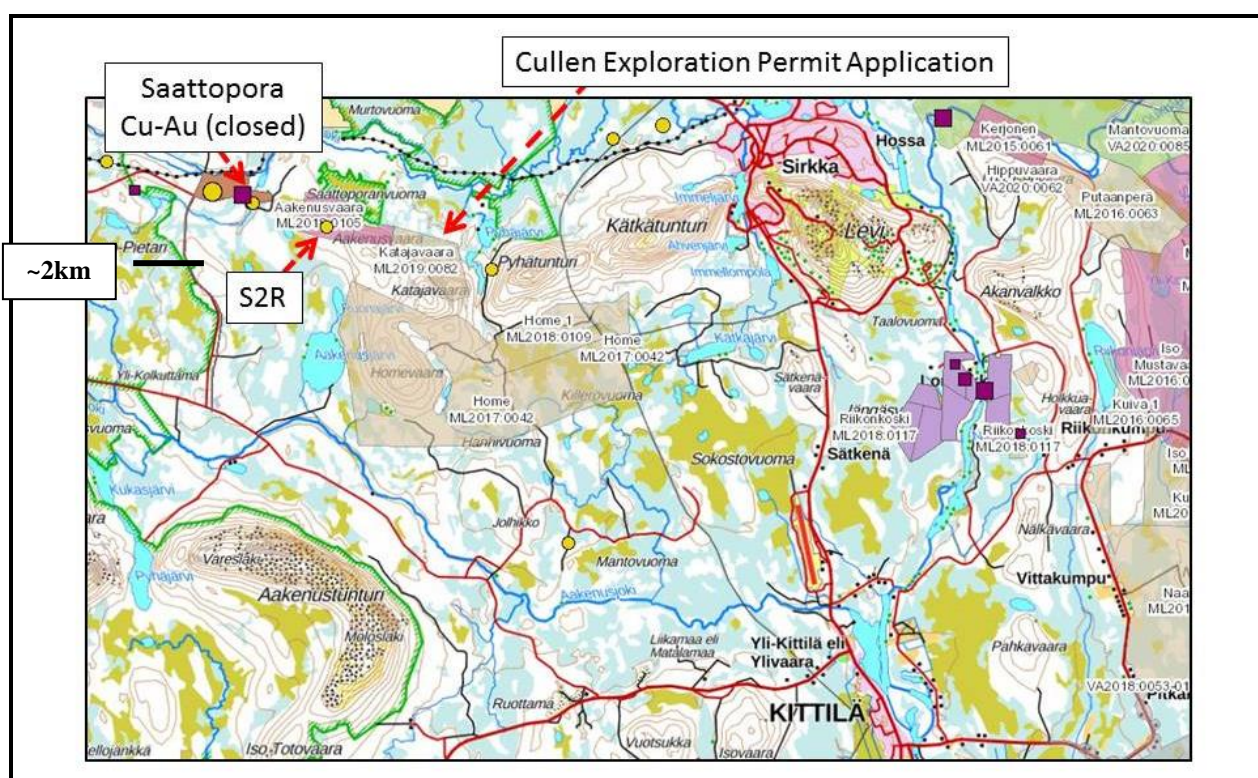
**Fig. 17.** Location of key Mt Fisher (Rox) and Mt Eureka (Cullen) project tenements



