

## ASX Announcement | 17 August 2021 Rafaella Resources Limited (ASX:RFR)

# Rafaella Resources announces 42% increase in open pit Measured & Indicated Resources

#### **Announcement Highlights**

• Wardell Armstrong International ('WAI') was engaged by Rafaella Resources (RFR) as independent consultants to update the open pit category of the Mineral Resource Estimate ('MRE').

The updated open pit MRE shows a **42% increase of the Measured and Indicated categories ('M&I')** with respect to the 2020 MRE, comfortably meeting the principal objective of the drilling campaign to convert Inferred Resources to Measured and Indicated Resources to:

- $\circ$   $\;$  Further de-risk the project with a robust resource model; and
- $\circ$   $\,$  Underpin the ongoing feasibility study by providing substantially more resources to feed into the mine schedules.
- Total open pit MRE of 9.97Mt @ 0.16% WO $_3$  and 100ppm Sn for 16,063 tonnes of contained WO $_3$  and 994 tonnes Sn.
- Mineralisation remains open along strike and at depth.
- Rising tungsten prices (APT benchmark at US\$312/mtu) are expected to generate a further positive impact on the feasibility study, including mine life and overall economics.
- Underground Inferred Resources of 0.234Mt @ 0.95% WO3 and 2,797ppm Sn for 2,221 tonnes of contained WO<sub>3</sub> and 655 tonnes of contained Sn (0.53% WO<sub>3</sub> cut-off) remain unchanged from the 2016 MRE<sup>1</sup>.

First production of ore taken from underground (UG) stockpiles<sup>2</sup> remains on track for pilot plant processing in September. In recognition of the improved tungsten prices and being a fully permitted operation, RFR is planning to take the underground development through to full scale commercial operation as soon as possible. This will involve further resource studies, including drilling to convert and expand the current high-grade UG resource.

RFR notes that the Milestone 1 resource target has been met and consequently the Milestone 1 Consideration Shares and shares associated with the Milestone 1 Performance Rights as detailed in the notices of General Meeting dated 9 August 2019 and 13 February 2020 will be issued.

**Rafaella's Managing Director Steven Turner said:** "The Company set out a clear objective to extend the mine life through the conversion of open pit Inferred Resources to Measured and Indicated Resources. This was an important precursor to increase debt capacity, enhance the economics and secure offtake. The increased Measured and Indicated Resources will now be fed into the feasibility study where we will be able to see the impact of this upgrade.

<sup>&</sup>lt;sup>1</sup>Refer to ASX announcement dated 27/05/2019 "Rafaella Resources Signs Heads of Agreement to Acquire 100% Interest in Spanish Tungsten and Tin Project". The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed.

<sup>&</sup>lt;sup>2</sup> Note that the underground stockpiles are not included in the MRE resource calculations

Further benefits are expected to flow from a much-improved tungsten market with prices up 43% from the earlier study. This has led the Board to agree to accelerate the current small scale underground development to a full commercial operation. The underground is fully permitted, the resource is high grade and offers additional tin credits, whilst the metallurgy is well understood from historical production. Finally, the company is actively reviewing a number of attractive opportunities to materially increase its tungsten exposure and enhance the flexibility in managing its portfolio to maximise shareholder return."

Rafaella Resources Limited (ASX:RFR) ('Rafaella' or 'the Company') is pleased to announce the results of the recently completed resource estimation for the Santa Comba tungsten and tin project ('Santa Comba' or the (Project'), carried out by independent consultants. Table 1 shows the global total Mineral Resource Estimate (MRE) for Santa Comba, including the open pit MRE updated by WAI as of 6 August, 2021 and the unchanged underground Inferred MRE, dated August, 2016.

Table 1. Globa	Table 1. Global Total Mineral Resource Estimate for the Santa Comba Project - 6 August 2021						
	Total Mineral	Resource	e Estimate fo	r Santa Comb	a - August 20	21	
	Classification	Mt	WO₃ %	Sn ppm	WO₃ t	Sn t	
	Measured	1.57	0.15	105	2,424	166	
	Indicated	7.11	0.15	98	10,629	695	
Onon Dit*	Subtotal	8.68	0.15	99	13,053	861	
Open Pit*							
(D)	Inferred	1.29	0.23	103	3010	133	
	Total	9.97	0.16	100	16,063	<i>99</i> 4	
Underground#	Inferred	0.23	0.95	2,797	2,221	655	
$\bigcirc$							
Total	Meas + Ind + Inf	10.2	0.18	162	18,284	1,649	
	Meas + Ind + Inf	10.2	0.18	162	18,284	1,649	

## Table 1 Clabel Total Mineral Pacourse Estimate for the Santa Comba Project 6 August 2021

<sup>\*</sup>Updated by WAI as of August, 2021. 0.05% WO₃ cut-off for open pit resources.

# Unchanged from Adam Wheeler, August 2016. UG Inferred: Cut-off = 10Kg/m2 = 0.53% WO3

Rounding as required by reporting guidelines may result in apparent summation differences between tonnes, grade and contained metal content. Where these occur, they are not considered material

#### Mineral Resource Estimate Reporting Requirements

The Company owns 100% of the Project on a group of concessions covering 36.1km<sup>2</sup>. A significant amount of artisanal mining has occurred across the concessions exploiting quartz-wolframite veins and alluvial concentrations of wolframite. Underground mining occurred in the vicinity of Barrilongo Hill, including the Mina Carmen and Santa Maria mines. The previous owners of Galicia Tin & Tungsten S.L. ('GTT') focused their activities in this area, including drilling, which resulted in the estimation of a maiden JORC 2012 near-surface Inferred MRE of 5.11Mt @ 0.20% WO<sub>3</sub> and 138ppm Sn (0.05% WO<sub>3</sub> cut-off) and underground Inferred Mineral Resource Estimate of 234kt @ 0.95% WO<sub>3</sub> and 0.28% Sn (0.53% WO<sub>3</sub> cut-off)<sup>3</sup>.

The Santa Comba tungsten and tin project is located in the Varilongo granitic massif, which has dimensions of approximately 8km in the north-south direction and approximately 1.5km in the east-west direction. The elongated geometry of the massif trends 005-010° which is in concordance with the main regional structures. The intrusive body is hosted by metamorphic rocks corresponding to Santiago Unit, one of the Basal Units of Órdenes (Ordes) Allochthon Complex, which is part of Galicia-Trás-os-Montes Zone (GTMZ), included itself in the Iberian Massif of the Variscan Orogen (Figures 1). The metamorphic rocks are comprised of schists, paragneisses and felsic orthogneisses.

AFAELLA sources

<sup>&</sup>lt;sup>3</sup> Refer to ASX announcement dated 27/05/19 "Rafaella Resources Signs Heads of Agreement to Acquire 100% Interest in Spanish Tungsten And Tin Project".



