

ASX Announcement | 1 July 2020 Rafaella Resources Limited (ASX:RFR)

Rafaella Resources announces significant Mineral Resource Estimate upgrade

Announcement Highlights

- Updated Mineral Resource Estimate for the near-surface mineralisation at the Santa Comba tungsten and tin project (the '**Project**') increased total tonnes by 103%¹.
- Maiden near-surface Measured and Indicated Mineral Resource Estimate ('MRE') of 6.13Mt @ 0.16% WO₃ and 96ppm Sn (cut-off 0.05% WO₃).
- Inferred MRE of 4.24Mt @ 0.16% WO₃ and 91ppm Sn for the near-surface mineralisation (cut-off 0.05% WO₃).
- O Total MRE of 10.61Mt @ 0.17% WO3 and 154ppm Sn for 18,532 tonnes of contained WO₃ and 1,629t Sn comprising:
 - 10.37Mt @ 0.16% WO₃ and 94ppm Sn for 16,311 tonnes of contained WO₃ and 974 tonnes of contained Sn, an increase of 57% and 38% of contained metal, respectively in the near-surface mineralisation, and
 - 0.234Mt @ 0.95% WO3 and 2,797ppm Sn for 2,221 tonnes of contained WO₃ and 655 tonnes of contained Sn (0.53% WO₃ cut-off) for the mineralisation at Mina Carmen underground (unchanged from the 2016 MRE)¹
- Zone of near-surface tungsten mineralisation, potentially amenable to low cost open pit mining, significantly expanded. The increase demonstrates the outstanding potential of the Project and underpins the mine plan and feasibility studies currently underway.
- Mineralisation still open along strike and at depth, offering multiple opportunities to both increase the measured and indicated categories and increase the total mineral resources.
- Management intend to recommence drilling numerous prospects once the feasibility study is completed to add both tonnage and grade to feed the future expansion of the Project.

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 total MRE for the Santa Comba Project as of 30 June 2020.

Table 1. Total Mineral Resource Estimate for the Santa Comba Project –30 June 2020

Mineral Resource Estimate for Santa Comba - 30 June 2020						
Туре	Classification	Mt	WO₃%	Sn ppm	WO₃ t	Sn t
Near-surface	Measured	1.21	0.16	118	1,916	143
	Indicated	4.93	0.16	90	7,647	445
Total Measured + Indicated		6.13	0.16	96	9,563	588
Near-surface	Inferred	4.24	0.16	91	6,747	386
Underground*	Inferred	0.23	0.95	2797	2,221	655
Total Inferred		4.48	0.20	233	8,968	1,041
Grand Total		10.61	0.17	154	18,532	1,629

^{* 0.05%} WO₃ cut-off for near-surface resources; 0.53% WO₃ cut-off for underground resources; 2016 underground Inferred MRE remains unchanged.

¹ Refer to ASX announcement released 27/05/19 "Rafaella Resources Signs Heads of Agreement to Acquire 100% Interest in Spanish Tungsten and Tin Project".



Rafaella's Managing Director Steven Turner said: "This is an exceptional outcome for the Company with a significant increase in total mineral resources and the estimation of maiden measured and indicated resources. The resource update significantly increases the level of confidence in the Santa Comba Project and underpins the development of the mine plan and feasibility study. The increase in tonnes also allows the Company to evaluate increased production scenarios. With concurrent mining and processing studies underway, the Company is well on track for completion of the feasibility study and fast-tracking the development of the Santa Comba Project. Furthermore, the deposit is open to the north, south and at depth offering good prospects for further drilling planned to increase total tonnage and grade to feed a future expansion of the Project post commissioning."

Mineral Resource Estimate Reporting Requirements

The Company owns 100% of the Project on a group of concessions covering 36.1km². 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 the Project, Galicia Tin & Tungsten S.L. ('GTT'), focused its 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% WO₃ and 138ppm Sn (0.05% WO₃ cut-off) and underground Inferred Mineral Resource Estimate of 234kt @ 0.95% WO₃ and 0.28% Sn (0.53% WO₃ cut-off)².

The Santa Comba tungsten and tin project is located into 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 & 2). The metamorphic rocks are comprised of schists, paragneisses and felsic orthogneisses.

The massif 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 was the focus of Rafaella's 2019 and 2020 drilling activities and hosts widespread disseminated tungsten and tin mineralisation. The predominant tungsten mineral is wolframite ([Fe,Mn]WO₄) with minor scheelite (CaWO₄). The tin mineral is ubiquitously cassiterite (SnO₂).

