



COBRE LAS CRUCES



15th May, 2017

Agenda

- ☐ CLC Management Introductions
- ☐ Safety Video
- ☐ Technical Presentation
- ☐ Questions
- ☐ Tour of Operations
- ☐ Lunch & Close Out

CLC Management Introduction



- ✓ Sean Whittome – Managing Director
- ✓ Mark Roebert – Mining Director
- ✓ Enrique Delgado – Metallurgical & Environmental Director
- ✓ Luis Vega – Facultative Director
- ✓ Carlos Frias – Technology Director
- ✓ Stuart Tevendale – CFO



Technical Presentation

- ☐ Operational Overview
- ☐ Mining Operations
- ☐ Plant Operations
- ☐ Managing Water
- ☐ Looking Ahead
- ☐ Questions

Project Location



FIRST QUANTUM



Cobre Las Cruces Timeline



1992	Rio Tinto exploration commences
1994	Deposit discovered
1996 -2000	Feasibility study & EIA
2001-2005	Permit, land acquisition, funding
2006-2008	Construction
June 3 rd 2009	Initial Production
2010	Inmet 100% acquisition
March 2013	FIRST QUANTUM 100% acquisition
2016	Production record 73,643 tonnes



Project Information

Investment: ~ €1 billion euros to date

Project KPIs:

Annual Production: 72 000 t cathodes

Production Life: 12 years (to 2020)

First Cathode: June 2009

LOM Mining Contract:

Other Resources:

Primary Sulphides

Gossan material

Employment:

Direct: 280

contractors: 530

Induced: ~ 4 000



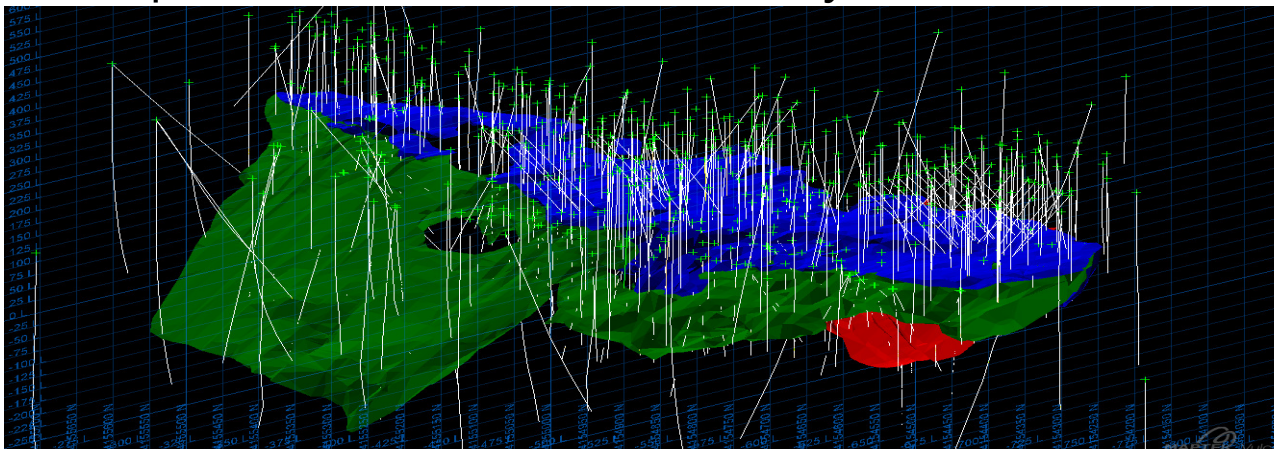
Ore Reserves – Dec 2016

The Ore Body – Copper Reserves

Reserves of 6 million tonnes grading 5.0% Cu

Indicates LOM to 2020

Options to continue with Primary ore



Las Cruces massive sulphide ore body:

In blue: mineable reserve of secondary Cu

In green primary resources (Cu, Zn, Pb & Ag)

In red stockwork resources (Cu, Zn, Pb & Ag)

Source: MRR Statement_Las Cruces_End 2016

Additional Resources

Gossan

2.9 million tonnes @ 2.5 gpt Au, 75 gpt Ag, 3.2 % Pb

Primary Sulphides + Stockwork

36 million tonnes @ 1.1% Cu, 1.3% Pb, 2.6% Zn, 29 ppm Ag

Pit Cutback Sequencing

Flat Lying orebody

Key Dimensions:

