

ASX Announcement | 13 June 2019 Rafaella Resources Limited (ASX:RFR)

Rafaella Resources Defines Exploration Target at Newly-Acquired Santa Comba Tungsten Project

Investment Highlights

- A near-surface Exploration Target* has been defined at the Santa Comba Tungsten Project
- The Exploration Target* is based on distribution of prospective rock type, historic bulk sampling, historic trial mining and a maiden defined Mineral Resource Estimate (MRE) in 2016¹, evaluated using JORC (2012) guidelines. These MRE resources had an Inferred Resource category.
- A comprehensive drilling programme to test the Exploration Target is scheduled for Q3 CY19
- Rafaella recently signed an agreement to acquire the Santa Comba Tungsten Project, seeing it as having significant fast track development potential

13 June 2019 – Junior exploration company Rafaella Resources Limited (ASX: RFR) ("Rafaella" or "the Company") is pleased to announce that it has defined an initial Exploration Target* at the Santa Comba Tungsten Project ("Santa Comba" or "the Project") in Galicia, NW Spain (Fig. 1).

The Exploration Target* supports the Company's proposed drilling programme which has the objective of defining extensions to the already defined near-surface JORC Mineral Resource Estimate¹. As part of its proposed work programme, Rafaella will be targeting additional near-surface prospects that are amenable to open pit mining.

* The potential quantity and grade of the Exploration Target is conceptual in nature; there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration work will result in the estimation of a Mineral Resource.

Table 1. Santa Comba near-surface Exploration Target*.

	Tonnes, Mt		Grade,	WO₃ %	Metal target, WO ₃ t			
	Min.	Max.	Min. Max.		Min.	Max.		
TOTAL	16.2	48.6	0.15	0.23	25,000	112,000		

⁻The near-surface JORC Inferred MRE previously estimated for Santa Comba¹ is included within the Exploration Target.
-These grades stem from an evaluation done at a cut-off of 0.05% WO₃.

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" (pages 2 & 3, Table 1).



Santa Comba Tungsten and Tin Project

The Project, which is already permitted for underground and open pit mining, is located near the township of Santa Comba in Galicia, northwest Spain, and covers the 7km long Santa Comba granite massif (*Figs. 1 & 2*).

Rafaella is targeting Santa Comba as a development project capable of being fast tracked to production and has received an offtake offer from H.C. Stark Tungsten GmbH with associated development funding from the German Government. The Project also boasts proximity to deep-water ports and has considerable infrastructure already in place, including a partially completed process plant.

The Project comprises several known prospects with a near-surface Mineral Resource Estimate² of 5.1Mt of Inferred Resource grading at 0.203% WO₃ and 0.014% Sn, and an underground Inferred Resource of 234Kt grading at 0.95% WO₃ and 0.28% Sn located at the historic Mina Carmen underground mine.²

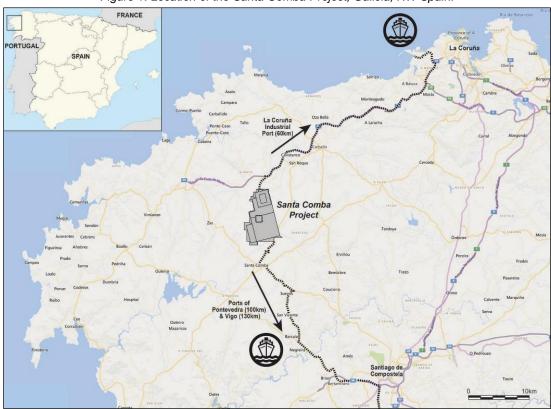


Figure 1. Location of the Santa Comba Project, Galicia, NW Spain.

Exploration Target

The Exploration Target is presented in *Table 1*. The Company has defined the near-surface Exploration Target in order to assist in the planning of its upcoming drill programme and to assess the potential prospectivity of the broader Santa Comba massif. The Project area shows evidence of extensive historical workings which reinforces the Project's prospectivity. Historical documents that detail bulk sampling, trial mining and production records, in conjunction with the recently defined near-surface JORC Inferred MRE, are used as the basis for defining the Exploration Target.

² Refer to RFR ASX announcement 27/05/19 "Rafaella Resources Signs Heads of Agreement to Acquire 100% Interest In Spanish Tungsten and Tin Project" (pages 2 & 3, Table 1).



