Rafaella Resources Limited
ABN: 49 623 130 987

ASX: RFR

Projects

SPAIN
- **Santa Comba**
  W-Sn development
- **San Finx**
  W-Sn development

CANADA
- **Midrim/Laforce**
  PGM-Ni-Cu exploration
- **Alotta & Lorraine**
  PGM-Ni-Cu exploration

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ASX Announcement
20 June 2022

Advanced Pre-Feasibility Study for Santa Comba open pit confirms strong economics and supports re-opening of integrated mine with 63% increase in Ore Reserves

Rafaella Resources Limited (ASX:RFR) ('Rafaella' or the 'Company') is pleased to announce the results of an advanced open pit pre-feasibility study (Advanced PFS) conducted at the Santa Comba Tungsten and Tin Project ("Santa Comba Project' or the 'Project') in northwestern Spain. The PFS shows the Project to be economically robust, complementing the permitted underground mine and offering significant upside due to the obvious scalability.

Announcement Highlights

- The "open pit only" Advanced PFS shows a **pre-tax NPV of A$ 94.8M** (US$ 67.3M) and **IRR of 32.6%** (Management Case). The above numbers include Inferred Resources representing 5.6% of total production*.
- The Project is robust with rapid payback of **2.3 years** post-commissioning.
- Proven and Probable Ore Reserves are estimated to be **7.48 million tonnes at a grade of 0.15% WO3 (cut-off 0.05%)** for **12,374t of contained WO_3**, being an increase of 63% over previous numbers.[1]
- **Open Pit Upside:** Recently drilled additional resources have translated into a higher NPV, demonstrating the importance of size and scalability on open pit projects:
  - 90% of the open pit project area has yet to been drilled. The wider project area offers significant potential for expansion, with a near surface Exploration Target** of **25,000 to 112,000 tonnes contained WO_3**.[2]
- **Underground Upside:** The open pit is complementary to the recommissioning of the high-grade underground operation containing JORC Inferred Resources of **2,752 tonnes of contained WO_3** and **662 tonnes of contained Sn** with an additional Exploration Target** of between **6,000 to 12,400 tonnes of contained WO_3** and **1,300 to 2,200 tonnes contained Sn.**[3]
- The Advanced PFS results support the Company's application for 'Strategic Industrial Project' status for the Project, to facilitate an acceleration of the permitting process.

Cautionary Statements

**There is a lower level of geological confidence associated with inferred mineral resources and there is no certainty that further exploration work will result in the determination of indicated mineral resources or that the production target itself will be realised.*

*** 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.*

[1] See ASX announcement dated 1 December 2020 "Santa Comba PFS demonstrates Exceptional Economics with Assignment of Ore Reserves"
[2] See ASX announcement dated 1 December 2020 "Santa Comba PFS demonstrates Exceptional Economics with Assignment of Ore Reserves"
[3] See ASX announcement dated 8 February 2022 "JORC compliant Underground MRE increases by 24% at Mina Carmen, Santa Comba and substantial Exploration Target determined."

The Advanced PFS has been prepared in accordance with JORC 2012 by Consultores Independientes en Gestión de Recursos Naturales, S.A. (CRN) and follows the 42% increase in the Mineral Resource Estimate[4] reported in August 2021 (after the 2021 drill campaign) and test work that showed improved metallurgical recoveries[5] from Santa Comba project ores in January 2022.

Managing Director Steven Turner said: *"The study work has been carried out to a definitive feasibility level in most areas with CAPEX and OPEX estimations having an accuracy of +/- 10-15% at the time of estimation. Further work to finalise the definitive study is mainly related to metallurgical optimisation studies, however sufficient understanding of the processing has been achieved to confirm the attractiveness of the open pit as a complementary operation to the permitted underground mine, creating a long-term integrated scalable project. The Company is now able to move to the next important development stage and commence the open pit permit application process, presenting the Project as one of strategic importance to Galicia and Spain. The integrated Santa Comba project provides the Company with a future world class tungsten operation, combining (i) a high-grade underground operation, which is highly synergistic to the recent San Finx tin and tungsten mine acquisition, with (ii) a large scale, high volume, open pit development. The Project will bring major regional investment, securing long term jobs and a responsibly operated domestic source of a critical metal, highly vulnerable to Chinese and Russian supply chain disruption."*

Tungsten Mining Strategy

Rafaella aims to be a significant supplier of tin and tungsten to Europe and North America through the development of its two Galician mines; Santa Comba and San Finx. The Company is actively seeking ways to advance both projects which have previously operated and benefit from pre-exiting permits and substantial infrastructure.

The plans for Santa Comba project to operate as an underground and open pit mine are expected to extend the Project's mine life and support regional investment and local job creation.

Tungsten Industry

The two naturally occurring tungsten minerals, that currently support commercial extraction and processing are wolframite ($(Fe,Mn)WO_4$) and scheelite ($CaWO_4$). Tungsten has a unique set of physical properties; it has the highest melting point of all the elements (~3,400°C), has a density that is 19.3 times that of water, making it among the heaviest metals, has excellent electrical conductivity and its coefficient of thermal expansion is the lowest of all metals.

Tungsten is classified as a critical metal due to its importance to key industries, whilst being vulnerable to supply chain disruption. 85% of global tungsten concentrates come from China. Importantly around 20% of Europe's current demand is met from Russian sources (Argus Media). Given geopolitical events, the risks to future supply disruptions are very real and have been the subject of increasing concern at the European Commission level. A key mitigant to this risk would be the development of domestic resources. The Santa Comba project contains such a resource.

[4] See ASX announcement dated 17 August 2021 "RFR sees 42% Increase in Measured and Indicated Resources".
[5] See ASX announcement dated 25 January 2022 "Santa Comba shows improved recoveries ahead of DFS"

Prices for tungsten concentrates have historically tended to follow the same trend as prices for ammonium paratungstate (APT), which is the key intermediary product in the tungsten supply chain. APT prices are quoted on the basis of metric tonne units. A metric tonne unit (MTU) is 10 kg. An MTU of tungsten trioxide (WO_3) contains 7.93 kg of tungsten (W). Standard industry grade specification for tungsten concentrate is 65% WO_3.

Location

Santa Comba Project (the "Project") is a brownfield development located in the municipalities of Santa Comba, Coristanco and Cabana de Bergantiños in the province A Coruña. The project is located 60 km from A Coruña city and at 40 km from Santiago de Compostela. Container ports are located in A Coruña, Vilagarcia (83 km) and Vigo (120 km). The main access to the Santa Comba mine is from Varilongo, approximately 7 km North of the town of Santa Comba, by the AC-2904 road.

