

# ASX Announcement

29 JANUARY 2024



## REGIONAL BASE METAL ANOMALISM AT VICTORIA BORE

### HIGHLIGHTS

- Two new areas with elevated base metals located by a recent reconnaissance portable x-ray fluorescence (pXRF) soil sampling program at regional base metal targets
- 'Prospect 2' located 7.5km northwest of the Historic Victoria Bore Mine containing five samples with copper readings in excess of 2.5x background, and
- 'Prospect 6' located 1.9km along strike to the south from historic Victoria Bore copper mine containing two samples with copper readings in excess of 2.0x background
- Program of 400m line spacing and 50m sample spacing represents first-phase on-ground exploration of regional targets developed by PGN Geoscience
- Follow up infill pXRF soil sampling to be completed at Prospects 2 & 6 in addition to initial testing of other regional targets

**M3 Mining Limited (ASX:M3M) (M3 Mining or the Company)** is pleased to announce the results of recent pXRF soil sampling campaign at the Victoria Bore Project (**Victoria Bore** or the **Project**) located 120km south of Onslow in Western Australia. (see Figure 4).

### EXECUTIVE DIRECTOR SIMON ELEY SAID:

*"M3 Mining is pleased to announce the outcome of the recently completed pXRF soil sampling campaign undertaken at seven geological targets within granted tenure at the Victoria Bore Project. Two of the targets surveyed contained multiple anomalous copper readings with some as high as 5.9x background. The first phase survey was reconnaissance in nature and the team expects to complete a second phase of infill soil sampling within the quarter. Given the continued focus on expected copper demand, it is with good reason to test the copper potential at Victoria Bore"*

#### Disclaimer:

Soil samples were analysed using a portable x-ray fluorescence (pXRF) analyser. Values obtained are directly comparable to one another, hence are a useful and cheaper way to define base metal distributions in soils for exploration purposes. However, these values are not as accurate as laboratory XRF analyses and, whilst indicative, may not define absolute values accurately. Several samples have been dispatched to independent laboratories for an initial assessment. The Company will provide updates if the results from this orientation survey affect the anomalies stated in this announcement.

Please refer to Appendix 2 for methodology used to calculate background geochemical levels.



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#### Projects

Edjudina Gold Project (100% Owned)  
Victoria Bore Copper Project (100% Owned)

Shares on Issue	46.5M
Share Price	\$0.064
Market Cap	\$3.0M
ASX Code	M3M

## pXRF Soil Sampling Program

The recently completed program consisted of 245 soil sampling stations located across seven prospects. The majority of prospects were surveyed using single scout lines that were sampled on 50m spacing. At prospects 1 and 2, multiple lines were surveyed utilising a 400m line spacing. The targets were chosen due to favourable interpreted geology and their structural setting. Prospects 3 and 5 were chosen due to favourable radiometric signatures and prior anomalous rock chips.

The program was successful in detecting areas of anomalous copper that have not been the focus of prior exploration. These areas will be revisited, and infill sampled.

Prospect 1 surrounded the immediate vicinity of the historic Victoria Bore copper mine to explore possible strike extensions of copper mineralisation. As anticipated, sample VBS7, located less than ten metres from the historic mine recorded a relative copper reading of 20x background. However, the broader prospect only delivered one additional copper reading above 2x background.

