

# ANTAS MINE DEVELOPMENT UPDATE

The Company is pleased to report the start of pre-stripping operations over the Antas Open-pit. The pre-strip is a precursor to ore mining and is a major milestone in the realisation of Avanco's first copper mine. Equally encouraging is progress at the plant, where construction remains on schedule and within budget.

## HIGHLIGHTS

- > Construction at Antas commenced in May and continues to progress on schedule and to budget. Management aim to be commissioning in Quarter 1, 2016
- > ~75% of Construction Capex has been committed within budget. Plant earthworks are complete and ~80% of civil works is finished
- > Largely site expenditure including labour costs are in local currency (Brazilian Real), consequently the weakening of the Real is reducing construction costs and financial risk
- > Pre-stripping of the Antas open-pit has commenced and is more than one third towards the sulphide ore situated at ~15m below surface
- > The Lump Sum Turn Key Mesto Filter construction is also on schedule
- > Installation of the crushing circuit is nearing completion, with electrical connection and reticulation approaching commencement
- > Construction of the Tailings Management Facility (TMF) drainage filter is complete. Lifting and compaction of the dam embankment is ongoing with completion anticipated during November
- > Installation of the electricity transmission line continues. Access to electrical power to facilitate construction activities is expected soon
- > Avanco's construction owner's team is operating very effectively, has been expanded, reinforced and provides continuous progress reporting
- ➤ Antas is forecast to ramp-up to ~12,000t of copper and 7,000oz of gold per annum
- Execution of Off-Take contract(s) for concentrates is targeted for December
- > The Company is financially strong, debt free and owns 100% of both Antas and the proximal and larger Stage 2 Pedra Branca Copper Project
- Good progress has also been achieved on the Pedra Branca scoping study
- The Managing Director has relocated to site to support 'Operational Readiness'

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## ANTAS MINE DEVELOPMENT

Pre-production mining and plant building works are scheduled for completion during Quarter 1, 2016 with commissioning thereafter. The cost of the construction and working capital was originally denominated in Brazilian Real's (BRL) and estimated at US\$60M (FX US\$1 = BRL3.00).

Eighty percent of capital expenditure has now been committed and forecast costs remain within budget.

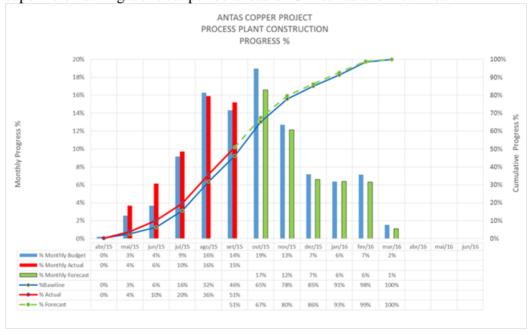
Recent weakening of the local currency is expected to yield savings and so increase the contingency funds available to address any difficulties should they arise.

Construction activities are progressing very well and have passed a number of important milestones including the delivery of a new mining fleet and the start of the pre-stripping over the Antas open-pit.

All civil construction is now "above ground", reducing the risk of delays associated with rain which can occur as early as October.

With most of the budget having been committed, management believe that project risk is now mainly limited to the 'execution' of the works, and thereafter to operational implementation.

Cognisant of the execution risk which is (now) mainly associated with mechanicals and electricals the Avanco owner's team has been expanded. This will reinforce site supervision during a critical period ahead of Christmas and New Year.



With reference to the above construction 'S' curve plant construction activities are ~50% complete and have successfully followed the planned schedule.

Management are very pleased with the quality of the contractors work and their adherence to safe working practices.

## PRE-PRODUCTION MINING

A review of the grade control test patterns has indicated that mineralisation could be thicker in some areas and will likely facilitate selective mining. The programme also confirmed a gold enriched zone in the saprolite above the deposit. Whilst the size of the zone is relatively small, the feasibility of recovering the gold warrants investigation. The material is being stockpiled separately until the investigation is concluded.

