

## **Elevated Lithium Results in Orientation Soil Sampling, Bingin Peninsula - Bullfinch North, WA**

- **Orientation soil sampling over the Matheson Pegmatite on the Bingin Peninsula has detected elevated Li values between 65ppm and 106ppm\*.**
- **Eleven of sixteen shallow soil samples collected reported Li values equal to or greater than 50ppm.**
- **The samples were prepared and analysed by Portable Spectral Services (PSS) of West Perth, who are leaders in the pXRF and Li detection field. (Refer Note 1 below:**
- **A systematic soil sampling program over the Matheson Pegmatite has been planned.**

67 073

\* Li-Index Portable X-ray Fluorescence (pXRF) values are provisional until confirmed by sodium peroxide fusion with mass spectrometry finish.

---

Enterprise Metals Ltd (ENT) (“Enterprise” or the “Company”) is pleased to advise that it has received Lithium Index pXRF results for sixteen orientation soil samples collected over the Matheson Pegmatite on the Bingin Peninsula. Refer Figure 1 and Table 1 overleaf for locations and results.

While the recent orientation soil sampling was focused on Matheson’s Pegmatite, Enterprise’s GeoEye image (Figure 1) also shows two quartz scree areas west of Matheson’s pegmatite. Orientation soil sampling of these two photo features is currently in progress.

As reported on 22 January 2022, the Bingin-Maries Find gold workings are closely associated with a network of pegmatite intrusive bodies which have not been explored or analysed for lithium by previous explorers. Pegmatites display both dyke-like and complex shapes.

The pegmatite swarm was first mapped by geologist R.S. Matheson in 1939 while mapping the Bingin -Maries Find gold workings. His detailed plan of the area (Figure 3 in this report) was published in 1947 in Bulletin 101 of the Geological Survey of Western Australia.

**Note 1:** pXRF cannot detect lithium (Z3) directly. Lithium is derived from 2 main sources:

- Lithium-Caesium-Tantalum pegmatites (LCT Pegmatites)
- Lithium bearing brines associated with salt lakes
- pXRF can detect elements associated with LCT Pegmatites (Ga, Rb, Nb, Sn, Cs, Ta & Tl)
- an algorithm based on associated LCT elements is used to estimate the Li content (Lithium Index) (Refer Brand, N. & Brand, C. 2017)

It is generally considered that +60ppm Li in soils associated with LCT pegmatites is significant.