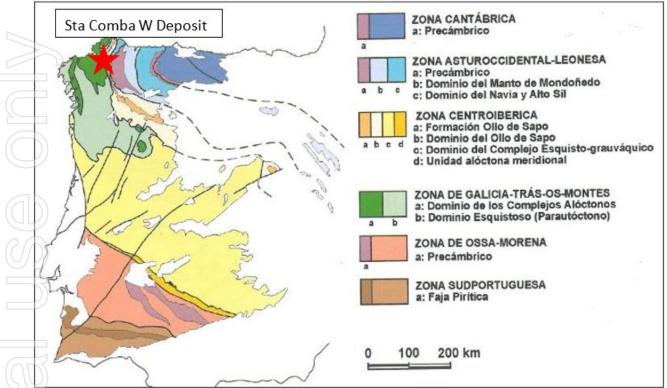
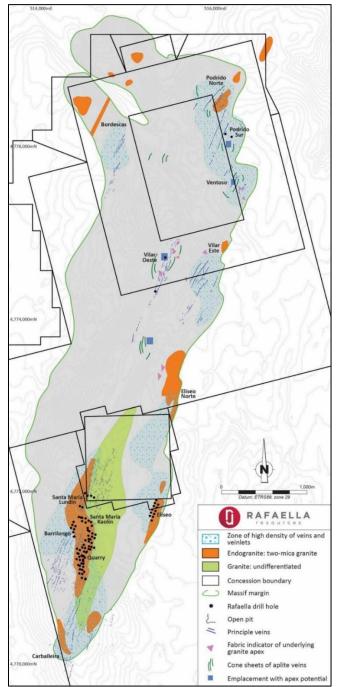


Figure 1. Location of the Santa Comba W deposit into the Iberian Massif Zonation map according to Farias et al. (1987).

The massif (Figure 2) is not homogeneous and is composed of at least three main, well defined granite types, known as two mica exogranite (EXG), biotitic exogranite (BEXG) and endogranite (ENG) in keeping with the terminology of previous explorers. These facies or lithologic types include some internal variations or sub-facies and there are also some varieties with intermediate compositions. The endogranite lithology has been the focus of Rafaella's 2019-2020 and 2021 drilling activities and hosts widespread disseminated tungsten and tin mineralisation. The predominant tungsten mineral is wolframite with minor scheelite. The tin mineral is ubiquitously cassiterite.

All granite types are crosscut by abundant quartz veins parallel or subparallel to the regional foliation of the massif (005-010°). It is these veins that host the tungsten-tin mineralisation which was the primary focus of historical mining activities throughout the massif. The veins are more prevalent in the southernmost area of the massif and it is here where extensive underground mining activities occurred periodically between the 1940's and 1980's. Cutting the massif there is also an important set of fractures and faults. Highlighting among them there are some NW-SE faults which frequently induct variable kaolin alteration, sufficiently strong in some areas so that they have been economically exploited in the past.





*Figure 2. General map of the Varilongo granitic massif, highlighting the granite facies (after Coparex, 1985).* 

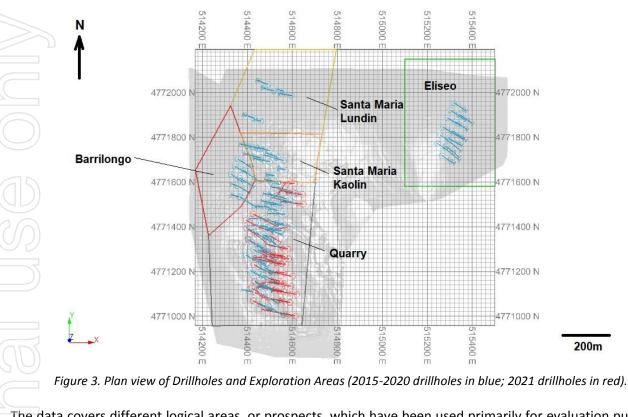
Following the acquisition of GTT in August 2019, Rafaella completed additional drilling at the project which resulted in a significant upgrade to the MRE<sup>4</sup>. The updated MRE was based on 64 diamond (ddh) drillholes (8,209m; 2,496 samples) and 24 reverse circulation (RC) drillholes (2,908m; 877 samples) which included the 2016 drilling.

In April 2021, RFR completed a diamond drill programme with 37 ddh for a total of 5,808.35m. Additionally, the geotechnical drillhole 20GTF003 drilled in 2020, has been included in the 2021 drilling campaign for resource modelling for a total of 38 ddh and 5,958.85m.

<sup>&</sup>lt;sup>4</sup> Refer to ASX announcement dated 01/07/2021 "Rafaella Resource announces significant Mineral Resource Estimate upgrade".



200m



A plan view of drillholes and Exploration Areas is shown in Figure 3.

The data covers different logical areas, or prospects, which have been used primarily for evaluation purposes. Drillholes were completed on a nominal 40m spacing with sections spaced 40m apart. Diamond drilling consisted of PQ, HQ and NQ size and sampled predominantly as 3m lengths of ½ core for HQ and NQ and ¼ core for PQ. RC sampling was completed by making 3m composites from 1m samples.

For the 2015/2016 and 2019/2020 drill programmes assays were completed by ALS Global via Seville with analysis completed in Loughrea, Ireland. Primary assaying was done by using multi-element ICP (ALS code ME-MS81). For returned ICP assays greater than 10,000ppm W, fused disks were created and analysed with XRF (ME-XRF10 in 2016 and ME-XRF15b in 2020). Rafaella's QAQC procedures included the insertion of duplicates, blanks and commercial certified reference materials with all samples submitted. The QAQC procedures in both drilling programmes yielded acceptable results.

For the 2021 drill programme, the cut-core samples were sent to SGS Huelva preparation laboratory in south Spain. Primary assaying was done by using multi-element ICP with sodium peroxide fusion (SGS code GE\_IMS90A50). For returned ICP assays greater than 10,000ppm W, fused disks were created and analysed with XRF\_GE\_ICP90A50 (W). For returned XRF assays greater than 40,000ppm W, additional pulp was analysed by XRF coded XRF72 (W). The pulps for assay were sent from SGS Huelva to SGS Burnaby, Canada. In 2021 drill programme a total of 1,655 samples were submitted which included 1,334 drill samples and 321 control samples for QA/QC yielding acceptable results.

In the opinion of the resource consultants, the geological data collated during the 2015-2016, 2019-2020 and 2021 drilling campaigns have been collected in line with good industry practice, allowing the results associated with these data to be reported in accordance with the guidelines of the JORC Code (2012).



The MRE evaluation work was carried out and prepared in accordance with the JORC Code (2012) by using a 3D block modelling approach in Datamine Studio RM and Snowden Supervisor software. Geological wireframes defining the contact of the endogranite/exogranite were constructed based on lithological logging data (figure 4). Mineralisation wireframes (predominantly constrained by the endogranite) were defined using a cut-off grade of 0.05% WO<sub>3</sub>.

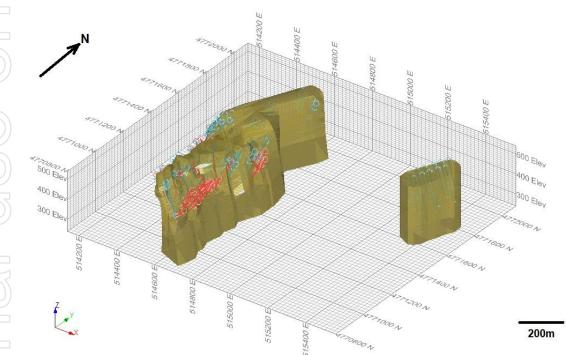


Figure 4. Wireframes of Modelled Extents of Endogranite

Rock density measurements from the 2021 drilling campaign were reviewed by WAI. An average rock density of 2.65t/m<sup>3</sup> was derived from 117 endogranite lithologies and an average of 2.63 t/m<sup>3</sup> was derived from 49 measurements from the exogranite lithologies which were comparable with previous (2020) MRE. For consistency, a global density of 2.65t/m<sup>3</sup> was used by WAI in the MRE. It is noted that the exogranite lithologies comprise predominantly waste or Inferred Mineral Resources only.