Following the Letter of Intent (LOI) signed with mining contractor "MACA", the mobilising of a mining fleet is well advanced with the establishment of their administration, maintenance and refuelling areas located between the mine and the plant. Equipment already on site includes:

- Liebherr excavator
- 4 x 40t Volvo articulated trucks
- D8 dozer
- Grader
- 2 x Cat Blast-hole Drills (equipped with downhole sampling/cyclones etc)

MACA will substitute the current excavator for a larger 100t machine as mining progresses into the more demanding fresh rock.



The ore/fresh rock interface is 15m below surface and is expected to be reached by the end of October. Pre-stripping is one third towards the fresh rock. The stripping of the saprolite cover is anticipated to remain "free-digging", with little or no transition material. On reaching the interface, both high and low grade copper mineralisation is expected to be contiguous with the exposure of the fresh rock surface.

The selection of an explosives supplier is well advanced such that blasting is being planned for November. Blasting will allow (more tractable) fresh rock surfaces to be established for the pit and ramps prior to the wet season. Use of the liberated waste rock is ideal (after crushing) for haul road maintenance.



The mining schedule is oriented to provide low grade ore for plant commissioning as early as December. Increasing quantities of higher grade ore are expected to be delivered to the ROM from December.



Avanco looks forward to a establishing a long term working relationship with the Mining Contractor, MACA has demonstrated significant commitment and ability to establish their presence on site.



Pre-stripping of the open-pit has commenced in parallel with the building of the haul roads. MACA will be keeping two excavators on site along with the Volvo truck fleet that is expected to increase from four to six trucks by mid-2016.





The articulated trucks are considered ideal for the Antas pit. This selection of equipment has already proven itself (with MACA) to operate well in mining and climatic conditions far more challenging than the Carajas.



MACA's D8 Dozer pushing the haul road forward toward the plant in the distance

# PLANT CONSTRUCTION



View of construction activities around the beneficiation plant

# **CRUSHING CIRCUIT**



Earthworks associated with the initial ROM Pad construction have been completed and the retaining wall erected. The jaw crusher has been installed below the tip head – awaiting only the feed hopper, grizzly and electrics



Secondary cone crusher/screen of local manufacture, being configured to produce a -20mm sized feed to the ball mill. The ball mill feed will be stockpiled above the reclaim tunnel below

# **GRINDING**



The Ball Mill feed reclaim tunnel civils are completed



Installation of the Ball Mill concrete foundation represents the most complex civil works of the project. This activity has now reached the trunnion pedestal elevations where precision is paramount



The 12'x24' Metso Ball Mill shell (flanges) being prepared for mounting of the trunnion heads



# **FLOTATION**



Flotation floor civils are sufficiently advanced to allow the start of structural steel which will support the float cells

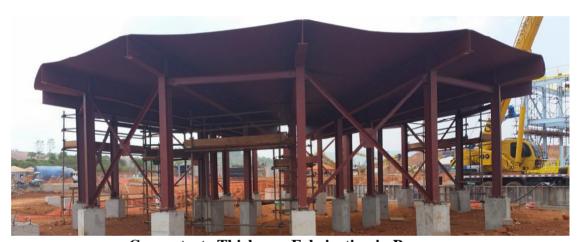


Rougher-Scavenger OK 38's Flotation Cells ready for lifting into position once the steel structures are ready



Flotation area electrical installation is facilitated by the use/delivery of pre-wired Motor Control Centers

## **DEWATERING**



**Concentrate Thickener Fabrication in Progress** 



Metso VPA plate and frame pressure filter main assembly ready for installation within the building





Filter House building footings are completed and structural steel erection building is progressing on schedule

# **UTILITIES**



Foundations being prepared for Process water and raw water Tanks



Admin offices, refectory and first aid post, all well advanced

# TAILINGS MANAGEMENT FACILITY(TMF)

Having overcome small delays attributed to boulders discovered within the centerline of the embankment, construction is now back on schedule with completion expected in November. Following earth works, the installation of electical and water-reclaim reticulation systems will commence.