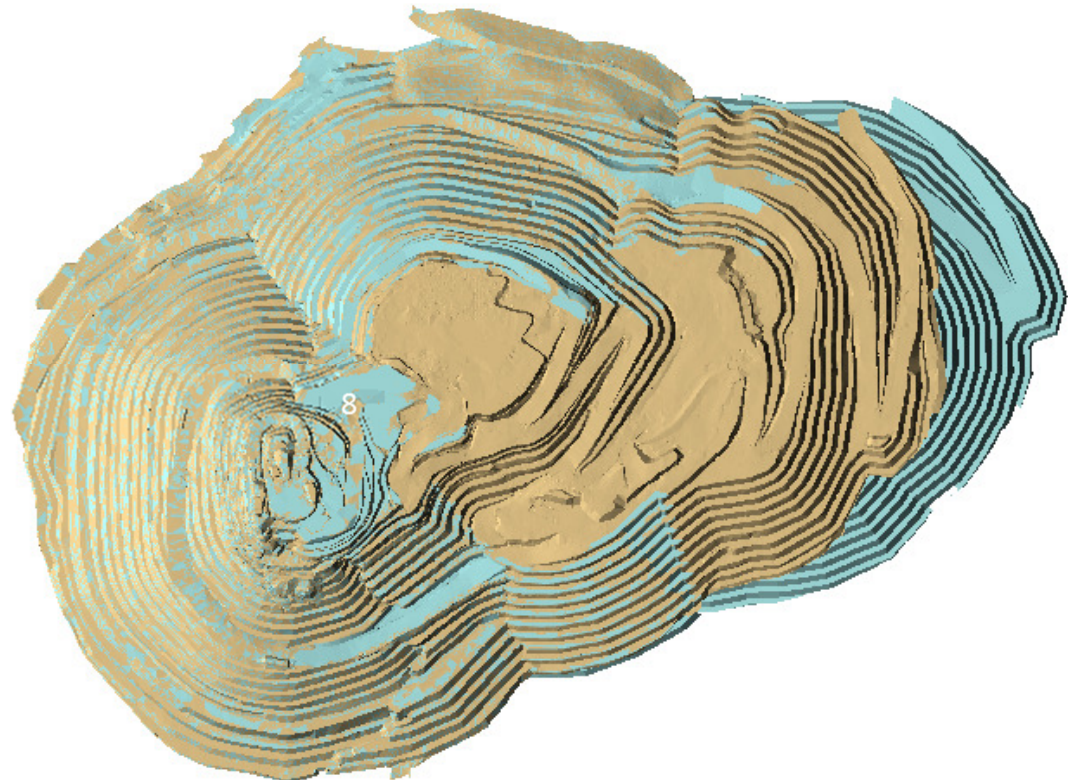
1,578 x 1,000 x 215 m

Surface: 127 hectares

Key Statistics:

Waste: 22.3 Million m³

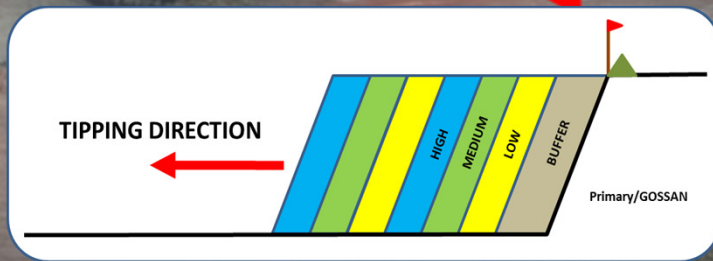
Ore: 6 Mt @ 5 %Cu



Plant Feed Preparation

Direction of tipping and reclaiming are perpendicular
Tipping and reclaiming widths are narrow