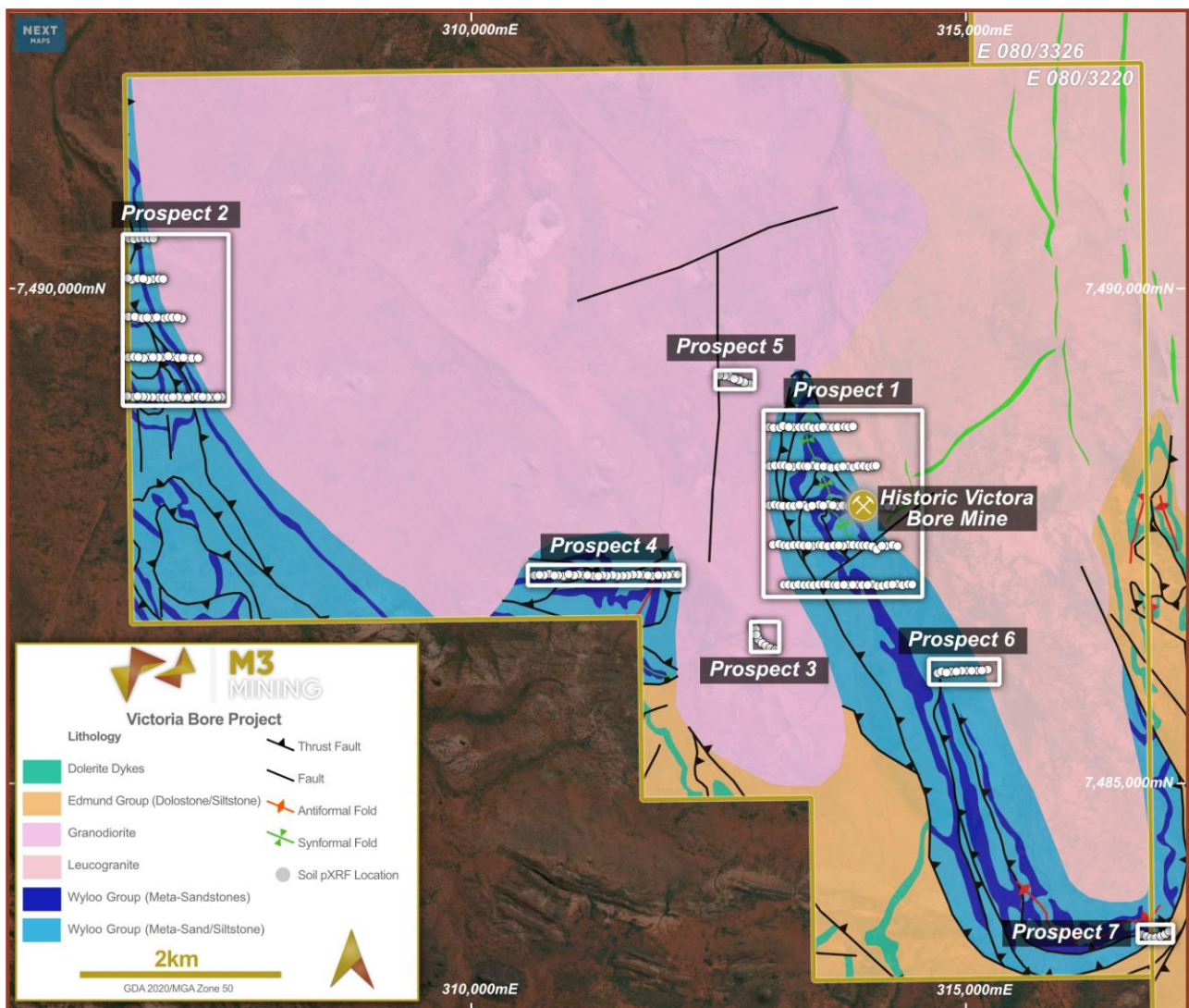


Figure 1 – pXRF sampling at The Victoria Bore Project

## Prospect 2

This prospect is located on the western side of the Project approximately 7.5km northwest of the historic Victoria Bore Copper Mine. It is interpreted to be situated along a limb consisting of Wyloo group metasediments which is in close contact with a leucocratic monzogranite batholith. The prospect consists of moderate relief silica-rich ridges which are surrounded by sheetwash plains common to the local area.

Sampling consisted of five lines oriented in an east-west direction, lines varied from 950m to 250m in length due to local geology and were spaced 400m apart (see Figure 2). Samples were collected at 50m spacing along the lines.

Six samples delivered copper readings in excess of 2x background with highlight sample (VBS161) having a copper reading 5.7x background. The two samples with the highest copper readings (VBS161 and VBS172) are located on separate lines approximately 400m apart and align with the local NNW geological fabric. It is currently interpreted that these samples belong to the same system and further infill sampling will be undertaken to explore this possibility.