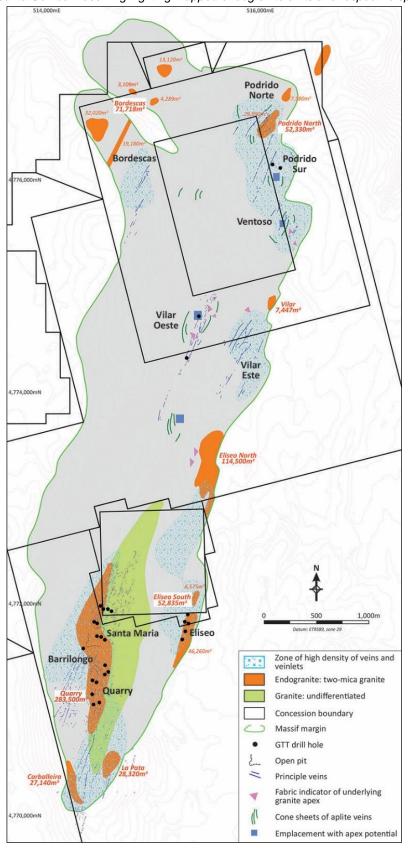


Figure 2. Santa Comba massif highlighting mapped endogranite units and respective spatial area.



The methodology implemented in the JORC (2012) compliant estimation of the Exploration Target is summarised below.

Estimated Ore Tonnage

The range estimates of potential volume of rock and tonnage are based on geological mapping of the prospective rock type (endogranite) that hosts the near-surface disseminated and veinlet mineralisation. Approximately 0.6 km² of the prospective endogranite has been mapped across the massif in eight different areas (*Fig. 2*). A volume for each endogranite body was calculated to a depth of 100m from the erosional surface. Tonnages for each body were then calculated using a density of 2.6 g/cc which is the same specific gravity used in the calculation of the near-surface JORC Inferred MRE. On this basis, it is estimated that there are approximately 160 million tonnes of endogranite across the massif to a depth of 100m. To calculate the final minimum and maximum tonnage ranges, it was estimated that between 10% and 30% of the total endogranite is mineralised, respectively. To date, less than 10% of the volume of prospective endogranite has been drill tested. Of this tested volume, approximately 30% contained tungsten mineralisation of sufficient quality and continuity to be included in the maiden near-surface JORC (2012) Inferred MRE⁴, thus the Company believes there is a reasonable basis for these estimated tonnage ranges.

Estimated Grade Range

The estimates of potential grade ranges are based on historical records of bulk sampling and trial mining by former owners³ within the endogranite zones, and the maiden JORC Inferred MRE defined by GTT in 2016⁴. The minimum and maximum grade ranges are based on +/-20% variation to the grade estimated for each of the prospective endogranite areas.

The northern endogranite bodies (Podrido, Bordescas and Vilar; *Fig. 2*) within the Company's Exploration Target have grade ranges which have been estimated by Coparex in late 1979 from bulk sampling in the northern area of Podrido. After processing the bulk samples through a pilot plant and assaying the semi-concentrate, a head grade of 0.164% WO₃ was calculated for Podrido³. The minimum and maximum grade ranges at the northern endogranite bodies have been estimated at +/- 20% to that of the bulk sample head grade. The southern endogranite bodies (Eliseo North, Eliseo South, Quarry, La Pata and Carballeira; *Fig.* 2) have grade ranges estimated using +/-20% variation to the grade of the JORC Inferred MRE (based on a cut-off of 0.05% WO₃) already defined in, or adjacent to, these areas by GTT⁴.

Proposed Work Programme to Test Exploration Target

To test the Exploration Target on a nominal 40m x 80m drill pattern, the Company estimates that approximately 230 drill holes will be required with target depths of 100m (23,000m in total). It is estimated 9-12 months would be required to complete the drilling, subject to drilling method, rig numbers and drilling performance.

The Company intends to test the different near-surface targets in a staged approach, initially concentrating on extensions to the JORC MRE defined for Quarry and Eliseo prospects. These prospects are being targeted as part of a proposed study into the economic potential of the near-surface mineralisation at Santa Comba. 8,000m has initially been allocated for the drill programme.

³ Coparex Minera, S.A., 1979. Santa Comba, Zone Nord, Rapports D'Activites, 1 Octobre 1979.

⁴ Refer to RFR ASX announcement 27/05/19 "Rafaella Resources Signs Heads of Agreement to Acquire 100% Interest In Spanish Tungsten and Tin Project" (pages 2 & 3, Table 1).



Rafaella's Executive Director Ashley Hood said: "We believe that the Santa Comba acquisition offers considerable upside to investors as less than 10% of the mineralised potential along the 7km granite massif has been drilled. Rafaella proposes to unlock this value through a staged drilling programme supporting and enhancing what is already an exciting project being targeted for near-term development."