## PIPELINE PROJECTS

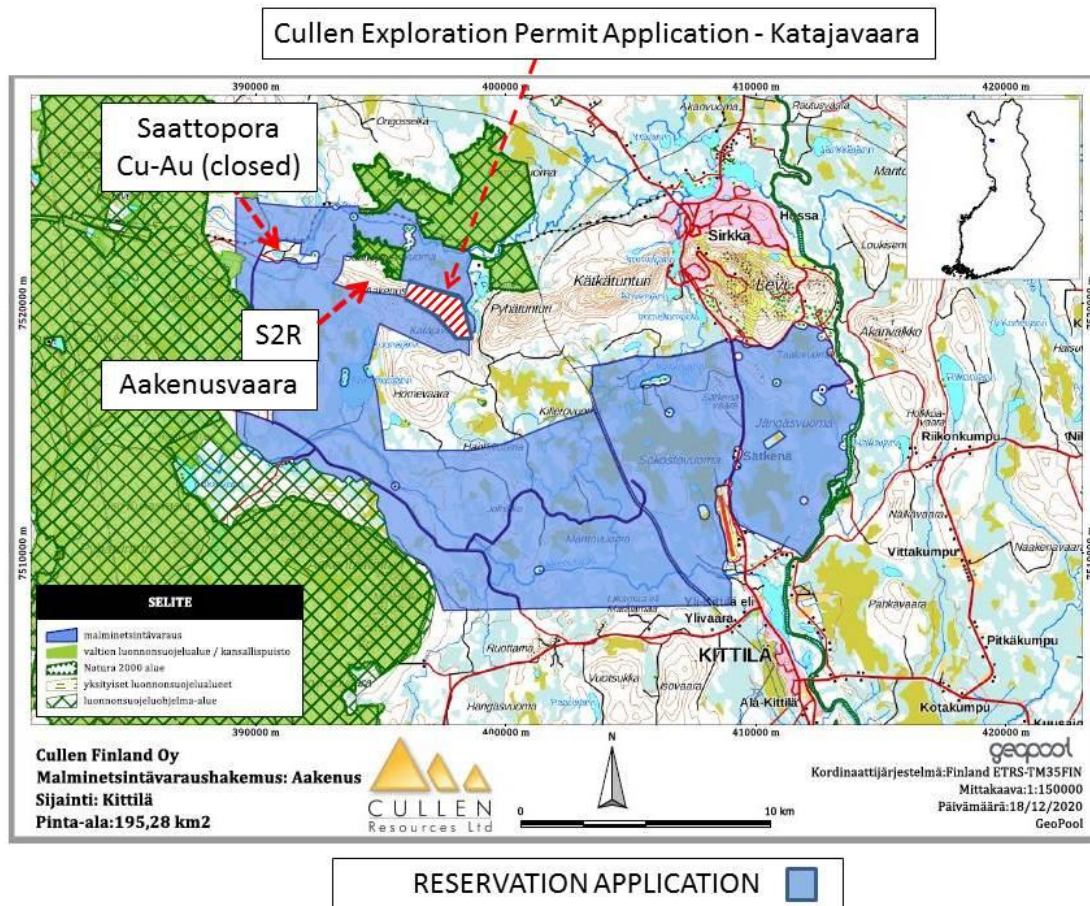
### 1) FINLAND

Cullen has applied for Exploration Permit “Katajavaara” in the Central Lapland Greenstone Belt of northern Finland, approximately 20 km north west of Kittilä. This application adjoins S2 Resources Ltd’s (S2R) Aakenusvaara Exploration Permit along strike to the east, from where S2R has reported a potential gold discovery (ASX:S2R,19-8-2019) and an intersection of 2.11m @ 86 g/t Au from its drilling (ASX:S2R, 26-9-2019). Cullen’s Reservation Licence “Aakenus” of approximately **200 sq. km** has been approved for a 2 year term. It includes or surrounds several known gold and copper occurrences, part of the regionally-significant Sirkka shear zone, and strike-extensive, prospective stratigraphy.