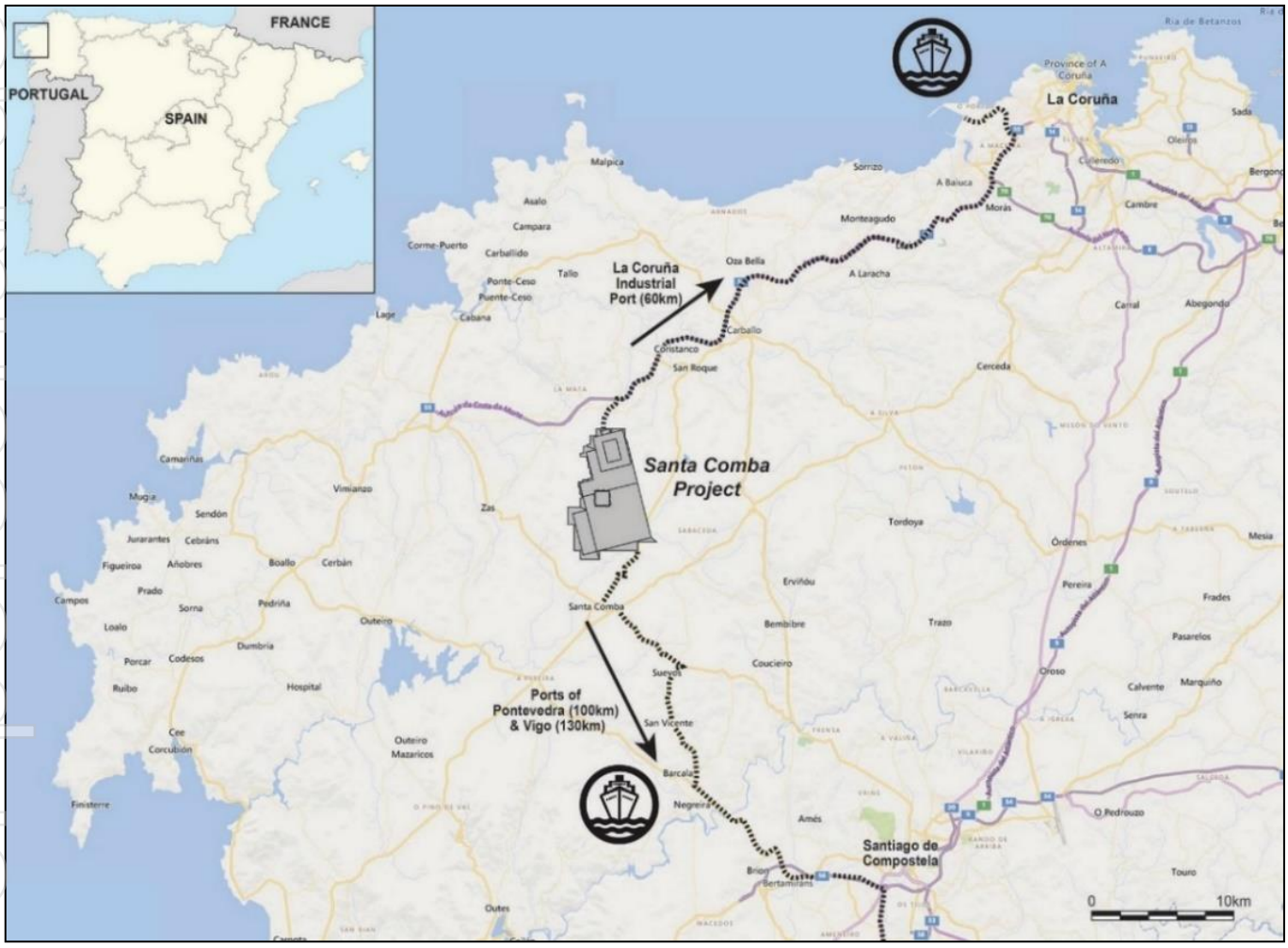


Figure 1.- Location and infrastructure of the Santa Comba Project

Two main cases have been run:

- the Management Case (which incorporates 445kt of Inferred Resources being 5.6% of total production) and
- the Ore Reserves Case which has been used to generate the assignment of Ore Reserves. All numbers that follow are those generated from the Ore Reserves Case, unless specifically stated otherwise.

TABLE 1.- PROJECT OVERVIEW (MANAGEMENT RESERVES CASE)		
Geology	Mineral Resource Estimate	Measured: 1.57 Mtonnes @ 0.15% WO_3, 105 ppm Sn. Indicated: 7.09 Mtonnes @ 0.15% WO_3, 98 ppm Sn Inferred: 1.27 Mtonnes @ 0.24% WO_3, 104 ppm Sn
Mining	Pits	Main pit and Eliseo Pit
	Ore Reserves Estimate	Proved: 1.51 Mtonnes @ 0.15% WO_3, 102 ppm Sn Probable: 5.97 Mtonnes @ 0.15% WO_3, 95 ppm Sn
	Cut Off Grade	0.05 % WO_3
	Mining Rate	1,300 ktpa
	Strip Ratio (waste to ore)	5.4:1
	Life of Mine	7 years
	Mining profile	2 years for construction and commissioning. Ramp up production 60% 1st year, 80% 2nd year, 100% 3rd year and ahead.
	Operations	Contract Mining – drill, blast, load, haul
Processing	Flowsheet	Crush, ore sort, grinding, gravity concentrator, magnetic separator, flotation, leaching.
	Nominal processing rate	1,300 ktpa
	Feed Grade	0.15% WO_3
	Recovery (WO_3)	70 %
	Annual Tungsten Production	136,500 mtu – 2,167 tonnes @ 63% WO_3
	Product	Calcium tungstate (synthetic scheelite)
Aggregates	Processing Rate	1,000 ktpa
	Life	15 years
	Operations	Crush, screening
Infrastructure	Roads	Access via by AC 2904
	Waste Storage Facility (WSF)	WSF for mine waste and processing tails. Aggregates plant from mine waste.
	Power	Currently the mine site has a 20 kV/400 V substation powered with a 20 kV power line. Power requirements of 3,197 kW.
	Water	Water requirements ~53 m3/hr for processing plant.
	Logistics	Concentrate trucked in containers to A Coruña Port for export.

Mineral tenure

Galicia Tin & Tungsten (the "Company" or "GTT") was formed in June 2014 and owns 100% of the Project mining ownership. GTT is part of the Rafaella Resources Ltd ("RFR") group of companies.

The project mineral tenures comprise seven concessions called "Grupo Minero Santa Comba" (Santa Comba Mining Group) that cover a very large surface of 4,510 ha and it is considered the greater mining right in Galicia. The exploitation concessions were consolidated on 02/24/1978 for a period of 90 years based on the first transitory provision of Law 22/1973 of July 21 on Mines.