Figure 1. GeoEye Image - Matheson Pegmatite with Li\_Index Results in ppm

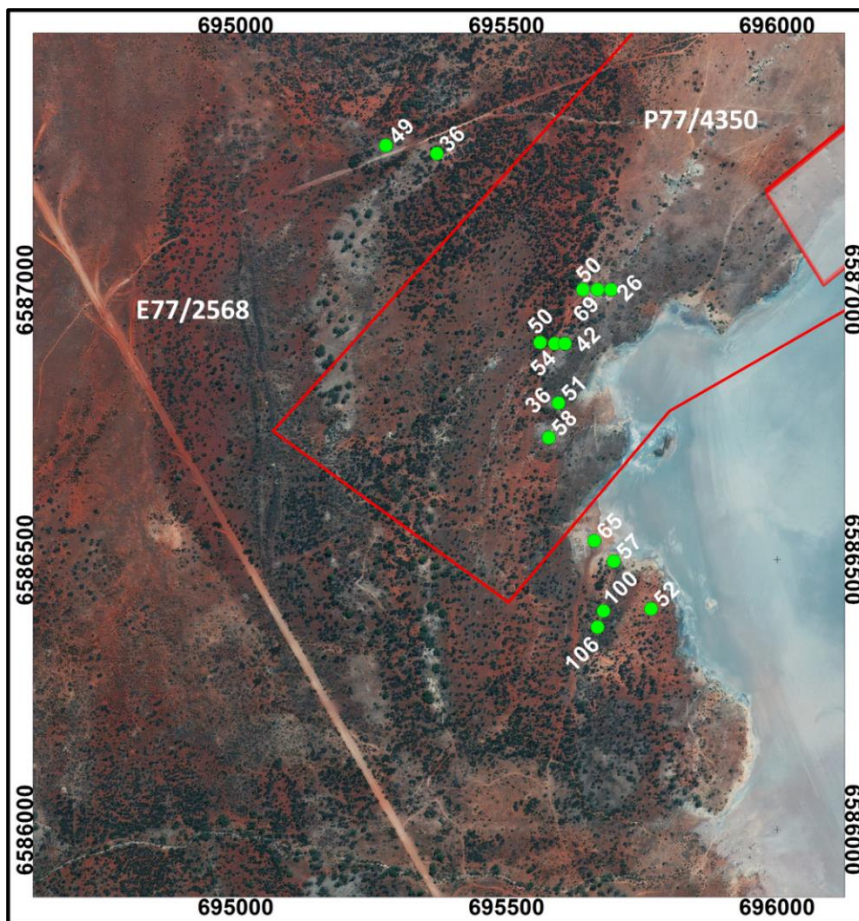


Table 1. pXRF Lithium Index Soil Results from Matheson Pegmatite – Bingin Peninsula

Sample No.	Li_IDX %	Li-ppm	GDA94_50 East	GDA94_50 North	Comments
SiO2	0.0014	14			PSS Standards
OREAS147	0.2978	2978			PSS Standards
AS0002	0.005	<b>50</b>	695641	6587000	light brown soil
AS0003	0.0069	<b>69</b>	695668	6587000	light brown soil
AS0004	0.0026	<b>26</b>	695693	6587000	light brown soil
AS0005	0.0054	<b>54</b>	695589	6586900	brown soil on track
AS0006	0.0042	<b>42</b>	695608	6586900	eastern margin pegmatite
AS0007	0.005	<b>50</b>	695562	6586902	western margin pegmatite
AS0009	0.0036	<b>36</b>	695596	6586790	pegmatite with green feldspar(?)
AS0010	0.0051	<b>51</b>	695590	6586790	light brown soil
AS0011	0.0058	<b>58</b>	695578	6586726	light brown soil
AS0012	0.0065	<b>65</b>	695662	6586535	micaceous pegmatite weathered
AS0013	0.0057	<b>57</b>	695698	6586497	micaceous soil
AS0014	0.01	<b>100</b>	695679	6586405	light brown soil
AS0015	0.0106	<b>106</b>	695668	6586375	micaceous soil & pegmatite
AS0016	0.0052	<b>52</b>	695767	6586409	light brown soil
AS0018	0.0049	<b>49</b>	695277	6587267	mixed pegmatite scree
AS0019	0.0036	<b>36</b>	695371	6587252	quartz scree (pegmatite scree)
SiO2	0.0008	8			PSS Standards
OREAS147	0.2974	2974			PSS Standards

**Note:** Missing sample numbers are rockchips submitted for Mass Spectrometry laboratory analysis.



Plate 1. Bleached weathered and brecciated pegmatite, 695668 East , 6586375 North GDA94\_50



Plate 2. Bleached weathered and brecciated pegmatite, 695699 East , 6586380 North GDA94\_50





Plate 3. Pale Green Feldspar (?) Phase of Pegmatite. Sample AS0008  
 695562 East, 6586895 North GDA94\_50



Figure 2. Surface Geology Plan Showing Pegmatites West of the Bingin-Maris Find Gold Workings: from Sullivan (2008), based on Matheson (1939).