Grade estimation of WO<sub>3</sub> and Sn grades into the block model was completed using indicator estimation (IK). Alternative grade values were also estimated using ordinary kriging (OK), inverse stance weighting (ID) and nearest neighbour estimation (NN) for validation purposes. Directional anisotropy was used to control the orientation of estimation search ellipses. Estimated grades were validated against the input composite data. A visual comparison of the sample grades and the estimated block grade was conducted in cross-section. Figures 5 and 6 are examples of east-west sections for comparing drillhole sample WO<sub>3</sub> grades and block model WO<sub>3</sub> grades. Visually, the model is considered to reflect the input sample data.

Validation of the block model grade was also carried out by statistical comparisons and by means of swath analysis.

Globally no indications of significant over or under estimation are apparent in the model nor were any obvious interpolation issues identified. From the perspective of conformance of the average model grade to the input data, WAI considers the model to be a satisfactory representation of the sample data used and an indication that the grade interpolation has performed as expected.



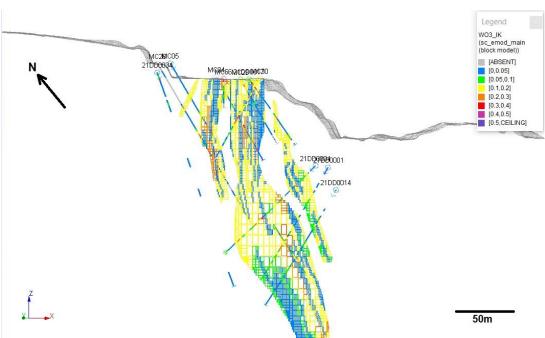


Figure 5. Example of West-East Cross Section Looking North, comparing WO3 Sample grades and BLK model WO3 grades (Mineralised zones only).

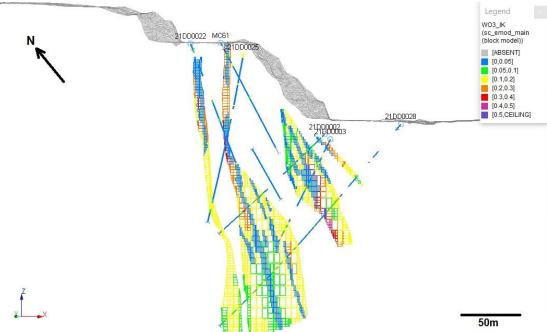


Figure 6. Example of West-East Cross Section Looking North, comparing WO3 Sample grades and BLK model WO3 grades. (Mineralised zones only).

Resource classification followed the guidelines of the JORC Code (2012). The main principles governing the operation and application of the JORC Code (2012) are transparency, materiality and competence.

WAI considers the Santa Comba deposit has been sufficiently explored to assign Measured, Indicated and Inferred Mineral Resources as defined by the JORC Code (2012).



The key drillhole spacings for the allocation of resources can be summarised as follows:

• Measured Resources – Covered by a drilling grid of at least 20m down dip x 40m along strike. At least 3 drillholes.

• Indicated Resources – Covered by a drilling grid of at least 40m down dip x 40m along strike. At least 3 drillholes; and

• Inferred Resources – Limited to a maximum extrapolation of 120m. Includes all mineralisation located outside of the wireframed mineralised zones.

Mineral Resources were depleted for recent open pit mining (by the granite quarrying operation) using a mine survey dated 10th February 2021. To reflect historical underground mining of the veins below the open pit, Mineral Resources were depleted using the historical underground development surveys. In addition, wireframes depicting the interpreted position of mined-out stopes between the underground development levels were constructed by WAI and used for the purposes of mining depletion.

WAI recommends that if access to the underground mine can be restored then a detailed underground mine survey should be undertaken to confirm mined (depleted) volumes.

Mineral Resources were further limited based on an expectation of eventual economic extraction using an optimised open pit shell generated using appropriate economic and technical parameters shown in table 2. Mineral Resources contained within the pit shell were then evaluated based on a cut-off grade of 0.05% WO<sub>3</sub>.

Parameter	Unit	Value
APT Price	\$/mtu WO <sub>3</sub>	300
Metal Price - received	\$/mtu WO₃	240
WO <sub>3</sub> price after transport and smelting	\$/t	24,000
Sn Price	\$/t	18,000
Sn Price - received	\$/t	17,650
Sh Price - received	\$/g	0.0177
Mining Cost	\$/t	1.50
Mining Dilution	%	5.0
Mining Recovery	%	95.0
Processing + G&A Cost	\$/t	7.75
WO3 Recovery	%	86.0
Sn Recovery	%	81.0
WO₃ Economic Cut-Off Grade	%	0.0394
Annual Production rate	tpa	650,000
Annual Discount Rate	%	10
Slope Angles	Degrees	55

Table 2. Optimisation Parameters for Open Pit Resources

The Mineral Resource Estimate for the Santa Comba Open Pit Project is classified in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves [JORC Code (2012)]. The stated Mineral Resources are not materially affected by any known environmental, permitting, legal, title, taxation, socio-economic, marketing, political or other relevant issues, to the best knowledge of the author. There are no known mining, metallurgical, infrastructure, or other factors that materially affect this Mineral Resource Estimate, at this time.

Table 3 details the open pit Mineral Resource Estimates of 2021 (WAI) while Table 4 details the Open Pit MRE of 2021 (WAI) at different cut-off grades.



Total

Mineral Resource Estimate for Santa Comba - August 2021							
Classification	Mt	WO₃ %	Sn ppm	WO₃ t	Sn t		
Augus	t 2021 San	ita Comba Re	source Estima	te			
Measured	1.57	0.15	105	2,424	166		
Indicated	7.11	0.15	98	10,629	695		
Subtotal	8.68	0.15	99	13,053	861		
Inferred	1.29	0.23	103	3,010	133		

Table 3. 2021 Open Pit Mineral Resource Estimates at 0.05% WO<sub>3</sub> cut-off grade

Table 4. Total Mineral Resource Estimate of Open Pit Resources at different cut-off grades. Total Mineral Resource Estimate at different cut-off grades - August 2021

0.16

100

16,063

*994* 

9.97

	Total Willeral Resource Estimate at anjierent cat-ojj grades - August 2021					
Cut-off WO₃%	Classification	Mt	WO₃ %	Sn ppm		
	Measured + Indicated	10.03	0.14	98		
0.03	Inferred	1.82	0.17	94		
	Total	11.85	0.14	97		
	Measured + Indicated	8.68	0.15	99		
0.05	Inferred	1.29	0.23	103		
	Total	9.97	0.16	100		
	Measured + Indicated	8.66	0.15	99		
0.07	Inferred	1.16	0.25	106		
	Total	9.82	0.16	100		

Figures 7 and 8 are showing the grade-tonnage curves of the open pit Measured and Indicated Mineral Resources and the open pit Measured, Indicated and Inferred Mineral Resources respectively.

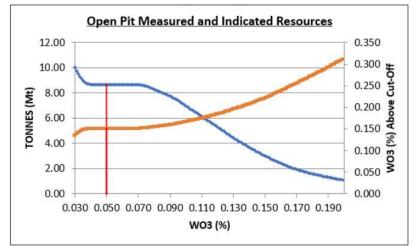


Figure 7. Grade-Tonnage Curve of Open Pit Measured and Indicated Resources



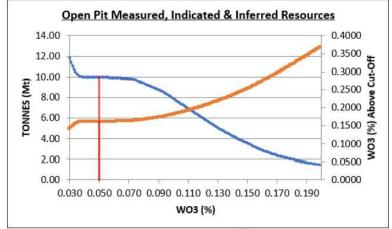


Figure 8. Grade-Tonnage Curve of Open Pit Measured and Indicated Resources

#### **Milestone 1 Target**

RFR has reviewed the detailed grade tonnage curve as provided by WAI and confirms that the Milestone 1 Target of delivering a JORC compliant resource (Measured and Indicated categories) of a minimum 10,000 tonnes contained WO<sub>3</sub> grading at least 0.18% has been met. As per the terms of the GTT acquisition agreement, the Milestone 1 Consideration Shares are to be issued to the Vendors of GTT. Furthermore, the shares associated with the Milestone 1 Performance Rights as detailed in the notices of General Meeting dated 9 August 2019 and 13 February 2020 will be issued to the individuals named.