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.

² Refer to ASX announcement released 27/05/19 "Rafaella Resources Signs Heads of Agreement to Acquire 100% Interest in Spanish Tungsten and Tin Project".



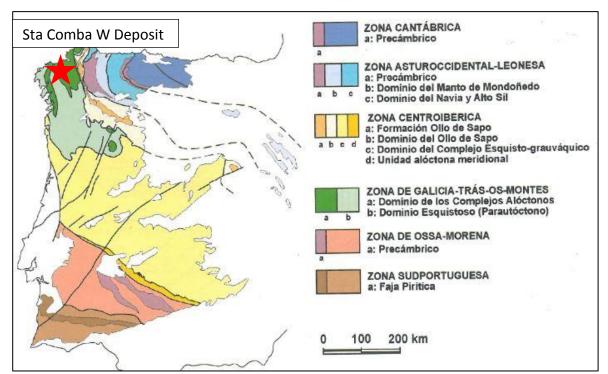


Figure 1. Location of the Santa Comba W deposit into the Iberian Massif Zonation map according to Farias et al. (1987).

Following the acquisition of GTT in August 2019, Rafaella has completed additional drilling at the project which has resulted in a significant upgrade to the MRE. The updated MRE is based on 64 diamond drillhole (8,209m; 2,496 samples) and 24 reverse circulation (RC) drillholes (2,908m; 877 samples) and includes the 2016 drilling. A plan showing all the drillholes is presented 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. 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.

Data used in the MRE is sourced from spreadsheets supplied by Rafaella and was validated by the independent geological and resource consultants. Thereafter, the data was imported into Datamine modelling software and provided resolution of any errors connected with hole sequencing, range checks or data inconsistencies. The geological model developed by RFR geologists, stemming primarily from drillhole lithological logs, was verified by surface geological mapping. In the opinion of the resource consultants, the geological data collated in the course of the 2015-2016 and 2019-2020 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). The MRE stems from geological modelling primarily focussed on the evaluation of near-surface mineralisation, which may be amenable to open pit mining. A computerised block modelling approach was applied for resource estimation and to provide the basis for subsequent open pit mine planning. The interpreted mineralised zones have been based primarily on a lithological endogranite model, as well as grade-envelope models related to a cut-off of 0.05% WO₃ (Figure 4 and 5). This cut-off level was selected as being a reasonable lower limit with respect to economic cut-off grade.



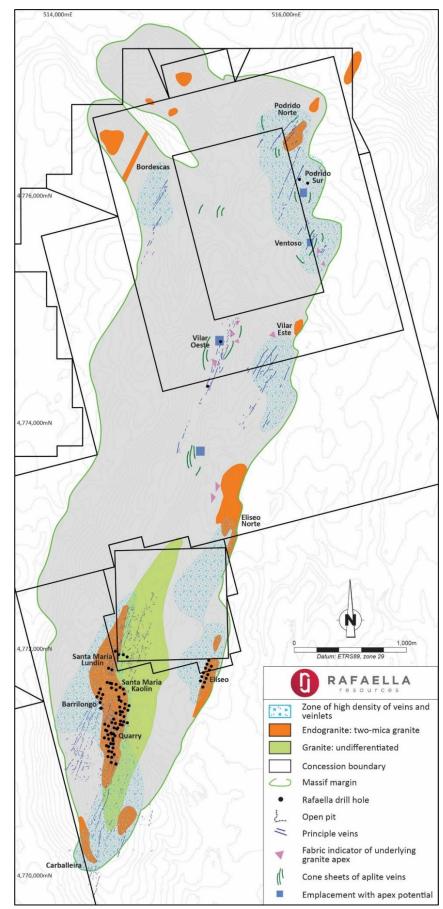


Figure 2. General map of the Varilongo granitic massif, highlighting the granite facies (after Coparex, 1985).



