

21 November 2017

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## San Santiago Copper Plant Expansion Underway

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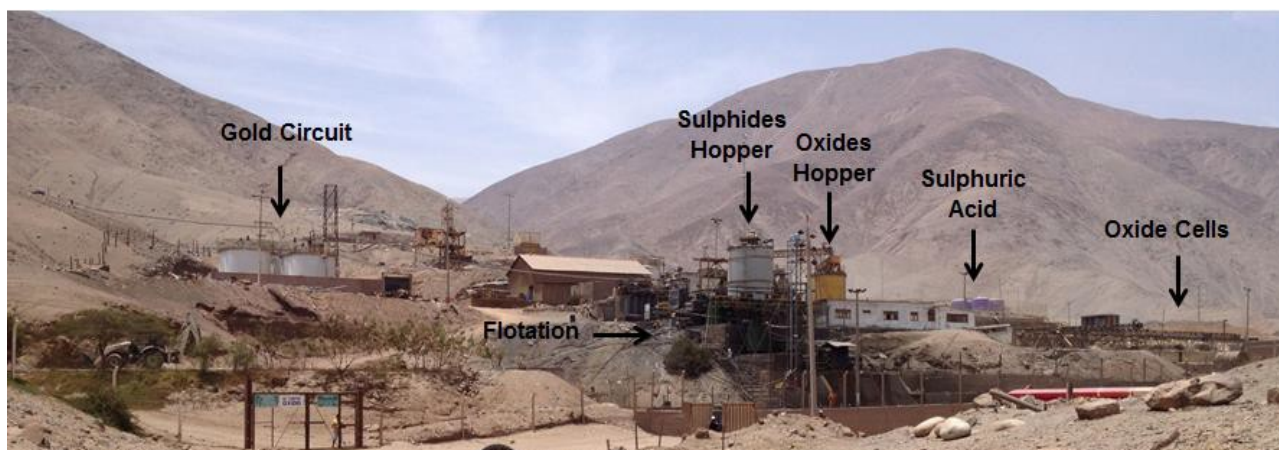
### Highlights

- Independent review of San Santiago copper plant undertaken by Primero Group
- Tailings dam expansion of 99,000m<sup>3</sup> to increase copper and gold production
- Copper circuit to process 90,000 tonnes of Cu feedstock and produce at an average head grade of 7% per year once upgrades are complete 1H 2018
- Technical review of the Brasil copper mine concession is ongoing by the Company's team with potential contractors for the re-commencement of mining the mine in 1H 2018
- Exploration works being expedited through the remainder of 2017

Titan Minerals Limited (ASX: TTM) ("Titan or the "Company") is pleased to announce it has received an independent review of the San Santiago copper plant by Primero Group, which has recommended implementing an expansion program on the tailings dam facility to allow for a significant increase of copper and gold production. Titan intends to submit a new dam design to the local Peruvian authorities in early Q1 2018 and aims to begin construction in Q2 2018 subject to receiving the required approvals.

Titan's technical team in Peru has undertaken a review of all artisanal mining operations in the Company's 9,000Ha package acquired as a part of the San Santiago concession and has identified a key area that previously provided high grade channel sampling that the Company believes will provide suitable additional ore to feed the San Santiago plant in the near future. This assessment is ongoing and a decision relating to this area will be made at the conclusion of the expansion process

The Company is currently negotiating with local artisanal miners on the San Santiago Brasil copper mine concessions to start moving copper feed stock to the San Santiago plant location, it is expected that stockpiles will accumulate during Q1 2018 for treatment once construction finishes around June 2018.



**Picture 1: San Santiago Processing Plant**

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The Company is in the process of engaging consultants to design and implement the upgrade to the tailings dam facility. Initial designs are expected in December and fully costed plans are expected to be finalised early 2018, ready for construction. The San Santiago plant is currently in care and maintenance as the company undertakes the studies and subsequent expansion capex works.

Largest shareholder Andina Resources has reviewed the tailings expansion report and provided further validation, including its support for the Titan Minerals business plan. The Company plans to leverage off the Andina Resources technical team who has operated a gold plant in the area for 8 years and continues to provide ongoing in country support from its highly experienced team.

### **Overview of the San Santiago Processing Plant**

The San Santiago processing plant and mining properties are located in the highly prospective Cobrepampa area surrounding the Acari region, which has been producing copper, gold and silver for more than 40 years. The area is also host to two large Chinese-owned IOCG deposits, Marcona and Pampa del Pongo.

The San Santiago processing plant, located in an established mining region, is one of two processing plants operating in Otapara - the other being owned and operated by the local Otapara community. Importantly, the San Santiago plant is operational, with access to:

- The national grid power supply;
- Water supply from onsite bores;
- Tailings disposal (expansion is required); and
- All required environmental permitting and licensing.

The processing plant can legally process 350 tonnes per day (TPD) of material through a combination of its three circuits, including:

- 200TPD CIP gold circuit
- 250TPD copper flotation circuit; and
- 120TPD copper oxide circuit

San Santiago's copper flotation circuit was historically the plant's primary income generating asset. It is the intention of Titan to modify pre-existing toll treatment arrangements so that Titan eventually owns and controls all ore mined and processed from within the concessions and mining rights it has acquired. At full nameplate capacity, tonnage and grades being processed through the plant equates to approximately 6,000 tonnes per annum of contained copper with additional gold and silver credits.