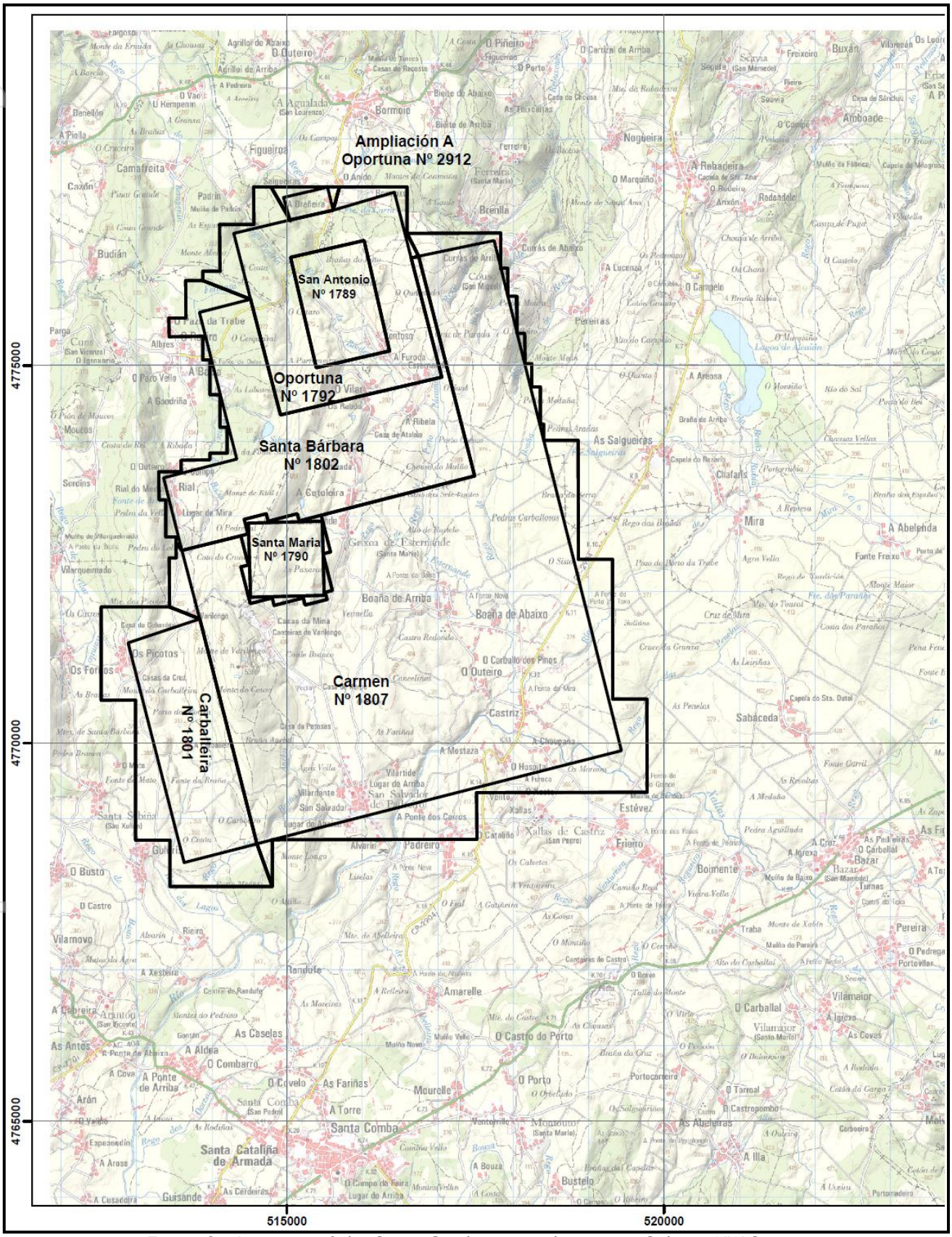


Figure 2.- Location of the Santa Comba mineral tenures. Galicia, NW Spain.

The previous resource drilling that supports this Advanced PFS focused on a small part of the potential open pit mineralisation, so there remains significant potential to increase the mineral resources through new exploration campaigns.

Mineral Reserves

The mining methods were selected based on a detailed analysis having regard for operational safety, common mining practices, orebody geometry and geotechnical advice. Ore Reserves are supported by a Resources Block model developed by Wardell Armstrong International (WAI) and pit designs. Ore Reserves have been assigned to the Project as follows:

TABLE 2 RESERVES ESTIMATE. MAY 2022

Classification	Tonnage (kt)	WO_3 (%)	Sn (ppm)
Proved	1,513	0.15	102
Probable	5,968	0.15	95
Total reserves	**7,481**	**0.15**	**97**

- Cut-off = 0.05% WO_3.
- Reserves are below the topography and exclude depleted underground working.
- Reserves are inside a designed pit, which was developed using operational and geotechnical parameters.
- The reserves calculation considered 5% of dilution and 95% of mining recovery.
- The inferred resources in-pit are 408 kt

Mining

Lower grade endogranite hosted mineralisation will be exploited by an open pit method over 7 years and will be carried out by a conventional mine operation with drill and blast, haul and dump using hydraulic excavator and trucks. The mine plan combines the exploitation of two pits (Main Pit and Eliseo Pit). Mine operations will be done by a specialized company. Concurrently to the exploitation of tungsten ore, aggregates will be produced from the mine waste until year 15.

TABLE 3.- PRODUCTION PROFILE (ORE RESERVES CASE)

Years	Total	1	2	3	4	5	6	7	15
Tungsten Ore									
Ore (kt)	**7,481**	776	1,037	1,300	1,300	1,300	1,300	468	
WO_3 (%)		0.15	0.15	0.15	0.15	0.15	0.15	0.15	
Ramp up (%)		60	80	100	100	100	100	36	
Recovery (%)		70	70	70	70	70	70	70	
Concentrate (t)	**12,374**	1,283	1,712	2,134	2,133	2,167	2,167	779	
WO_3 (%)	**63**	63	63	63	63	63	63	63	
WO_3 (mtu)	**779,583**	80,808	107,835	134,439	134,400	136,500	136,500	49,101	
Aggregates									
Production (kt)	**14,400**	600	800	1,000	1,000	1,000	1,000	1,000	1,000
Ramp up (%)		60	80	100	100	100	100	100	100

The mine plan is based entirely on Proven and Probable Reserves (Ore Reserves Case). In addition, there is 408 ktonnes at 0.24% WO_3 of Inferred Mineral Resources in-pit (Management Case).

Metallurgy and Processing

The mineral processing plant is based on metallurgical test work carried out by Tomra Sorting GMbH and Grinding Solutions Ltd.

The process considers both coarse crystals of wolframite in the veins and relatively fine-grained wolframite in the granite. The process design needs flexibility to have both coarse and fine mineral recovery stages and to prevent, as far as possible, an over breakage of soft wolframite/scheelite/cassiterite crystals thereby generating fines (slimes) which are difficult to recover and lower plant efficiency. The approach to this is to eliminate as much as possible the main sources of mineral sliming and losses to tailings by maximising fine crushing prior to coarse concentration and eliminating ball mills and hydrocyclones and instead using fine screens and short duration rod milling.

The processing design produces a nominal 2,167 tpa of tungsten concentrate with 63 % WO_3.The tungsten concentrate contains 136,500 mtu. The process encompasses crushing of the ROM ore, x-ray ore sorting, grinding, gravity concentrator consisting of centrifugal concentrators, shaking tables and a magnetic separator. Tungsten concentrate is floated to eliminate sulphides and leaching to eliminate any remaining deleterious elements producing a clean calcium tungstate, a premium tungsten product that is highly desirable by end users. Tungsten concentrate is dewatered, dried and bagged prior to being trucked to port, shipped and sold to an APT plant. Tailings and slimes from the tungsten gravity circuit are thickened and mixed with ore shorter rejects and stored in the WSF.

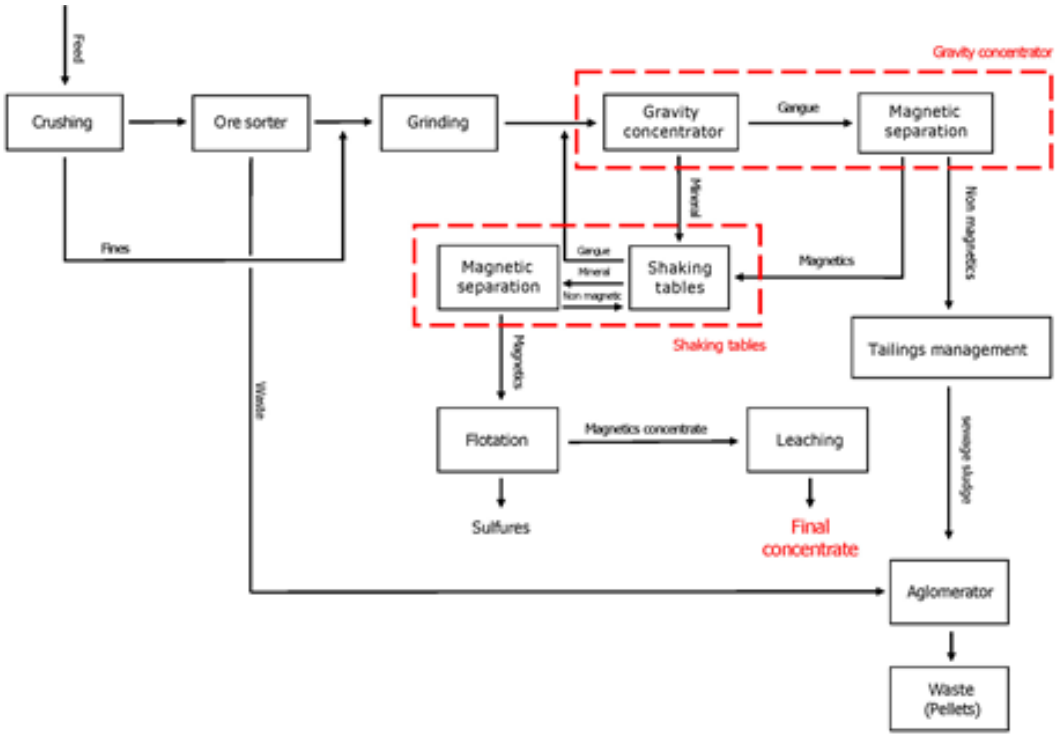


Figure 3.- Generic flow sheet diagram.