Earthworks continue to raise the crest of the dam wall

# **INFRASTRUCTURE**



34.5Kv power cables being installed on the transmission poles



The mine access road including construction of a number of river bridges is ongoing. These are expected to complete before the wet season



## **OPERATIONAL READINESS**

"Operational readiness" for the pending transition from construction to production is being pursued. Management aims to be ready for commissioning in early Quarter 1 2016. Hiring of operational and technical staff is gaining momentum, assisted by the availability of skilled personnel resident within the Carajas mining district.

Operations are expected to benefit from the weakening local currency by way of incurring potentially lower Opex in US\$ terms. Brazilian inflation is however reported as being circa 9% and this will erode some of the apparent upside in operating costs.

## CONCENTRATES MARKETTING AND LOGISTICS

Progress towards securing off-take contracts for Antas copper concentrate continue in London in mid-October coincident with London Metal Exchange (LME) Week. Avanco has engaged a very experienced concentrates marketing specialist to assist with negotiations. More than twenty trading/smelter groups have expressed interest and made offers for the "clean" Antas product over the past year. The offers have since been adjudicated and shortlisted for final negotiations.

The end of December is being targeted for the execution of an off-take contract or contracts for which a term of three years is envisaged. A three year term facilitates the opportunity for the Company to negotiate future larger contracts/logistics in anticipation of additional production from Stage 2.

Shipping in containers is considered the optimum approach for the ~48,000tpa of Antas concentrates. (This shipping preference might change to bulk cargo in future and /or with the addition of Stage 2 (Pedra Branca) production).

Management have re-inspected warehousing/port facilities proximal to Belem some ~750km from the mine. The Company is confident that existing logistics/export facilities are adequate and available for Antas.

#### PEDRA BRANCA (STAGE 2)

Whilst cognisant of previously indicated Stage 2 timelines, it has been necessary to direct greater management effort to construction at Antas.

A substantial amount of work on the Scoping Study has been completed and Management's impression of the projects feasibility is very positive. The Company will attempt to finish the study during the quarter. Any revisions to the Pedra Branca timeline will be inclusive of the Study.

The Company has begun the regulatory processes for the licenses concerning the future operations of the project.



## **CORPORATE**

The Board recognises the importance of, and the commitment required during the next six months. Consequently, the Managing Director has relocated to Brazil, ready to oversee the commissioning phase. The Board has authorised to rapidly deploy contingent funds to *firefight* start-up problems with the objective of mitigating potential delays. The Director of Operations is already in residence next to the mine and will assume responsibility for copper production on transition to 24 hour operations.

Tony Polglase Managing Director

#### **ABOUT AVANCO**

- Avanco (ASX-AVB) is an emerging mid-tier copper company situated in the mining friendly world class Carajas Mineral Province, Brazil
- Avanco either owns, or holds the rights to 100% of the second largest area of mineral tenure in the World Class Carajas region (behind Vale SA)
- The Company is ultimately well positioned to potentially operate a number of high grade, low cost copper/gold mines in the region which will establish Avanco as a potentially profitable long life producer
- Management have been successful in obtaining funding for Antas via an equity capital raising putting Avanco in a strong financial position whereby management believes it is fully funded into production whist remaining debt and covenant free
- Construction of Antas is well advanced and expected to produce around 12,000tpa of copper in concentrates from 2016
- Antas will produce desirable clean copper concentrates, the Company retains ownership to the rights for its production off-take
- The Company is well supported by institutional shareholders: Blackrock World Mining Trust, Appian Natural Resources Fund, Greenstone Resources and Glencore
  - Avanco is managed by highly experienced international and Brazilian mining professionals, most of whom are Portuguese speaking and reside in Brazil
  - Whilst near term priorities are focussed on transition to copper producer status and resource growth, Brazil offers significant opportunities to enhance shareholder value with new discoveries and acquisitions