It is also worth noting other geochemical associations within Prospect 2;

- VBS159 that measured 2.7x the copper background level also had a reading of 4.4x the lead background
- VBS166 that measured 2.5x the copper background level also had a reading of 3.0x the arsenic background

## Prospect 6

This prospect is located approximately 1.9km southeast along strike of the historic Victoria Bore Copper Mine. It is interpreted to be situated on the same limb of Wyloo group metasediments which hosts the historic copper mine. The prospect consists of exposed meta-sedimentary schists which outcrop at surface.

Sampling consisted of a single 500m line oriented in an east-west direction, samples were collected at 50m spacing (see Figure 3).

Two samples delivered copper readings in excess of 2x background with highlight sample (VBS243) having a copper reading 2.5x background. It is currently interpreted that Prospect 6 may represent a buried copper occurrence similar to the historic Victoria Bore copper mine. This is due to the geological similarities and paired copper anomalism. Infill sampling will be undertaken to further evaluate this anomaly.

Geochemical associations within Prospect 6;

- VBS243 that measured 2.5x the copper background level also had a reading of 2.2x the lead background and 4.9x the arsenic background
- VBS241 that measured 2.2x the copper background level also had a reading of 11.7x the arsenic background

Of the 11 samples collected on this line, eight returned arsenic readings in excess of 2x the arsenic background. Arsenic can be a key geochemical indicator for mineralisation and as such will be followed up later in the quarter to explore the extent of the copper/arsenic anomaly at Prospect 6.