This announcement has been authorised by the Board of Directors of the Company.

#### Ends

#### For further information, please contact:

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#### **About Rafaella Resources**

Rafaella Resources Limited (ASX:RFR) is an explorer and developer of world-class mineral deposits. Rafaella owns the Santa Comba tungsten and tin development project in Spain, as well as the McCleery cobalt-copper project and the Midrim and Laforce high-grade nickel-copper-PGE sulphide projects in Canada. Santa Comba is located in a productive tungsten and tin province adjacent to critical infrastructure. The McCleery project was previously under-explored and holds significant potential. The Midrim and Laforce projects have had extensive drilling with some exciting intersections and offer significant upside for the Company.

To learn more please visit: www.rafaellaresources.com.au



#### **Competent Persons Statement**

Competent Persons from WAI who undertook the Open Pit Mineral Resource Estimate and supervised the production of this report are as follows:

• Mr Richard Ellis, BSc, MSc (MCSM), CGeol, EurGeol, FGS, Principal Resource Geologist.

No recent visit to the Santa Comba Project has been undertaken by the Competent Person due to travel restrictions associated with COVID-19. However, WAI has completed a previous site visit to the Santa Comba Project in January 2017 whilst undertaking a technical assessment and valuation opinion on the Santa Comba asset.

Additionally, the underground inferred MRE that remains unchanged from 2016, weas undertaken by Mr Adam Wheeler who is a professional fellow (FIMMM), Institute of Materials, Minerals and Mining. Mr Wheeler is an independent mining consultant with sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity that 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' (the JORC Code).

Mr Ché Osmond and Mr Richard Ellis consent to the inclusion of this information related to the near-surface mineralisation in the form and context in which it appears in this report.

Mr Wheeler consents to the inclusion of this information related to the underground mineralisation in the form and context in which it appears in this report.

The information in this announcement that relates to Exploration Results is based on, and fairly represents, information and supporting documentation compiled under the supervision of Lluis Boixet, a consultant to the Company. Lluis Boixet Martí holds the title of European Geologist (EurGeol), a professional title awarded by the European Federation of Geologists (EFG). EFG is a 'Recognised Professional Organisations' (ROPO) by the ASX, an accredited organisation to which Competent Persons must belong for the purpose of preparing reports on Exploration Results, Mineral Resources and Ore Reserves under the JORC (2012) Code. Lluis Boixet Martí consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

#### Forward Looking Statements Disclaimer

This announcement contains forward-looking statements that involve a number of risks and uncertainties. These forward-looking statements are expressed in good faith and believed to have a reasonable basis. These statements reflect current expectations, intentions or strategies regarding the future and assumptions based on currently available information. Should one or more of the risks or uncertainties materialise, or should underlying assumptions prove incorrect, actual results may vary from the expectations, intentions and strategies described in this announcement. No obligation is assumed to update forward looking statements if these beliefs, opinions and estimates should change or to reflect other future developments.

<sup>•</sup> Mr Ché Osmond, BSc, MSc (MCSM), CGeol, EurGeol, FGS, Technical Director Geology and Mineral Resources; and



## JORC Code, 2012 Edition – Table 1 report

## Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (eg 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.</li> </ul>	<ul> <li>Principal samples in the 2015-2016 and 2019 drill programs were derived from diamond drill core. Other sample used in the resource estimation included RC drill chips (RFR &amp; GTT). Other samples used for reference purposes were surface rock chips (GTT &amp; Incremento Grupo Inversor (IGI)), underground channel sampling along adits (GTT) and historic underground channel sampling completed by Coparex during sublevel drive development and gallery (stope) exploitation.</li> <li>Samples from 2021 drill program are derived from diamond drill core (½ of HQ core or ¼ of PQ core with approximate weight of 4-5 Kg per meter).</li> </ul>
10	<ul> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> </ul>	<ul> <li>Drilling was oriented as far as possible, according to local geography and access, to be perpendicular to the mineralised structures.</li> <li>For the 2015-2016 drilling programme, drill collars were located using a GPS accurate to +/-3m. For the 2019 drilling programme, collars were located using a Geomax Zenith 35 GPS accurate to +/-3mm. For the 2021 drill programme, all drill collars have been located by means of GPS LEICA GS-16 accurate to +/-5mm.</li> </ul>
	<ul> <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 (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>Mineralisation was determined using lithological changes, assaying, as well as UV light picking up any occurrences of scheelite. Disseminated mineralisation is associated with a two-mica endogranite and vein mineralisation predominantly associated with quartz veins or as pure wolframite veins.</li> <li>In the Coparex era of underground mining, the principal method of sampling was by channel sampling of development or stope faces. Channels were cut byhand across the mineralised width, approximately 5cm in height, 1cm in depth, giving typical 2kg samples.</li> </ul>



Drillina • Drill type (ea core, reverse circulation, open-hole hammer, rotary air techniques blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face- sampling bit or other type, whether core is oriented and if so, by what method, etc).

- Diamond drilling contractors for the 2015-2016 drill programme: SPI (Sondeos y Perforaciones Industriales del Bierzo (León)). Drill rig SPI DRILL 160-D (made by SPI); 24 holes for 2,481m.
- Diamond drilling contractors for the 2019 drill programme: Geonor (La Coruna). Drill rig Atlas Copco CS-14C.
- Diamond drilling contractors for the 2021 drill programme: SPI (Sondeos y Perforaciones Industriales del Bierzo (León)). Drill rig SPI DRILL 160-D (made by SPI).
- Reverse Circulation (RC) contractors for the 2015-2016 drill programme: EDASU (Madrid). Drill rig: EDASU RCG 2500 (made by EDASU); 3 drill holes for 255m.
- Reverse Circulation (RC) contractors for the 2019 drill programme: SPI (Sondeos y Perforaciones Industriales del Bierzo (León)). Drill rig SPI DRILL 160-D (made by SPI).
- The primary sample database for the 2015-2016 drill programme contains data from 27 surface drill holes. 23 of these drill holes were used in the 2016 JORC MRE (3 RC drill holes for 255m; 20 diamond drill holes for 2,020m).
- The primary sample database for the 2019 drill programme contains data from surface drill holes ((21 RC drill holes for 2,650m; 44 diamond drilling for 6,176m).
- For both drill programmes, diamond core was mostly HQ size. Holes were collared using PQ size. Only NQ was used when no voids were encountered.
- A similar approach has been carried out for 2021 programme with diamond core size of PQ and HQ.
- For the 2015-2016 drill programme, diamond core was oriented with spear marks every 9m. No core was oriented during the 2019/2020 drill programme, except for 3 geotechnical drillholes 20GTF001, 20GTF002 and 20GTF003, that had been oriented with DEVI CORE BTT. DDH 20GTF003 has been sampled and included in 2021 drill programme.
- No core was oriented during the 2021 resource drill programme. 1 geotechnical drillhole 21GTF001, which has not been included in the resource model was oriented with GC2-GyroCore from SPT.
- In the Coparex era of underground mining, no information is known about the drilling techniques.