Ends

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About Rafaella Resources

Rafaella Resources Limited (ASX:RFR) is a junior exploration company which owns the McCleery cobalt and copper project in the Yukon territory Canada, and the Sandstone gold project in Western Australia. To learn more please visit: www.rafaellaresources.com.au

About Galicia Tin & Tungsten

Galicia Tin & Tungsten (GTT) is a Spanish registered company formed in June 2014 by Starboard Global Limited (SGL) in conjunction with other seed investors and local joint venture partners to acquire ownership of the physical assets, land leases, licences and mineral rights of the formerly producing Santa Comba mine. To learn more please visit: www.galiciatinandtungsten.com

Competent Persons Statement

The information in this announcement that relates to Exploration Results and Historical Estimates 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.

The information in this report that relates to Mineral Resources and Exploration Targets 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. Mr Wheeler is an independent mining consultant. Mr Wheeler has 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.



GTT confirms that it is not aware of any new information or data that materially affects the information included in this report and confirms that all material assumptions and parameters underpinning the 2016 Mineral Resource Estimate continue to apply and have not materially changed.

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.

Cautionary Note Regarding Exploration Targets

The potential quantity and grade of the Exploration Target is conceptual in nature; there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration work will result in the estimation of a Mineral Resource.

Appendix 1.

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	 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 sample in 2015-2016 was diamond drill core. Other sample types include RC drill chips, surface rock chip (GTT & Incremento Grupo Inversor (IGI)) and underground channel sampling along adits (GTT) and historic underground channel sampling completed by Coparex during sublevel development and gallery exploitation. Drilling was oriented as far as possible, according to local geography and access, to be perpendicular to the mineralised structures. Drill collar locations located using a GPS accurate to +/-3m. Mineralisation was determined using lithological changes. Disseminated mineralisation being associated with a two-mica endogranite and vein mineralisation predominantly associated with quartz veins or as pure wolframite veins. UV light has been run over all core to pick up any occurrences of scheelite. In the Coparex era of underground mining, the principal method of sampling was by channel sampling of development or stope faces. Channels were cut by hand across the mineralised width, approximately 5cm in height, 1cm in depth, giving typically 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: SPI (Sondeos y Perforaciones Industriales del Bierzo (Asturias)). Drill rig SPI DRILL 160-D (made by SPI); 24 holes for 2,481m. Reverse Circulation (RC) contractors: EDASU (Madrid). Drill rig: EDASU RCG 2500 (made by EDASU); 3 drill holes for 255m. The primary sample database contains data from 27 surface drill holes drilled during 2015-2016. 23 of these drill holes were used in the MRE (3 RC drill holes for 255m; 20 diamond drill holes for 2,020m). Diamond core mostly HQ size. Holes were collared using PQ size. Only HQ where no voids encountered. Diamond core was oriented with spear marks every 9m. In the Coparex era of underground mining, no information is known about

Criteria	JORC Code explanation	Commentary
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. 	 the drilling techniques. Recovery measured directly from drilled length by a geologist. Core recovery was very high, generally greater than 95%. 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 the MRE. All core was orientated with a spear mark 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 was photographed. In the current drillhole database, 99% of the core & RC chips from the drilling (2,736m) 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 the 2016 drill core, selected core samples were sawn longitudinally such that one ½ core was sent to the laboratory. Core oriented so that the same side taken for sampling down each hole. ½ 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. Limited Reverse Circulation drilling was undertaken at Eliseo and Santa Maria prospects. 1m samples were passed through a standard splitter and the sub-samples 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. 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

Criteria	JORC Code explanation	Commentary
		 for assay. 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.
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 were created and analysed with XRF (ME_XRF10). The analytical methods are considered total and appropriate for the style of mineralisation (predominantly wolframite). The samples produced by the Coparex underground channel sampling by Coparex were subsequently analysed gravimetrically in an on-site laboratory as wt% WO₃. These grade values was 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 2σ 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.

Criteria	JORC Code explanation	Commentary
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. Discuss any adjustment to assay data. 	 No external verification done. All the QC data was reviewed by Dr Lachlan Rutherford (Project/Country Manager, GTT) who is a Competent Person under the JORC Code (2012) and was full-time employee of GTT. No specific twin holes were drilled. Primary data for the 2016 campaign has been entered and maintained in an Excel database. Any problems encountered during the hole data import, combination and desurveying process were resolved with GTT geologists. The only adjustment made to assay were applied top-cuts during the compositing process.
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. 	 Drill hole collar locations were determined by GPS accurate to +/-3m. Downhole survey taken using REFLEX EZ-SHOT nominally every 40m and at end of hole. Grid: ETRS TM Zone 29 (epsg: 3041). Datum EU ref 89. No procedural documentation on surveying data points exists from the Coparex era. The precise location of data points cannot be accurately determined. Topography: Lidar satellite data and from digitised 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. Whether sample compositing has been applied. 	 Nominally 80m, restricted by quarry access. It is considered that the spacing of samples used is sufficient for the Mineral Resources evaluated in the current study. Drill hole data were composited to 5m lengths, but honouring the ZONE flag differences. The composite length applied was flexible, so as to allow equal sized composites within each intercept. A minimum composite length of 0.5m was applied.
Orientation of data in relation to geological structure	 Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. 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 oriented 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 triple-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.

