# Mandilla Gold Project WA, UltraFine Soil Sampling Results

Enterprise Metals Ltd (the "Company" or "Enterprise") has received the results of a recent 81 sample UltraFine+™ ("Ultrafine") orientation soil sampling program completed within the Mandilla Tenement E15/1437 in Western Australia.

# **Highlights**

- Initial UltraFine geochemical sample results collected for orientation purposes has identified a cluster of +30ppb gold results within shallow soils east of the Emu Rocks Granite (also known as the "Mandilla Syenite") (Refer Figures 1 & 3).
- This newly identified soil gold anomaly is in the general area where the 744oz Ausrox gold nugget was purported to have been found in 2013.
- An infill soil sampling program, notionally on a 200m x 100m grid, is underway to enable a better understanding of this newly identified soil anomaly.
- Once soils from the current program are processed at LabWest Minerals Analysis Ptd Ltd's laboratory and interpreted, Enterprise plans to test this and any other UltraFine gold anomaly(ies) with aircore ("AC") drilling.

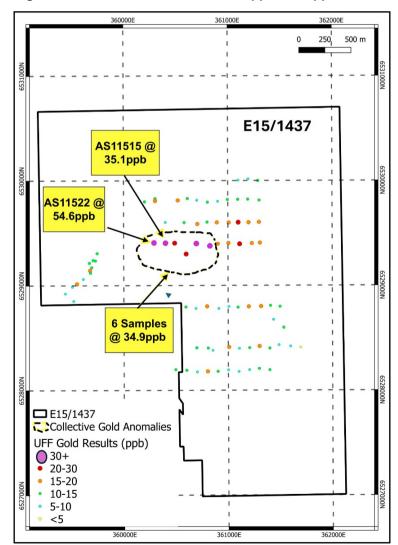


Figure 1. Mandilla E15/1437 with UFF ppb Gold ppb Results

## **Background**

Enterprise's wholly owned Mandilla tenement E15/1437 lies on the eastern margin of the Emu Rocks Granite, approximately 13 km north of Widgiemootha in WA. The "granite" is actually an Archaean syenite body which intrudes volcaniclastic sedimentary rocks in the area which forms part of the Spargoville Group of rocks.

The Company's primary exploration target at Mandilla is gold mineralisation similar to Astral Resources NL's 1.25 Moz gold resource, which lies on the western margin of the syenite. Enterprise believes that the volcaniclastic sediments on the eastern margin of the syenite on E15/1437 are equally prospective for gold, but recent shallow sediments have masked the basement rocks.

Previous shallow vertical aircore drill holes completed by Enterprise in 2021 on wide spaced east-west lines by Enterprise identified some scattered low-grade regolith gold accumulation but did not intersect any significant gold mineralisation. This was a similar story to Astral's experience on the western side of the syenite, until Astral discovered a number of narrow shear zones carrying very high-grade gold mineralisation.

#### Mandilla Ultra Fine Soil Geochemical Results

Following a geological re-appraisal of E15/1437 east of the Emu Rocks Granite, a recent UltraFine+™ ("Ultrafine" or "UFF") orientation soil sampling program was undertaken on the general area where the 744oz Ausrox gold nugget was purported to have been found in 2013.

The analytical results of the 1<sup>st</sup> batch of 81 soil samples have highlighted a surficial +30ppb to 54ppb gold anomaly with associated gold pathfinders, which is open to the south. Based on these preliminary results, an expanded UFF soil sampling program is currently underway to cover the areas of E15/1437 which have not been drilled with aircore holes. Following the completion of the current UFF soil geochemical program, it is anticipated that the Company will test areas of anomalous gold and associated pathfinder elements with AC drilling.

