

25 November 2024 ASX Release

## YUINMERY AIRCORE DRILLING PROGRAM RESULTS

## **HIGHLIGHTS**

- Final assay results received from October 2024 air core (AC) drilling program completed at the Yuinmery Copper-Gold Project.
- Drilling has confirmed extension of the YT01 mineralisation to the west.
- Ø Drilling highlights include:
  - 43m @ 4294ppm Cu from 16m, includes 8m @ 8230ppm Cu from 28m in YAC24-29
  - 20m @ 2917ppm Cu and 0.25g/t Au from 0m in YAC24-31
  - 24m @ 2240ppm Cu from 8m, including 12m @ 2891ppm Cu and 0.28 g/t Au from 12m in YAC24-26.
- Anomalous copper-gold results returned from YT12 and YT19 Prospects.
- Follow-up drilling to commence in the first quarter of 2025.

Empire Resources Limited (ASX: ERL; "Empire" or the "Company") is pleased to provide the following update on exploration at the Company's Yuinmery Copper-Gold Project.

Empire advises that it has now received all assay results from its recently completed AC drilling campaign<sup>[11]</sup> at its Yuinmery Copper – Gold Project in Western Australia.

Thirty-one air core drill holes for 1,483m (Table 1), where completed to test four separate target areas, three copper-gold projects and one gold only target, this included extending and further defining previously drilled copper-gold anomaly at YT01 Prospect.

## YUINMERY COPPER – GOLD PROJECT

#### LOCATION

The Yuinmery Project is situated approximately 470km northeast of Perth and 80km southwest of Sandstone, Western Australia (Figure 1). Access from Perth is via the Great Northern Highway to Paynes Find and then along the gravel surfaced Paynes Find-Sandstone Road for 152km.

The Yuinmery Project is host to the Just Desserts volcanogenic massive sulphide deposit with a JORC 2012 Resource of **2.52Mt @1.31% Cu**, **0.49g/t Au and 1.76g/t Ag** using a 0.5% Cu cut-off.



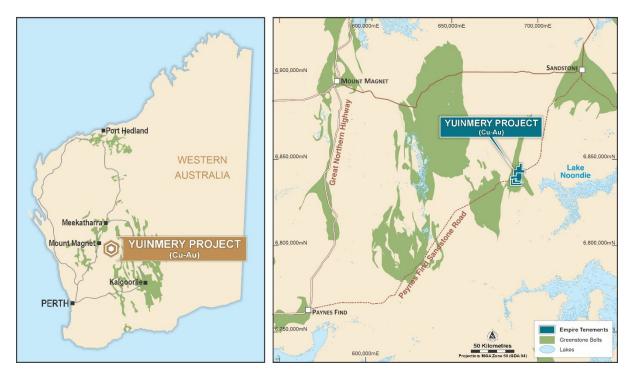


Figure 1. Yuinmery Project location map

## **GEOLOGY**

The Yuinmery project area covers the eastern portion of the Archaean Youanmi greenstone belt with rock types consisting largely of altered chloritic felsic and intermediate volcanic units with minor tholeiltic and ultramafic volcanics, BIF and chert (Figure 2). The volcanic units contain intercalated strongly sulphidic cherty sediments, which are host to Volcanic Massive Sulphide (VMS) copper-gold mineralisation. The project area lies between the Youanmi Shear zone (western boundary) and the Yuinmery Shear zone (eastern boundary) with the southern area covering the southern closure of a northerly plunging syncline. A prominent north-south foliation overprints many of the rocks in the project area.

## YUINMERY PROJECT DRILLING PROGRAM

The **YT01 Prospect** was initially drilled by the Company in 2019 using air core drilling following a geological review and targeting study<sup>[4]</sup> which identified multi-element geochemical anomalism with maximum results for copper of 1,300ppm Cu and gold of 49 ppb Au. Twenty-four holes drilled in the initial drilling, across 3 lines spaced approximately 400m apart. Follow-up drilling in 2020 utilising reverse circulation (RC) drilling<sup>[5]</sup> intersected two broad copper horizons. Copper mineralisation occurs primarily as one domain (up to 36m wide) however a second narrow patchy lower grade zone (up to 10 wide) of copper mineralisation has been identified approximately 65m in the hanging wall to the main mineralised domain. Further testing of YT01 by diamond drilling was undertaken by the Company in 2022<sup>[6]</sup>.

The mineralisation at YT01 is interpreted to dip steeply to the north and strikes east-west. Mineralisation is hosted in a non-magnetic chlorite - sericite - talc schist with a north-south axial planar foliation along the contact of magnetic gabbro. Copper mineralisation occurs as fine disseminated chalcopyrite (+/-pyrite) and lesser sulphide veinlets. Sulphide content is typically 1-3%.



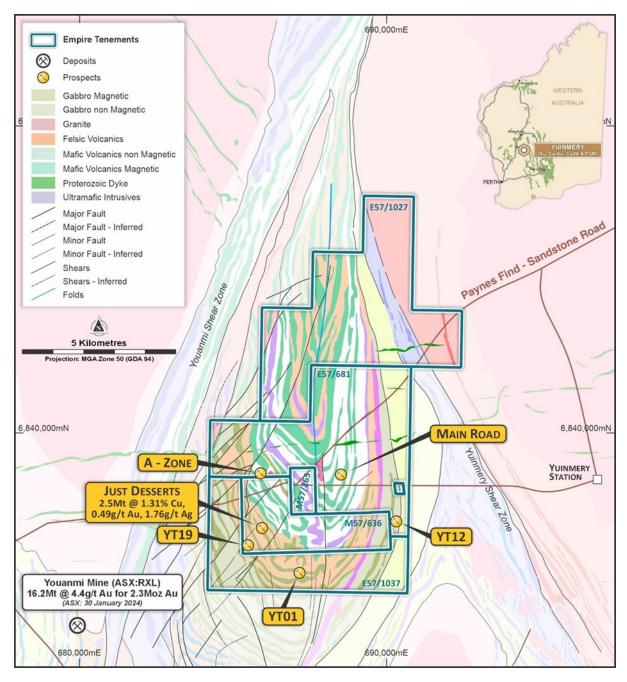


Figure 2. Regional geology of the Yuinmery area interpreted from aeromagnetic data showing the location of the four prospects (YT01, YT19, Main Road, YT12) tested in this air core drilling program.