Criteria	JORC Code explanation	Commentary
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 status	-	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. Type Name Number Grant date Consolidation date Expiration date Area (m²)
		The licences are in good standing and no known impediments exist. The licences are in good standing and no known impediments exist.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	 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. 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

Criteria	JORC Code explanation	Commentary
		 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 1979, Coparex tested a bulk sample from Podrido in what was previously recognised to be a "sterile" area. Historical documents state a 740kg (dry) bulk sample was processed through a pilot plant. 9.9kg of semi-concentrate was produced grading 8.8% WO₃. It is estimated that approximately 70% of the tungsten was recovered to the concentrate, implying a head feed grade of approximately 0.164% WO₃. 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 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.
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 GTT.
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 	 Drill collar table (Datum: ETRS89 [EPSG: 3041], zone 29): Hole_ID MGA_East MGA_North Elevation Hole_Type Azi Dip EOH_Depth 15RC0001 514562.0 4771992.8 467.7 RC 295 -60 70.00 15RC0002 515289.8 4771873.6 459.6 RC 108 -60 115.00 15RC0003 514460.7 4771858.9 461.3 RC 295 -60 70.00

Criteria	JORC Code explanation	Commentary							
	 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. 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. 	15DD0001 514498.2 4771729.8 438.8 DD 295 -60 115.80 15DD0002 514459.0 4771737.3 444.2 DD 295 -60 46.55 15DD0003 514596.3 4771972.9 466.4 DD 295 -60 122.10 15DD0004 514519.0 4771993.0 469.2 DD 295 -60 115.00 15DD0005 514492.1 4772023.0 466.8 DD 295 -60 115.80 15DD0006 514431.8 4771872.7 458.8 DD 295 -60 116.00 15DD0007 514416.0 4771318.8 488.9 DD 108 -60 80.00 16DD0001 514454.2 4771299.5 476.5 DD 108 -60 88.20 16DD0002 514565.5 4771399.1 455.1 DD 288 -60 85.30 16DD0003 514533.0 4771374.1 460.6 DD 288 -60 85.30 16DD0004 514413.4 4771187.0 509.0 DD 108 -60 85.10 16DD0005 514481.5 4771108.7 501.0 DD 288 -60 85.00 16DD0006 514425.9 4771090.2 515.8 DD 288 -60 85.00 16DD0007 515295.1 4771782.7 455.3 DD 108 -60 115.90 16DD0007 515295.1 47717942.0 459.7 DD 108 -60 115.00 16DD0009 514533.4 4771702.9 434.4 DD 295 -60 115.00 16DD0011 515423.2 4774765.7 466.3 DD 113 -60 115.20 16DD0013 516121.0 4776202.0 425.3 DD 298 -60 115.10 16DD0014 516193.6 4776169.1 432.6 DD 118 -60 115.10 16DD0015 515266.2 4771705.9 443.9 DD 108 -60 115.20 16DD0015 515268.2 4771705.9 445.7 DD 108 -60 115.10 16DD0015 515268.2 4771705.9 445.7 DD 108 -60 115.10 16DD0018 514328.9 4771620.3 481.7 DD 115 -60 115.10 16DD0018 514328.9 477162	5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0						
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. 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. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	 Not relevant – Mineral Resource is defined No equivalent grades have been calculated. 							
Relationship between mineralisation widths and intercept lengths	 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 'down hole length, true width not known'). 								
Diagrams	 Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being 	Refer to figures in body of this announcement.							

Criteria	JORC Code explanation	Commentary
Balanced reporting	 reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. 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. 	 Not relevant when reporting Mineral Resources. All information considered material to understanding the database, estimation procedure and classification of the Mineral Resource has been reported.
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. 	 To test the Exploration Target on a nominal 40m x 80m drill pattern it is estimated approximately 230 drill holes will be required with target depths of 100m (23,000m in total). It is estimated 9-12 months would be required to complete the drilling, subject to drilling method, rig numbers and drilling performance. The Company intends to test the different near-surface targets in a staged approach, initially concentrating on extensions to the JORC MRE defined for Quarry and Eliseo prospects. These prospects are being targeted as part of a proposed study into the economic potential of the near-surface mineralisation at Santa Comba. An 8,000m infill and extensional drill programme has been planned as part of proposed prefeasibility studies. See figures in the announcement dated 27 May 2019 "Rafaella Resources Signs Heads Of Agreement To Acquire 100% Interest In Spanish Tungsten And Tin Project.