This concentrate is currently among the cleanest concentrate available in the Peruvian market. It contains a premium copper grade with gold and silver credits whilst being extremely low in penalty-attracting impurities, enhancing its appeal in metals blending. Most of the concentrate is primarily sold into the spot market to a number of traders.

The additional copper oxide circuit, used on a batch-only basis currently, is a valuable asset long-term for the Company, given the presence of large non-JORC copper oxide resources in the surrounding concessions. Once the necessary permitting is obtained, it will require some upgrades in order for it to be utilised on a full-time basis. We will look to permit and refurbish the gold circuit at San Santiago. The gold circuit will be able to produce 35,000oz per annum.

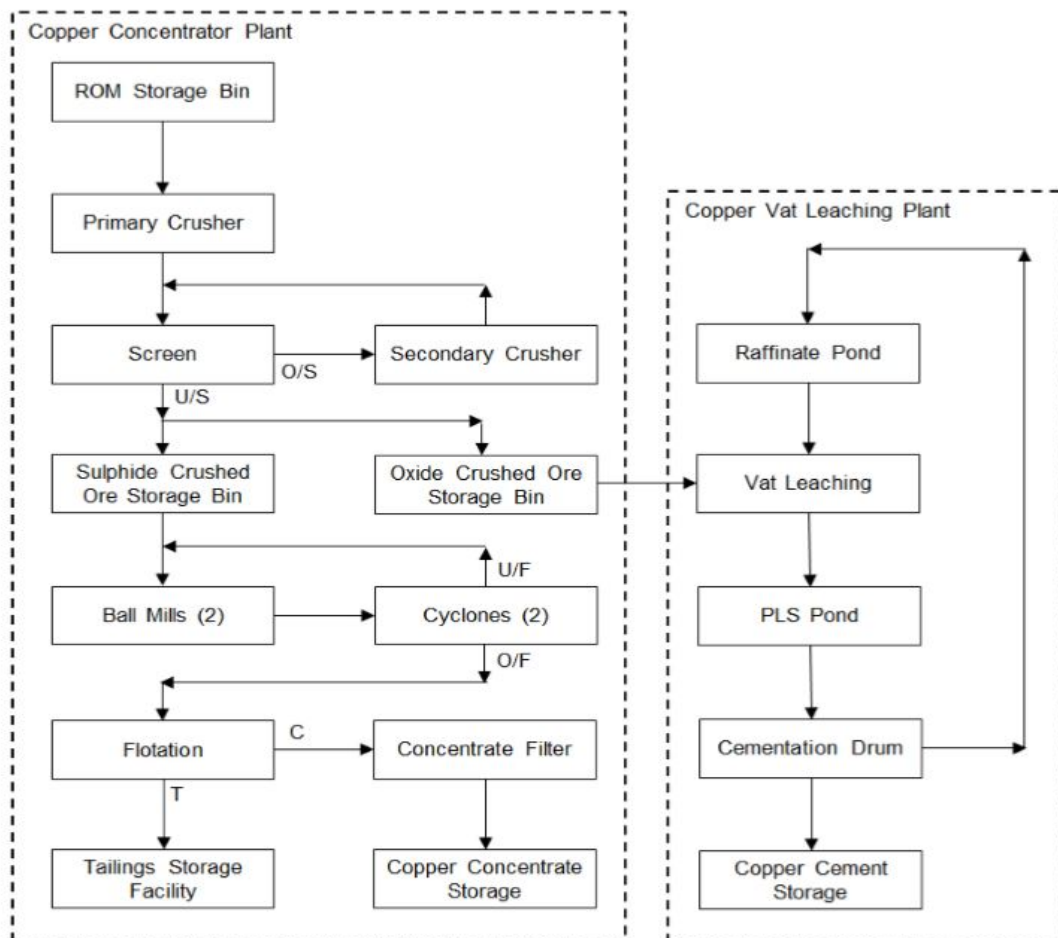
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### Exploration Potential

The current San Santiago Concessions have not been subjected to modern day detailed mapping, geochemistry, regional geophysics or drilling exploration. Titan plans a systematic assessment of the area's various IOCG and high-grade vein systems which is ongoing through the remainder of 2017



**Picture 2: San Santiago Flotation Circuit**



**Picture 3: Copper Concentrator Blockflow**

ENDS

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**About Titan Minerals Ltd**

Titan Minerals is the owner and operator of a copper and gold business in a well-established mining region of Southern Peru. A centralised processing plant with three separate circuits produces copper concentrate and copper cement in addition to loaded carbon from the CIP gold circuit, with feed sourced from third party operators as well as from Titan's 100% owned mines.

The copper assets of Titan are contained within 7,800Ha of under explored concessions that surround the San Santiago processing plant and are currently being mined for copper, with an attractive gold and silver credit.

Titan's gold assets include its small-scale mines at the Torrecillas project. At Torrecillas, a number of high-grade narrow gold veins have been developed and mined by Titan Minerals. This gold project, located just 180kms from the processing plant, are part of 16,000Ha concession package that also contain two large tonnage, low-grade disseminated targets containing known gold and copper with silver and molybdenum mineralization.