Six AC holes (YAC24-26 to YAC24-31) were drilled in this program (Figure 3) to extend the domain of anomalism and further define the copper-gold zone within the limits of existing drilling through the weathered horizon. Drilling (YAC24-31) confirms the zone of copper mineralisation extends 100m west of previous drilling. Hole YAC24-30 did not intersect any mineralisation as it failed to reach target depth due to hard drilling conditions, ending at a depth of 20m. Re-drilling this hole will be a priority in future drilling.



ERL has shown the copper-gold zone at YT01 extends to at least 700m length and is known to extend locally, to a vertical depth of 260m from diamond drilling (YDD22-07: 8m @ 0.33% Cu & 0.10g/t Au from 292m, including 1.2m @ 0.65% Cu & 0.2g/t Au from 294.3m) [12].

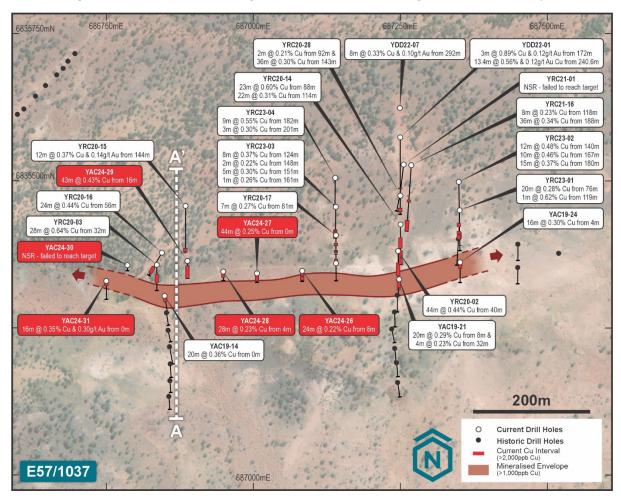


Figure 3. YT01 plan. Reported air core holes are shown with red callouts (GDA94 MGA Zone 50)



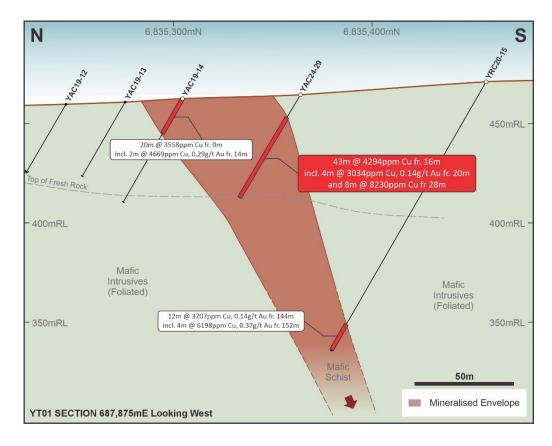


Figure 4. YT01 section A-A (40m wide window) at 686,875mE looking west.

Significant mineralised intercepts for YT01 air core drilling are listed below.

YAC24-26: 24m @ 2240ppm Cu from 8m including

12m @ 2891ppm Cu and 0.28g/t Au from 12m and,

24m @ 2051ppm Cu from 36m

• YAC24-27: 44m @ 2489ppm Cu from 0m including

8m @ 3268ppm Cu and 0.13g/t Au from 32m

• YAC24-28: 28m @ 2274ppm Cu from 4m including

4m @ 1815ppm Cu and 0.11g/t Au from 28m and,

4m @ 2093ppm Cu from 40m

• YAC24-29: 43m @ 4294ppm Cu from 16m including

4m @ 3034ppm Cu and 0.14g/t Au from 20m and,

8m @ 8230ppm Cu from 28m

• YAC24-30: no significant result, ended at 20m depth due to hard ground

YAC24-31: 20m @ 2917ppm Cu and 0.25g/t Au from 0m

The **YT19 Prospect** is a zone of anomalous copper mineralisation identified by RGC in 1991, through a soil sampling program. RGC tested the anomaly by drilling one vertical RAB hole to a depth of 10m, a single 4m composite sample was collected from the bottom of the hole and returned 4300ppm Cu.

ERL initially targeted YT19 in 2019<sup>[3]</sup> drilling seven AC holes along two lines spaced 100m apart and was further tested by drilling two reverse circulation holes in 2020 <sup>[5]</sup>; one hole was



drilled at the eastern end of each AC line. There has been no further drilling undertaken at YT19 since the 2020 reverse circulation drill program.

ERL interprets the YT19 copper mineralisation to occur along the same lithological contact as the YT01 Prospect mineralisation (Figure 5). Approximately 2km separates YT01 and YT19. However, the YT19 mineralisation occurs along the western limb of the regional fold structure and strikes NW – SE. There is no drilling between YT19 Prospect and YT01 Prospect along this contact further highlighting the potential for further low-grade copper mineralisation occurrences.

