

CASE STUDY

MARCH 2016

SAMPLING SYSTEMS



ABOUT SARACEN

Saracen Mineral Holdings (ASX:SAR) is a shining example of the success being enjoyed by the new generation of Australian gold miners and their shareholders.

The company was recently promoted into the ASX 200 on the back of growing production (doubling to ~300,000ozpa), and cash flows (forecast all-in sustaining cost of less than A\$1,075/oz). At the same time, Saracen has no debt thanks to its highly successful strategy of funding its project development from internal cash flows.

Saracen's production comes from two WA projects, Carosue Dam and its new Thunderbox mine. Both operations have long lives with extensive potential for further growth through exploration.

The combination of strong cash flow, no debt, and exploration upside has left Saracen perfectly positioned to take full advantage of the current gold environment. The proven board/Management team are focused on sustainable growth and adding value to key stakeholders.

[Source: <http://www.saracen.com.au/about-us/company-overview/>]

SARACEN CAROSUE DAM SAMPLING STATION

In December 2015, Consep was asked to design and supply a sampling station for Carosue Dam's toll treatment program.

The Carosue Dam Operations (CDO) processing plant is located in the South Laver-ton gold field, approximately 120km north east of Kalgoorlie. Saracen acquired the CDO processing plant in February 2006 and currently operates at nameplate capacity of 2.4Mtpa [2009].

In late 2015, Consep was engaged to design and supply a standalone sampling station in primary crushed ore duty. The sampling station was to be mounted on the existing fine ore bin feed conveyor and used to generate composite samples to be used for determining third party toll treatment payment.

Consep's team effectively collaborated with Saracen site staff to seamlessly integrate the sampling station into the existing plant infrastructure whilst ensuring existing access ways were not encroached. The project went from concept to delivery in approximately 10 weeks. Consep's team of highly skilled engineers in tandem with Consep's company owned manufacturing

facility meant that every project milestone could be met, including first toll treatment.

The Carosue Dam sampling system is designed to handle 350tph fine ore and generate a shift composite sample of the product stream suitable for the plant met-allurgical accounting.

The system incorporates a cross belt ARM sampler to take a primary cut from the 1000mm conveyer belt. The primary cut is then processed via a RSDR (rotary sample divider residue type), which is an all-in-one device that combines a feeder, secondary sampler and a four-canister sample collector. The rejects from the RSDR4 fall into a hopper for transfer back to the plant. Consep was also responsible for the design and supply of the structure, chute work and electrical control system (field mounted PLC and MCC).

The sampling station was successfully commissioned by Consep staff during March 2016.



Carosue Dam's Crushed Ore Sampling Station



Our clients are able to work directly with staff who have both the experience and ability to develop custom solutions to a clients requirements.

At Carosue Dam, we were keen to continue the long standing relationship we had with site as they are users of our Gravity Circuit Equipment. They were heavily reliant on our sampling expertise and entrusted Consep with designing a system that would suit their requirements. We believe that only a company with 25 years of sampling experience with in house design and manufacturing could achieve the project's requirements.

Consep have a very broad product range for sampling systems. The sampling products which are fully manufactured and serviced by Consep include:

- Linear cross cut samplers
- Rotary vezin samplers
- Belt feeders, weigh feeders and shuttle feeders
- Bucket elevators and skip hoists
- Swirl tanks, chute works and structure
- Arcual samplers
- Cross belt ARM samplers
- In-line samplers (Pressure Pipe and Fixed Cutter)
- Poppet Samplers
- Custom made samplers
- Continuous sample dewatering modules
- Sample Collection Diverters and Carousels

Consep also offers the widest range of proven drive types. For instance just within our range of linear cross cut samplers we can offer:

- Electric chain, ball screw & belt drives
- Hydraulic & Pneumatic drives
- Continuous unidirectional electric drives

One unique aspect of Consep is our ability to supply both the process and automation systems to go with the sampling equipment which allows us to provide a complete sampling solution.

For many of our clients we also develop the process design and sampling protocols to meet their specific needs, for instance meeting ISO3082 for Iron Ore. We then can develop the functional design and automation system for the sampling station.

Consep tailors each equipment package to suit our client's specific project requirements. Please contact our experienced engineers to discuss how we can assist with your sampling requirements.



Consep 1000ARM Sampler



Crushed Ore Sampling System



RSDR Sample Canister



Consep Pty Ltd is committed to providing customers with long term satisfaction through innovative, cost effective products and solutions which answer the customers individual needs.

CONSEP PTY LTD
Ph: +61 2 9756 5299
sales@consep.com.au
www.consep.com.au
ABN 74 053 177 898

SYDNEY
PO Box 6625
Wetherill Park NSW 1851
59 Newton Road
Wetherill Park NSW 2164
AUSTRALIA

PERTH
Level 15
111 St Georges
Terrace Perth WA 6000
AUSTRALIA
Ph: +61 8 9477 6777