Table 1. Top 15 Au UFF Results & Pathfinders from Orientation Soil Survey

Element			Au	As	Cu	Мо	Sb	Se	W
Units	Northing	Easting	ppb	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit			0.5	0.5	0.1	0.03	0.001	0.05	0.001
Method	GDA94	GDA94	UF_MAR _MS						
Element	Z51	<b>Z</b> 51	Au	As	Cu	Мо	Sb	Se	W
AS11511	6529236	359728	31.9	14.5	32.9	1.16	0.569	1.36	0.535
AS11513	6529214	359670	29.6	13.7	30.5	0.73	0.425	0.79	0.472
AS11514	6529172	359692	27	13.3	40.6	1.04	0.569	1.04	0.552
AS11515	6529143	359676	35.1	14.5	38.1	0.91	0.42	1.03	0.439
AS11522	6528851	359519	54.6	12.6	45.3	0.59	0.254	1.14	0.316
AS11523	6529306	359745	31.2	12.3	34.5	0.92	0.378	1.1	0.412
AS11528	6529407	360291	17	10.5	45.4	0.66	0.379	0.93	0.256
AS11529	6529377	360827	16.8	11.6	57.4	0.54	0.382	1.12	0.206
AS11566	6528402	360808	24.6	18	51.7	0.68	0.286	0.87	0.427
AS11570	6528175	360703	17.6	18.9	49.9	0.64	0.332	0.83	0.617
AS11573	6528180	360901	19.8	18.2	55.6	0.6	0.326	1.02	0.535
AS11581	6528808	361406	19.2	20.4	63	1.2	0.41	0.95	0.28
AS11582	6528799	361498	18.9	21.6	62.6	0.78	0.325	0.84	0.244
AS11583	6529799	360201	28.1	12.7	50.4	0.65	0.295	1.24	0.257
AS11584	6529829	360302	17.8	11.5	48.2	0.56	0.344	1.17	0.252

Figure 2 shows the location of the Star Anomaly and several other anomalous Enterprise RC and AC gold intersections at Mandilla. Refer ENT: ASX release dated 21 June 2021.

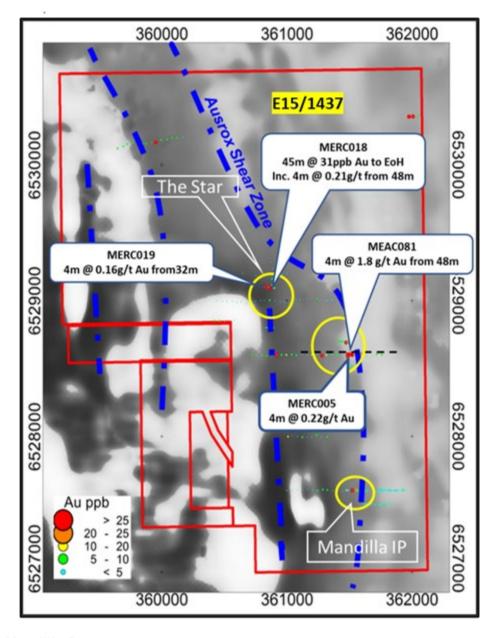


Figure 2. Mandilla Prospect - Anomalous RC- AC Gold Intersections

## **About the Mandilla Prospect**

Enterprise's E15/1437 (Mandilla) is located in the Widgiemooltha greenstone belt in the western part of the Kalgoorlie geological domain, some 100 kilometres south of Kalgoorlie by road and 20 kilometres south west of Kambalda. Significant nickel and gold deposits are present in the belt, with the nearest mined gold deposit being the high-grade Wattle Dam Mine located approximately 3 km to the west of Mandilla.

The Mandilla Prospect lies on the eastern margin of the Emu Rocks Granite ("Mandilla Syenite"). The syenite intrudes volcaniclastic/sedimentary rocks in the area which form part of the Spargoville Group.

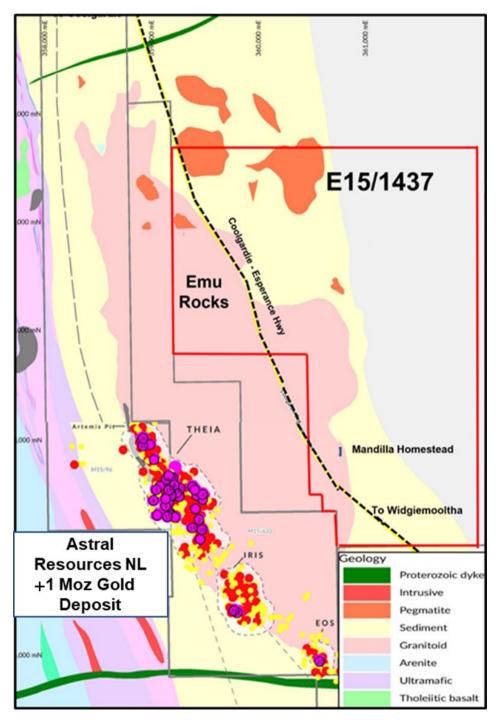
Significant NW to WNW and NE trending structures along the western flank of the tenements are interpreted from regional aeromagnetic data to cut through the syenite and may be important in localising gold mineralisation within shear zones within the volcaniclastic sedimnets marginal to the syenite

Enterprise's target at Mandilla is primary gold mineralisation, similar to the 1.25 Moz's discovered on the western margin of the Syenite by Astral Resources NL (ASX: AAR: 11 January 2023). AAR's drilling has demonstrated that shallow low grade gold intersections in saprolite and saprock may overlie narrow but high grade primary gold mineralisation.