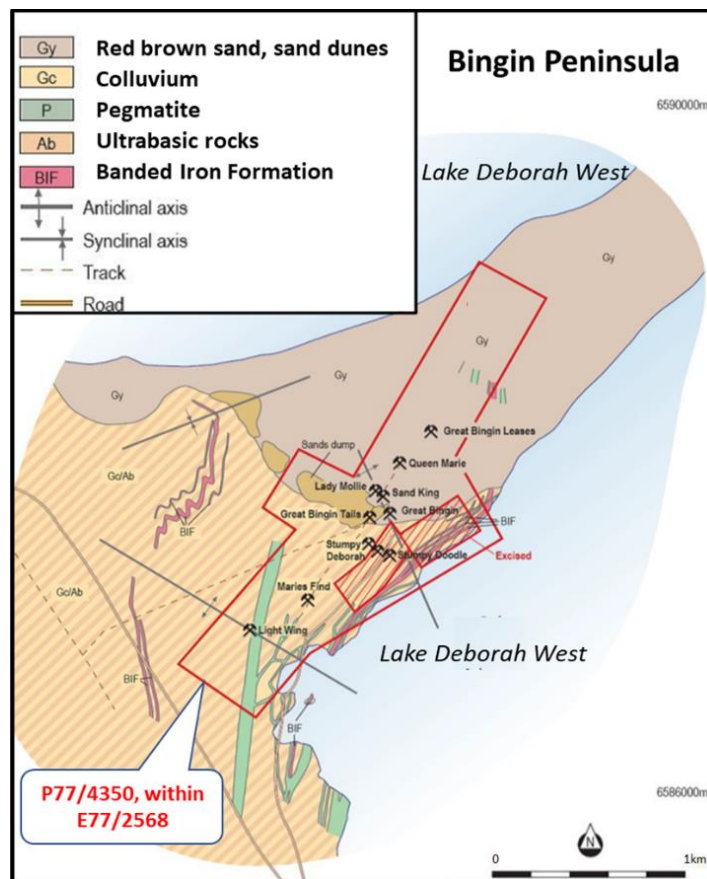
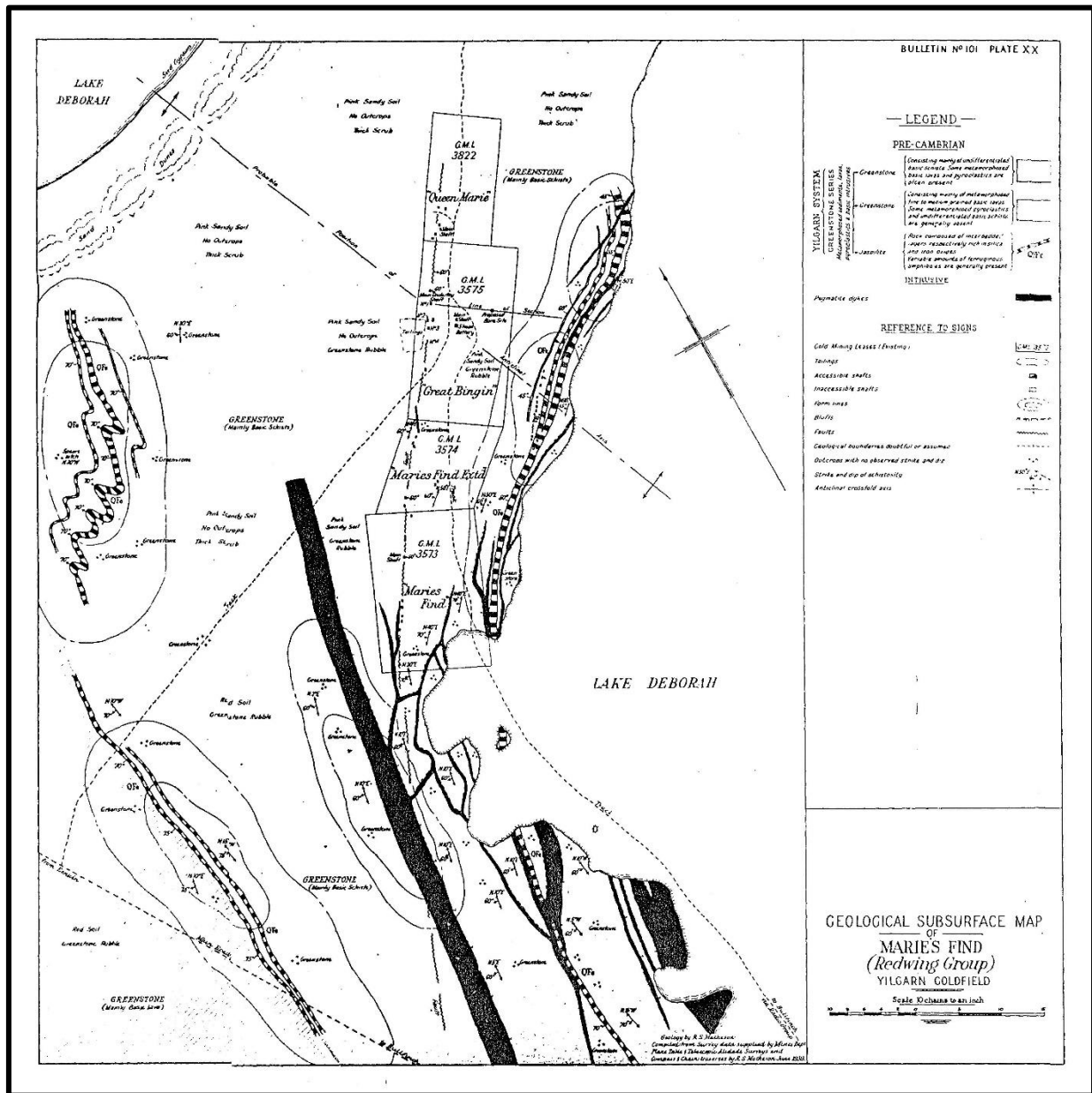