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	 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. Data validation procedures used. 	 The Competent Person undertook the following validation procedures: Inspection of drillhole collars and surface outcrops, inspection of core storage and handling facility on site; verification of 2016 diamond drilling QC data, plotting of imported underground vein data, to compare with original long sections. Checks during import, combination and desurveying of data. Check sections and plans also produced. Historic data management and data validation procedures from the Coparex era are unknown. Checks on the calculated resource block grades from averaging of the individual channel samples along sublevel development drives indicate the correct values have been applied to the majority of resource blocks.
Site visits	 Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken indicate why this is the case. 	Adam Wheeler visited the Santa Comba site and core processing facilities from May 27th-28th, 2016.
Geological interpretation	 Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. Nature of the data used and of any assumptions made. The effect, if any, of alternative interpretations on Mineral Resource estimation. The use of geology in guiding and controlling Mineral Resource estimation. The factors affecting continuity both of grade and geology. 	 The general overall interpretation of vein structures is very clear, due to historic underground mining and outcrops. The diamond drilling campaign has shown clear evidence of disseminated structures associated with the near surface vein structures. In the estimation of Inferred resources for the underground vein structures, a maximum extrapolation distance of 100m has been applied, which vertically is approximately equivalent to 2 underground levels. Effects of alternative geologic models were not tested. The impact of geology on mineralization has been applied through the use of dynamic anisotropy controlling search envelopes during grade estimation, such that high and low grades are projected sub-parallel to the edges of the defined mineralised structures. The main factors affecting continuity and grade is the general sub-parallel and steeply dipping structure of the high grade veins at Santa Comba.

Criteria	JORC Code explanation	Со	mmenta	ary						
Dimensions	The extent and variability of the Mineral Resource expressed as				Vert	ical Limits		Horizoi	ntal Width	
	length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.		Strike Length m	Overall Width of Mineralised Areas	Minimum Base Elevation m RL	Maximum Outcrop Elevation m RL	Max. depth m	Individual Vein Structures	Disseminated Mineralisation	Dip Range
		•	2,000	500	0	515	515	10-20 cm	2-30 m	70 - 90
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 parameters used. The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. The assumptions made regarding recovery of by-products. Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation). In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. Any assumptions behind modelling of selective mining units. 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 process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available. 	•	2016. Two for study: a) Near general study: a) Near general study: a) Near general study: and any data important study: and any data important study: and assumine sample study: by of the moder inter drilling An and a prob	ms of resource. r-Surface Blace and surface ging data she desurveyed. errors with do. Surface chipoted, based of there were data covers avaluation pureloped, one coin and Santa ern Eliseo zo pretation of rest and east a. Maximum of 70m down-diamptions corred veins in the ple data and working sective assumed usels of these working top-cut wing top-cut	ce estimation ock Model disseminate drilling capets were in This procest ownhole seep and under poses. Two overing the Maria Lunder of the Maria L	on have I. A converted material managements ampaigned as proving and 1 gical are or esour elements or esour elements as the known of extrapolistances to the extrapolis	been vention erial was. into D ded er sor mal chanic points of the point	complet hal 3D bl hich has atamine ror chec ismatche nel samp s, combi annel sa t have b cks mod rry, Barr d the oth on was d based or used we	ed in the of ock mode is been drill and then exing, with es between oles were ned with language. It is a cut-off ere 50m at the properties of the properties	current I has been led during combined reports of n hole also ab assay primarily been and Maria ag the edfinition of 0.05% long-strike able reviously surface overlain on elevations Vireframe d. The ate the log-