Enterprise believes that the eastern margin of the Emu Rocks Granite on E15/1437 is equally prospective for gold, but the regolith is deeper and although Enterprise has completed 121 aircore (AC) holes and 22 reverse circulation (RC) holes on the property, the drilling grid is still very sparse.

Refer Figure 3 for location of E15/1437 and Figure 4 overleaf for the location of the Mandilla Prospect and Astral Resources NL's 1.25 million ounce gold deposit on the western flank of the Mandilla Syenite.

Figure 3. Geology of E15/1437 Mandilla Prospect & Astral Resources' 1.25 Moz Gold Deposit



\*Geology Source: Astral Resources NL website

This ASX Announcement has been approved in accordance with the Company's published continuous disclosure policy and authorised for release by the Company's Board of Directors.

#### **COMPETENT PERSON STATEMENT**

The information in this report that relates to Exploration Activities and Results is based on information compiled by Mr Dermot Ryan of Montana Exploration Services Pty Ltd, who is a Director and security holder of the Enterprise Metals Limited. Mr Ryan is a Fellow of the Australasian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists and has sufficient experience of relevance to the styles of mineralisation and the types of deposits under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Ryan consents to the inclusion in this report of the matters based on information in the form and context in which it appears.

## Appendix 1. JORC Code, 2012 Edition, Table 1.

## **Section 1 Sampling Techniques and Data**

(Criteria in this section apply to all succeeding sections.)

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Criteria	JORC Code explanation	Commentary
Sampling techniques	Nature and quality of sampling.	Enterprise's 2024 Mandilla orientation UFF soil sampling program was undertaken to determine if the UFF method of geochemically analysing the clay fraction in regolith was appropriate for the Mandilla area.
		The Soil sample survey was conducted on an ~ 200m x 100m spacing.
		Raw coarse sample was sample was taken from a nominal depth 10-15cm below surface and screened to 0.4mm.
		Approximately 150gm of screened samples were placed in new geochemical kraft bags and location recorded with a Garmin 64S GPS.  Samples were transported by Enterprise staff to LabWest Minerals Analysis Pty Ltd, Malaga, WA.
Sub-sampling techniques and sample preparation	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Collection of <2 micron fraction from -0.4mm soil samples by LabWest Minerals Analysis Pty Ltd, Malaga, WA for UltraFine analysis.
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used	The UltraFine analysis was conducted at LabWest Minerals Analysis Pty Ltd, Malaga, WA, a certified independent laboratory.
	and whether the technique is considered partial or total.	Analysis Method: LabWest Code UFF.
	,	Analysis and reporting 53 element suite by ICP-MS/OES assisted by microwave digestion.
		The LabWest Laboratory was inspected by Enterprise technical staff.
Verification of sampling and assaying	The verification of significant results by either independent or alternative company personnel.	Final geochemical data was reviewed, processed and interpreted by internal Enterprise geological staff.  Assays were as reported from the laboratory and are stored
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	in the Enterprise database and have not been adjusted in any way.

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Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.  Specification of the grid system used. Quality and adequacy of topographic control.	
Data spacing and distribution	Data spacing for reporting of Exploration Results.  Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity	Sample spacing of 100m on lines and lines spaced between 200m and 400m depending on area.  Sample spacing is appropriate for this level of reconnaissance exploration.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	No surface geology was available to determine stratigraphy or structure.  The soil sample grid is considered unbiased due to regular grid spacing.
Sample security	The measures taken to ensure sample security.	Each pre-numbered kraft packet soil sample was put into a draw string calico bag, with approximately one dozen samples in each bag. The bag was tied off and then the calico bags were placed in polyweave bags which were zip tied and labelled.  The polyweave bags were delivered directly to the LabWest Laboratory in Malaga by company personnel for sample preparation and analysis.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	The Company carries out internal audits and reviews of procedures, however no external reviews have been undertaken.