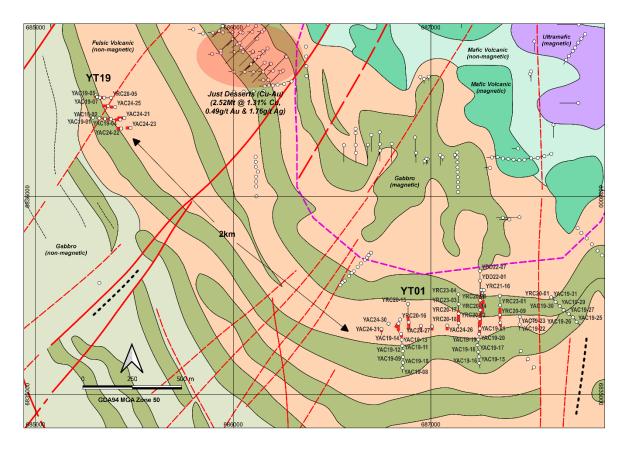


Figure 5. YT01 and YT19 on geology interpreted from magnetics. Red lines are interpreted structures (GDA94 MGA Zone 50).

Five air core drill holes were used to target extensions to the YT19 mineralisation (Figure 6).

YT19 air core drilling assay results are as follows,

• YAC24-21: 31m @ 2060ppm Cu from 24m

• YAC24-22: 28m @ 2138ppm Cu from 4m including

4m @ 2325ppm Cu and 0.15g/t Au from16m and

4m @ 2783ppm Cu and 0.14g/t Au from 24m

YAC23-23: 4m @ 1514ppm Cu from 36m and,

1m @ 1331ppm Cu from 47m

YAC24-24: 27m @ 2244ppm Cu from 20m including

12m @ 2792ppm Cu and 0.10g/t Au from 24m



## YAC24-25: 4m @ 1410ppm Cu from 36m

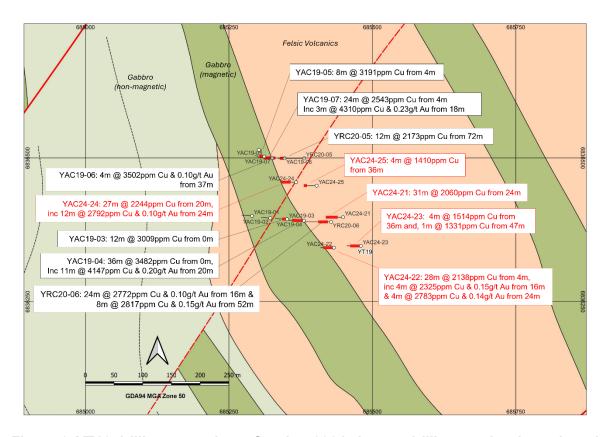


Figure 6. YT19 drilling on geology. October 2024 air core drilling results shown in red (GDA94 MGA Zone 50).

At the **Main Road Prospect** fourteen AC holes (YAC24-07 to YAC24-20) were drilled testing for gold mineralisation. Drilling targeted a north to northeast trending steeply west dipping contact between non-magnetic mafic volcanics and magnetic mafic volcanics. The area has been the focus of recent prospector activity using metals detecting.

The area has previously been the target of RAB drilling by Shell (1982), RGC (1989) and Mines and Resources Australia (2004); holes were drilled on 100-200m spaced east -west lines. Shell did not assay for gold and the RGC holes are generally less than 10m in depth.

MRA holes in the target area generally range in depth from 40-50m and have been assayed for gold. Holes were planned to test the mineralisation by drilling below the intercepts.

Main Road Prospect air core drilling assay results are as follows,

• YAC24-07: no significant result

YAC24-08: 4m @ 0.29g/t Au from 44m

• YAC24-09: 4m @ 0.13g/t Au from 36m

YAC24-10: no significant result
 YAC24-11: no significant result

YAC24-12: 4m @ 0.23g/t Au from 16m and,

4m @ 0.16g/t Au from 28m

YAC24-13: 4m @ 0.13g/t Au from 28m and,



**4m @ 0.14g/t Au from 48m** and, **4m @ 0.16g/t Au from 56m** 

YAC24-14: no significant result
 YAC24-15: no significant result
 YAC24-16: no significant result

YAC24-17: 4m @ 0.12g/t Au from 32m

YAC24-18: no significant result
YAC24-19: no significant result

YAC24-20: 4m @ 0.13g/t Au from 24m

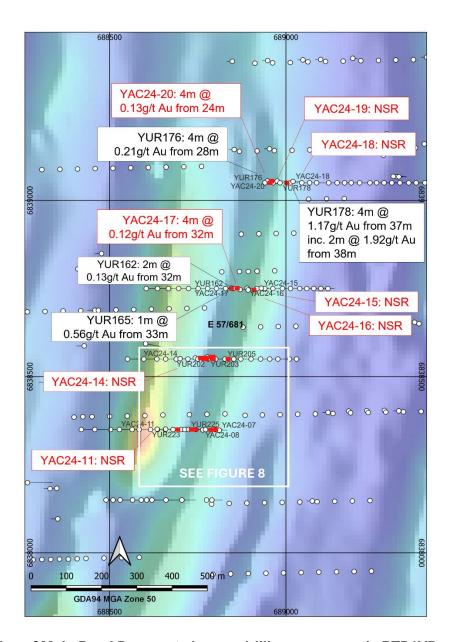


Figure 7. Plan of Main Road Prospect air core drilling on magnetic RTP1VD east shaded image. Reported air core results are shown red, historic mineralised intersections are shown black (NSR = no significant result; GDA94 MGA Zone 50).