Criteria	JORC Code explanation	Commentary
Ontona	Corro Code explanation	Commentary
		WO₃ top-cut level = 1.6%
		Sn top-cut level = 0.06%
		For subsequent estimation work, the selected samples were
		composited, according to the following different steps:
		1. Top-Cuts. Any sample grades greater than the applied top-cut levels
		(described above) were set to that level.
		2. Waste Flagging. A flag was set for those samples within intercept
		(ZONE=0), with a grade lower than 0.02% WO ₃ , representing the
		internal waste component(s) within each intercept. The higher grade
		parts were flagged with a ZONE ID according to the different wireframe structures.
		3. Compositing. Downhole composites were then created, with a
		nominal length of 5m, but honouring the ZONE flag differences. The
		composite length applied was flexible, so as to allow equal sized
		composites within each intercept. A minimum composite length of 0.5m
		was applied.
		Two block models were set up for the western and eastern (Eliseo)
		areas. The parent block size of 10m x 10m x 10m was selected. The
		initial volumetric block model was set up using topographical and
		mineralised zone wireframe models as controls. During this generation
		of the volumetric model sub-blocks were generated, with splitting down
		to 2m in the Y and Z directions. In the X direction the sub-block size
		was variable with a resolution down to 1m. In the near surface
		modelling, mineralised sub-blocks were generated with a 5m x 5m x 5m size.
		The grade estimation process went through the following steps:
		Separation of the waste and mineralised parts of the volumetric
		block model. Blocks were split into 5m x5m x 5m structure for the
		mineralised part.
		2. Use of dynamic anisotropy to determine local orientation angles of
		the mineralisation, based on the interpreted wireframe models.
		3. Modelling of internal waste zones, for material lower than a cut-off of
		0.02% WO ₃ . These waste zones were generated with sub-cells, down
		to a minimum width of 1m.
		4. Estimation of grades, using inverse-distance weighting (ID), of WO ₃
		and Sn grades. For validation purposes, alternative grades were also
		estimated by nearest –neighbour weighting (NN). 5. The search volumes and distances to nearest sample were then
		used to assist with resource classification.
		used to assist with resource classification.

riteria	JORC Code explanation	Commentary
		b) Underground Vein Block Models. These models have been built up
		from supplied data in the form of Autocad long-sections of the main
		veins that stem from previous work when the mine used to be in
		underground production. A summary of the data imported for the 4
		main veins in the current analysis is shown below: Vein
		4 5 111 5
		5 5 95 3
		18 3 62 8
		Restrevas 5 128 13
		The imported level strings, representing each vein's approximate
		geometry, were used to create a digital terrain model (DTM). When the
		vein DTMs were created, they were extrapolated outwards at the sam
		general orientation as the level vein data. The imported long-section
		and channel data were transformed into the projected long-section
		(vertical) plane, and then were projected perpendicularly onto the vein
		DTM, so as to get all the available data in their estimated 3D position.
		For reference purposes, the diamond drillhole intersections imported
		from Autocad were also overlaid. Based on outliers apparent from
		decile analyses, WO ₃ -accumulation values were capped at: Vein WO ₃ top-cut
		Vein Vo₃ top-cut Kg/m²
		4 60
		5 45
		18 25 Restroyas 45

The available sample data, mined outlines and level development for each vein were viewed in long section. In this long section orientation, resource limit perimeters were defined. Based on this limit, and the zone orientation, volumetric block models were generated for each vein with an assumed thickness of 0.7m. This width was used as it is the effective mining thickness that can be applied in the envisaged resuing mining method. The mined portions of each vein were removed. Separate rotated block models were set up for each vein, as each vein has a different orientation. The block size used were 5m along-strike and 5m down-dip.

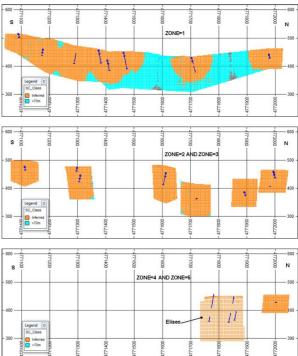
The accumulated grade values from the imported channel sampled were estimated into the volumetric block models, using inverse—distance weighting. Based on the assumed minimum mining width of 0.7m, percentage (%) grades of WO₃ and Sn were then back-

Criteria	JORC Code explanation	Commentary
		calculated. Drillhole intercepts have not been used in this estimation, owing to lack of confidence associated with them. The two types of resource estimation done are covering different resource volumes which do not overlap. As the near-surface disseminated material has not been evaluated before, checks with previous estimates are not possible. It is considered that tungsten is the principal product, with tin as a secondary product. There are no other by-products. No deleterious elements have been considered, and have therefore not been estimated. The 3D block models for the near-surface modelling were based on a parent block size of 10m x 10m x 10m x 10m, with sub-blocks generated down to a resolution of 1m, to reflect low grade extensions. For the underground vein modelling, blocks were size 5m x 5m alongstrike and down-dip. A mining thickness of 0.6m has used for the crossstrike direction. In the underground vein modelling, a 0.7m mining thickness has been applied. There appears to be no particular correlation between Sn and WO ₃ grades. The interpretation of mineralised zones subsequently controlled selected samples and zone composites, and then the resource block models. For the underground vein modelling, the modelling was primarily controlled level strings from galleries developed along strike, following the vein structures. Grade capping was applied as described above. Model grades were compared with samples and composites on long sections and cross-sections. A set of cross-sections through the near-surface block model, showing WO ₃ grades, were generated. A global comparison was also made for each zone. These comparison showed acceptable results. A local comparison of grades was also made, in the form of swath plots, which compare the average grades on each 100m thick west-east slice. Separate plots were generated for each zone. These plots compare for each slice: the average inverse-distance model grades; the average nearest neighbour model grades; the average channel sample grades; and