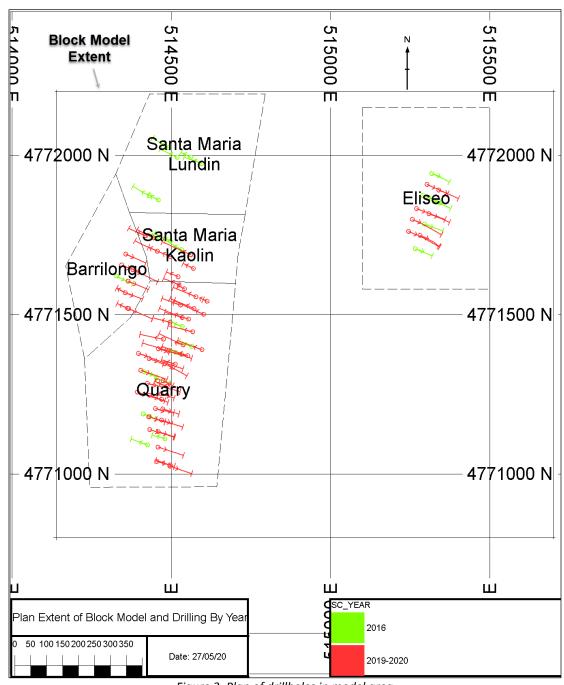


Figure 3. Plan of drillholes in model area.

As a preparation for compositing, an analysis of outlier grades was done using observation of log-probability plots, decile analyses and coefficient of variation (CoV) analyses. In subsequent estimation, an indicator-type estimation was applied, focussed on a high/low cut-off level of 0.2% WO₃. This threshold level also corresponds with geological understanding with the +0.2% WO₃ composites being associated with vein-type mineralisation. No WO₃ top-cut was applied as high-grade samples were contained within separate vein wireframes, thereby constraining their influence. A marked break in the Sn CoV plot at 800ppm Sn was used as a top-cut level for Sn, prior to compositing.



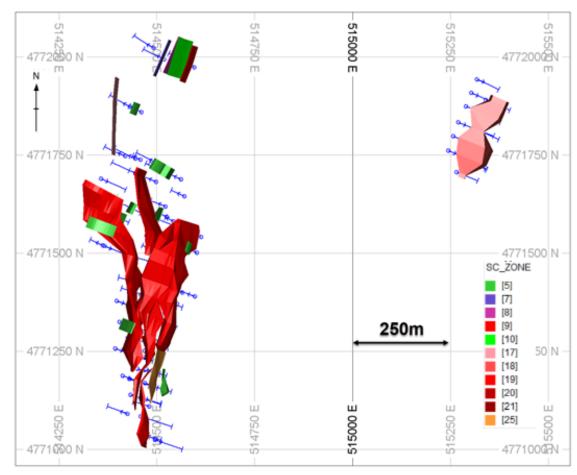


Figure 4. Plan view of interpreted mineralised zones.

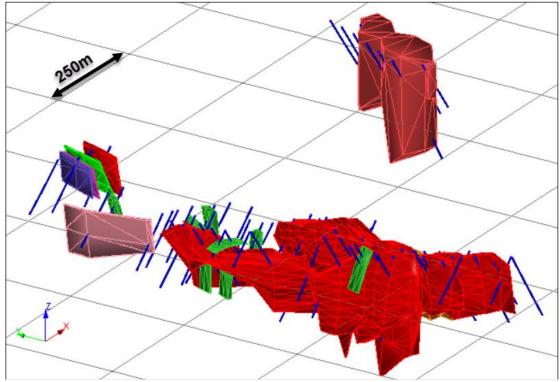


Figure 5. 3D view of mineralised zones viewed from the southwest.



Almost all the modelled disseminated material is within the endogranite lithology. A volumetric block was generated using parent block sizes of $10 \text{m} \times 10 \text{m} \times$

Grade estimation of WO₃ and Sn grades was completed using indicator kriging (IK). Alternative grade values were also estimated using ordinary kriging (OK), inverse-distance weighting (ID) and nearest neighbour estimation (NN) for validation purposes. Directional anisotropy was used to control the orientation of estimation search ellipses. A three-pass progressive search strategy was employed for grade estimation. Of the plus 0.05% WO₃ Measured and Indicated (M&I) Resources, approximately 25% of these resource blocks were estimated using the first search volume (40m x 40m x 10m), the remainder being estimated using the second search volume (80m x 80m x 20m) and using data comprised of at least 9 composites from at least 3 drillholes.

A total of 557 density measurements from the 2019-2020 drilling program were averaged for the different lithologies after exclusion of clear outliers. Both mean and median values of all the main lithologies are at or near to 2.65t/m³. This value was therefore applied as a global density for the modelling of all rock types in the MRE.

Resource classification criteria were based on variography results as well as a conditional simulation study. The resource has been classified as Measured, Indicated and Inferred Resources in accordance with the 2012 edition of the JORC Code, depending on drillhole spacing and confidence of geological interpretation. Resources were calculated as 'Measured' where they were covered by drilling on a grid of at least 20m x 40m with at least 3 drillholes; 'Indicated' when they were covered by drilling on a grid of at least 40m x 40m with at least 3 drillholes; and 'Inferred' for the remainder limited to a maximum extrapolation of 120m.