Criteria	JORC Code explanation	Commentary
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul> <li>Recovery measured directly from drilled length by a geologist.</li> <li>Core recovery was very high, generally greater than 98%.</li> <li>For the 2019 RC drill programme, sample recovery was greater than 90%.</li> <li>Sample collection was supervised by a site geologist who ensured samples were representative and recovery was acceptable for resource estimation.</li> <li>There was no evidence of sample bias or any relationship between sample recovery and grade.</li> <li>For the 2021 drill programme the same methodology has been applied with very birb recovery and grade.</li> </ul>
	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>high recoveries greater than 98%.</li> <li>The core was logged to a level of detail to support an MRE.</li> <li>For the 2015-2016 drill programme all core was orientated with a spear mark at intervals of 9m. Orientation lines were marked on the core.</li> <li>Logging was completed recording lithology, mineralogy, veining, textures and alteration features. A coded logging procedure was implemented. UV light was run over all core in order provide an indication of scheelite.</li> <li>Logging was both qualitative and quantitative.</li> <li>All drill core and RC drill chips were photographed.</li> <li>In both drill hole databases, 99% of the core &amp; RC chips from the drilling has been logged.</li> <li>For the 2021 drill programme the same logging techniques have been applied with same templates as previously.</li> </ul>



- If core, whether cut or sawn and whether quarter, half or all core taken.
- If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.
- For all sample types, the nature, quality and appropriateness of the sample preparation technique.
- Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.
- Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.
- Whether sample sizes are appropriate to the grain size of the material being sampled.

- Selected core samples were sawn longitudinally such that one ½ or ¼ core was sent to the laboratory. The 2015-2016 drill core was oriented so that the same side taken for sampling down each hole. ¼ core was only taken from PQ core. Sample length maximum is 3m, then smaller for lithological changes. The majority of samples were 3m in length. 3m length samples of ½ HQ core weighed approximately 15kg.
- In the 2015-2016 drill programme, limited reverse circulation drilling was undertaken at Eliseo and Santa Maria prospects. In the 2019 drill programme, limited RC drilling was undertaken at the Kaolin and Eliseo prospects.
- For the RC drilling, 1m samples were passed through a standard splitter and the subsamples combined into 3m composites.
- Samples were sent to ALS in Seville for sample preparation (DRY-21, CRU-31, SPL-22Y, PUL-32). Pulps were sent to ALS's Canadian facilities for analysis.
- Surface rock chip and underground channel sampling completed by GTT were collected using either pick and shovel or a portable air-driven jackhammer. Samples were crushed on site with a jaw crusher to *ca.* -10mm and then passed through a standard splitter. Approximately 2kg sub-samples were collected for analysis.
- Course duplicates, produced by ALS using a Boyd rotary splitter, show a good correlation between original and duplicate samples.
- It is considered that the sample sizes used are appropriate for the mineralisation at Santa Comba.
- For the 2021 drill programme, samples have been sent to SGS Huelva for preparation (PRP95) and pulps are sent to SGS's Canadian facilities.



Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	<ul> <li>The nature, 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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul> <li>Primary assaying was completed by multi-element ICP (ALS code ME_MS81). For returned ICP assays greater than 10,000 ppm W, fused disks were created and analysed with XRF (ME_XRF10 in 2015-2016 and ME_XRF15b in 2019). The analytical methods are considered appropriate for the style of mineralisation (predominantly wolframite).</li> <li>The historical samples produced by the Coparex underground channel sampling were subsequently analysed gravimetrically in an on-site laboratory as wt% WO3. These grade values were used with the mineralised width to determine an accumulation value for WO3 in term of kg/m<sup>2</sup>. Tin grades were also determined in the same way. The kg/m<sup>2</sup> grades were then generally plotted on long section for subsequent stope planning purposes. Geologists also made detailed face maps. As Coparex geologists gained more experience with mine production, they also estimated grades directly in kg/m<sup>2</sup>, based on the observed veins and wolframite crystals. These were also recorded with position and used for estimation purposes. In addition to channel samples and estimated grades, the contents of complete rounds would also be mined separately and treated at a small pilot plant facility on-site. This also enabled a check grade estimate at these positions.</li> <li>No geophysical tools were used.</li> <li>Control samples were submitted (1 control sample for every 5 samples or 20% of total analyses), in the form of standard samples (GW-02, GW-03), blanks and coarse duplicates. ALS also submitted their own internal control samples, in the form of standards, no two standards in any batch varied by more than 20 from the analysed mean implying a good level of analytical precision. Certified blanks were used and analysis at acceptable levels. Course duplicates show a good correlation between original and duplicate samples.</li> <li>For the standards, no two standards in any batch varied by more than 20 from the analysed mean implying a good level of analytical precision. Certified blanks we</li></ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent 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> </ul>	<ul> <li>No external verification done. All the QC data from 2015-2020 was reviewed by Dr Lachlan Rutherford (Project Manager, GTT; GM Exploration, RFR) who is a Competent Person under the JORC Code (2012) and was a consultant to both companies.</li> <li>No specific twin holes were drilled.</li> <li>Primary data for the 2015-2016 and 2019 drilling campaigns was entered and</li> </ul>



Criteria	JORC Code explanation	Commentary
	Discuss any adjustment to assay data.	<ul> <li>maintained in an Excel database. Any problems encountered during the hole data import, combination and surveying process were resolved with company geologists. No top-cuts were applied.</li> <li>All QC data for the 2021 drill programme is reviewed by Lluis Boixet Martí, who holds the title of European Geologist (EurGeol), a professional title awarded by the European Federation of Geologists (EFG). EFG is a 'Recognised Professional Organisations' (ROPO by the ASX, an accredited organisation to which Competent Persons must belong for the purpose of preparing reports on Exploration Results, Mineral Resources and Ore Reserve under the JORC (2012) Code. All drilling data for the 2021 drilling program has been validated by internal geologists of the company and confirmed by Lluis Boixet before forwarding any data to Wardell Armstrong.</li> <li>All assay data is stored in the database in an as received basis with no adjustment made to the returned data.</li> </ul>
Location of data points	<ul> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>For the 2015-2016 drill programme, hole collar locations were determined by GPS accurate to +/-3m. For the 2019 drill programme, collar locations were determined by Geomax Zenith 35 GPS accurate to +/-3mm.</li> <li>For the 2021 drill programme, all drill collars have been surveyed by means of GPS LEICA GS-16 accurate to +/-5mm.</li> <li>For the 2015-2016 drill programme downhole surveys taken using REFLEX EZ- SHOT nominally every 40m and at end of hole. For the 2019 drill programme, downhole surveys taken using a SPT MagCruiser MM013 survey tool.</li> <li>For the 2021 drill programme down hole survey is determined after completion of each drill hole, with Reflex GYRE E755 or SPT Mag Cruiser.</li> <li>Grid: ETRS UTM Zone 29 (epsg: 3041). Datum EU ref 89.</li> <li>No procedural documentation on surveying data points exists from the Coparex era, hence the precise location of data points cannot be accurately determined.</li> <li>Topography established from Lidar satellite data (2014), Updated Digital Terrain Model (DTM) by means of UAV aerial LIDAR survey, flown in February, the 10<sup>th</sup>, 2021 which enabled to penetrate vegetation and produce a highly accurate Digital Terrain Model over the quarry area and from digitised historical Coparex plans. In the opinion of the Competent Person, the quality of the topographic data is adequate for the current study being described.</li> </ul>
Data spacing and distribution	• Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve	<ul> <li>Nominally 40m parallel section lines, restricted by quarry access.</li> <li>It is considered that the spacing of samples used is sufficient for defining Mineral Resource Estimates.</li> </ul>
	<ul> <li>estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	During resource estimation, approximately 3m composites were generated.