Criteria	JORC Code explanation	Commentary
		 In the historical estimates, Coparex calculated resources using a combination of estimating the grade at the base of a stope, estimating grades within development drives and finally processing the ore extracted from the development drifts in a pilot plant and back-calculating the grade. Depending on the amount of information that was available and collected, Coparex extrapolated the resource and subdivided the mineral inventory into categories (stocks, secured ore, probable ore, possible ore, potential ore). The historic resources quoted have not been reported according to the guidelines of the JORC Code (2012) and are unclassified. It is uncertain that following further evaluation and/or further exploration work that the historic resource estimates will be able to be reported as Mineral Resources in accordance with JORC Code (2012). It is also important to note that the historic resource estimates report the in-situ grade and tonnage of mineralisation above an applied cutoff criteria. Ongoing work by GTT will be required to substantiate historically applied cut-off criteria and understand the proportion of the deposit that is likely to meet reasonable prospects of eventual economic extraction. Further refinement of historic resource estimates is expected with additional infill drilling, refinement of current geological and structural models and changes in search criteria, estimation parameters and estimation technique.
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	Tonnages are 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-offs used for resource estimation were: 0.05% and 0.07% WO₃ for near-surface modelling, as appropriate for potential open pit mining. For underground modelling evaluation a cut-off of 10 kg/m² (0.53% WO₃) was applied, selected as being appropriate for potential underground mining. The Coparex historic estimate utilised a cut-off of 10 kg/m² (0.53% WO₃). This was based on the economic cut-off grade of underground operations at the time.
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	 Conventional open pit mining was considered for potential mining of near-surface resources. Mining factors of dilution and ore loss have not been applied. Underground mining using the resuing method (0.7m mining width) was considered for potential mining of underground resources.

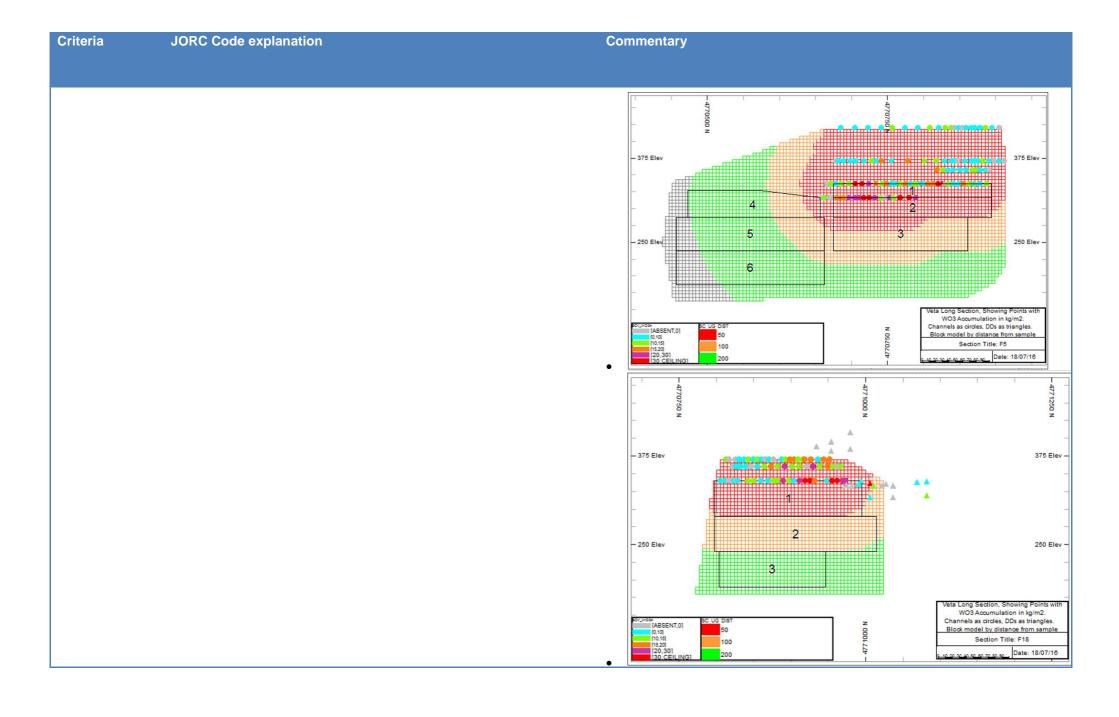
Criteria	JORC Code explanation	Commentary
	mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	The historic estimate was calculated assuming underground mining using the resuing method (0.7m mining width).
Metallurgical factors or assumptions	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.	 No metallurgical assumptions have been built into the resource model. Extensive tests and processing information was completed by Coparex for the underground vein-hosted mineralisation ultimately achieving recoveries of <i>ca.</i> 70%.
Environmental factors or assumptions	 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 made. 	 No assumptions have been made regarding waste and process residue. If the project is further developed, environmental impact monitoring will be required.
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. 	 Density measurements have been made from core samples, using water immersion. No voids present. From density values estimated from actual drillhole measurements, a global density of 2.6 t/m³ was applied for near-surface modelling. For underground modelling a global density of 2.7 t/m³ was applied based on that used by Coparex (1987) and vein density measurements.
Classification	 The basis for the classification of the Mineral Resources into varying confidence categories. 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, 	 All resources evaluated have been classified as an Inferred category. Near-Surface mineral resource: Taking into account all of the available data, it was decided that there is inadequate data to define any Measured or Indicated resources. The intersections provided by the drilling done do not provide a close enough grid of sample data to assess the grade