# **Section 2 Reporting of Exploration Results**

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements, overriding royalties, native title interests, 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.	Exploration Licence 15/1437 was granted to Mr William Allen on 18 March 2015 and Enterprise Metals Ltd signed an Option to explore the tenement on 9 March 2020.  Subsequently, Enterprise purchased the tenement on 7 April 2023. The Allen family have a 1.5% Royalty on production, capped at \$1.0M. E15/1437 has an expiry of 17 March 2025, but Extension of Term are possible.  There is no granted Native Title over the tenement. The outcropping portion of the Emu Rocks Granite is a Heritage Site.
Exploration done by other parties		In 1981 Newmont Holdings Pty Ltd explored the Spargoville Project for stratabound volcanogenic gold mineralisation. Newmont's focus was largely around Spargoville, but they undertook reconnaissance E-W lines of rotary airblast (RAB) drilling throughout the belt with bottom hole sampling and assaying for gold and arsenic only. The RAB assay results in the Mandilla area were not encouraging.

### Exploration done by other parties (cont'd)

Newmont undertook wide spaced reconnaissance lines of IP throughout their project area in 1983, and one of these lines (Line 33500N) was placed east-west just south of the Mandilla homestead. (Wamex a14616)

In 1987, WMC Resources Ltd entered into a JV with Camira Mines NL, to explore E15/116. WMC collected 3,757 -10# soil samples from the 40km² tenement. The soil survey defined two gold soil anomalies adjacent to the granite-sediment contact west of the Mandilla Homestead.

The southern anomaly was defined by a 20ppb Au contour, with peak values up to 150ppb Au, extending over 800m of strike. The northern anomaly was defined by a 10ppb Au contour extending over 600m. Of the 3,757 WMC soil samples, only 117 were located on current Mandilla tenement E15/1437.

Between 1990-1997 WMC held a very substantial block of tenements from ~30km south of Higginsville to ~20km north of Widgiemooltha and was targeting nickel and gold deposits. Most of WMC's exploration occurred immediately to the west of the current Mandilla tenement E15/1437 (i.e. within current Astral Resources NL's Mandilla Project tenements) but a small amount overlapped into current E15/1437.

In 1991-1992 WMC undertook extensive -6mm bulk soil sampling programs on a 400m x 100m grid and some aircore drilling. E15/116 was converted to ML 15/633.

As part of this regional AC program, WMC reported that 43 shallow aircore holes (647m) were drilled within M15/633 over a gold soil anomaly in the vicinity of the Mandilla Homestead. (in what is now E15/1437). The drilling was undertaken on east-west lines, 200m apart, with 40m hole spacing. WMC reported the bottom 3m results of all holes as 0.02ppmAu".

WMC undertook a partial surrender of E15/116 in 1990 which was picked up by AngloGold Australia Ltd as E15/660. AngloGold undertook an extensive soil auger drilling program (400m x 400m, 766 holes, av. 1.5m depth) with RAB drilling (106 holes/3,922m) to follow up soil geochemical anomalies. The eastern half of E15/1437 was covered by this soil auger drilling program. (128 samples)

Three of AngloGold's RAB holes (LFRB102,103 & 105, for total 149m) were drilled in the NE corner of current tenement E15/1437. The peak assay from AngloGold's 106 RAB hole program was recorded in LFRB105: 4m at 0.028 ppm Au from 52-56m.

In 2001 WMC sold its Mandilla tenements M15/96 and M15/633 to Gold Fields. In 2004 Anglo Australian Resources NL ("AAR") purchased the gold rights of the Mandilla Project (M15/96 & M15/63) from Gold Fields.

The whole of the Mandilla Project was covered by a 2004 low level airborne geophysical survey by UTS Geophysics. Total field magnetic data, radiometric data and digital terrain information was collected on 50m spaced east-west lines at a sensor height of 30m. The survey consisting of 963 line kilometres was part of a much larger multiclient survey.

In April 2013 and February 2014, Kalgoorlie prospector Darren Higgins pegged Prospecting Licences 15/5795, 5858 and 5885 in an area just north of the Mandilla Homestead. Using surface scaping and metal detecting, Higgins unearthed a 744 oz gold nugget (21.09 Kg) and another 103oz gold nugget. The 744oz nugget now resides in the WA Museum. William Allen bought the prospecting Licences from Higgins and pegged his own Exploration

### Exploration done by other parties (cont'd)

Licence 15/1437 on 6 August 2014 which was a surrendered portion of M15/633.

From 2015 to 2019, William Allen and family metal detected and prospected on E15/1437 for gold nuggets. Based on observations of panned samples from ~150 shallow auger holes drilled by Mr Allen on E15/1437, it was concluded that these nuggets had most likely weathered out of the Mandilla syenite and had concentrated in the easterly draining channel that drained towards Lake Lefroy some 10 kilometres to the east of Mandilla.