(7)



Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the</li> </ul>	<ul> <li>Holes generally oriented at approximately 110° or 300° directions, typically dipping at 60° to get as near perpendicular to the lode orientation as possible and collect meaningful structural data.</li> </ul>
	orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported material.	• It is not considered that the sampling orientations have introduced any sampling bias. <i>if</i>
Sample security	• The measures taken to ensure sample security.	<ul> <li>Sample security was managed by the Company. Each composite sample was double-bagged, cable-tied and then inserted into a polyweave bag and cable tied again. Each batch of samples was sent directly to Seville by courier with appropriate chain of custody information.</li> <li>For 2021 drill campaign, the same procedure has been applied, although the samples have been sent to SGS prep lab at Huelva.</li> </ul>
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	None.



## **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	nent and agreements or material issues with third parties such as joint		ng table lists the concessions and e licences were fully transferre : in November 2015. The licences	ed into t	he name o	f GTT by the N
status	historical sites, wilderness or national park and environmental settings.	Туре	Name	Number	Expiration date	Area (m²)
	5	Concession	San Antonio	1789	24/02/2068	1,500,000
	<ul> <li>The security of the tenure held at the time of reporting along with</li> </ul>	Concession	Santa María	1790	24/02/2068	959,400
	any known impediments to obtaining a licence to operate in the	Concession	Oportuna	1792	24/02/2068	4,000,000
		Concession	Carballeira	1801	24/02/2068	3,000,000
	area.	Concession	Santa Bárbara	1802	24/02/2068	6,380,000
		Concession	Carmen Fraccion 1*	1807	24/02/2068	14,890,000
		Concession	Ampliación a Oportuna	2912	24/02/2068	180,000
		Excesses	Demasía a Santa María	and the second second	24/02/2068	249,600
		Excesses	Primera Demasia a Oportuna		24/02/2068	471,210
		Excesses	Segunda Demasía a Oportuna		24/02/2068	226,450
		Excesses	Demasía a Carballeira		24/02/2068	2,004,912
		Excesses	Demasía a Santa Bárbara		24/02/2068	654,852
		Excesses	Primera Demasia a Carmen Fraccion 1*		24/02/2068	1,238,810
		Excesses	Segunda Demasia a Carmen Fraccion 1*		24/02/2068	239,298
		Excesses	Demasía Ampliación a Oportuna		24/02/2068	94,795
		Sector States States and States			36,089,327	

• The licences are in good standing and no known impediments exist.



Exploration done • Acknowledgment and appraisal of exploration by other parties. by other parties	<ul> <li>Santa Comba was mined intermittently between 1940 – 1985 with considerable underground infrastructure developed (<i>ca.</i> 7,000m). Much of the understanding about deposit and vein geometry was developed between 1980 - 1985 by French company Coparex.</li> </ul>
	• There is a list from the Coparex era of 230 diamond drillholes. For these holes, 79 vein intersections have recorded WO <sub>3</sub> and Sn assays. However, this database does not contain any collar coordinates or survey data, and so cannot be processed or included in the mineral resource estimate. The working long sections of each vein used by the mine in the Coparex are do show drillhole intersections with intersected thicknesses.
	mine in the Coparex era do show drillhole intersections, with intersected thicknesses and grades. They are also shown in plan projections, but there are no complete sets of sections showing the drillhole data. The log section intersection data have been used in historic resource calculations.
	<ul> <li>There is no proper database of historical drillhole data. Discussions with a Coparex geologist confirmed that during the period of underground production, the drillholes were logged and mineralised zone intersections were assayed gravimetrically using the on-site laboratory. However, the principal use of drillholes was using quartz intersections to help</li> </ul>
	<ul><li>with vein interpretation and subsequent underground development and exploration.</li><li>In 2012, IGI assessed the open pit potential of Santa Comba using rock chip sampling.</li></ul>
	Channel sampling and single site sampling showed elevated tungsten concentrations. Channel sampling in the quarry area assayed 14m @ 0.11% WO <sub>3</sub> and highlighted the near-surface tungsten potential. It is considered that the sample methods and analytical methods utilised by IGI were appropriate for the mineralisation at Santa Comba.



Criteria	JORC Code explanation	Commentary
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>The main mineral of economic interest at Santa Comba is wolframite ([Fe,Mn]WO mineralisation contained within, and adjacent to, a two-mica granite (endogranite Quartz-vein hosted mineralisation is also prevalent throughout the area and was the mai focus of historic mining.</li> <li>The geology is the Galicia-Tras-Os-Montes Zone in the NW Iberian peninsula, wester Variscan Orogen. The Galicia-Tras-Os-Montes Zone is a complex zone represented by a allochthonous crustal block thrusted over the Central Iberian Zone. Mineralisation i hosted within a 7.5km long by 1-2km wide massif composed of syn- to post-tectoni Variscan granitoids.</li> <li>Tungsten-tin mineralisation at Santa Comba occurs in two primary forms: quartz veir hosted and disseminated in the endogranite. The quarz vein-hosted style is the most prevalent, occurring throughout the majority of the massif. The vein mineralisation wa the main focus of historic mining. Disseminated tungsten mineralisation is hoste exclusively within the endogranite.</li> </ul>
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 drill holes:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> </ul>	<ul> <li>Drillholes listed out in resource report, along with summary of main intersections.</li> </ul>
	<ul> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	No information has been excluded.
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> </ul>	<ul> <li>Length-weighted average grades were calculated for intervals &gt;0.05% WO3. A maximu of 6m of internal dilution allowed.</li> </ul>
	• Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	<ul> <li>Any aggregation of drillhole data was done using length-weighting.</li> </ul>
	<ul> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	Metal equivalents not used.



Criteria	JORC Code explanation	Commentary
Relationship between mineralisation widths and intercept lengths Diagrams	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole 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 effect (eg 'downhole length, true width not known').</li> <li>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 drill hole collar locations and appropriate sectional views.</li> </ul>	<ul> <li>Drill holes inclined so as to get as near to perpendicular intersections as possible.</li> <li>Downhole lengths reported. True widths estimated to be 50-60% of downhole widths based on interpreted orientation of mineralisation.</li> <li>The mineralised drill hole intersection were modelled in 3D in Datamine to interpret the spatial nature and distribution of the mineralisation.</li> <li>A plan of the main interpreted zones and drillholes is shown below.</li> </ul>
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.	<ul> <li>Interim exploration results were reported at a cut-off of 0.05%WO3, with intersection lengths varying from 3m – 76m.</li> <li>Sufficient data is available to report a Mineral Resource herein, as such the inclusion of further datail in this Section is not required.</li> </ul>
Other substantive exploration data	<ul> <li>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.</li> </ul>	<ul> <li>of further detail in this Section is not required.</li> <li>No meaningful and material exploration data, apart from the drillhole database, surface rock chip sampling and underground channel sampling completed by GTT (2015-2016), and historical underground channel sampling by IGI (2012) have been included in the report.</li> </ul>



Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	UG mapping and sampling is being planned to the south of the current Open Pit MRE
2		