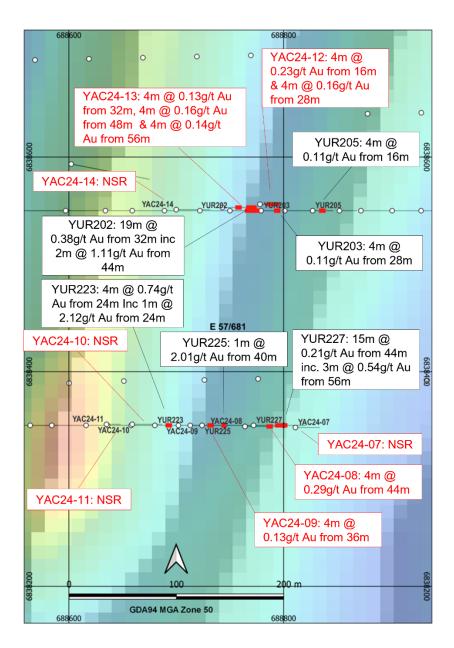


Figure 8. Plan of Main Road Prospect air core drilling on magnetic RTP1VD east shaded image. Reported air core results are shown red, historic mineralised intersections are shown black (NSR = no significant result; GDA94 MGA Zone 50).

At the **YT12 Prospect**, 6 AC holes were drilled to test copper - gold anomalism intersected in previous drilling (Table 3). The low-grade copper gold anomalism occurs along the contact between a north - south trending magnetic and non-magnetic gabbro. Drilling was conducted as 3 sets of scissor holes as the orientation of the anomaly was unclear. All holes were collared on weathered interpreted sub-cropping mafic schist.

Shell Australia undertook reconnaissance RAB drilling exploring for base metals in the YT12 area in 1982 but did not assay for gold. In 2004, Mines and Resources Australia (MRA) also conducted RAB drilling in the area testing a large north-south copper in soil anomaly. MRA sampled the entire hole for gold, only the EOH underwent a multi-element analysis which included copper.



In 2020, Empire completed 36 AC holes <sup>[7]</sup> at the YT12 prospect partly to test a north-south trending conductive horizon identified in an airborne VTEM survey undertaken in 2009 potentially representing a conductive (exhalative) sediment and the southern extent of a historic gold-copper soil anomaly. Domains of the anomaly appear related to surficial calcrete in a drainage system. However, the 2020 ERL drilling did encounter cherty siliceous rocks and extended the metal anomalism encountered by Shell and MRA. Drilling was conducted on 500m spaced east-west lines.

Of the six holes (YAC24-01 to YAC24-06) drilled at YT12 in this drill program, only two holes YAC24-05 and YAC24-06 intersected anomalous gold mineralisation validating previous drilling, low level copper was encountered in all holes,

• YAC24-01: no significant result

YAC24-02: 8m @ 578ppm Cu from 24m
 YAC24-03: 8m @ 1342ppm Cu from 20m

**YAC24-04: 8m** @ **1277ppm Cu from 16m** and,

12m @ 1494ppm Cu from 32m

• YAC24-05: 20m @ 1338ppm Cu from 4m and,

12m @ 2163ppm Cu and 0.13g/t Au from 32m

YAC24-06: 24m @ 1510ppm Cu from 32m including

4m @ 1308ppm Cu and 0.19g/t Au from 44m



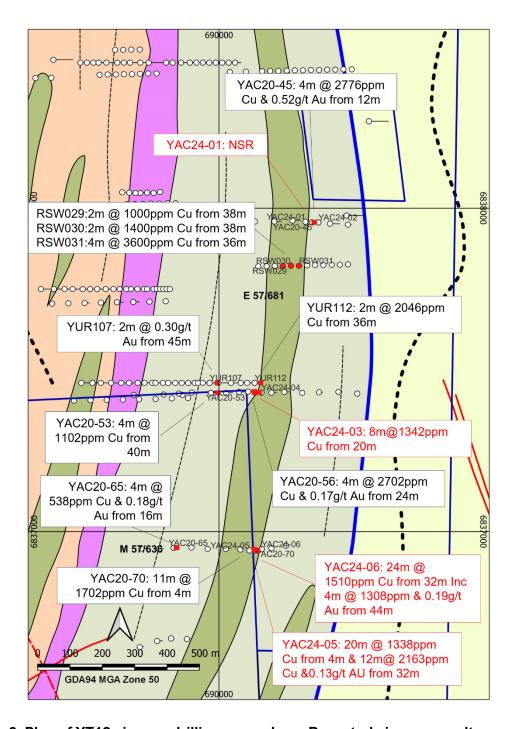


Figure 9. Plan of YT12 air core drilling on geology. Reported air core results are shown red, historic mineralised intersections are shown black (NSR = no significant result; GDA94 MGA Zone 50).



# Next steps,

- Survey the AC collars using DGPS
- Test YT01 with RC at depth in fresh rock and along strike to the west
- Step out drilling testing the geological contact between YT01 and YT19



**Table 1.** List of drill holes from ERL Yuinmery October 2024 AC drilling program with location details (GDA94 MGA Zone 50).