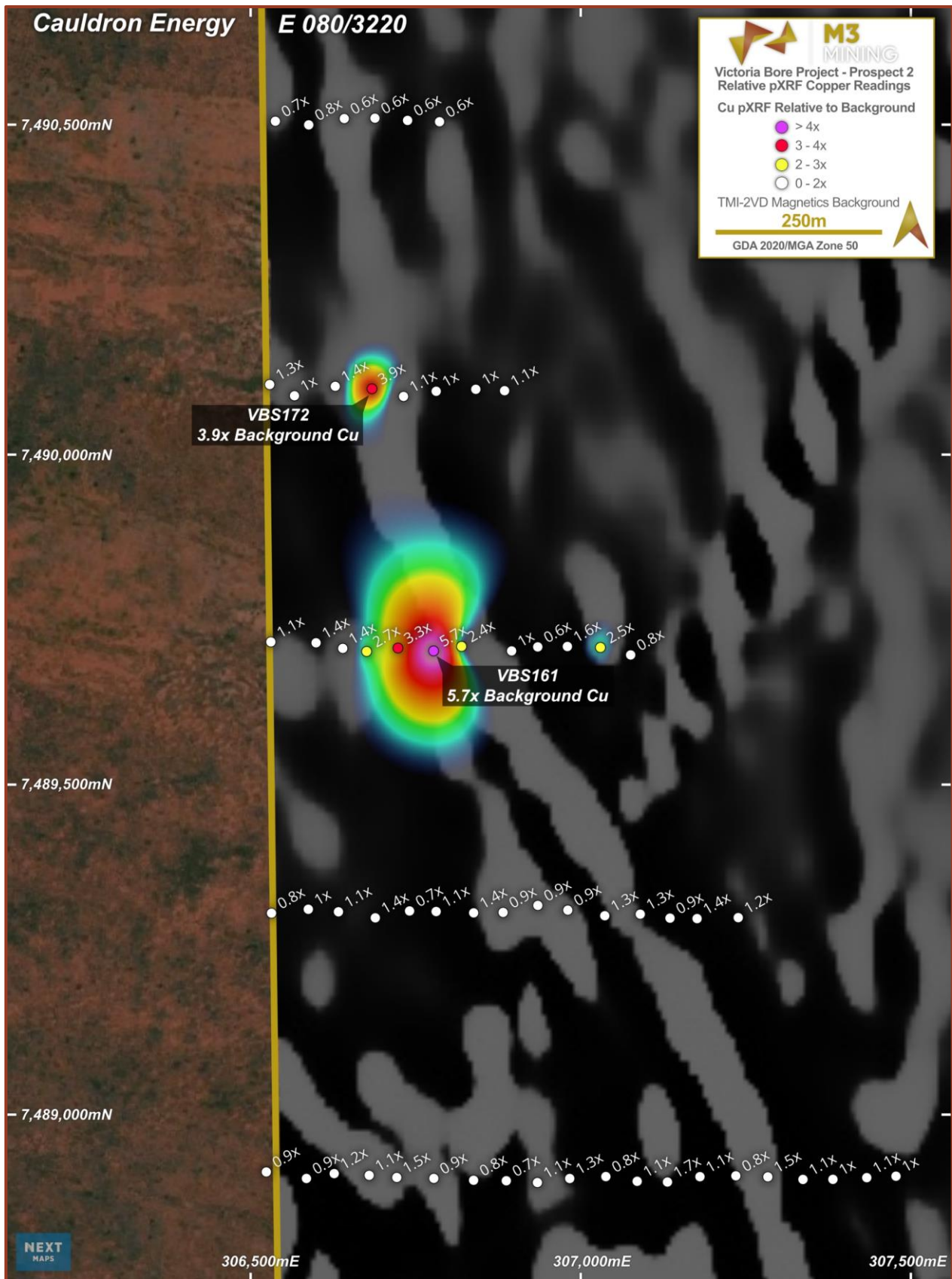


Figure 2 – Prospect 2 – Relative pXRF Copper Readings



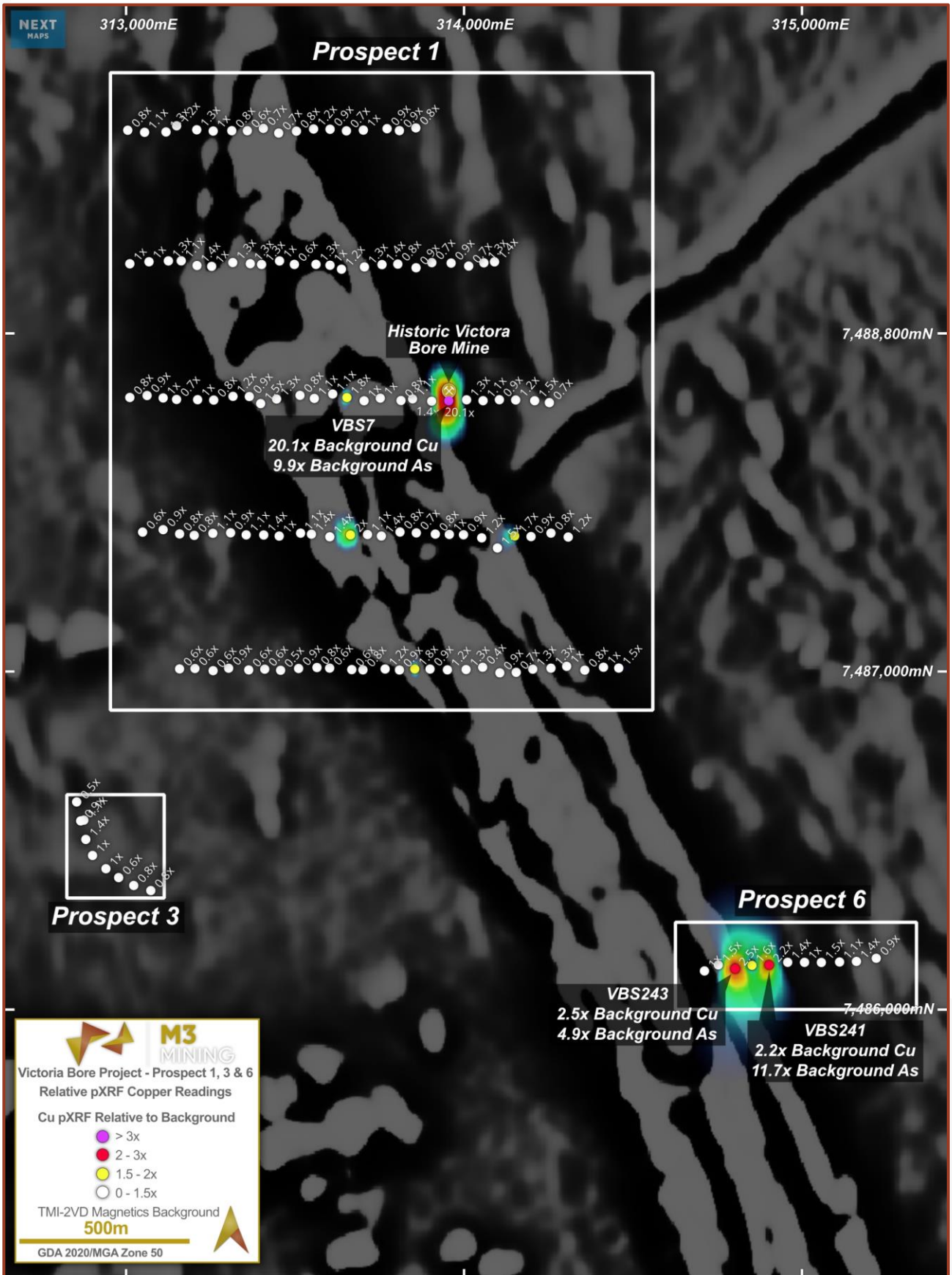


Figure 3 – Prospect 1, 3 & 6 – Relative pXRF Copper Readings

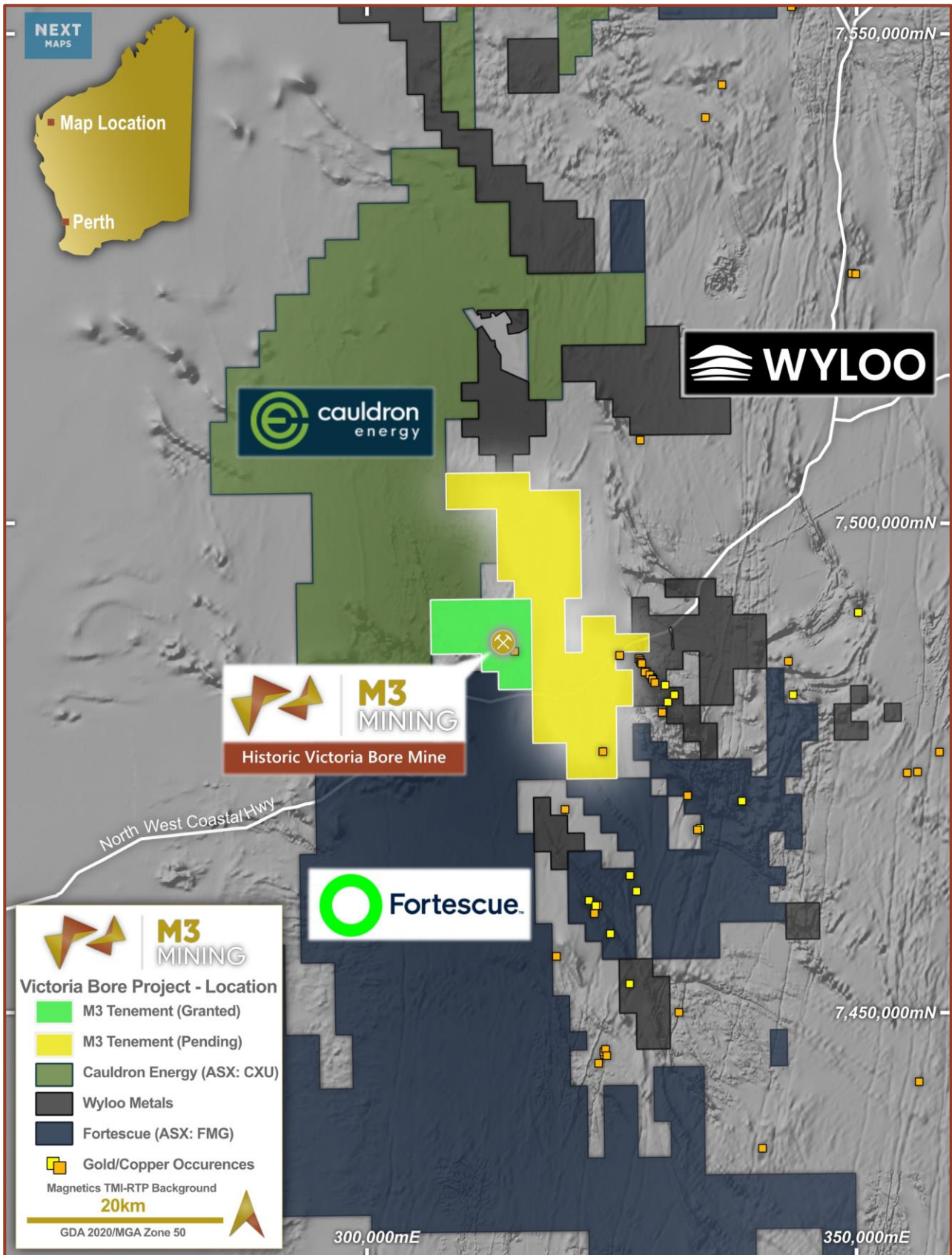


Figure 4 – The Victoria Bore Project



**-END-**

This announcement has been authorised for issue by the Board of M3 Mining Limited in accordance with ASX Listing Rule 15.5.

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## About M3 Mining

M3 Mining Limited (ASX:M3M) is a Perth-based mineral exploration company focused on creating value for shareholders through exploration and development of a high-quality base metal and gold exploration portfolio. M3 Mining's projects are strategically located in regions surrounded by majors and has experienced minimal modern, systematic exploration across both projects. The Company's strategy is to apply a systematic approach to the assessment and prioritisation of its projects, all of which have the potential to produce material discoveries.