continuity and be able to delineate any areas with sufficient confidence for Measured or Indicated resource assignments. However, it has been decided that Inferred resources can be estimated, up to a maximum extrapolation distance of 70m. This distance was decided by reference to all available drillhole, surface point data and reference to veins which have been mined from underground. With this 70m limit, the extent of Inferred resources modelled is depicted in the long section below

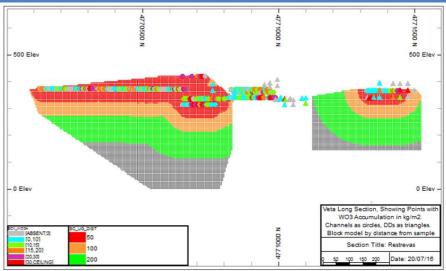


Underground mineral resource: No resources were categorised as Measured or Indicated, owing to lack of quality control data associated with the samples, as well as limited sample coverage. An Inferred resource classification was used for all of the underground resources reported in the current study, and were limited to a maximum extrapolation distance of 100m, which is approximately double the

Criteria	JORC Code explanation	Commentary
		underground level spacing. Reference was made to adjacent exploited stope production data and development drive channel sampling. The resource classification criteria have taken into account all relevant factors. The resource estimation results reflect the Competent Person's view of the deposit. Long sections showing the extent of Inferred Resources (coloured red and orange) are shown below. 500 Elev 500 Elev 600 Ele







- The Coparex historical estimate utilised the following categories:
 <u>Stocks</u>: in-situ or blasted mineralised material in a gallery and ready for exploitation.
 - <u>Secured ore</u>: constructed upper drive and geological studies including panel grade estimates.
 - <u>Probable ore</u>: there are panel grade surveys at the drive front and assumes possibility of exploitation to 50m depth. Depth extensions are booked at same grade value and sterile percentage as in drive.

 <u>Possible ore</u>: isolated drill holes and geological studies. Reserve grade estimated at average of reserves in secured and probable classes.

 <u>Potential ore</u>: isolated drill holes and geological studies, outside the main operating area of the time (e.g. North Zone, including Vilar East and West).
- The historic resources quoted have not been reported according to the guidelines of the JORC Code (2012).
- It is uncertain that following further evaluation and/or further exploration work that the historic resource estimates will be able to be reported as Mineral Resources in accordance with JORC Code (2012).
- It is also important to note that the historic resource estimates report the in-situ grade and tonnage of mineralisation above an applied cut-

Criteria	JORC Code explanation	Commentary
		 off criteria. Ongoing work by GTT will be required to substantiate historically applied cut-off criteria and understand the proportion of the deposit that is likely to meet reasonable prospects of eventual economic extraction. Further refinement of historic resource estimates is expected with additional infill drilling, refinement of current geological and structural models and changes in search criteria, estimation parameters and estimation technique.
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	 No audit or review of the Mineral Resource estimates has been completed by an independent external individual or company. The Competent Person has conducted an internal review of all available data.
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 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 estimate should be compared with production data, where available. 	 The relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resources as per the guidelines of the 2012 JORC code. The resource statement relates to global estimates of tonnes and grade. No mining has taken place since 1985. Historical production data is not in a form that enables comparisons.