Figure 3. Matheson's Plan of Pegmatite (1939), WA Geol Survey Bulletin 101, 1947. Plate XX



Enterprise considers that the geological setting of the Bingin-Maries Find area has some similarities with the Earl Grey lithium deposit some 100km south of Southern Cross. The Earl Grey deposit is described as being a pegmatite with an albite-spodumene-quartz-microcline dominated composition, with accessory muscovite, biotite, petalite and tourmaline.

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

**Further information, contact:**

Dermot Ryan - Director

Ph: +61 8 6381 0392

[admin@enterprisemetals.com.au](mailto:admin@enterprisemetals.com.au)

**Competent Person Statement**

*The information in this report that relates to Exploration Activities and Results is based on information compiled by Mr Dermot Ryan, who is an employee of Montana Exploration Services Pty Ltd and a Director and security holder of the Company. 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.*

**Bullfinch North Project – Enterprise Metals**

Enterprise holds “Option to Purchase 100%” agreements over a contiguous block of Bullfinch North tenements held by Nickgraph Pty Ltd and Peter Gianni. The tenement package extends for approximately 50 km along strike from just north of Trough Well through to just south of Bullfinch and covers approximately 240 km<sup>2</sup> of granted tenements over Archaean greenstone lithologies prospective for orogenic gold deposits, nickel-copper sulfide deposits, iron ore, and pegmatite hosted lithium.

**References**

Brand, N. and Brand, C. 2017. Detecting the Undetectable: Lithium by Portable XRF, in Mineral Exploration and Mining, Denver X-Ray Conference, July 2017.

Matheson, R.S. 1947. The Mining Groups of the Yilgarn Goldfield North of the Great Eastern Railway, Bulletin 101, Geological Survey of Western Australia, 1947.

Sullivan, M. 2008. Annual Report Great Bingin Project P77/3386 Period 17/10/07-16/10/08, Golden Iron Resources Ltd. (Unpublished) Wamex A79888.