The information in this announcement that relates to exploration results is based on and fairly represents information compiled by Jeremy Clark, a competent person who is a member of the AusIMM. Jeremy Clark is the sole director of Lily Valley International Pty. Ltd. Jeremy Clark has sufficient experience that is relevant to the style of mineralisation and type of deposits under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code of Reporting of Exploration Results, Mineral Resources and Ore Reserves. Jeremy Clark consents to the inclusion in this announcement of the matters based on his work in the form and context in which it appears.



## Appendix 1 – pXRF Soil Sampling Information (Cu or Zn or As or Pb > 2.0x background)

Sample ID	Prospect	Easting	Northing	Elevation	(Times background)			
					Cu	Zn	As	Pb
VBS5	1	314,057	7,487,803	91	1.1	1.0	2.0	0.7
VBS6	1	314,009	7,487,805	89	1.3	1.0	3.2	0.8
VBS7	1	313,956	7,487,802	96	20.1	1.8	9.9	1.6
VBS44	1	313,859	7,488,196	95	0.9	0.8	2.3	0.8
VBS45	1	313,906	7,488,211	93	0.7	0.8	3.4	0.8
VBS46	1	313,963	7,488,210	91	0.9	0.8	5.6	0.6
VBS53	1	313,703	7,488,603	91	1.0	0.8	2.3	0.7
VBS64	1	313,151	7,488,616	88	1.2	0.8	0.0	6.3
VBS72	1	314,100	7,487,367	93	1.5	2.1	2.1	1.1
VBS81	1	313,665	7,487,405	102	2.0	1.7	0.9	1.0