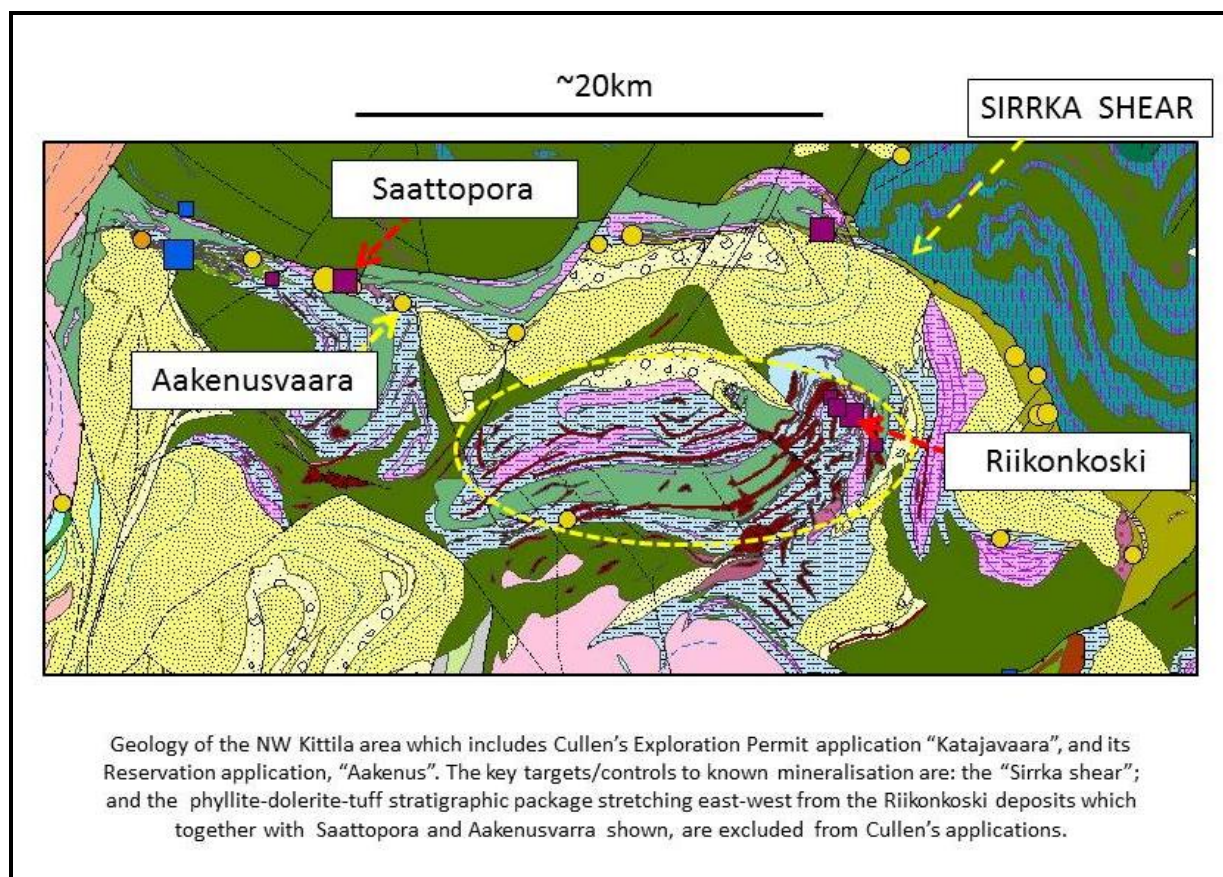


**Fig.18.** Location of Exploration Permit application “Katajavaara”,





**Fig. 19.** Location of Reservation: “Aakenus”.



**Fig. 20.** General geology north west of the town of Kittilä  
<https://gtkdata.gtk.fi/mdae/index.html>.



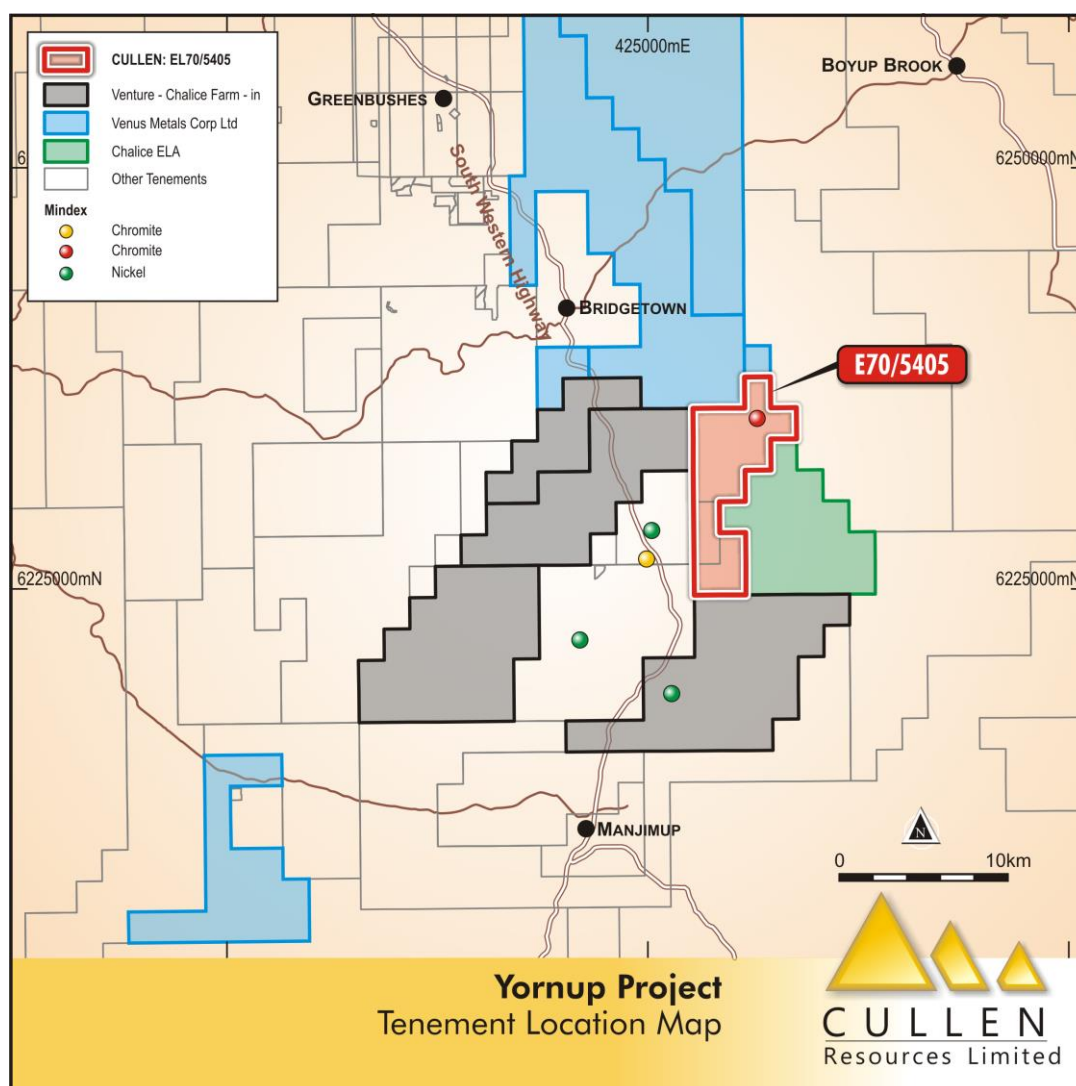
## 2) YORNUP - targeting Ni-Cu-PGE mineralisation

Exploration Licence (E70/5405) covers the **Yornup Northeast** chromium prospect from where an intersection of 2m at 7.4% Cr has been reported by West Coast Holdings (Chadwick, 1986). Yornup Northeast is part of a trend of nickel and chromium occurrences including Palgarup (Ni) and Yornup South (Ni and Cr) trending NE-SW in the Balingup Complex of south west WA. The ultramafic-mafic complex at Yornup consists of olivine gabbro-norite, harzburgite, lherzolite, and dunites that have been extensively serpentinized (Hassan, 1998).

Cullen's E70/5405 adjoins Venture Minerals tenure - the subject of a Farm-In by Chalice Mining Ltd. Chalice has commenced a ground electromagnetic survey (EM) over parts of the "Julimar lookalike magnetic anomaly" within Venture's project area (ASX:VMS, 27-4-2021).