## JORC Code, 2012 Edition – Table 1 Report

### Matheson's Pegmatite - Bingin Prospect WA

#### 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>Orientation soil sampling was carried out by Enterprise Metals staff, using a hoe pick.</li> <li>All samples were collected from approximately 20cm depth, and screened to 1mm on site. Samples weighed between 1 - 2kg.</li> <li>Samples were brought to Perth and approximately 250 gms were screened off and sent to Portable Spectral Services in West Perth for pXRF analysis for Lithium Index analysis.</li> </ul>
<i>Drilling techniques</i>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
<i>Logging</i>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
<i>Quality of assay data and laboratory tests</i>	<ul style="list-style-type: none"> <li>Portable Spectral Services used 2 Standards before and after during the pXRF analysis of ENT samples.</li> </ul>
<i>Verification of sampling and assaying</i>	<ul style="list-style-type: none"> <li>Laboratory and field results are reviewed by Enterprise Metals Ltd personnel.</li> </ul>
<i>Location of data points</i>	<ul style="list-style-type: none"> <li>Enterprise used a handheld a Garmin 64 GPS to locate and record sample positions, accurate to +/-5 metres.</li> </ul>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>Due to the nature of the orientation sampling, samples sites were chosen on the basis of soil areas adjacent to pegmatite subcrop or outcrop.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>Some samples were collected on east-west lines 100m apart, with sample spacing of 25. Other samples were collected based on outcrop and sub-cropping pegmatite.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>Samples in numbered Kraft packets were delivered by Enterprise staff to the Portable Spectral Services laboratory.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>As this is Enterprise's 1<sup>st</sup> RC program at Maries Find, no audits or reviews have yet been completed.</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 Maries Find - Bingin Prospect is located on granted Prospecting License 77/4350 registered to Nickgraph Pty Ltd. On 19 November 2020, Nickgraph applied to amalgamate the western portion of P77/4350 into Nickgraph's granted E77/2568. Amalgamation No. 0590981 is pending. P77/4350 The tenement is part of a larger package of tenements under option by Enterprise from Nickgraph.</li> <li>Following a payment to the Bullfinch North vendors in May 2020, Enterprise has secured a two year right to explore the Bullfinch North tenement package under a 2 Year <i>Option to Purchase Agreement</i>.</li> <li>Enterprise Metals can exercise the Option to Purchase, and the Option to Purchase can be extended for a further 2 years by paying the Vendors an addition sum in cash.</li> <li>P77/4350 is in good standing with an expiry date of 5 October 2024, and no known impediments to exploration and mining exist.</li> </ul>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li>Refer to JORC Table 1, ENT ASX release 9 July 2021 for gold mining and exploration in the Bingin area.</li> </ul>
<i>Geology</i>	<ul style="list-style-type: none"> <li>P77/4350 sits within the Archaean Southern Cross Greenstone Belt in the Southern Cross Domain of the Youanmi Terrane.</li> <li>Regional geology is based upon GSWA regional airborne magnetic surveys and previous GSWA geological mapping. Gold mineralisation in the area is known to be shear hosted but other styles of mineralisation may be present.</li> <li>The historical mined orebody was described as a typical quartz vein within a well-developed shear zone striking between 32° and 37°. This vein dips easterly at approximately 50° to 62°. Mining was concentrated in two areas with a strike of 290m and 78m in length, with approximately 40% of these areas stoped over an average width of 0.84m.</li> <li>The orebody was accessed by three levels and two main shafts, as well as a number of other shafts and rises. On the 44.8m level, the reef varies from 0.15m to 1.37m in width and averages 0.87m over a strike length of 246m. Sampling prior to 1942 on this level revealed a 41m length of reef grading 29.5g/t over a width of 0.53m. The 78m level is connected by crosscut to the Bingin Main Shaft. The drive extends for 190m north from the main shaft. (Matheson &amp; Miles, 1947)</li> <li>Note: there is very little exposed bedrock in much of the area of recent drilling program as basement rock is obscured by alluvium and sand dunes.</li> </ul>
<i>Drill hole Information</i>	<ul style="list-style-type: none"> <li>No drill holes exist in the vicinity of the Matheson Pegmatite</li> </ul>
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <li>No relevant drill hole data to aggregate at the present time.</li> </ul>
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <li>Not relevant at this stage. Cannot be determined due to lack of diamond core drilling.</li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <li>Refer to Figures in main body of this report.</li> </ul>