Prospect	Hole ID	East	North	RL	Azimuth	Dip	Depth (m)	Tenement
YT12	YAC24-01	690,267	6,837,958	462	090	- 60	31	E57/681
YT12	YAC24-02	690,307	6,837,956	462	270	- 60	38	E57/681
YT12	YAC24-03	690,090	6,837,433	462	090	- 60	41	E57/681
YT12	YAC24-04	690,131	6,837,430	462	270	- 60	45	E57/681
YT12	YAC24-05	690,094	6,836,942	462	090	- 60	49	M57/636
YT12	YAC24-06	690,132	6,836,946	462	270	- 60	60	E57/681
Main Road	YAC24-07	688,811	6,838,348	465	090	- 60	45	E57/681
Main Road	YAC24-08	688,764	6,838,349	465	090	- 60	62	E57/681
Main Road	YAC24-09	688,713	6,838,350	465	090	- 60	55	E57/681
Main Road	YAC24-10	688,659	6,838,351	465	090	- 60	55	E57/681
Main Road	YAC24-11	688,635	6,838,351	465	090	- 60	26	E57/681
Main Road	YAC24-12	688,778	6,838,556	465	090	- 60	39	E57/681
Main Road	YAC24-13	688,743	6,838,553	465	090	- 60	60	E57/681
Main Road	YAC24-14	688,700	6,838,551	465	090	- 60	63	E57/681
Main Road	YAC24-15	688,930	6,838,751	465	090	- 60	41	E57/681
Main Road	YAC24-16	688,890	6,838,751	465	090	- 60	43	E57/681
Main Road	YAC24-17	688,845	6,838,751	465	090	- 60	39	E57/681
Main Road	YAC24-18	689,020	6,839,054	465	090	- 60	48	E57/681
Main Road	YAC24-19	688,975	6,839,055	465	090	- 60	41	E57/681
Main Road	YAC24-20	688,947	6,839,055	465	090	- 60	47	E57/681
YT19	YAC24-21	685,449	6,836,397	465	270	- 60	55	M57/636
YT19	YAC24-22	685,433	6,836,344	465	270	- 60	46	M57/636
YT19	YAC24-23	685,480	6,836,347	465	270	- 60	48	M57/636
YT19	YAC24-24	685,367	6,836,458	465	270	- 60	48	M57/636
YT19	YAC24-25	685,403	6,836,452	465	270	- 60	40	M57/636
YT01	YAC24-26	687,083	6,835,347	463	180	- 75	67	E57/1037
YT01	YAC24-27	687,006	6,835,343	464	180	- 73	52	E57/1037
YT01	YAC24-28	686,949	6,835,346	465	180	- 72	48	E57/1037
YT01	YAC24-29	686,888	6,835,364	465	180	- 60	59	E57/1037
YT01	YAC24-30	686,786	6,835,357	471	180	- 60	20	E57/1037
YT01	YAC24-31	686,750	6,835,330	464	180	- 60	62	E57/1037



Table 3. YT12 Prospect significant historic drilling intercepts

Hole_ID	East	North	Depth (m)	Mineralised Intercepts	Company
YAC20-70 <sup>[7]</sup>	690,113	6,836,942	19	11m @ 0.17% Cu from 4m	ERL
YAC20-65 <sup>[7]</sup>	689,860	6,836,950	33	4m @ 0.05% Cu & 0.18gt Au from 16m	ERL
YAC20-56 <sup>[7]</sup>	690,111	6,837,430	30	4m @ 0.27% Cu & 0.17gt Au from 24m	ERL
YAC20-53 <sup>[7]</sup>	689,975	6,837,429	47	4m @ 0.11% Cu from 40m	ERL
YAC20-45 <sup>[7]</sup>	690,287	6,837,956	40	4m @ 0.28% Cu & 0.52gt Au from 12m	ERL
YUR107 <sup>[8]</sup>	689,971	6,837,460	56	2m @ 0.30gt Au from 45m	MRA
YUR112 [8]	690,110	6,837,460	38	2m @ 0.20% Cu from 36m to EOH	MRA
RSW029 <sup>[10]</sup>	690,197	6,837,821	42	2m @ 0.10% Cu from 38m	Shell
RSW030 <sup>[10]</sup>	690,222	6,837,822	42	2m @ 0.11% Cu from 38m	Shell
RSW031 <sup>[10]</sup>	690,247	6,837,822	54	4m @ 0.25% Cu from 36m	Shell

**Table 4. Main Road Prospect significant historic drilling intercepts** 

Hole_ID	East	North	Depth (m)	Mineralised Intercepts	Company
YUR227 <sup>[9]</sup>	688,772	6,838,350	59	15m @ 0.21gt Au from 44m,	MRA
				inc. 3m @ 0.54gt Au from 56m (to EOH)	
YUR225 <sup>[9]</sup>	688,724	6,838,350	52	1m @ 2.01gt Au from 40m	MRA
YUR223 <sup>[9]</sup>	688,680	6,838,350	45	4m @ 0.74gt Au from 24m,	MRA
				inc 1m @ 2.12gt Au from 24m	
YUR205 <sup>[8]</sup>	688,827	6,838,550	38	4m @ 0.11gt Au from 16m	MRA
YUR203[8]	688,779	6,838,550	35	4m @ 0.11gt Au from 28m	MRA
YUR202 <sup>[8]</sup>	688,750	6,838,550	54	19m @ 0.38gt Au from 32m,	MRA
				inc. 2m @ 1.11gt Au from 44m	
YUR162 <sup>[8]</sup>	688,829	6,838,750	34	2m @ 0.13gt Au from 32m	MRA
YUR165 <sup>[8]</sup>	688,893	6,838,746	49	1m @ 0.54gt Au from 33m	MRA
YUR176 <sup>[8]</sup>	688,940	6,839,050	53	4m @ 0.21gt Au from 28m	MRA
YUR178 <sup>[8]</sup>	688,983	6,839,050	60	4m @ 1.17gt Au from 37m,	MRA
				inc. 2m @ 1.92gt Au from 38m	

# EMPIRE RESOURCES

#### **ASX Announcement** 25 November 2024

This announcement is authorised for release by:

# Michael Ruane Non-Executive Chairman

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## Additional Information

Further details relating to the information in this release can be found in the following ASX announcements:

- 1. ASX: ERL "Yuinmery RC drilling results" 18 April 2023
- 2. ASX: ERL "Yuinmery continues to deliver excellent copper-gold & copper-nickel results" 24 April 2020
- 3. ASX: ERL "Strong anomalism in reconnaissance drilling" 24 January 2020
- 4. ASX: ERL "Exploration Projects Update" 16 September 2019
- 5. ASX: ERL "Drilling confirms new copper-gold & copper nickel prospects at Yuinmery" 11 March 2020
- 6. ASX: ERL "Assay results from Yuinmery Project" 02 May 2022
- 7. ASX: ERL "Widespread copper, gold & nickel mineralisation in aircore drilling at Yuinmery" 15 February 2021
- 8. Mines and Resources Australia Pty Ltd, Wamex Report A69231 (2004)
- 9. Mines and Resources Australia Pty Ltd Wamex Report A71187 (2005)
- 10. The Shell Company of Australia Ltd, Wamex Report A12137 (1983)
- 11. ASX: ERL "Aircore Drilling Program Completed at Yuinmery" 28 October 2024
- 12. ASX: ERL "Pennys Gold Project Aircore Drilling Results" 25 October 2022
- 13. ASX: ERL "Excellent Results from Yuinmery Drilling" 22 September 2021
- 14. ASX: ERL "Penny's Gold Project Aircore Drilling Results" 25 October 2022

## **Competent Person Statements**

The information in this report that relates to Exploration Results is based on information compiled and/or reviewed by Mr Mark Shelverton, who is a Member of the Australian Institute of Geoscientists. Mr Shelverton is a full-time employee of Empire Resources and has sufficient experience that is relevant to the style of mineralisation and type of deposits under consideration and to the activity he is undertaking 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 Shelverton consents to the inclusion in this presentation of the matters based on this information in the form and context in which they appear.

#### **New Information**

Information concerning the current mineral resource estimate relating to the Just Desserts deposit is extracted from the ASX Announcement dated 17 May 2016.

Empire Resources Limited confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the Resource estimate in the



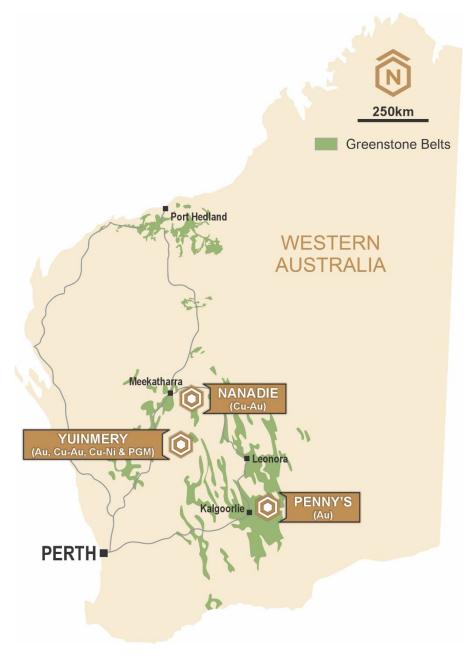
relevant market announcement continue to apply and have not materially changed. Empire Resources Limited confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the original market announcements.

## **About Empire**

Empire Resources Limited (ASX: ERL) is a gold and copper focussed exploration and development company. Empire owns three highly prospective projects. The Yuinmery Copper-Gold Project 470km northeast of Perth in the Youanmi Greenstone Belt, the Nanadie Copper-Gold Project southeast of Meekatharra in the Murchison Region and the Penny's Gold Project 45km northeast of Kalgoorlie in the prolific Eastern Goldfields Region of Western Australia. Empire's projects have numerous exploration targets with excellent potential.

Empire has an experienced team of exploration, development and financial professionals who are committed to developing a sustainable and profitable mineral business. Empire seeks to extract value from direct exploration of its existing projects as well as identifying value accretive investment opportunities that complement the Company's development objectives.





**Empire Resources Project Location** 



# JORC TABLE 1 FOR THE YUINMERY COPPER - GOLD PROJECT

# **Section 1 Sampling Techniques and Data**

Criteria	JORC Code Explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information</li> </ul>	<ul> <li>Air core (AC) drilling with an 85mm air core bit was used to collect one metre samples in buckets. Each drilled sample was placed on the ground in ordered rows by the drill crew under ERL supervision.</li> <li>Samples for geochemical analysis where primarily collected as four (4) meter composite samples, with one (1) meter samples being collected at the end of each hole. Depending on the end of hole depth a composite sample less than 4m may have been collected from each hole.</li> <li>Each 4m composite sample was created using a 50mm diameter spear and spearing the relevant four, one-meter sample piles to collect a sub-sample of approximate equal volume from each one-meter sample pile, the speared sample was placed in a pre-numbered calico bag to create the four-meter composite sample.</li> <li>Composite samples were generally &lt;3kg in size made up of equal sub-sample from each one-meter sample pile.</li> <li>A one-meter sample was collected in a pre-numbered calico bag at the end of each hole by spearing the last one-meter sample pile from each hole.</li> <li>Care was taken to create samples of the same weight; generally, less than 3kg.</li> <li>Composite samples and one-meter samples were created by Empire Resources personnel.</li> <li>Drill holes were angled towards 90° &amp; 270° at YT12 prospect; 90° at Main Road prospect; 270° at YT19 prospect; 180° at YT01 prospect.</li> <li>All samples were analysed by Aqua regia digestion with ICP-MS finish (Intertek code AR10/MS33).</li> <li>Historic YUR series holes samples were collected by PVC spear as 4m composites and analysed for gold by aqua regia digest, solvent extraction and graphite furnace AAS finish to 1ppb by Genalysis in Perth. An aliquot of the 10g digest from the final sample in each hole</li> </ul>