**HADWICK, R. C., 1986**, Yornup prospect, Annual Exploration Report, 1986: West Coast Holdings Limited: Western Australia Geological Survey, M-series, A 18173 (unpublished).

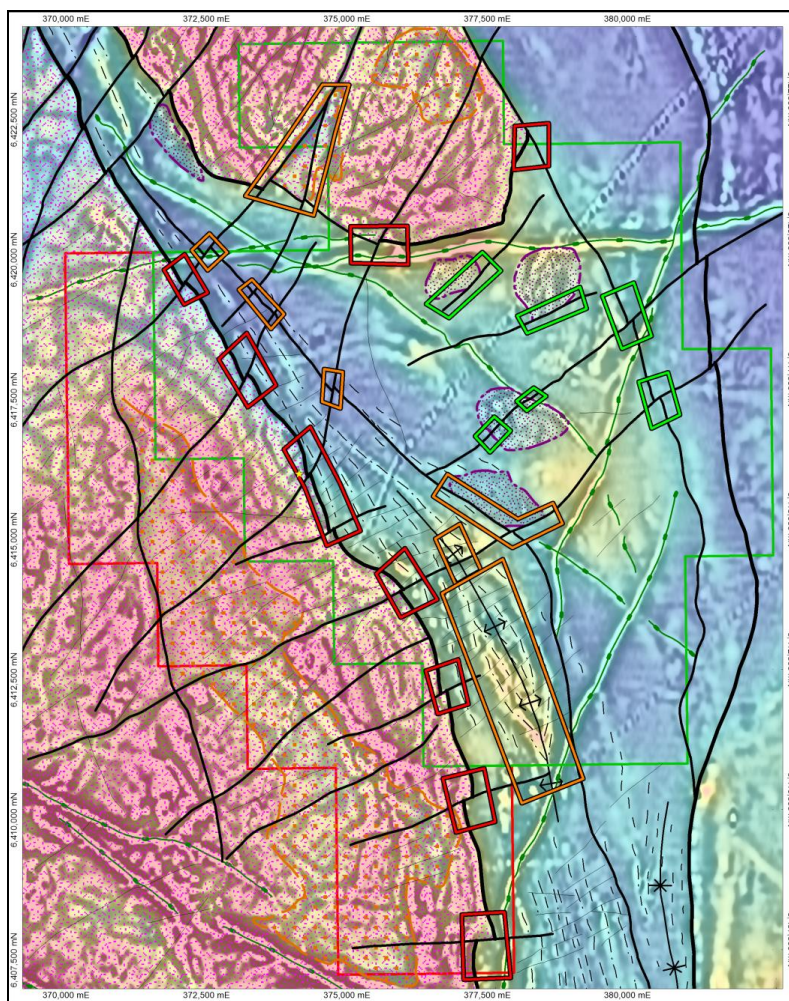
**HASSAN, L. Y., 1998**, Mineral occurrences and exploration potential of southwest Western Australia: Western Australia Geological Survey, Report 65, 38p



**Fig.21 Yornup Project Location Map, W.A.**  
<https://geoview.dmp.wa.gov.au/geoview/MINEDEX>

**3) BROMUS SOUTH - E63/1894, E63/2006 (Cullen 100%) ~100 sq. kms, centered 20km SW of Norseman in the Eastern Goldfields, gold, base metals**

Exploration is planned to test a low-level, gold-in-auger anomaly (to 8.4ppb), ~ 4.6km long and up to 600m wide (mainly sandplain regolith), parallel with a granite-greenstone contact. A programme of work (POW) has been granted to allow exploration drilling to commence as soon as practical following access checking and heritage surveying.



