Rafaella Resources announces exceptional ore sorting results for Santa Comba

Announcement Highlights

- Tomra Sorting Solutions has reported exceptional ore sorting results for the Santa Comba tungsten and tin mine in Galicia, Spain.
- Overall results showed a 50% rejection of unmineralised rock and an approximate doubling of feed grade significantly lowering planned process capex and opex, and enhancing process efficiency through a simpler process flow sheet.
- The "Grade Recovery Curve" shows potential for over 90% tungsten recovery with an increased yield of up to 55% of feed mass.
- Testing of the low-grade ores also showed viable recovery from over 2 million tonnes of mineralisation not currently factored into the Project's economics.
- The 50% reduction in process tonnage reduces the Project's environmental impact with a far lower volume of waste generated, lower energy consumption per unit of metal produced and lower water consumption.

Rafaella Resources Limited (ASX:RFR) ('Rafaella' or **'the Company')** is pleased to announce the results of the ore sorting test-work by Tomra Sorting Solutions ("Tomra") for the Santa Comba tin and tungsten mine in Galicia, northwest Spain (the "Project"). The testing of the pre-concentration of Santa Comba ores was highly positive and allows Rafaella to review several opportunities to simplify the process plant thereby reducing both capital costs and operating costs for the Project.

- The test programme tested 2 x bulk samples selected from assayed drill core crushed to two size groups, +8mm to -20mm and +20mm to -40mm.
- Sample No.40 was ~1100kgs of average grade ore @0.15% WO_3
- Sample No.41 was ~250kgs of low-grade ore @0.05% WO_3

Tomra's conclusion in its report was that "the results from this test work were positive for both sizes and samples. Significant upgrades of WO_3 as well as high recoveries were achieved in all test runs for sample "40" using XRT, while leaving rather low grades for WO_3 in the waste fraction. A calculation has shown that a 90% recovery of tungsten can be possible at a waste removal of more than 50%. The low-grade sample "41" could be upgraded by a factor of 1.7 to 3. For further calculations, a waste grade between 0.025 and 0.030 is achievable."

Key results (see Figure 1) are summarised as follows:

Process grade tests

- Maximum recovery was 90% with a product grade of 0.246% WO_3, a yield of 48% from feed grade of 0.133% WO_3.
- Maximum head grade was 0.399% WO_3, recovery of 86.5%, and a 40% yield from feed grade of 0.183.

Note that the 78.17% result was considered a sampling anomaly and diluted by a higher yield but has been left in for completeness.

Low grade ore treatment results
- Best recovery was 64.5% with a product grade of 0.1% WO_3, and a 38% yield from a feed grade of 0.058% WO_3.
- Best head grade was 0.165% WO_3, 18% yield and 54% recovery from a head grade of 0.055% WO_3.

Ore was crushed to two sizes: 20mm to 40mm and 8mm to 20mm. The sorting criteria was based upon selection of 1% and 2% of the surface area of heavy element inclusions detected and this surface area criteria can be optimised (less than 1% for example) to further extract the maximum economic value from the orebody.
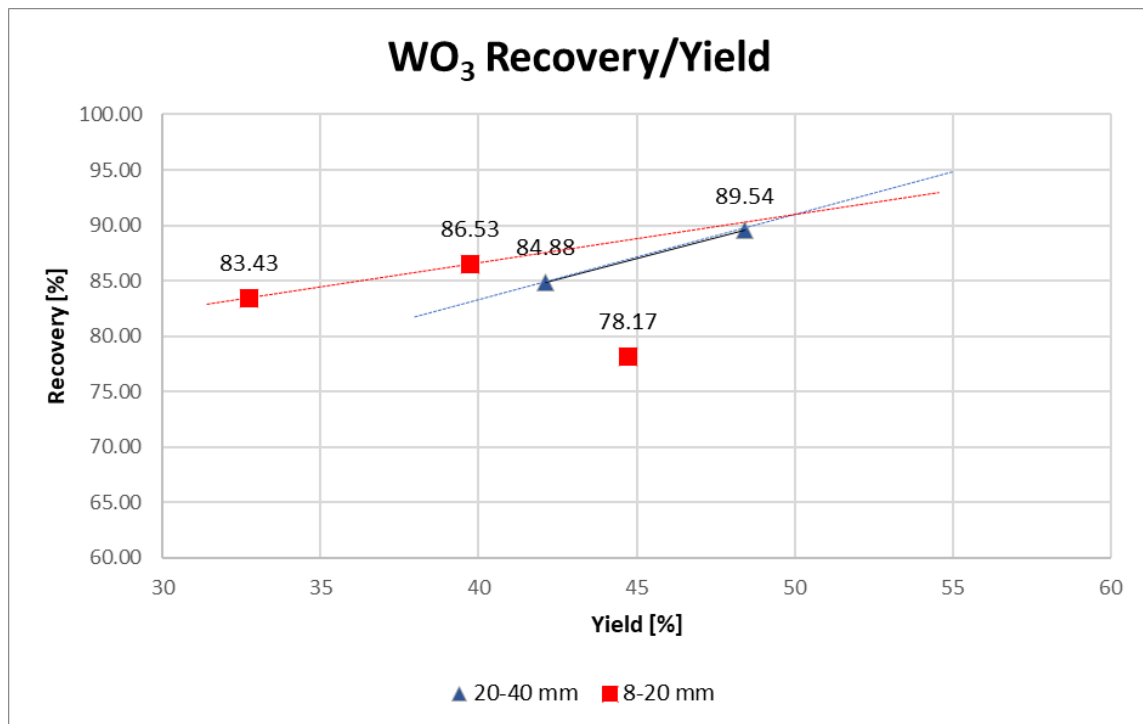