## **Section 3 Estimation and Reporting of Mineral Resources**

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	<ul> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>Data validation procedures used.</li> </ul>	<ul> <li>Primary data for the 2015-2016, 2019, and 2021 drilling campaigns was entered and maintained in an Excel database. The data is validated by company geologists before acceptance into the final database.</li> <li>The sample database was supplied to WAI as CSV format Microsoft Excel spreadsheets.</li> <li>Data validation procedures:         <ul> <li>Comparison of geological cross sections with the drillhole database; Verification that collar coordinates coincide with topographical surfaces; Verification that downhole survey azimuth and inclination values display consistency;</li> <li>Evaluation of minimum and maximum grade values;</li> <li>Evaluation of minimum and maximum sample lengths;</li> <li>Assessing for inconsistencies in spelling or coding (typographic and case sensitive errors); and</li> <li>Ensuring full data entry and that a specific data type (collar, survey, lithology and assay) is not missing and assessing for sample gaps or overlaps.</li> </ul> </li> </ul>
Site visits	<ul> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul> <li>The Competent Person for Section 3 of this report, Richard Ellis of Wardell Armstrong International, has not visited the site due to travel restrictions associated with COVID- 19 at the time of the study.</li> <li>Wardell Armstrong International has visit the Santa Comba Project for previous commissions prior to Rafaella Resources ownership.</li> </ul>
Geological interpretation	<ul> <li>Confidence in (or conversely, the uncertainty of ) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> </ul>	<ul> <li>The interpreted mineralised zones have been based primarily on a lithological endogranite model, as well as grade-envelope models. Almost all of the modelled disseminated material is located within the endogranite. Higher grade material is associated with vein type mineralisation and was the target of historic underground mining. The overall geological interpretation is well understood and is based on historic underground mining, outcrops and exploration.</li> <li>Diamond drilling has shown clear evidence of disseminated structures associated with</li> </ul>
	<ul> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource</li> </ul>	<ul> <li>the Open Pit vein structures.</li> <li>Effects of alternative geologic models were not tested.</li> <li>The resource model was built up based on a conceptual geological model developed by RFR geologists, a lithological model of the endogranite/exogranite boundary in main part of the deposit, existing vein and underground data, as well as a mineralised zone model based on a limiting cut-off grade of 0.05% WO3. In development of the mineralised zones' interpretation, the maximum distances of extrapolation used were</li> </ul>



Criteria	JORC Code explanation
	estimation.
	• The factors affecting continuity both of grade and geology.
Dimensions	• The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.
Estimation and modelling techniques	• The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and

• The exter	t of the mineralisation	n (based on the mineralise	d zono wiroframos) has
<ul> <li>The exter been defi</li> </ul>		i (based on the mineralise	u zone wireframes) has
	•	in areas: 1100m along stri surface) and dip from 60°	
	ast; and		
	area: 200m along stril 0° to 90° to the east-so	ke, 100m width, 230m der outbeast	oth below surface and d
		zones and exploration are	eas is shown in the figur
below:			
N	514400	515000 514800 514600	515400
<b>^</b>			
1	4772000 N	No.	Eliseo 4772000 N
	111200011		4772000 N
		Santa Maria Lundin	4772000 N
Barril	4771800 N		477200 N 4771800 N
Barril	4771800 N		
Barril	4771800 N longo 4771600 N	Lundin Santa Maria	4771800 N 4771600 N
Barril	4771800 N	Lundin Santa Maria Kaolin	4771800 N
Barril	4771800 N longo 4771600 N	Lundin Santa Maria	4771800 N 4771600 N
Barril	4771800 N 4771600 N 4771400 N	Lundin Santa Maria Kaolin	4771800 N 4771600 N 4771400 N

approximately 40m along-strike and 60m down-dip.

Commentary

Resource estimation has been based on a conventional 3D block model, developed using the Datamine mining software system. The primary group of samples within the mineralised zone structures were converted into approximately 3.0 m composites, which was by far the most prevalent sample length for assaying. During the compositing process, internal sub-0.05% WO3 intersections were also separately



Criteria	JORC Code explanation	Commentary						
	parameters used.	estimation incorporat Directiona	flagged, and these were extrapolated as part of the modelling proc estimation of WO3 and Sn grades was completed using an indicator esti incorporating ordinary kriging and inverse distance weighting estimation Directional anisotropy was used to control the orientation of estimat ellipses. The main estimation parameters are shown in the table below.					stimation (IK) on methods.
				Summary	of Grade Est	imation Param	eters	
				Distances				Minimu
		Search	Along Strike	Down Dip	Across Strike	– Minimum Composite s	Maximum Composite s	m Drillhole s
		1st	40	40	10	9	24	3
		2nd	80	80	20	9	24	3
		3rd	120	120	30	1	12	1
	• The availability of check estimates, previous estimates of	2. Searc			mposites per s controlled lo	drillhole ocally by dynan	nic anisotropy	
	production records and whether the Mineral Resource e	stimate • The depo	sit has no	t been min	ed previously	v as an open pit	for dissemina	ated WO3 ma
	takes appropriate account of such data.					al product, wit		
		No estim	ation of d	eleterious	elements was	undertaken in	the resource	model.
					-	d using parent		
	• The assumptions made regarding recovery of by-produc		-	-	-	d between 20m		
	• Estimation of deleterious elements or other non-grade v				ial waste zone iit of 1m x 5m	es, the smalles	t blocks were	1m in the Z (c
	economic significance (eg sulphur for acid mine drainag characterisation).	e		-		on between Sn	and WO3 gra	des.
		The inter	pretation	of minerali	sed zones sul	bsequently cor	trolled select	ed samples ar
		Grade ca	ps were as	ssessed usi	ng log probat	oility plots. Bas	ed on this, the	e following gra
	• In the case of block model interpolation, the block size in	<i>1</i>				(1 sample) and	1,005ppm Sn	i (6 samples);
	the average sample spacing and the search employed.	0		)6ppm Sn ( Mppm Sn (	1 sample); 4 samples);			
					+ Janny 1621			

	Summary of Grade Estimation Parameters							
	Distances (m)			Minimum	Maximum	Minimu		
Search	Along Strike	Down Dip	Across Composite Strike s		Composite	m Drillhole s		
1st	40	40	10	9	24	3		
2nd	80	80	20	9	24	3		
3rd	120	120	30	1	12	1		
Notes:								

#### not been mined previously as an open pit for disseminated WO3 mat

- hat tungsten is the principal product, with tin as a secondary product
- deleterious elements was undertaken in the resource model.
- lock model was generated using parent block sizes of 10m x 10m x 1 erally 40m along-strike and between 20m-40m across-strike.
- tion of internal waste zones, the smallest blocks were 1m in the Z (cr ive mining unit of 1m x 5m x 5m.
- be no particular correlation between Sn and WO3 grades.
- on of mineralised zones subsequently controlled selected samples an
- assessed using log probability plots. Based on this, the following gra
  - main zone): 4.477% WO3 (1 sample) and 1,005ppm Sn (6 samples);
  - 306ppm Sn (1 sample);
  - 534ppm Sn (4 samples);
  - 392ppm Sn (3 samples);