VBS100	1	313,458	7,487,005	99	0.5	0.6	0.0	4.6
VBS108	1	313,855	7,487,009	112	1.8	2.0	2.1	1.7
VBS115	1	314,205	7,487,008	111	1.3	1.4	2.0	0.9
VBS138	2	306,628	7,488,912	90	1.2	1.1	2.1	1.1
VBS144	2	307,091	7,489,305	97	1.3	2.1	3.1	1.5
VBS159	2	306,677	7,489,703	106	2.7	1.3	1.0	4.4
VBS160	2	306,724	7,489,708	106	3.3	1.2	1.4	1.3
VBS161	2	306,778	7,489,704	124	5.7	1.2	1.4	1.5
VBS162	2	306,821	7,489,711	114	2.4	1.7	1.5	1.3
VBS166	2	307,031	7,489,709	102	2.5	1.3	3.0	1.1
VBS172	2	306,685	7,490,101	105	3.9	0.9	1.0	1.0
VBS187	3	312,979	7,486,392	116	0.6	0.5	0.0	2.2
VBS218	4	310,737	7,487,107	117	1.1	2.1	1.0	1.0
VBS219	4	310,690	7,487,109	108	1.3	2.0	1.1	1.2
VBS222	7	317,015	7,483,477	117	1.0	1.0	3.1	1.0
VBS223	7	316,972	7,483,458	118	0.6	0.8	2.9	1.0
VBS232	5	312,614	7,489,114	96	0.8	1.2	0.7	2.2
VBS237	6	315,113	7,486,142	104	1.1	1.3	4.3	0.9
VBS238	6	315,059	7,486,141	105	1.5	1.9	9.9	1.6
VBS239	6	315,009	7,486,141	100	1.0	1.3	4.3	1.1
VBS240	6	314,959	7,486,141	105	1.4	1.7	5.7	0.9
VBS241	6	314,904	7,486,133	105	2.2	1.5	11.7	0.8
VBS242	6	314,853	7,486,132	108	1.6	1.4	4.2	0.8
VBS243	6	314,804	7,486,122	107	2.5	2.2	4.9	1.1
VBS244	6	314,754	7,486,133	100	1.5	1.4	3.4	1.0