was also determined for a multi-element







#### suite (Ag, As, Cu, Ni, Pb, Zn) by flame Historic RSW series holes samples were collected as 4m composites with resampling of significant results at 1m samples and analysed for gold by aqua regia digest by Genalysis. **Drilling** Drill type (e.g. core, reverse Drilling was undertaken using Air core circulation, open-hole hammer, (AC) drilling technique. **Techniques** rotary air blast, auger, Bangka, AC drilling predominately used an 85mm sonic, etc) and details (e.g. core blade bit, with a face sampling down hole diameter, triple or standard tube, hammer used to penetrate hard depth of diamond tails, faceformations. sampling bit or other type, whether The drill hole orientation is surveyed core is oriented and if so, by what using a compass and clinometer. method, etc). Samples are drill spoil/chips and as such cannot be orientated. Drilling was performed by Australian Air Core Ptv Ltd. Historic YUR and RSW series holes are RAB holes. **Drill sample** Method of recording and assessing Sample recoveries are estimated visually, core and chip sample recoveries along with moisture and contamination recovery and results assessed. and notes made in the logs by Empire field crew. Sample recoveries were Measures taken to maximise sample recovery and ensure representative generally considered >80% nature of the samples. Estimated sample recovery is recorded Whether a relationship exists by the Empire field crew at the time of between sample recovery and grade sampling. and whether sample bias may have As a minimum standard, sample buckets occurred due to preferential and cyclone are cleaned at the end of loss/gain of fine/coarse material. each drill rod. There is no observable relationship between recovery and grade or if bias has been introduced due to preferential loss/gain of fine/coarse material and therefore no sample bias. Logging Whether core and chip samples Detailed geological logging has been have been geologically and carried out on all AC holes but due to the geotechnically logged to a level of nature of the drilling technique and detail to support appropriate Mineral resultant sample no geotechnical data Resource estimation, mining studies have been recorded. and metallurgical studies. Logging of AC chips recorded lithology, Whether logging is qualitative or mineralogy, mineralisation, weathering, quantitative in nature. Core (or colour, and other features of note. costean, channel, etc) photography. All holes were logged in full. The total length and percentage of the relevant intersections logged. Sub-sample If non-core, whether riffled, tube Air core samples were speared directly sampled, rotary split, etc and from one meter drill sample piles. techniques whether sampled wet or dry. All samples are dried, crush to ~2mm and sample For all sample types, the nature, then pulverized in a LM5 or similar mill to preparation quality and appropriateness of the a grind of 85% passing 75 micron. sample preparation technique. Field QC procedures involve the use of Certified Reference Materials (CRM's) as



	Quality control procedures adopted	assay standards insertion at a rate of
	<ul> <li>for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the insitu material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	approximately 1:40 and, field duplicates samples.
Quality of	The nature, quality and	The assaying and laboratory procedures
assay data and laboratory tests	<ul> <li>The hattre, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable</li> </ul>	<ul> <li>The assaying and laboratory procedures used are appropriate for the material tested. The analytical technique involved Aqua Regia of a 10g with ICP-MS finish for multi element analysis.</li> <li>No geophysical or portable analysis tool were used to determine assay values.</li> <li>Internal laboratory control procedures involve duplicate assaying of randomly selected assay pulps as well as internal laboratory standards. All these data are reported to the Company.</li> </ul>
	levels of accuracy (i.e. lack of bias) and precision have been established.	
Verification of sampling	The verification of significant intersections by either independent	Primary data was collected in the field using Excel templates on a Panasonic
and assaying	<ul> <li>or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	Toughbook laptop. The data are transferred into the companies Microsoft Access database.  No adjustments or calibrations have been made to any assay data
Location of Data points	<ul> <li>Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>Drill hole collars are located using a handheld Garmin GPSMAP64x, nominal accuracy is 3m.</li> <li>Grid system is GDA94 MGA Zone 50</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade</li> </ul>	<ul> <li>YT19: 40-50m spaced holes on three east-west lines spaced 50m apart. YT01: holes spaced 50-100m apart in an east- west direction. Main Road: 40m spaced holes on 200m-300m spaced east-west</li> </ul>



Orientation of data in	continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.  • Whether sample compositing has been applied.  • Whether the orientation of sampling achieves unbiased sampling of	lines. YT12: 40m spaced holes on three east-west lines spaced 400m and 600m apart.  NA AC results being reported are mostly based on 4m composite samples and 1m samples for all end of hole results  Drill sample orientation is considered appropriate with respect to the structures
relation to geological structure	possible structures and the extent to which this is known, considering the deposit type.  • If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	<ul> <li>being tested.</li> <li>Bias introduced by drilling orientation is considered insignificant due to the depth of cover and lower penetration of residual bedrock</li> </ul>
Sample Security	The measures taken to ensure sample security.	<ul> <li>Samples for submission to the laboratory are collected in pre-numbered calico bags; top of each bag is secured with a draw string.</li> <li>At each drill pad, calico sample bags are placed inside a poly woven bag (4 to a bag); top of each poly woven bag is secured with a cable tie.</li> <li>Each poly woven bag is annotated with the company name and the sample numbers held within each bag.</li> <li>Poly woven bags are transported to the Intertek Maddington Laboratory and placed on pallets by Empire Resources personnel.</li> <li>The Intertek Maddington Laboratory has a fenced compound with lockable gate.</li> </ul>
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	<ul> <li>Samples are submitted to Intertek         Laboratory in Maddington by Empire         Resources personnel for sample         preparation and analysis</li> <li>The laboratories are subject to routine         and random inspections</li> <li>The program was completed and, data         processed by the competent person who         is an employee of Empire.</li> </ul>