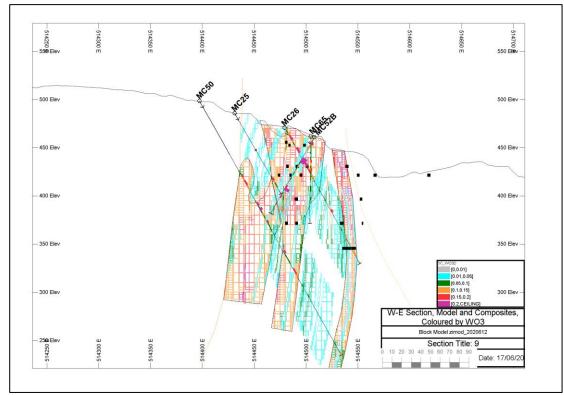


Figure 6. Cross-section of block model and composites for WO₃.

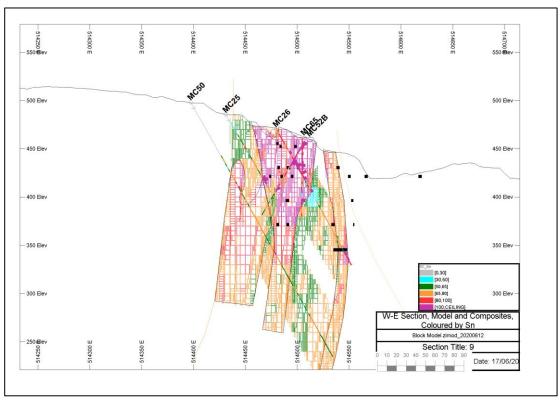


Figure 7. Cross-section of block model and composites for Sn.



The reported in-situ MRE is reported at a cut-off of 0.05% WO₃, which corresponds to an APT price of US\$240/mtu and US\$19,200/t Sn price, along with reasonable assumptions for processing costs, including ROM feed going into an ore sorter. Table 2 details the near-surface MRE at different cut-off grades. Table 3 details the difference in near-surface Mineral Resource Estimates from 2016 to 2020.

Table 2. Total Mineral Resource Estimate of near-surface resources at different cut-off grades.

Total Mineral Resource Estimate at different cut-off grades					
Cut-off WO₃%	Classification	Mt	WO₃ %	Sn ppm	
	Measured + Indicated	6.86	0.14	94	
0.03	Inferred	4.68	0.15	89	
	Total	11.54	0.14	92	
	Measured + Indicated	6.13	0.16	96	
0.05	Inferred	4.24	0.16	91	
	Total	10.37	0.16	94	
	Measured + Indicated	6.03	0.16	96	
0.07	Inferred	4.00	0.16	92	
	Total	10.04	0.16	95	

Table 3. Comparison of 2020 and 2016 near-surface Mineral Resource Estimates.

Mineral Resource Estimate for Santa Comba - June 2020					
Classification	Mt	WO₃ %	Sn ppm	WO₃ t	Sn t
June 2	2020 Santa	Comba Res	ource Estima	te	
Measured	1.21	0.16	118	1,916	143
Indicated	4.93	0.16	90	7,647	445
Subtotal	6.13	0.16	96	9,563	588
Inferred	4.24	0.16	91	6,747	386
Total	10.37	0.16	94	16,311	974
August 2016 Santa Comba Resource Estimate					
Inferred	5.11	0.20	138	10,374	707
Total	5.11	0.20	138	10,374	707

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

Ends

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About Rafaella Resources Limited

Rafaella Resources Limited (ASX:RFR) is an explorer and developer of world-class mineral deposits worldwide. Rafaella owns the Santa Comba tungsten and tin project in Spain and the McCleery cobalt and copper project in Canada. The Santa Comba project is located in a productive tungsten and tin province adjacent to critical infrastructure and the McCleery project was previously under-explored and holds significant potential.





Location of the Santa Comba Project, Galicia, Spain.

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

Competent Persons Statement

The information in this report that relates to Mineral Resources defined at Santa Comba is based on information compiled by Mr Adam Wheeler who is a professional fellow (FIMMM), Institute of Materials, Minerals and Mining and Mr Mark Owen who is a Fellow of the Geological Society of London and a European and Chartered Geologist. Mr Wheeler is an independent mining consultant and Mr Owen an independent geological consultant. Mr Wheeler and Mr Owen have 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 Wheeler consents to the inclusion of this information 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 Dr Lachlan Rutherford, a consultant to the Company. Dr Rutherford is a Member of the Australasian Institute of Mining and Metallurgy. He has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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 (JORC Code). Dr Rutherford 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.