## Appendix 2 – pXRF Soil Sampling – Background Level Calculation

The following information relates to the calculation of the relevant geochemical background levels that are quoted within the body of this report.

Various methodologies exist to ascertain the baseline of geochemical signatures, typically categorized into statistical and contextual approaches.

In this report, the determination of background levels is conducted through several statistical techniques. The exclusion of contextual determination is attributed to the preliminary stage of the project and the absence of comprehensive geological data. Premature interpretations of the geological context may result in inaccuracies, potentially leading to the incorrect identification of geochemical anomalies.

The statistical methodologies implemented are delineated as follows:

- **Trimmed Mean (%x):** This involves calculating the mean from a dataset while excluding a specified percentage of the lowest and highest outliers. The percentage indicates the proportion of upper and lower values omitted from the mean calculation. In this pXRF soil sampling program, which encompasses 245 readings, the exclusion amounts for each the upper and lower values for each percentage level are as follows:
  - o 5% - 12 values, 10% - 25 values, 15% - 37 values, 20% - 49 values, and 25% - 61 values.
- **Mode:** The value that appears most frequently in a data set. A set of numbers may have one mode or more than one mode (as is the case with the copper dataset)
- **Median:** The median is the value that divides a dataset into two equal halves and is determined by arranging the data in numerical order and selecting the middle number.

**To ascertain the baseline value for each element under investigation, an averaged mean is computed, encompassing the outcomes of all applied statistical methodologies, with the results rounded for precision.**

Method	Background Level (ppm)			
	Copper (Cu)	Zinc (Zn)	Lead (Pb)	Arsenic (As)
Trimmed Mean (5%)	29	34	16	8
Trimmed Mean (10%)	29	33	16	7
Trimmed Mean (15%)	29	33	16	7
Trimmed Mean (20%)	28	33	16	7
Trimmed Mean (25%)	28	33	16	7
Mode (1)	28	26	16	7
Mode (2)	23	-	-	-
Mode (3)	26	-	-	-
Median	28	32	16	7
<b>Average of Above Methodologies</b>	<b>28</b>	<b>32</b>	<b>16</b>	<b>7</b>