# **Section 2 Reporting of Exploration Results**

Criteria	JORC Code explanation	Commentary
Mineral	<ul> <li>Type, reference name/number,</li> </ul>	<ul> <li>The Company's' Yuinmery Copper-Gold</li> </ul>
tenement and	location and ownership including	Project comprises five granted
land tenure	agreements or material issues with	tenements: M57/265, M57/636,
status	third parties such as joint ventures,	E57/1037, E57/681 and, E57/1027.
	partnerships, overriding royalties,	<ul> <li>Tenements M57/265, M57/636 and</li> </ul>
	native title interests, historical sites,	E571037 are 100% owned by ERL



•	wilderness or national park and environmental settings.  The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	<ul> <li>Tenements E57/681 and E57/1027 are 91.89% owned by Empire and are subject to a Net Smelter Royalty (NSR) of 1.25%</li> <li>All tenements are in good standing and no known impediments exist.</li> </ul>
Exploration done by other parties	obtaining a licence to operate in the area.  • Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Western Mining Corporation Ltd commenced base metal exploration in the area in 1969 and continued until 1981. Soil sampling, ground magnetics, IP and EM were exploration methods used to target their vacuum, percussion and diamond drilling programs.</li> <li>Esso Australia Ltd explored the area between 1979 and 1984 using EM, RAB and diamond drilling in the search for Golden Grove - Scuddles type base metal deposits.</li> <li>Black Hill Minerals Ltd explored part of the area for base metals between 1986 and 1991. This involved rock chip sampling and limited percussion drilling.</li> <li>Meekal Pty Ltd commenced an exploration program in 1985 by remapping parts of the syncline and rock chip sampling. In 1986 Meekal introduced Arboyne NL into the project who carried out gold exploration by drilling reverse circulation holes under old gold workings.</li> <li>Between 1989 and 1991 RGC Exploration Pty Ltd explored the area concentrating on the potential for gold mineralization. This exploration consisted of geological mapping, rock chip sampling and some RAB drilling.</li> <li>In 1992 Meekal Pty Ltd joint ventured the project to Giralia Resources NL, who brought in CRAE as a partner in1993. CRAE completed a ground EM survey and drilled three diamond holes in its search for base metals.</li> <li>Gindalbie Gold NL then explored the area for gold between 1995 and 2000. This</li> </ul>
		<ul> <li>work entailed a wide spaced soil sampling program but although several anomalous zones were identified no drilling was undertaken.</li> <li>Mineral Resources Australia / La Mancha explored the northern end of the project area between 2002 and 2010 completing; extensive soil sampling (Auger), reconnaissance (RAB / Aircore) drilling</li> </ul>
		and geophysical surveys (VTEM and aeromagnetic surveys).



Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>Empire Resources Ltd commenced exploration in the area during 2006. To date a number of RAB, RC and diamond drilling programmes have been completed as well as aerial, surface and downhole electromagnetic (EM) surveys.</li> <li>The Yuinmery project area covers the eastern portion of the Archaean Youanmi greenstone belt with rock types consisting largely of altered mafic and</li> </ul>
		ultramafic volcanic and intrusive rocks with chloritic felsic and intermediate volcanic units. The volcanic units contain a number of intercalated strongly sulphidic cherty sediments which are host to VMS copper-gold mineralization. In the project area these rocks lie on the eastern side of the regional Youanmi Fault and form the southern closure of a northerly plunging syncline.  The volcanic rocks have been intruded by dolerites, gabbros, pyroxenites and other ultramafic rocks which probably form part of the layered Youanmi Gabbro Complex. Several zones of copper - gold mineralization have been identified within the project area by previous surface sampling and drilling. The volcanogenic massive sulphide style mineralization is associated with cherts, felsic volcanic breccias and tuffs.  Copper-gold mineralisation is interpreted to be associated with lower order shears subsidiary to either the Youanmi or Yuinmery Shear zones. Gold sits in subvertical shears, and forms narrow, steep plunging high grade shoots at minor flexures in the shears as quartz-sulphide lodes.
Drill hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:</li> <li>easting and northing of the drillhole collar</li> <li>elevation or RL (elevation above sea level in metres) of the drillhole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul>	<ul> <li>Thirty-one (31) air core drill holes for 1488m were drilled at the Yuinmery Copper – Gold Project.</li> <li>All drill hole details are provided and displayed in the attached tables and diagrams</li> </ul>



Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.	<ul> <li>All reported assay intervals have been length weighted. No top cuts have been applied.</li> <li>Length weighted copper intervals have been reported where the length weighted copper interval is &gt;2000ppm and may include intervals less than 2000ppm. Consecutive intervals &lt;2000ppm Cu have not been used in the length weighted interval.</li> <li>Mineralisation over 0.1g/t Au has been included in aggregation of sample intervals.</li> <li>No metal equivalent values have been used or reported</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this affect.</li> </ul>	Drill hole intercepts are reported as downhole intercepts due to the early nature of the program and the uncertainty in interpreted mineralisation widths and geometry.
Diagrams	Appropriate maps and sections     (with scales) and tabulations of     intercepts should be included for     any significant discovery being     reported These should include, but     not be limited to a plan view of     drillhole collar locations and     appropriate sectional views.	Refer to Figures and Tables in the announcement.
Balanced reporting	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	All data from the drill program is provided in the report. Representative reporting of both low and high grades and widths is practiced.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	All meaningful and material information has been included in the body of the announcement.
Further work	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).	