Waste Management

An aggregates plant located close to the WSF will monetize the mine waste by producing granite aggregates for regional and international consumers. The aggregates production is according the “Roadmap for the Sustainable Management of Mineral Raw Materials. 2022” carried out by the Ministry for Ecological Transition and Demographic Challenge (MITECO), which considers the European Circular Economy Action Plan, 2015, and the Strategy Circular Spain (EES 2030).

Project Infrastructure

The infrastructure for the Santa Comba Project includes haul truck roads, drainage system, processing plant, auxiliary facilities, waste storage facility, water treatment plant, water dams and aggregates plant. The set of facilities and project areas have been distributed in a compact way to minimize the total footprint.

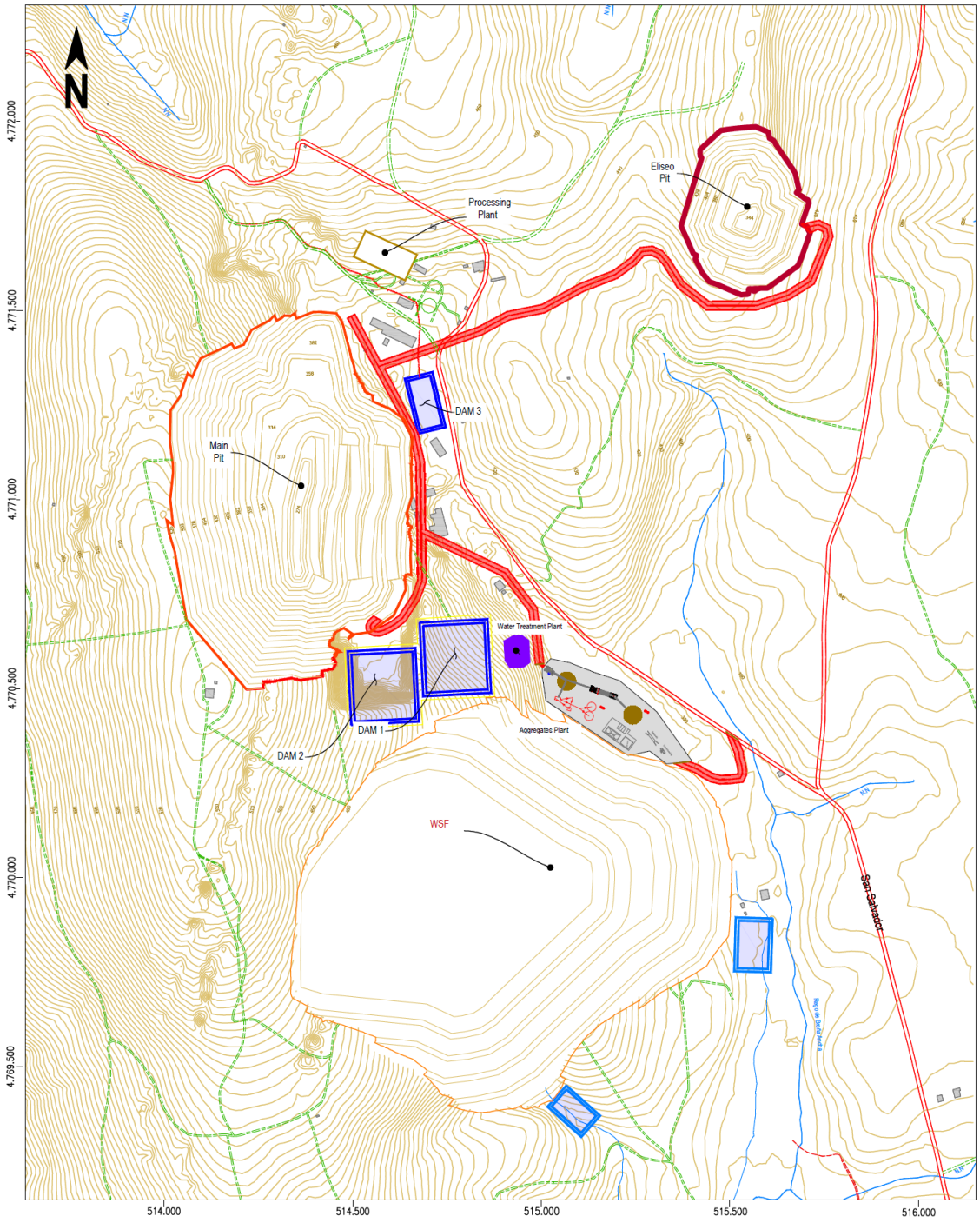


Figure 4.- General project layout

Environmental Studies, Permits and Social Community Impact

All the Project activities are expected to be compatible with the environment. Water bodies or water courses won't be disturbed by project development, on the contrary, water quality will be improved as water management and treatment of contact water will be introduced. No rivers are occupied by the project and no special conservation areas have been identified in the surroundings of the Project. As soon as possible, recovery of affected areas will start, being carried out as far ahead as the development of the activity allows.

The Project will deliver the social benefits of quality employment whilst helping to maintain and expand the range of industries in and around Galicia, making the area a more attractive region for young people to settle in.

Capital Cost Estimate

The Advanced PFS capital cost estimate to construct a 1,300 ktpa ore processing plant, a 1,000 ktpa aggregates plant and associated mine infrastructure at the Santa Comba Project to produce tungsten concentrate and aggregates is AU$53.22M to a level of accuracy of +/- 10 -15%. This estimate includes a contingency determined by RFR of 15 % applied to all initial capital costs.

TABLE 4. CAPEX SUMMARY

Description	US $	AU $
Total Processing Plant	20,087,909	28,292,829
Total ancillary infrastructure	5,172,583	7,285,329
Total Mine Development Capital	530,923	747,779
Aggregates Plant	3,638,321	5,124,396
Engineering, Procurement and Construction	1,084,640	1,527,662
Total owners costs for constructions	2,340,257	3,296,137
Total	**32,854,633**	**46,274,131**
Contingency (15%)	**4,928,195**	**6,941,120**
Total CAPEX	**37,782,828**	**53,215,251**

The above estimate represents the initial capital cost only and does not include sustaining capital or WSF lift costs. Costs on raising the WSF is included in the mine opex.

Operating Cost Estimate

The operational cost (OPEX) has been estimated from equipment manufacturers, suppliers, contractors, and consultants working on similar operations with similar ore types. The Advanced PFS operating cost estimate is AU$33.85 per tonne of ore produced over seven years; Aggregates operating cost estimate are AU$2.41 per tonne of aggregates production.