## Appendix 3 – JORC Table

### JORC Code, 2012 Edition – Table 1 report – pXRF Soil Sampling

#### Section 1 Sampling Techniques and Data

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

Criteria	Commentary
<i>Sampling techniques</i>	<ul style="list-style-type: none"> <li>pXRF Soil sampling – Dry samples were collected from a depth between 5 - 40cm below surface and sieved in the field to -0.4mm (40 mesh)</li> <li>This material was then scanned using a Vanta Series-M pXRF. Exposure time was set to 10 seconds per beam for a total scan time of 30 seconds per sample</li> <li>The pXRF soil sampling techniques are considered standard industry practice</li> </ul>
<i>Drilling techniques</i>	<ul style="list-style-type: none"> <li>No drilling results reported, refer to sampling techniques section above</li> </ul>
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <li>No drilling results reported, sample recovery from pXRF soil sampling is considered complete recovery. Practices to avoid surface contamination were adhered to</li> </ul>
<i>Logging</i>	<ul style="list-style-type: none"> <li>Soil sample sites are described noting landform and nature of soil media</li> <li>Photographs are taken of the sample site</li> <li>Soil sample descriptions are considered qualitative in nature</li> </ul>
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> <li>pXRF readings were taken on the sub 0.4mm fraction of the original dry soil sample</li> <li>No drilling results are being reported</li> <li>Based on the information provided sample sizes are considered appropriate to correctly represent interpreted anomalism given the status of the projects and allow an assessment of exploration potential</li> <li>Industry Standard QAQC was utilised included standard, duplicates and blanks</li> </ul>
<i>Quality of assay data and laboratory tests</i>	<ul style="list-style-type: none"> <li>Handheld pXRF readings reported</li> <li>Vanta Series-M with read times of 30 seconds (10, 10, 10 seconds per the three beams). Instrument calibrated at start</li> <li>Routine 'standard' (mineralised pulp) Certified Reference Material (CRM) was analysed by M3. Routine 'blank' material was also analysed. No significant issues were noted</li> <li>Handheld Geochemical analysis by handheld XRF should be considered as a preliminary indication only and subject to confirmation by laboratory assay</li> <li>Results from pXRF analysis can vary significantly from laboratory assay</li> </ul>
<i>Verification of sampling and assaying</i>	<ul style="list-style-type: none"> <li>pXRF is used as a preliminary analysis to identify samples with anomalous elements of interest</li> <li>Duplicate analysis was undertaken on samples with elevated copper to ensure device consistency. No significant issues were noted</li> <li>Several samples have been dispatched to independent laboratories for an initial assessment. The Company will provide updates if the results from this orientation survey affect the anomalies stated in this announcement</li> </ul>
<i>Location of data points</i>	<ul style="list-style-type: none"> <li>Sample locations were collected using a handheld GPS and are considered acceptable for the nature of this program</li> <li>Sample locations are recorded with a handheld Garmin GPS (+/- 3m)</li> <li>GPS coordinates for each station was undertaken using the standard inbuilt GPS systems grid system – WGS84 UTM Zone 51</li> </ul>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>Soil samples – 50m sample spacing along lines, with lines spaced 400m at prospects which had multiple lines</li> <li>The spacing and location of the sampling in the projects is, by the nature of early exploration, variable.</li> <li>The spacing and location of data is currently only being considered for exploration purposes.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>Limited drilling has been completed to confirm the optimal sampling orientation. Exploration Results are reported, and no estimate is completed as further works are required</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>M3 staff and contractors ensured a strict chain of custody procedures that are adhered to for all samples</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>M3's review is independent of the Company and all previous owners</li> </ul>

## Section 2 Reporting of Exploration Results

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

Criteria	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <li>The Victoria Bore Copper Project consists of one exploration license and seven exploration licence applications</li> <li>No joint venture or royalties are understood to impact the tenements.</li> <li>No known impediments are understood to occur to allow further exploration</li> </ul>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li>Limited exploration has been completed, historical rock chip sampling as well as a MLEM and FLEM was completed along with two RC programs as released previously</li> <li>A tenement wide airborne geophysical survey has been undertaken by M3</li> <li>Exploration is considered to be at an early stage across all tenements</li> </ul>
<i>Geology</i>	<ul style="list-style-type: none"> <li>The data supplied indicates mineralisation within the tenements is potentially in line with the commonly observed shear hosted, structurally control mineralisation style. Limited understanding of the mineralisation occurs to date</li> </ul>
<i>Drill hole Information</i>	<ul style="list-style-type: none"> <li>No drilling undertaken, refer to section 1 above for pXRF soil sampling methodology</li> </ul>
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <li>No drilling undertaken; data analysed via background statistical calculation. Refer to Appendix 2 for further detail</li> </ul>
<i>Relationship between mineralisation widths and intercept widths</i>	<ul style="list-style-type: none"> <li>No drilling undertaken, all reported geochemical anomalies are present in the surficial regolith. No widths of intercepts have been reported. Trends that are inferred between sampling stations are just interpretations and require further field work to be confirmed</li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <li>Suitable figures have been included in the body of the announcement</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li>Key results and conclusions have been included in the body of the announcement</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li>Historical rock sampling and drilling data mentioned in the release can be found in previous releases and detailed in the Independent Geologist Report in the prospectus</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li>Follow up field work is planned</li> </ul>