**Fig. 22** Prioritised target areas for gold – red (1); orange (2); green (3).

## CORPORATE

**Exploration expenditure** for the Quarter was approximately **\$264,000** which included ~\$45,000 for drilling and support and ~ \$33,000 combined for geophysical and geochemical studies at the Wongan Hills project. Geological consulting, soil sampling and data interpretation expenditure of ~\$40,000 at the Barlee Project.

### **Payments to related parties of the Company**

The company paid executive director salary and statutory superannuation together with non-executive directors' fees and statutory superannuation of **\$60,000** for the quarter.

## **REFERENCES (Wongan Hills Project)**

**Karajas, J.**, 2005: Swancove Enterprises Pty Ltd, Combined annual mineral exploration report, E70-2437 and E/70-2443, Wongan Hills.

**WAMEX report A70056.**

**Red River Resources Ltd**, 2007: Partial Surrender Report E70/2437 and E70/2443.

**WAMEX report A74956.**

**Chaku, S.K., and Hungerford, N.**, 1985: Annual Exploration Report, Wongan Hills prospect, Billiton.

**WAMEX report A17145.**

**Lee, S.D.**, 1979: Annual Exploration progress Report, Wongan Hills prospect, Shell,

**WAMEX report A8879.**

**Belford, S.M.**, 1996: Wongan Hills Project, Annual Report 1995, Sipa Exploration NL,

**WAMEX report A47022.**

**Blackburn, G**, 1975: Progress Report, Wongan Hills, W.A. Otter Exploration NL,

**WAMEX report A6281.**

**Smit, R.**, 1989: Wongan Hills project, BHPG-Otter Joint Venture, 1988 Annual report, Regional BLEG Soil Sampling.

**WAMEX report A26695.**

### **Further Information - 2020 ASX Releases**

1. **29-1-2020 : Quarterly activities Report**
2. **07-2-2020 : Exploration Update**
3. **10-2-2020 : Share Purchase Plan**
4. **12-2-2020 : Investor presentation**
5. **03-3-2020 : Key Tenement Granted**
6. **28-4-2020: Quarterly Report, March 2020**
7. **19-6-2020: Barlee Update**
8. **22-6-2020: Exploration Update**
9. **15-7-2020: Exploration Update**
10. **23-7-2020: Quarterly Report, June 2020**
11. **21-8-2020: Exploration Update**
12. **29-10-2020: Quarterly Report, September 2020**
13. **4-12-2020: Investor Presentation**
14. **9-12-2020: Exploration Update**

### **Further Information - 2021 ASX Releases**

1. **28-1-2021: Quarterly Report, December 2020**
2. **18-2-2021: Exploration Update**
3. **2-3-2021 : Exploration Update – Wongan Hills**
4. **8-3-2021 : Exploration Update – Barlee**
5. **15-3-2021: Results of FLEM survey**

**There are no new exploration results included in this report**

**SCHEDULE OF TENEMENTS (as at 31 March 2021)**

REGION/ PROJECT	TENEMENTS	TENEMENT APPLICATIONS	CULLEN INTEREST	COMMENTS
<b>WESTERN AUSTRALIA</b>				
<b>PILBARA</b>				
Paraburdoo JV	E52/1667		100%	Fortescue can earn up to 80% of iron ore rights; Cullen 100% other mineral rights
<b>NE GOLDFIELDS - Mt Eureka JV</b>				
Gunbarrel	E53/1299, +/ * 1893, 1957 - 1959, 1961, 2052	E53/2063 E53/2101	100%	+2.5% NPI Royalty to Pegasus on Cullen's interest (parts of E1299); *1.5% NSR Royalty to Aurora (other parts of E1299, E1893, E1957, E1958, E1959 and E1961).
Irwin Well	E53/1637		100%	
Irwin Bore	E53/1209		100%	
<b>MURCHISON</b>				
<i>MURCHISON Cue</i> <i>MURCHISON Barlee</i>	E20/714 E77/2606 E57/1135	E20/980 E77/2782 E77/2688	100%	
<b>WHEATBELT AND SW</b>				
<b>WONGAN HILLS</b>	E70/4882, E70/5162	E70/5414 E70/5735	90%	
<b>YORNUP</b>	E70/5405		100%	
<b>EASTERN GOLDFIELDS</b>				
Killaloe	E63/1018		20%	Cullen retains 20% FCI to DTM.
Bromus South	E63/2006 E63/1894		100%	
<b>FINLAND</b>				
	<i>Katajavaara</i> <i>Aakenus</i>	<i>Exploration permit Application</i>  <i>Reservation</i>		
<b>TENEMENTS RELINQUISHED and APPLICATIONS WITHDRAWN DURING THE QUARTER</b>				