JORC Code, 2012 Edition – Table 1 report

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	 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. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. 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. 	 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 & GTT). Other samples used for reference purposes were surface rock chips (GTT & 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. Drilling was oriented as far as possible, according to local geography and access, to be perpendicular to the mineralised structures. 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. Mineralisation was determined using lithological changes, assaying, as well as UV ligh 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. 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 typic 2kg samples.
Drilling techniques	 Drill type (eg core, reverse circulation, open-hole hammer, rotary air 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 (Asturias)). 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 Atlas Copco CS-14C. 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 (Asturias)). Drill rig SPI DRILL 160-D (made by SP The primary sample database for the 2015-2016 drill programme contains data from 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



Criteria	JORC Code explanation	Commentary
		 surface drill holes (21 RC drill holes for 2,650m; 44 diamond drilling for 6,176m). For both drill programmes, diamond core was mostly PQ and HQ size. Holes were collared using PQ size and from drill hole 19DD0016 continued with PQ to end of hole Drilling diameter would reduce to HQ and NQ to transect voids. Only NQ was used when no voids were encountered. For the 2015-2016 drill programme, diamond core was oriented with spear marks every 9m. No core was oriented during the 2019 drill programme. In the Coparex era of underground mining, no information is known about the drilling techniques.
Drill sample recovery	 Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. 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. 	 Recovery measured directly from drilled length by a geologist. Core recovery was very high, generally greater than 98%. For the 2019 RC drill programme, sample recovery was greater than 90%. Sample collection was supervised by a site geologist who ensured samples were representative and recovery was acceptable for resource estimation. There was no evidence of sample bias or any relationship between sample recovery and grade.
Logging	 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. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged. 	 The core was logged to a level of detail to support an MRE. 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. 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. Logging was both qualitative and quantitative. All drill core and RC drill chips were photographed. In both drill hole databases, 99% of the core & RC chips from the drilling has been logged.



Sub-sampling techniques and sample preparation

- 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.

- For both drill programmes, 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.



Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	 The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. 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. 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. 	 Primary assaying was completed by multi-element ICP (ALS code ME_MS81). For returned ICP assays greater than 10,000 ppm W, fused disks werecreated 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). 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/m². Tin grades were also determined in the same way. The kg/m² 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/m², 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. No geophysical tools were used. 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, pulp duplicates and wet chemical blanks for assay. 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 were used and analysis at acceptable levels. Course duplicates show a good correlation between original and duplicate samples. Results of the control sample analysis are considered acceptable and lack of bias.
Verification of sampling and assaying	 The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. 	 No external verification done. All the QC data was reviewed by Dr Lachlan Rutherford (Project Manager, GTT; GM Exploration, RFR) who is a Competent Person under the JORC Code (2012) and is a consultant to both companies. No specific twin holes were drilled. Primary data for the 2015-2016 and 2019 drilling campaigns was entered and



Criteria	JORC Code explanation	Commentary
	Discuss any adjustment to assay data.	maintained in an Excel database. Any problems encountered during the hole data import, combination and surveying process were resolved with company geologists.
Location of data points	 Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control. 	 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. 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. Grid: ETRS TM Zone 29 (epsg: 3041). Datum EU ref 89. No procedural documentation on surveying data points exists from the Coparex era, hence the precise location of data points cannot be accurately determined. Topography established from Lidar satellite data (2014), drone data (photogrammetry method) with high precision RTK GPS (GPS R2 GNSS) 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.
Data spacing and distribution	 Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. 	 Nominally 40m parallel section lines, restricted by quarry access. It is considered that the spacing of samples used is sufficient for defining Mineral Resource Estimates. During resource estimation, approximately 3m composites were generated.
Orientation of data in relation to geological structure	 Whether sample compositing has been applied. Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material. 	 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. It is not considered that the sampling orientations have introduced any sampling bias.
Sample security	The measures taken to ensure sample security.	 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.
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
Mineral
tenement and
land tenure
status

JORC Code explanation

- Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.
- The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.

Commentary

• The following table lists the concessions and extensions that make up the Santa Comba Project. The licences were fully transferred into the name of GTT by the Mines Department in November 2015. The licences have an expiry date of 2068.