The eastern portion of the Mandilla Syenite (E15/1437) has been explored by soil sampling and sparse shallow RAB drilling by Newmont, WMC and AngloGold, which has been largely ineffective.

The regional geological setting is interpreted to be an Archaean mafic sequence of rocks wrapped around younger intrusive Archaean granites, based on GSWA regional airborne magnetic surveys and previous GSWA geological mapping.

The Mandilla Prospect lies on the eastern margin of the Mandilla (Emu Rocks) Syenite, a porphyritic granitic intrusion. The granite intrudes volcaniclastic sedimentary rocks in the area which form part of the Spargoville Group. Significant NW to WNW and NE trending structures along the western flank of the tenement are interpreted from regional aeromagnetic data to cut through the syenite and may be important in localising gold mineralisation within or on the margins of the syenite and adjacent volcaniclasitc sediments.

Note: there is very little exposed bedrock in most of the current tenement area as basement is obscured by alluvium and palaeo-channel material over saprolitic clays.

Enterprise digitised the small amount of historical shallow WMC aircore drill hole information in the vicinity of the Mandilla Homestead, and the three aircore holes in the NE corner of E15/1437, and the Newmont RAB data.

For details of Enterprise 2020 aircore drilling program, refer ENT- ASX release dated 21 Sept 2020

Drillhole intercepts and intervals were measured downhole in metres.

Refer to Figures in main body of this report.

All relevant exploration data has been assessed, and is considered inadequate due to the shallow, surficial nature of the historical soil sampling and limited drilling on the eastern side of the syenite.

Enterprise processed the 2004 low level airborne geophysical survey by UTS Geophysics. Total field magnetic data, radiometric data and digital terrain information was collected on 50m spaced east-west lines at a sensor height of 30m.

In 2020, Enterprise undertook a shallow 121 AC hole drilling program to blade refusal (total 2,408m), and in March 2021 Enterprise undertook a 3D-IP survey along the Ausrox Shear zone, and subsequently drilled 22 slimline RC holes following up low level gold and gold pathfinder elements from the AC drill program and an untested Newmont IP anomaly.

Four of these 2021 shallow slimline RC holes (MERC010, 011, 012 and 013) tested the Newmont IP anomaly of Section line 6527500N. (GDA94 Z51)

Exploration done by other parties (cont'd)	In 2022 Enterprise retrieved sample pulps containing pegmatite from MERC010, 011, 012 and 013 on the basis of lithological drill logs and chip trays and sent sample pulps to Portable Spectral Services Pty Ltd in West Perth, and duplicate pulps to MinAnalytical Services Pty Ltd for 4 acid digest and Mass Spectroscopy (MA40MS) and Optical Emission Spectroscopy (MA40OES).
	Enterprise also re-analysed all pegmatite RC pulps from Mandilla for 48 elements using Intertek-Genalyis' "4A-Li/MS48" analysis package. (Lithium-4 acid digestion/ICP-MS for Li and 47 asociated elements)
	Three main lithium anomalous pegmatite intrusions have been identified to date over a distance of 150m on one drill section. The Company does not yet know the north-south strike of these three (or more) pegmatite swarms. Further RC drilling is required to determine the north-south strike length, and the overall grade of the pegmatite swarms.
	Refer ENT ASX releases 21 Sept 2020, 16 March and 21 April 2021, 27 April 2022 and 26 October 2022.
	Due to the encouragement from the recent UFF orientation soil sampling, Enterprise is currently expanding the UFF soil sampling program, in order to identify specific targets for aircore drill testing.

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Not relevant at this early stage of exploration with UFF soil sampling and analyses.				
Given the wide spacing and shallow depths of drill holes by both past explorers and Enterprise, mineralisation widths and intersect lengths are not relevant.				
Refer to Figures in main body of this report.				
All relevant exploration data has been assessed, and is considered to be inadequate due to the shallow, surficial nature of the historical soil sampling and limited drilling on the eastern side of the syenite.				

#### Other substantive exploration data

Enterprise processed the 2004 low level airborne geophysical survey by UTS Geophysics. Total field magnetic data, radiometric data and digital terrain information was collected on 50m spaced east-west lines at a sensor height of 30m.

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#### Further work

Due to the encouragement from the recent UFF orientation soil sampling, Enterprise is currently expanding the UFF soil sampling program, in order to identify specific targets for further aircore drill testing.