Figure 1: Santa Comba Yield vs Recovery curves for sample 40

The success of the X-Ray sorting tests allows several mining and process options, including:
- Simplification of the process
- Bulk ore zone mining to reduce operational costs and maximise ore recovery
- In-pit sorting and conveying
- Bulk underground mining and sorting of wider ore zones using larger and longer stopes
- Separate sorting of subgrade mineralisation
- Sorting of satellite deposit ores prior to hauling to the process plant

Figure 2: TOMRA COM 1200 XRT 2.0

TOMRA estimates that for a throughput of 1 million tonnes of feed ore and ~500kt/year of pre-concentrate, two XRT units (Figure 2) would be required.

Rafaella's Managing Director Steven Turner said: *"The results from the ore sorting test-work have exceeded the Company's expectations. The clear discrimination between ore bearing rock and low grade or barren rock has delivered high recoveries and yields allowing for a simpler process plant. The benefits of this simplification will be significant once the metallurgical studies are completed. These results are now being fed into the feasibility study that is in the final stages of completion. The Company looks forward to providing the market with these exciting updates on the fast tracking of its flagship project over the coming weeks."*

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

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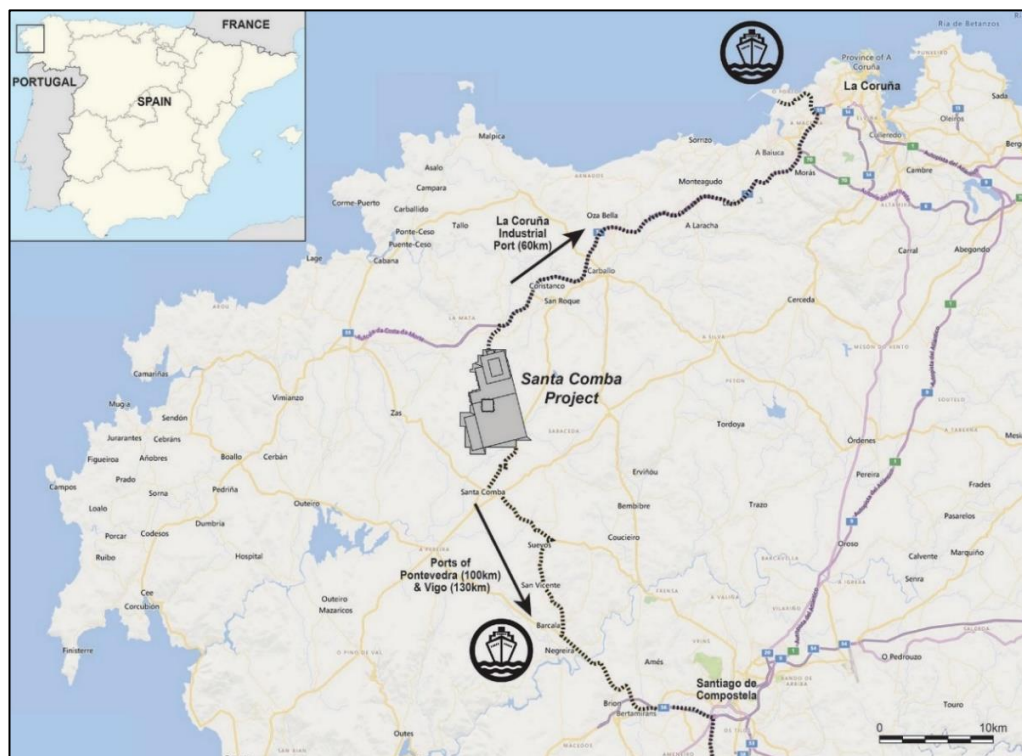E: info@rafaellaresources.com.au

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

Location of the Santa Comba Project, Galicia, Spain.

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

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