These costs of production forecast by the Advanced PFS Economic Model, characterized by activity, are shown below.

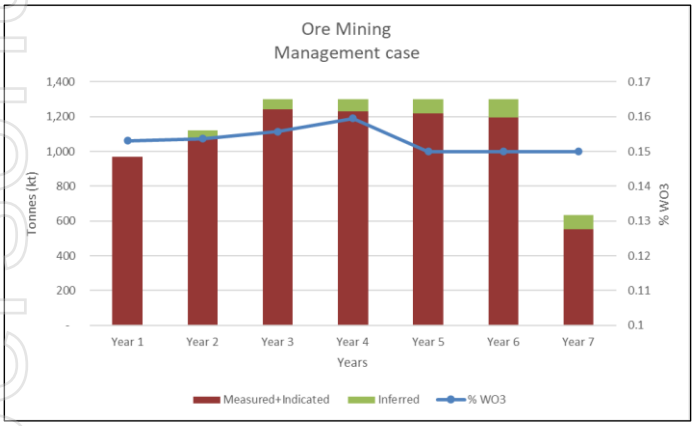
TABLE 5.- OPEX SUMMARY. TUNGSTEN CONCENTRATE PRODUCTION				
Description	**US$/year**	**AU $/year**	**US $/tore**	**AU $/tore**
Mine Cost				
Waste Mining	13,513,500	19,033,099	10.40	14.64
Ore Mining (US$/tw)	2,457,000	3,460,563	1.89	2.66
Total Mine Cost	**15,970,500**	**22,493,662**	**12.29**	**17.31**
Processing Plant				
Labor cost	2,497,361	3,517,410	1.92	2.71
Power cost	1,683,710	2,371,423	1.30	1.82
Consumable cost	5,839,012	8,223,961	4.49	6.33
Maintenance cost	860,000	1,211,268	0.66	0.93
Water management	188,493	265,484	0.14	0.20
Crushing Feed	333,450	469,648	0.26	0.36
Total Processing Plant	**11,402,027**	**16,059,193**	**8.77**	**12.35**
Waste management				
Residue disposal	496,124	698,767	0.38	0.54
Ore Sorting Reject Handling	630,739	888,365	0.49	0.68
Tailings Reject Handling	1,029,101	1,449,438	0.79	1.11
Total Waste management	**2,155,964**	**3,036,570**	**1.66**	**2.34**
G&A	**1,244,265**	**1,752,487**	**0.96**	**1.35**
Mining Supervision	**450,021**	**633,833**	**0.35**	**0.49**
TOTAL OPEX	**31,222,778**	**43,975,744**	**24.03**	**33.85**

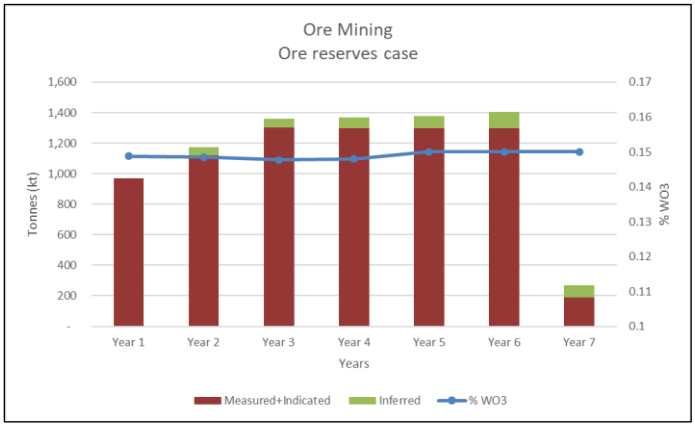
Economic Analysis

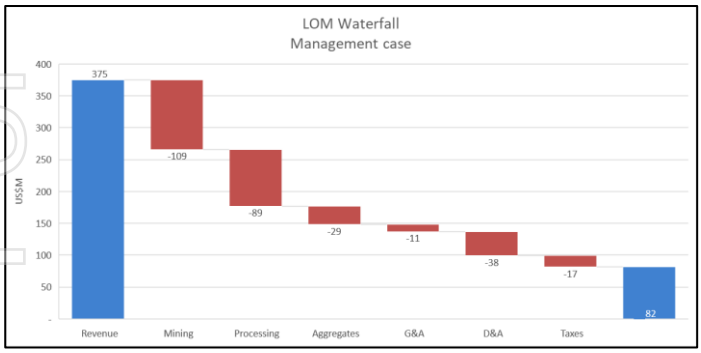
TABLE 6.- ECONOMIC PARAMENTS.	
Sales program	100% of production is sold over the whole life of the project.
Financial program	The NPV was calculated on an unleveraged basis
Taxes	25% over the life of the project
Depletion factor	30% over the base for taxes
Inflation	2.5% annual
WACC	4.5%
Amortization	Linear along the project life
Residual value	30% of the tungsten processing plant capex at the end of year 7
APT price scenario	350 US$/mtu APT rising at a rate of 5 % per year until 450 US$/mtu in the year 7 and falling at the same rate until the end of the mine production
Aggregates price scenario	Rising price scenario for aggregates at a rate of 0.5% per year until the end of the project in the year 15
Reserves	Ore Reserves Case considered only Proven and Probable Reserves. Management Case considered Ore Reserves Case and in-pit Inferred Resources
Tungsten processing plant residual value	30% processing plant capex as input in the Free Cash-Flow.

TABLE 7.- COMPARATION BETWEEN PRODUCTION RESOURCE SCENARIOS					
ECONOMIC MODELS	**Unit**	**Management Case**		**Ore Reserves Case**	
Total Reserves	ktonne	7,481		7,481	
Average WO_3 mined	%	0.15		0.15	
Contanied WO_3	mtu	1,113,690		1,113,690	
Inferred in Pit	ktonne	445			
Inferred WO_3	%	0.29			
Recovery	%	70.00		70.00	
Ore Mined per year	ktpa	1,300		1,300	
Life of Mine	Years	7.0		7.0	
WO_3 Produced	tonne	8,699		7,796	
WO_3 Produced	mtu	869,918		779,583	
Concentrate (63 % WO_3)	tonne	13,808		12,374	
WO_3 Price	$$/mtu	350 US$	493 AU$	350 US$	493 AU$
Payability	%	82.00		82.00	
Received WO_3 Price	$$/mtu	287 US$	404 AU$	287 US$	404 AU$
Yearly Price update	%	5.00		5.00	
Aggregates Price	$$/tonne	6.27 US$	9 AU$	6.27 US$	9 AU$
Yearly Price update	%	0.50		0.50	
Operating Cost	$$	238,253,792 US$	335,568,721 AU$	231,627,105 US$	326,235,360 AU$
Capital Cost	$$	37,782,828 US$	53,215,251 AU$	37,782,828 US$	53,215,251 AU$
Economic Inflation	%	2.50		2.50	
Income	$$	375,108,227 US$	528,321,447 AU$	349,994,032 US$	492,949,341 AU$
EBITDA	$$	136,854,436 US$	192,752,726 AU$	118,366,926 US$	166,713,981 AU$
Amortization	$$	37,782,828 US$	53,215,251 AU$	37,782,828 US$	53,215,251 AU$