Туре	Name	Number	Expiration date	Area (m²)
Concession	San Antonio	1789	24/02/2068	1,500,000
Concession	Santa María	1790	24/02/2068	959,400
Concession	Oportuna	1792	24/02/2068	4,000,000
Concession	Carballeira	1801	24/02/2068	3,000,000
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	Demasia a Santa Maria		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 Demasía a Carmen Fraccion 1º		24/02/2068	239,298
Excesses	Demasía Ampliación a Oportuna		24/02/2068	94,795
				36,089,327

• The licences are in good standing and n known impediments exist.



Acknowledgment and appraisal of exploration by other parties. by other parties Acknowledgment and appraisal of exploration by other parties.	 Santa Comba was mined intermittently between 1940 – 1985 with considerable underground infrastructure developed (ca. 7,000m). Much of the understanding about deposit and vein geometry was developed between 1980 - 1985 by French company Coparex. There is a list from the Coparex era of 230 diamond drillholes. For these holes, 79 vein intersections have recorded WO₃ 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 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. 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 with vein interpretation and subsequent underground development and exploration. In 2012, IGI assessed the open pit potential of Santa Comba using rock chip sampling. Channel sampling and single site sampling showed elevated tungsten concentrations. Channel sampling in the quarry area assayed 14m @ 0.11% WO₃ an highlighted the near-surface tungsten potential. It is considered that the sample method and analytical methods utilised by IGI were appropriate for the mineralisation at Sant Comba.
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Criteria	JORC Code explanation	Commentary
Geology	Deposit type, geological setting and style of mineralisation.	 The main mineral of economic interest at Santa Comba is wolframite ([Fe,Mn]WO₄) mineralisation contained within, and adjacent to, a two-mica granite (endogranite). Quartz-vein hosted mineralisation is also prevalent throughout the area and was the main focus of historic mining. The geology is the Galicia-Tras-Os-Montes Zone in the NW Iberian peninsula, western Variscan Orogen. The Galicia-Tras-Os-Montes Zone is a complex zone represented by an allochthonous crustal block thrusted over the Central Iberian Zone. Mineralisation is hosted within a 7.5km long by 1-2km wide massif composed of syn- to post-tectonic Variscan granitoids. Tungsten-tin mineralisation at Santa Comba occurs in two primary forms: quartz vein-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 was the main focus of historic mining. Disseminated tungsten mineralisation is hosted exclusively within the endogranite and is the main focus of RFR.
Drill hole Information	 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: easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. 	Drillholes listed out in resource report, along with summary of main intersections.
	 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. 	No information has been excluded.
Data aggregation methods	 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. 	 Length-weighted average grades were calculated for intervals >0.05% WO3. A maximum of 6m of internal dilution allowed.
	 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. 	Any aggregation of drillhole data was done using length-weighting.
	 The assumptions used for any reporting of metal equivalent values should be clearly stated. 	Metal equivalents not used.



	Criteria	JORC Code explanation	Commentary
	between mineralisation widths and	These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. 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').	 Drill holes inclined so as to get as near to perpendicular intersections as possible. Downhole lengths reported. True widths estimated to be 50-60% of downhole widths based on interpreted orientation of mineralisation. The mineralised drill hole intersection were modelled in 3D in Datamine to interpret the spatial nature and distribution of the mineralisation.
- OF Dersonal Use	Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	• A plan of the main interpreted zones and drillholes is shown below. 4771750 N
	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.	Interim exploration results were reported at a cut-off of 0.05%WO3, with intersection lengths varying from 3m – 76m.



MIUO	Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	•	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.
	Further work	 The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	•	The next phase of drilling is currently in the process of being planned, focussing of conversion of Inferred resource in mainly downward extensions of the mineralised zones. Preliminary pit optimisation is also being used to assist with this targeting.
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Section 3 Estimation and Reporting of Mineral Resources

 The Competent Person undertook the following validation procedures: Inspection of drillhole collars and surface outcrops, inspection of core storage and handling facilit on site; verification of 2016 and 2019 drilling QAQC, which were considered satisfactory data. Checks during import, combination and desurveying of data. Check sections and
plans also produced.
 Adam Wheeler visited the Santa Comba site and core processing facilities, from May 27th-28th, 2016. Mark Owen visited the Santa Comba site and core processing facilities, from September 29th-October 1st, 2019 and January 8th-9th, 2020.
• The mineralised zone interpreted zones have been based primarily on a lithological endogranite model, as well as grade-envelope models. Almost all of the modelled disseminated material is within the endogranites. Higher grades parts of this have also been tied into previously mined veins. The general overall geological interpretation of vein structures is quite clear, because of historic underground mining and outcrops.
 The diamond drilling campaign has shown clear evidence of disseminated structure associated with the near surface vein structures. In development of the mineralised zones' interpretation, the maximum distances of extrapolation used were approximately 40m along-strike and 60m down-dip.
Effects of alternative geologic models were not tested.
 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 mineralist zone model based on a limiting cut-off grade of 0.05% WO₃. In addition to the conceptual geological model, the impact of geology on mineralization has been applied through the use of dynamic anisotropy controlling