<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li>All relevant exploration data has been assessed and is considered adequate at this stage of exploration .</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li>In 2021, Enterprise commissioned a <b>3D-IP Survey</b> to search for chargeable bodies that may be associated with high grade primary (sulphidic) gold mineralised systems.</li> <li>The geophysical survey type is a time domain double offset Pole-Dipole Induced Polarisation (IP).</li> <li>The IP survey consisted of 3 receiver pole-dipole lines. For the pole-dipole survey, a receiving dipole length ('a' spacing) of 100 m was used. Moombarriga employed the Search 50kVA high powered IP transmitter to generate a square wave signal at 0.125Hz (8s) with a 50% duty cycle throughout the survey.</li> <li>The survey consisted of 2 spreads. Each spread comprised 3 receiver lines and 1 transmitter line. Line spacing was 150m. The lines were oriented approximately 113 degrees. Each receiver line is approximately 3km in length and each receiver dipole spacing ('a') was 100m. Field crews worked with a maximum lateral tolerance of +/- 10m (10% of the dipole spacing), however almost all electrode receiver locations were within 5m of the actual proposed locations. If movement of the electrodes were required, then it was likely away off rocky sub/outcrop.</li> <li>Survey station points were located using hand held GPS units, accurate to +/-5m (northing and easting), which is considered appropriate considering the station spacing.</li> <li>The RL was determined using the SRTM data.</li> <li>The IP survey consisted of 2 spreads. Each spread comprised 3 receiver lines and 1 transmitter line. The line spacing was 150m. The lines were oriented at approximately 113 degrees.</li> <li>Each receiver line was approximately 3km in length and each receiver dipole spacing (a' spacing) was 100m.</li> <li>Tx line L9850N used 100m electrodes</li> <li>Tx line L10150N used 200nm electrodes</li> <li>The IP survey was supervised by external consulting firm Terra Resources.</li> <li>The IP survey data was collected by Moombarriga Geoscience.</li> <li>Processing and modelling was supplied by Terra Resources Pty Ltd.</li> <li>Value Adding Resources Pty Ltd reviewed and interpreted the data. Two significant chargeability anomalies were identified by this survey, both of which occur on the area of the Matheson Pegmatite.</li> </ul>
<i>Moisture</i>	<ul style="list-style-type: none"> <li>Not relevant.</li> </ul>
<i>Metallurgical factors or assumptions</i>	<ul style="list-style-type: none"> <li>Not relevant at this stage,</li> </ul>
<i>Environmental factors or assumptions</i>	<ul style="list-style-type: none"> <li>It is assumed that no environmental factors exist that could prohibit any potential mining.</li> <li>The general area has a strong history of mining, and there is strong local support for mining in the area.</li> </ul>
<i>Metallurgical factors or assumptions</i>	<ul style="list-style-type: none"> <li>Not relevant at this stage due to lack of samples.</li> </ul>
<i>Environmental factors or assumptions</i>	<ul style="list-style-type: none"> <li>It is assumed that no environmental factors exist that could prohibit any potential mining.</li> <li>The general area has a strong history of mining, and there is strong local support for mining in the area.</li> </ul>
<i>Bulk density</i>	<ul style="list-style-type: none"> <li>Not relevant at this stage.</li> </ul>
<i>Classification</i>	<ul style="list-style-type: none"> <li>Not relevant at this stage due to lack of drilling data.</li> </ul>

<i>Audits or reviews</i>	<ul style="list-style-type: none"><li>• Not relevant at this stage.</li></ul>
<i>Discussion of relative accuracy/ confidence</i>	<ul style="list-style-type: none"><li>• Not relevant at this stage due to small amount of modern drilling data.</li></ul>