TABLE 7.- COMPARATION BETWEEN PRODUCTION RESOURCE SCENARIOS					
ECONOMIC MODELS	Unit	Management Case		Ore Reserves Case	
EBIT	$$	99,071,607 US$	139,537,475 AU$	80,584,098 US$	113,498,730 AU$
Depletion Factor (30%)	$$	29,721,482 US$	41,861,243 AU$	24,175,229 US$	34,049,619 AU$
Tax (25%)	$$	17,337,531 US$	24,419,058 AU$	14,102,217 US$	19,862,278 AU$
Net profit	$$	81,734,076 US$	115,118,417 AU$	66,481,881 US$	93,636,452 AU$
Net cash flow	$$	119,516,904 US$	176,821,517 AU$	104,264,709 US$	155,339,552 AU$
Residual value	$$	6,026,373 US$	8,487,849 AU$	6,026,373 US$	8,487,849 AU$
NPV Post tax	**$$**	**55,148,417 US$**	**77,673,826 AU$**	**43,518,747 US$**	**61,294,010 AU$**
IRR Post Tax	**%**	**28.52**		**23.47**	
P/I		**1.46**		**1.15**	
Payback period (overall / commissioning)		**4.3 / 2.3**		**4.9 / 2.9**	
WACC	**%**	**4.50**		**4.50**	
NPV Pre-tax	**$$**	**67,299,245 US$**	**94,787,669 AU$**	**53,202,676 US$**	**74,933,346 AU$**
IRR Pre-Tax	**%**	**32.56**		**26.66**	







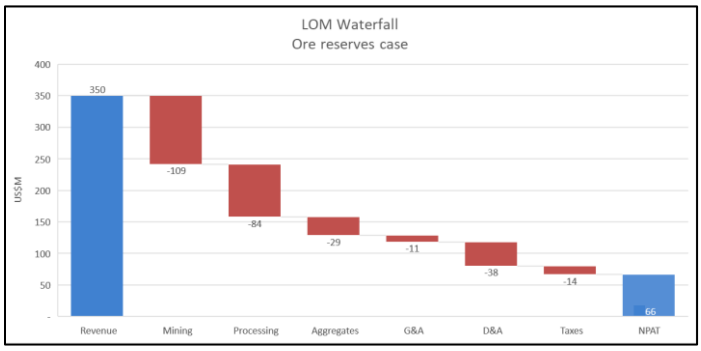


Table 8 shows the sensitivity analysis for Ore Reserves Case on the Advanced PFS financial model by considering independent changes to certain inputs to determine the impact on the Project Net Present Value

TABLE 8.- ORE RESERVES CASE PROJECT NPV AU$53.20M (POST-TAX)		
	-30%	**+ 30%**
APT Price	A$-10M	A$131M
Operating Cost	A$123M	A$-0.3M
Capital Cost	A$72M	A$51M
Sales	A$-34M	A$152M

The unique nature of the Santa Comba Project, which only covers 10% of a large mining license in an area with old mine works and visual evidence of near surface mineralisation, suggests that the Project not be assessed solely based on conventional financial measures (eg. NPV and IRR). Importantly, the Project has the potential to generate substantial positive cashflows, and offers considerable leverage for tungsten, a critical raw material, as demand and supply conditions evolve further within the critical mineral space.

Previous resource work has determined that the Project has a near surface JORC compliance exploration target as follows[6]:

Table 9. Santa Comba near-surface Exploration Target.*

	Tonnes, Mt		Grade, WO_3 %		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 estimated for Santa Comba is included within the Exploration target.
-These grades stem from an evaluation done at a cut-off of 0.05% WO_3.

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.

Underground Mine

The permitted underground mine does not form part of the open pit advanced prefeasibility study. The Company intends to continue to invest in, develop and operate the underground mine in accordance with its existing permits. Recent geological studies undertaken by the Company have seen an increase in the underground Inferred Resource ascribed to the underground mine and the estimation of a JORC compliant exploration target.[7]

Table 10 shows the details of the underground mineral resource estimate ('UG MRE') for Santa Comba, including the Zone Mina Carmen North updated by Rafaella as of February 2022 and the unchanged UG MRE of Zone Mina Carmen South, dated August, 2016[8].

[6] See ASX announcement dated 13 June 2019 "Rafaella Resources Defines Exploration Target at Newly-Acquired Santa Comba Tungsten Project"
[7] See ASX announcement dated 8 February 2022 "JORC compliant Underground MRE increases by 24% at Mina Carmen, Santa Comba and substantial Exploration Target determined."
[8] See ASX announcement dated 27 May 2019 "Rafaella Resources Signs Heads of Agreement to Acquire 100% Interest in Spanish Tungsten and Tin Project".

Table 10. UG Mineral Resource Estimate for Mina Carmen (Santa Comba) as of February 2022								
Zone	**Author (date)**	**Classification**	**Vein**	**Tonnes (Kt)**	**WO_3 (%)**	**Sn (%)**	***WO_3 t***	***Sn t***
UG Mina Carmen North	**Rafaella (2022)**	Inferred	F16	12.0	0.67	0.01	*80*	*1*
			Restrevas North	30.0	1.07	0.01	*321*	*2*
			Ramilla B	14.7	0.89	0.02	*131*	*3*
			Total	**56.6**	**0.94**	**0.01**	***532***	***6***
UG Mina Carmen South	**A. Wheeler (2016)**	Inferred	F4	38.6	1.32	0.10	*510*	*39*
			F5	51.5	1.04	0.42	*536*	*217*
			F8	41.1	0.80	0.26	*329*	*109*
			Restrevas South	103.1	0.82	0.28	*845*	*291*
			Total	**234.3**	**0.95**	**0.28**	***2,219***	***655***
TOTAL UG Mina Carmen				**290.9**	**0.95**	**0.23**	***2,752***	***662***

UG Inferred: Cut-off = 0.53% WO_3
Rounding as required by reporting guidelines may result in apparent summation differences between tonnes, grade and contained metal content. Where these occur, they are not considered material.

Rafaella has delineated substantial Exploration Targets for both Mina Carmen North and Mina Carmen South, which would require a drill program of between 3,000m to 4,000m for generating Inferred resources with the objective of 1Mt at 1.0% (WO_3 + Sn) combined (table 3).

Table 11: UG Exploration Targets (ET) for Mina Carmen, Santa Comba - February 2022										
Zone	**Range Tonnes (Kt)**		**Range WO_3 (%)**		**Range Sn (%)**		***Range WO_3 t***		***Range Sn t***	
	Higher	**Lower**	**Higher**	**Lower**	**Higher**	**Lower**	**Higher**	**Lower**	**Higher**	**Lower**
UG ET Mina Carmen North#	585	351	0.87	0.66	0.02	0.02	*5,063*	*2,316*	*114*	*70*
UG ET Mina Carmen South#	766	460	0.96	0.81	0.27	0.27	*7,331*	*3,725*	*2,072*	*1,242*
TOTAL UG ET Mina Carmen#	**1,351**	**811**	**0.92**	**0.75**	**0.16**	**0.16**	***12,394***	***6,041***	***2,187***	***1,312***

 # Potential quantity and grade are conceptual in nature. There has been insufficient exploration to estimate a mineral resource. It is uncertain if further exploration will result in the estimation of a Mineral Resource.

The open pit development is seen as highly complementary to the underground operation, providing scale, extending the mine life beyond the current 7 years shown in this Advanced PFS. In combining the two operations, the Company can bring substantial investment and local job creation to the region and also create a stable long-term supplier of tungsten material to Europe and North America markets. The acquisition of the San Finx mine at the start of 2022 also provides potential synergies to the Santa Comba operations and these are currently being studied.