Criteria	JORC Code explanation	Con	nmenta	iry		41 111 14			
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. 		Strike Length		of Minimum Bas as Elevatio m m R	n Elevation	Max. depth St		on Rang
		•	1,100	35	0 17	0 515	345 1	0-20 cm 2-100 m	60 - 9
nodelling echniques	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 parameters used.		mineral which v compose flagged estimat Direction	lised zone structions by far the siting process, and these wone of WO3 and anisotroponal anisotrop	uctures were comost prevalen internal sub-Cere extrapolated on Sn grades words was used to	onverted in t sample le .05% WO ₃ ied as part o as complet control the	to approxin ngth for ass intersection of the model ed using incorrientation	group of samples nately 3.0 m comp saying. During the is were also separalling process. Gradicator kriging (IK) of estimation sea e table below.	osites, ately Ie
			Searc	ch C	istances X:Y	(m)	Minimun		Minim
			l	1	2	3	Composit	oo Compositos	Deille
				ı ı			Composit	es Composites	Drillho
			1st 2nd	40	40 80	10 20	9 0	24 24	3 3

• The availability of check estimates, previous estimates and/or mine

production records and whether the Mineral Resource estimate

Notes:

- . Initial waste and low-grade zone extrapolation based on 60m x 60m x 5m ellipses
- . Maximum number of composites/hole = 4
- . Directions determined locally using dynamic anisotropy:
 - X: Along-Strike
 - Y: Down-Dip
 - Z: Cross-Strike
- . Discretisation 3 x 5 x 5
- . Parent block size for grade estimation: 5m x 10m x10m
- . WO₃ and Sn estimated inside main mineralised zones using indicator kriging (IK):
 - WO₃: Indicator split at 0.2%WO₃
 - Sn: Indicator split at 100ppm Sn
- . Outside of main mineralised zones, WO₃ and Sn estimated using ordinary kriging (OK
- . Grades also estimated using ID and NN, for validation purposes
- Deposit has not been mined previously as an open pit for disseminated WO₃ material, so no appropriate mine records exist. In assessing the amount of vein material that



Criteria	JORC Code explanation	Commentary
D	takes appropriate account of such data.	has been mined out previously from underground operations, a long-section of the Restrevas vein was to determine the mined-out proportions. This was reflected in the current block model by reducing the density associated with the three main veins in Quarry area.
	The assumptions made regarding recovery of by-products.	• It is considered that tungsten is the principal product, with tin as a secondary product. There are no other by-products.
	 Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation). 	• Seven drillholes were assayed for Arsenic, As. These data were not sufficient to allow an estimation of As in the resource model, but it did show that there are no particular relationships between As and either WO ₃ and Sn. The average in-situ arsenic grade of composites within the principal WO ₃ mineralised zones was 2,347ppm.
	 In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. 	 The volumetric block model was generated using parent block sizes of 10m x 10m x 10m blocks in waste, and 5m x 10m x 10m for mineralised zones. The drillhole spacing was generally 40m along-strike and between 20m-40m across-strike. During extrapolation of internal waste zones, the smallest blocks were 1m in the Z
	 Any assumptions behind modelling of selective mining units. 	 (cross-strike) direction, so the in-situ resource estimate is essentially reporting down to a selective mining unit of 1m x 5m x 5m. There appears to be no particular correlation between Sn and WO₃ grades.
	 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. 	 The interpretation of mineralised zones subsequently controlled selected samples and zone composites, and then the resource block models. Grade capping was applied for Sn grades, prior to compositing. This capping level was 800ppm Sn, selected from a Coefficient of Variation (CoV) analysis. WO₃ grades were not capped. Seven overall WO₃ outlier grades were constrained within specific vein wireframe models, such that their individual populations did not require capping. Model validation steps are included:
	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	 Examination of estimated grades on cross-sections. Comparisons between global average zone grades between samples, composites and model grades derived from IK, OK, ID and NN. Examination of local average grades, in the form of swath plots showing average grades of 40m thick vertical sections, derived from composites and model grades derived from IK, OK, ID and NN.
Moisture	 Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content. 	Tonnages were estimated on a dry basis
Cut-off parameters	 The basis of the adopted cut-off grade(s) or quality parameters applied. 	 The main reference cut-off used for developing grade envelope was 0.05%WO₃. The same cut-off grade was used for resource reporting purposes, and corresponds to a