**ATTRIBUTION: Competent Person Statement**

The information in this report that relates to exploration activities is based on information compiled by Dr. Chris Ringrose, Managing Director, Cullen Resources Limited who is a Member of the Australasian Institute of Mining and Metallurgy. Dr. Ringrose is a full-time employee of Cullen Resources Limited. He has sufficient experience which is relevant to the style of mineralisation and types of deposits under consideration, and to the activity which has been undertaken, to qualify as a Competent Person as defined by the 2012 edition of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves”. Dr. Ringrose consents to the report being issued in the form and context in which it appears.

Information in this report may also reflect past exploration results, and Cullen’s assessment of exploration completed by past explorers, which has not been updated to comply with the JORC 2012 Code. The Company confirms it is not aware of any new information or data which materially affects the information included in this announcement.

**ABOUT CULLEN:** Cullen is a Perth-based minerals explorer with a multi-commodity portfolio including projects managed through a number of JVs with key partners (Rox, Fortescue and Liontown), and a number of projects in its own right. The Company’s strategy is to identify and build targets based on data compilation, field reconnaissance and early-stage exploration, and to pursue further testing of targets itself or farm-out opportunities to larger companies. Projects are sought for most commodities mainly in Australia but with selected consideration of overseas opportunities. Cullen has a **1.5% F.O.B. royalty** up to 15 Mt of iron ore production from the Wyloo project tenements, part of Fortescue’s Western Hub/Eliwana project, and will receive \$900,000 cash if and when a decision is made to commence mining on a commercial basis – E47/1649, 1650, ML 47/1488-1490, and ML 08/502. Cullen has a **1% F.O.B. royalty** on any iron ore production from the following tenements – E08/1135, E08/1330, E08/1341, E08/1292, ML08/481, and ML08/482 (former Mt Stuart Iron Ore Joint Venture – Baosteel/Aurizon/Posco/AMCI) and will receive \$1M cash upon any Final Investment Decision. The Catho Well Channel Iron Deposit (CID) has a published in situ Mineral Resources estimate of 161Mt @ 54.40% Fe (ML 08/481) as announced by Cullen to the ASX – 10 March 2015.

**FORWARD - LOOKING STATEMENTS**

This document may contain certain forward-looking statements which have not been based solely on historical facts but rather on Cullen's expectations about future events and on a number of assumptions which are subject to significant risks, uncertainties and contingencies many of which are outside the control of Cullen and its directors, officers and advisers. Forward-looking statements include, but are not necessarily limited to, statements concerning Cullen’s planned exploration program, strategies and objectives of management, anticipated dates and expected costs or outputs. When used in this document, words such as “could”, “plan”, “estimate” “expect”, “intend”, “may”, “potential”, “should” and similar expressions are forward-looking statements. Due care and attention has been taken in the preparation of this document and although Cullen believes that its expectations reflected in any forward looking statements made in this document are reasonable, no assurance can be given that actual results will be consistent with these forward-looking statements. This document should not be relied upon as providing any recommendation or forecast by Cullen or its directors, officers or advisers. To the fullest extent permitted by law, no liability, however arising, will be accepted by Cullen or its directors, officers or advisers, as a result of any reliance upon any forward looking statement contained in this document.

**Authorised for release to the ASX by:  
Chris Ringrose, Managing Director, Cullen Resources Limited.**