Criteria	JO	RC Code explanation	Comm	entary			
		Any assumptions behind modelling of selective mining units.		<ul> <li>Zone 10: 653ppm Sn (1 sample)</li> <li>Zone 20: 857ppm Sn (1 sample)</li> <li>Zone 22: 529ppm Sn (3 samples)</li> </ul>	;		
	•	Any assumptions about correlation between variables. Description of how the geological interpretation was used to control the resource estimates. Discussion of basis for using or not using grade cutting or capping.	• •	<ul> <li>Zone 0 (external mineralization)</li> <li>arade caps were applied prior to composite</li> <li>Model validation methods carried out in</li> <li>Visual assessment of grade;</li> <li>Global statistical grade compari</li> <li>Swath analysis.</li> </ul>	): 2.396% WO3 (1 siting and sample cluded: son; and	grades greater than	the cappe
	•	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	a	overall, a close relationship was observe pparent in the model nor were any obvi onsiders the model to be a satisfactory to reconciliation data is available for the	ous interpolation representation of	issues identified. Fi	om the pe
Moisture	٠	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	• Tor	nages were estimated on a dry basis			
Cut-off parameters	5 •	The basis of the adopted cut-off grade(s) or quality parameters applied.	or • M du tyj gr In ap	cut-off grade of 0.05%WO3 was used to a contiguity analysis and was interprete neralisation at Santa Comba comprise ring the compositing process, samples v be) and <0.2% WO3 (disseminated type ade estimation. The 0.2% WO3 level wa addition, two main populations of Su proximately 100ppm Sn. Again, these licator grade estimation methodology. reporting of mineral resources a cut-off	ed as a natural cu es both vein and vere additionally e) and treated se is based on a stat n samples are o e two population	it-off grade. d disseminated, the coded as >0.2% WO parately during (ind cistical population ar bserved, with a bro ns were honoured	refore 3 (vein icator) aalysis. eak at
Mining factors or assumptions	•	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources	re • Th	nventional open pit mining was consid sources. e Mineral Resource Estimate was constr e economic and technical parameters de Optimisation Parameters f	rained by an oper etailed below:	n pit optimisation ba	
		may not always be rigorous. Where this is the case, this should be		Parameter	Unit	Value	
_		reported with an explanation of the basis of the mining assumptions		APT Price	\$/mtu WO <sub>3</sub>	300	
)		made.		Metal Price - received	\$/mtu WO <sub>3</sub>	240	
7				WO <sub>3</sub> price after transport and smelting	\$/t	24,000	
5				Sn Price	\$/t \$/t	18,000 17,650	
)				<u> </u>	φ/ ι	000,11	



Criteria	JORC Code explanation	Commentary		
		Sn Price - received	\$/g	0.0177
		Mining Cost	\$/t	1.50
		Mining Dilution	%	5.0
		Mining Recovery	%	95.0
		Processing + G&A Cost	\$/t	7.75
		WO <sub>3</sub> Recovery	%	86.0
5		Sn Recovery	%	81.0
		WO <sub>3</sub> Economic Cut-Off Gra	ade %	0.0394
		Annual Production rate	tpa	650,000
1		Annual Discount Rate	%	10
		Slope Angles	Degrees	55
		•		<u> </u>
factors or assumptions Environmental	<ul> <li>amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</li> <li>Assumptions made regarding possible waste and process residue</li> </ul>	<ul> <li>flotation cleaning step.</li> <li>In June 2020, TOMRA Sorting of samples from the Santa Cocapable of separating tungs material, X-Ray Transmission (the expected large differences rock material.</li> <li>Two samples of different grai 41") were submitted to TOM element as well as high recove XRT, while leaving rather low between 51% and 70% of the achieved. The objective in the possibility to upgrade this low fulfil the targets by using TOM</li> <li>In 2011, the previous owners</li> </ul>	two areas of development vein and disseminated ores 6, respectively. ed +62.5% WO3 and low ars Solutions conducted perform omba to demonstrate that T ten-bearing ore from barr (XRT) sensor was considered is in atomic density of the or n sizes (8-20mm "Sample 4 tRA for analysis. Significant ries were achieved in the tes or grades for WO3 in the was ne mass, recoveries betwee the sorting test with the Sar r-grade 'ore'. These results (RA's XRT sorting unit. IGI received the resolution of	, X-ray sorting and showed good reco enic values after a mance test work or OMRA Sorting sys en material. For the best choice be e-bearing particles 0") and 20-40mm t upgrades of the t runs for Sample "4 aste fraction. By r en 78.17% to 89.5 nple "41" was to s show a good amen
factors or assumptions	disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields	exploitation of Mina Carmen u environmental impact study fi subsequently received the res processing plant. In Decembe Industry, Energy and Mines of	rom Xunta de Galicia. In Oct olution of authorisation for r 2015, by resolution of the	ober 2012, IGI the construction of General Direction o



Criteria	JORC Code explanation	Commentary
	project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	mining rights to GTT was authorised. These permits are consolidated and valid for a 90 year period. A dual use agreement with the operators of the aggregate quarry is in effect and allows open pit mining within the permitted quarry area. RFR is in discussions with the quarry owners about delivering waste material for use as aggregate material. Multiple locations for an additional waste repository have been identified. Tailings will be filter pressed and dry stacked within the waste dump design. Baseline environmental studies have commenced and a conceptual mining plan is in preparation for expansion beyond the limits of current permits, including waste and tailings disposal.
Bulk density	<ul> <li>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</li> <li>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul> <li>Density measurements from the 2021 drilling campaign were reviewed by WAI. An average density of 2.65t/m3 was derived from 117 measurements from the endogranite lithologies and an average density of 2.63 t/m3 was derived from 49 measurements from the exogranite lithologies.</li> <li>These values are comparable to the previous (2020) MRE in which an average density of 2.65t/m3 was derived from 460 measurements from endogranite lithologies and an average density of 2.65t/m3 was derived from 460 measurements from endogranite lithologies and an average density of 2.64t/m3 was derived from 73 measurements from exogranite lithologies.</li> <li>For consistency, a global density of 2.65t/m3 was used by WAI in the MRE. It is noted that the exogranite lithologies comprise predominantly waste or Inferred Mineral Resources only.</li> <li>A density of 0.001t/m3 was applied to all underground development and stopes.</li> </ul>
Classification	<ul> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>Whether appropriate account has been taken of all relevant factors</li> </ul>	<ul> <li>WAI considers the Santa Comba deposit has been sufficiently explored to assign Measured, Indicated and Inferred Mineral Resources as defined by the JORC Code (2012). The key drillhole spacings for the allocation of resources can be summarised as follows:         <ul> <li>Measured Resources – Covered by a drilling grid of at least 20m down dip x 40m along strike. At least 3 drillholes. Classified at Zone 1 and Zone 3 only.</li> <li>Indicated Resources – Covered by a drilling grid of at least 40m down dip x 40m along strike. At least 3 drillholes. Classified at Zone 1, Zone 2, Zone 3 and Zone 20 only;</li> <li>Inferred Resources – Limited to a maximum extrapolation of 120m. Includes all mineralisation located outside of the wireframed mineralised zones.</li> </ul> </li> <li>Resource classification was coded into the block model using wireframe solids defining the Measured and Indicated resources at the respective zones.</li> <li>The resource classification criteria have taken into account all relevant factors.</li> </ul>
	<ul> <li>Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	• The resource estimation results reflect the Competent Person's view of the deposit.



Criteria	JORC Code explanation	Commentary
Audits or reviews	• The results of any audits or reviews of Mineral Resource estimates.	<ul> <li>WAI is not aware of the results of any audits or reviews of the Mineral Resource estimate.</li> </ul>
Discussion of relative accuracy/ confidence	<ul> <li>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</li> <li>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</li> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul> <li>This relative accuracy and confidence in the Mineral Resource Estimate is reflected in the reporting of the Mineral Resource as detailed in the JORC Code (2012).</li> <li>Validation procedures carried out on the final block model against input sample data show good correlation.</li> <li>The Mineral Resource relates to global tonnage and grade estimates.</li> <li>No mining has taken place since 1985, and that was only by underground mining of the higher-grade vein mineralisation. Historical production data is not in a form that enables comparisons.</li> </ul>