Cr	riteria	JORC Code explanation	Commentary			
			breakeven cut-off grade corresponding to a APT (ammonium paratungstate) price of US\$240/mtu (metric tonne unit), a combined processing and G&A cost of \$7.75/t and a combined metal recovery of 86% (mill and ore sorter). This cut-off grade also is a logical break point on plots showing average intersection thicknesses and average intersection grades over a series of different WO ₃ cut-off grades.			
	Aining factors or ssumptions	 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 may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made. 	 Conventional open pit mining was considered for potential mining of the near-surface resources which have been estimated. No mining factors have been applied in the calculation of in-situ resources. 			
fa	Metallurgical actors or ssumptions	• The basis for assumptions or predictions regarding metallurgical 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.	 RFR has implemented a number of metallurgical testing regimes for the economic extraction of tungsten and tin minerals from potential ores at its Santa Comba project. The programme consists of two areas of development, X-ray sorting and gravity concentration. Phase 1 testing carried out on vein and disseminated ores showed good recoveries at a coarse sizing of 90% and 85%, respectively. Concentrates produced showed +62.5% WO₃ and low arsenic values after a sulphide flotation cleaning step. 			
fa	nvironmental actors or ssumptions	 Assumptions made regarding possible waste and process residue 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 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 	 In 2011, the previous owners IGI received the resolution of authorisation for the exploitation of Mina Carmen underground mine, restoration of the site and environmental impact study from Xunta de Galicia. In October 2012, IGI subsequently received the resolution of authorisation for the construction of the processing plant. In December 2015, by resolution of the General Direction of Industry, Energy and Mines of the Xunta de Galicia, the change of domain of the 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 			
		made.	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			



Criteria	JORC Code explanation	Commentary			
		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	 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. 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. Discuss assumptions for bulk density estimates used in the evaluation process of the different materials. 	 During the 2019-2020 drilling campaign, 554 core density measurements were taken from 41 drillholes. The density measurements were made using conventional water immersion determinations. No voids present in intact samples. With density data outliers removed, below 2.54t/m³ and above 2.8t/m³, the average bulk density of 2.65t/m³ was determined, for all the main granite rock types tested. This value was therefore assigned a global density value for all granite rock types modelled. 			
		For the material within the three mined veins, a density value of 0.64t/m³ was set, representing a mining recovery of 76% and a corresponding remaining pillar-ore fraction of 24%. Null density values were set in sub-blocks representing the mined out areas from underground development, which were modelled over the 16 levels within the overa region being covered by the current estimation.			
Classification	The basis for the classification of the Mineral Resources into varying confidence categories.	The criteria for resource classification were developed from a conditional simulation exercise to test the evaluation precision corresponding to different drillhole spacings, the ranges of the model and the variability of interpreted mineralised envelopes. The classification criteria developed were: Measured Covered by drilling on a grid of at least 20m x 40m. At least 3 drillholes. Indicated Covered by drilling on a grid of at least 40m x 40m. At least 3 drillholes.			
	 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). Whether the result appropriately reflects the Competent Person's view of the deposit. 	 Inferred Limited to a maximum extrapolation of 120m The resource classification criteria have taken into account all relevant factors. 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.	 An external review completed by independent consultant Jörg Pohl (Member of the Professional Association of German Geoscientists (BDG)). In the opinion of this consultant input data, geological model and estimation techniques were to industry standards and appropriate to the style of mineralisation.
	Discussion of relative accuracy/confidence	 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. 	 The conditional simulation exercise has been used to develop criteria for Measured resources that should give relative error levels below 15%, at the 90% confidence level, for quarterly evaluations; and relative error levels below 15% for annual evaluations related to Indicated resources.
		 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. These statements of relative accuracy and confidence of the 	 These calculations are connected with an ore production rate of 930Ktpa. The resource criteria have been used to assign a CLASS field into the resource block model. Then both local and global can be evaluated according to this resource classification.
		estimate should be compared with production data, where available.	 No mining has taken place since 1985, and that was only on the higher grade vein mineralisation. Historical production data is not in a form that enables comparisons.
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