Regulatory Approvals

RFR is committed to complying with legislation in relevant jurisdictions. This means developing relationships and maintaining communications with Government agencies to ensure appropriate environmental standards are set and maintained, developing appropriate approvals and reporting incidents or mandated statistics

During the Advanced PFS, multiple studies were completed to provide a comprehensive understanding of the environment. These included a detailed flora and vegetation survey, terrestrial and subterranean fauna survey, surface and groundwater studies and waste characterization studies. These surveys and studies will assist the preparation of the required regulatory approvals documentation as the Project progresses. Surveys to date have not identified any threatened flora or fauna on the Santa Comba tenements. Prior to commencing operations, the Company will be required to obtain the necessary approvals, permits and licenses for the conduct of the proposed mining and mineral processing activities on site.

An important element to the open pit application will be the positioning of the Project as a 'Strategic Industrial Project'. This designation follows a recent change in law (Feb 2021) that confers significant permitting advantages, not least being an acceleration of the permitting timeline.

To be designated as a Strategic Industrial Project two of the three criteria must be met:

a) a minimum investment of €20 million,
b) a minimum job creation of one hundred direct jobs, and
c) the project must complement critical value chains or belong to sectors considered strategic and are aligned with the objectives of the European Union.

Execution and Project Schedule

The capital cost estimate for the Advanced PFS has been developed assuming an Engineering, Procurement, Construction Management (EPCM) delivery model. Different execution models will be investigated in future study phases.

The execution strategy to deliver the Project to operational status has yet to be formalised, however it is likely that different strategies that best match the various phases of the development pathway will be implemented.

The Advanced PFS assumes an indicative project timeline as set out in table 12.

TABLE 12.- CALENDAR YEAR

2022				2023				2024				2025				2026			
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		REGULATORY APPROVALS						EPC								PRODUCTION			

Risks

Mining and processing operations are inherently risky ventures based upon variable natural resources, estimated costs and income over many years, erratic market conditions, labour and equipment shortages and requiring market financing of many millions of dollars. Ore resources are calculated using drill data generated from multiple points through a mineralised zone and geological interpretation is used to develop ore zone shape, size and tungsten content. Procedures utilized for this activity are carried out using world class consulting companies to minimize risk.

Processing of the ore is planned to use a collection of ore processing equipment which has been selected on the basis of test work carried out by internationally renowned testing consultants and equipment selected from results generated during testing, by highly experienced metallurgical engineers to minimize risks associated with processing Santa Comba ores.

Understanding the risks of individual components of the entire operational process is essential to ensure that there are no fatal flaws in estimates, assumptions, permits, local resistance, environmental law changes and government legislation.

RFR has addressed risks in the many areas of project sensitivity and is aware of what is required to ensure that these risks are properly mitigated, or action plans developed to overcome obstacles in development, operation, and closure.

Procedures will be rolled out to cover regular potential site hazards for any material activities undertaken at site. Risk management will be made an integral part of the operational culture.

Next Steps

The Project focus will now be on critical path activities, in particular the regulatory approvals. Environmental surveys will continue to ensure the time required to meet the regulatory approval requirements is within the project development timeframe.

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

Ends

For further information, please contact:

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About Rafaella Resources

Rafaella Resources Limited (ASX:RFR) is an explorer and developer of critical mineral deposits that is progressing the Santa Comba and San Finx tungsten and tin development projects in Spain. The recently acquired San Finx project lies 50km south from the Santa Comba tungsten and tin mine in Galicia, NW Spain, all within the same geological belt, strengthening the Company's strategic position in the Iberian Peninsula and its long-term goal of being a significant supplier of the critically listed metals of tungsten and tin.

Rafaella also holds a battery metals exploration portfolio in Canada located within the prolific Belleterre-Angliers Greenstone Belt ('**BAGB**'), comprising the Midrim, Laforce, Alotta and Lorraine high-grade nickel-copper-PGM sulphide projects in Quebec. These BAGB project areas host historic Ni-Cu-Au-Ag mining operations and recent drilling has revealed additional exciting high-grade intersections offering significant exploration upside for battery metals in a supportive tier 1 mining jurisdiction.

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

Competent Person Statement

The information in this announcement is based on, and fairly represents, information and supporting documentation compiled under the supervision of Jose Antonio Zuazo, Roque M. Martínez and John A. Thomas, consultants to the Company. Jose Antonio Zuazo holds the title of European Geologist (EurGeol), a professional title awarded by the European Federation of Geologists (EFG) and Roque M. Martínez holds the title of Mine Engineer, MIMMM, CEng, awarded by the Institute of Materials Minerals and Mining (IOM3), both belong to the mining consultant company CRN, S.A. The information in this announcement that relates to the processing and plant capital estimated is based on, and fairly represents, information and supporting documentation compiled under the supervision John A. Thomas, a consultant to the Company. John A. Thomas is a Member of the Association of Professional Engineers and Geoscientists of British Columbia (AEGBC). EFG, IOM3 and AEGBC are 'Recognised Professional Organisations' (ROPO) by the ASX, an accredited organisation to which Competent Persons must belong for the purpose of preparing reports on Exploration Results, Mineral Resources and Ore Reserves under the JORC (2012) Code. José Antonio Zuazo, Roque M. Martínez and John A. Thomas 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 announcement that relates to underground resource estimates and exploration targets is based on, and fairly represents, information and supporting documentation compiled under the supervision of Lluis Boixet, a consultant to the Company. Lluis Boixet Martí holds the title of European Geologist (EurGeol), a professional title awarded by the European Federation of Geologists (EFG). EFG is a 'Recognised Professional Organisations' (ROPO) by the ASX, an accredited organisation to which Competent Persons must belong for the purpose of preparing reports on Exploration Results, Mineral Resources and Ore Reserves under the JORC (2012) Code. Lluis Boixet Martí consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

Forward Looking Statements Disclaimer

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

JORC Code, 2012 Edition – Table 1 report template

Section 4 Estimation and Reporting of Ore Reserves

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td>Mineral Resource estimate for conversion to Ore Reserves</td><td>• Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.
• Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.</td><td>• The reserves estimation is based on the WAI Mineral Resources model from 2021.
• WAI resources model has been validated and updated with the new economical parameters.
• Ore Resources are summarized in the table below:

<table>
<tr><th colspan="4">TABLE 0-1. MINERAL RESOURCES ESTIMATE (OPEN PIT)</th></tr>
<tr><th>Classification</th><th>Tonnes (Mt)</th><th>WO_3 (%)</th><th>Sn (ppm)</th></tr>
<tr><td>Measured</td><td>1.6</td><td>0.15</td><td>105</td></tr>
<tr><td>Indicated</td><td>7.1</td><td>0.15</td><td>98</td></tr>
<tr><td>Measured + Indicated</td><td>8.7</td><td>0.15</td><td>99</td></tr>
<tr><td>Inferred</td><td>1.3</td><td>0.24</td><td>103</td></tr>
<tr><td colspan="4">WO_3 Cut Off = 0.05 %</td></tr>
</table>
</td></tr>
<tr><td>Site visits</td><td>• 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.</td><td>• Jose Antonio Zuazo and Roque M. Martínez visited the Santa Comba site in June and July 2021. This included visits to quarry area and accessible underground workings.</td></tr>
<tr><td>Study status</td><td>• The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.
• The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.</td><td>• The current work has been part of a Pre-Feasibility Study (PFS).
• The mine plan has been developed for two production scenarios: 1,300 ktpa and 1,000 ktpa of ore processing during 7 years for each scenario plus an aggregate production of 1,000 ktpa during 15 years, with an increasing APT and aggregates price context. Mining process and operations costings have been considered for each of these scenarios and compared. The prefeasibility study has demonstrated that the mining and processing plan is commercially viable and has sufficient flexibility to lower operational and commercial risk.
• The PFS also include a specific economic study to produce only tungsten concentrate with favorable result.</td></tr>
</table>

Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	• Economical cut-off has been updated to the new economical parameters. It has been applied 350 $/mtu for APT price, 10.46 $/t ore for Processing, G&A and 1.89 $/t ore for mining operation. • The cut-off study considers costs related with the ore, excluding aggregates cost and incoming.
Mining factors or assumptions	• *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).* • *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* • *The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.* • *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* • *The mining dilution factors used.* • *The mining recovery factors used.* • *Any minimum mining widths used.* • *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* • *The infrastructure requirements of the selected mining methods.*	• The selected mining method is Open pit by conventional drill and blast operations. • Measured and indicated resources over the cut-off grade calculated in pit has passed as proved and probable reserves. • The open pit design is supported by a geotechnical study that needs to be updated for the west slope. • Bench height is 24 m and berm width is 9.3 m. Road width is 20 m, except for the two deepest benches that is 15 m. • The mining dilution applied is 5% • The Mining Recovery applied is 95 %. • It has been calculated the inferred in pit for future expansion. • Inferred resources have not been utilized in the pit optimization work leading to the main pit design. Inferred resources are also excluded from the Ore Reserves.
Metallurgical factors or assumptions	• *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* • *Whether the metallurgical process is well-tested technology or novel in nature.* • *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* • *Any assumptions or allowances made for deleterious elements.* • *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.* • *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	• The processing of the ore is matched to the nature of the mineralization contained in the ores to be processed. The process is industry standard X-ray ore sorting followed by wet gravity concentration and flotation cleaning of concentrates. The process equipment is off the shelf and standard mode of operations. Testing has covered the different ore types and grades and the process design has taken these parameters into account. Bulk sample batch testing derived from 1.15 tonnes of PQ core from the main ore zone has been carried out, through to production of saleable concentrate quality, which has been analysed to determine commercial value and any deleterious elements and potential smelter penalties. • 8 Tonnes of ore were sent to Grinding Solutions in January 2021 for the definitive study of the metallurgical test. • Test have been finished and based on their results the process has been designed. • Mineralogical studies identified mineral types, sizings and liberation/joined grains analysis and process testing were based upon these criteria for maximum liberation and minimum sliming of the

		softer economic minerals.
Environmental	• *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.*	• The waste rock component has been studied from core for various chemical and physical characteristics and the potential for acid mine water generation and run-off. Some of the more mineralized (barren sulphides) waste zones have shown the potential for oxidation and the potential for Acid formation. • There are environmental permits in place for the project at present with plans to expand the scope of the study to take into account the expansion of the open pit and the location of waste dumps and tailings facilities • There is an active quarry on site at present consuming 300-500Ktpa. of waste rock granite to the local aggregate market and the waste inventory of ~25Mt is eventually destined for sale as aggregate. • The application of an open pit permit to cover production in the latter years will require an updated environmental impact study.
Infrastructure	• *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	• The project is a brownfield site for both underground mining and open pit quarrying with all facilities present and operational for construction and operation of the mine and process facility. There is good local labor availability both skilled and unskilled and the project is in close proximity to motorways, main railway, and major container port within 60km.
Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the study.* • *The methodology used to estimate operating costs.* • *Allowances made for the content of deleterious elements.* • *The source of exchange rates used in the study.* • *Derivation of transportation charges.* • *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* • *The allowances made for royalties payable, both Government and private.*	• Capital costs have been estimated from firm quotes obtained from international equipment suppliers, contractors and local suppliers of goods and services. • Operating costs have been generated from local cost metrics, supplier information and consultants to the company specializing in specific cost centers of the study. • A range of commodity prices have been used in every aspect of the value chain from geological model through to concentrate sales to offtake customer. • The published spot rate has been used for the $/Euro exchange. • All costs and applicable royalties have been included in the cost analysis
Revenue factors	• *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* • *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	• The economic model has been generated using an increasing commodity price context and multiple process throughput estimates using diluted head grade, ore sorter predictions from independent testing, metallurgical recovery from independent testwork and concentrate tenor from process testing concentrate analysis.

Market assessment	• *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* • *A customer and competitor analysis along with the identification of likely market windows for the product.* • *Price and volume forecasts and the basis for these forecasts.* • *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	• Demand for tungsten generally follows that of GDP growth, although market shocks do occur due to geopolitical events as Ukraine's war and COVID19 which has seen a drop in demand for application in drill rigs and in the manufacture of automobile engines. Longer term the price is expected to be more heavily influenced by supply side factors as supply is dominated by China (circa 80%). China has been open about its desire to reduce supply outside of domestic markets for this critical material. In China, smaller mines have been closed and larger mines are seeing declines in resources and grade. Few new mines are being developed outside of China. • Reliable supply from a Western producer would be welcomed by Western end users. There is no material production in North America and Europe supplies less than half of its 8,000tpa demand. Benchmark pricing of Ammonium para-tungstate (APT) has a premium on the Rotterdam exchange over Chinese trade. • End users set out the specifications for the tungsten concentrate. It is expected that the concentrate from the Santa Comba mine will meet these specifications. Santa Comba has previously supplied tungsten concentrate that met acceptance specifications (1980–1985). • It has been estimated an APT pricing increase context from 350 US$/mtu until 450 US$/mtu with a constant 5 % increasing rate.
Economic	• *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* • *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	• Exchange rates have been based on published spot rates. • All economics have been prepared on a real basis 2.5 % of annual inflations assumptions have been applied. • Net Present Values have been calculated using a discount rate of 4.5%. This has been calculated on an unleveraged project basis. Sensitivities have been run at different rates for comparative purposes.
Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	• Existing rights of way agreements are in place with local landholders. • Landholders of areas that cover the extended resource have been identified and approaches will be made to secure access as required. • For a new Open Pit permit a new Reclamation Plan will need to be submitted and will involve public consultation and a further bond to be deposited.
Other	• *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* • *Any identified material naturally occurring risks.* • *The status of material legal agreements and marketing*	• Marketing of the tungsten concentrates will be secured through either a direct agreement with an end-user or through a marketing arrangement with a global commodity trader. • It does not exist a commercial agreement between GTT and CdM so

	arrangements. • *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	its facilities will be expropriated. • The Project has permits to construct the processing plant to process ore from underground mine. A new permit will be asked to process ore from open pit which will require a processing plant with great processing rate. • The Project has a permit to operate an underground mine. The Project does not have a permit to operate an open pit. A water discharge permit to advance the underground development is pending approval.
Classification	• *The basis for the classification of the Ore Reserves into varying confidence categories.* • *Whether the result appropriately reflects the Competent Person's view of the deposit.* • *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	• Measured resources within the designed open pit were converted into Proven Reserves, after application of mining factors. Similarly, indicated resources within the designed open pit have been converted into Probable Reserves. • This result reflects the CP's view of the deposit. • 100% of the Proven Ore Reserves have been derived from Measured Mineral Resources.
Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	• There have been no external audits of the Ore Reserve estimates.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve 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 reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which 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.* • *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* • *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• This relative accuracy and confidence in the Mineral Reserves Estimate is reflected in the reporting of the Mineral Reserves as detailed in the JORC Code (2012). Validation procedures carried out on the final block model against input sample data show good correlation. • The Mineral Reserves relates to global tonnage and grade estimates. • It has been applied as Modifying factors 5% of dilution and 95% of mining recovery. • No continuous mining has taken place since 1985, and that was only by underground mining of the higher-grade vein mineralisation. Historical production data is not in a form that enables comparisons. • In 2nd trimester of 2021, the underground works was reactivated by GTT.