TIPPING DIRECTION

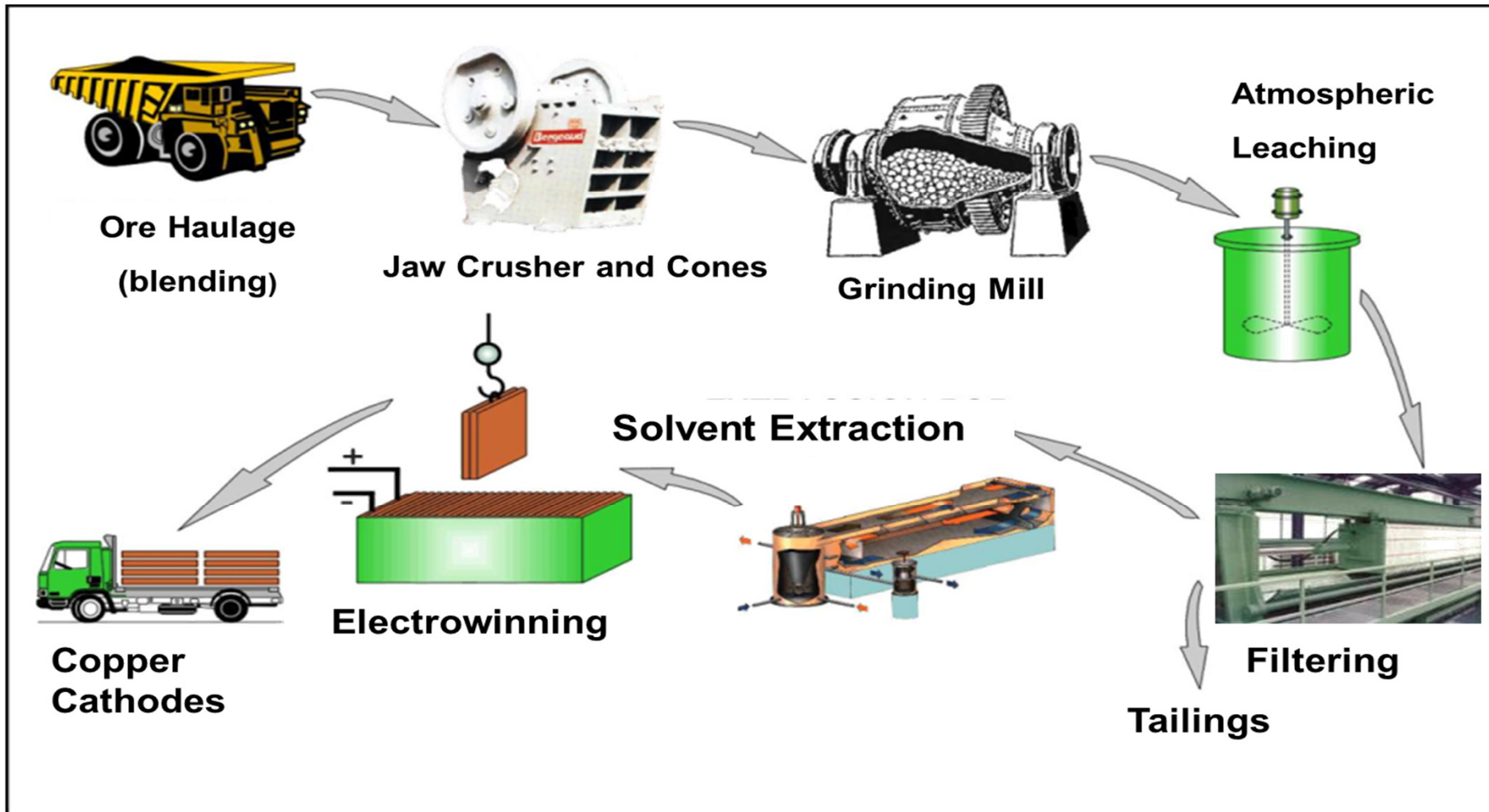


Loading delivers a homogeneous blend of all materials to achieve consistent Plant feed.
Critical in stabilizing the Plant

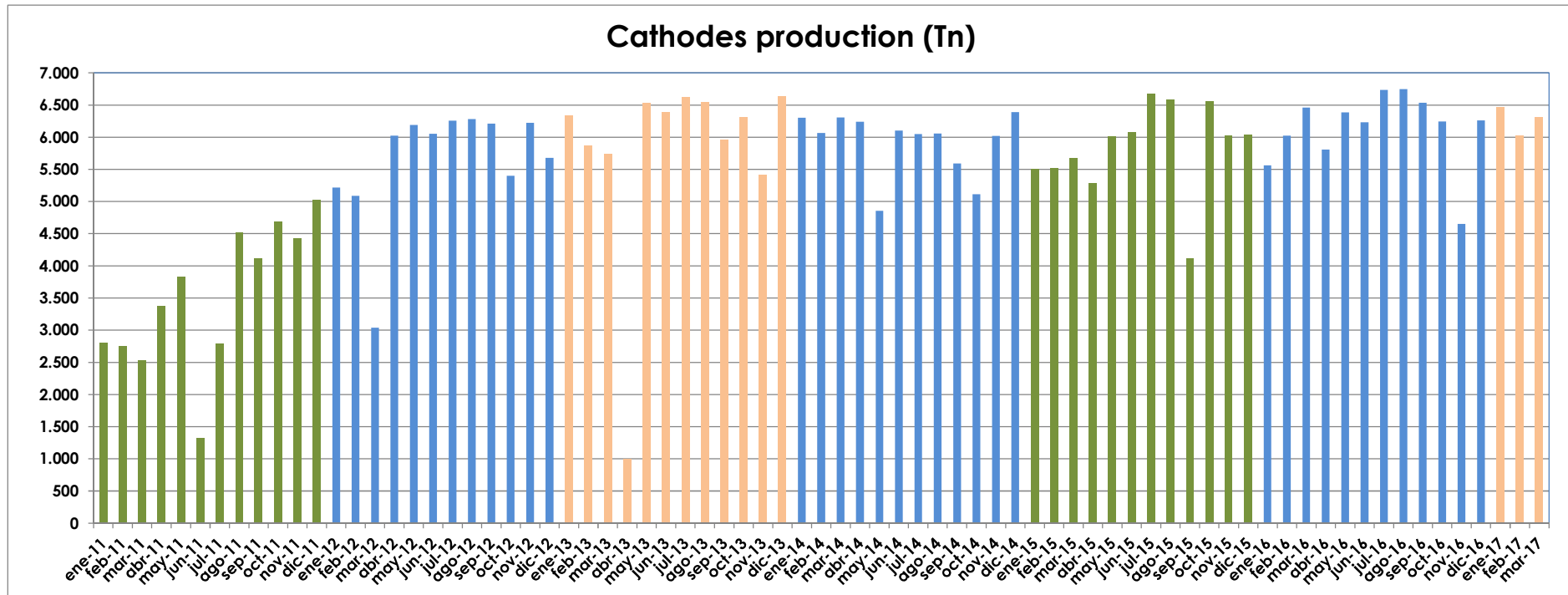
Hydrometallurgical Plant



Plant Flowsheet



Cathode Production

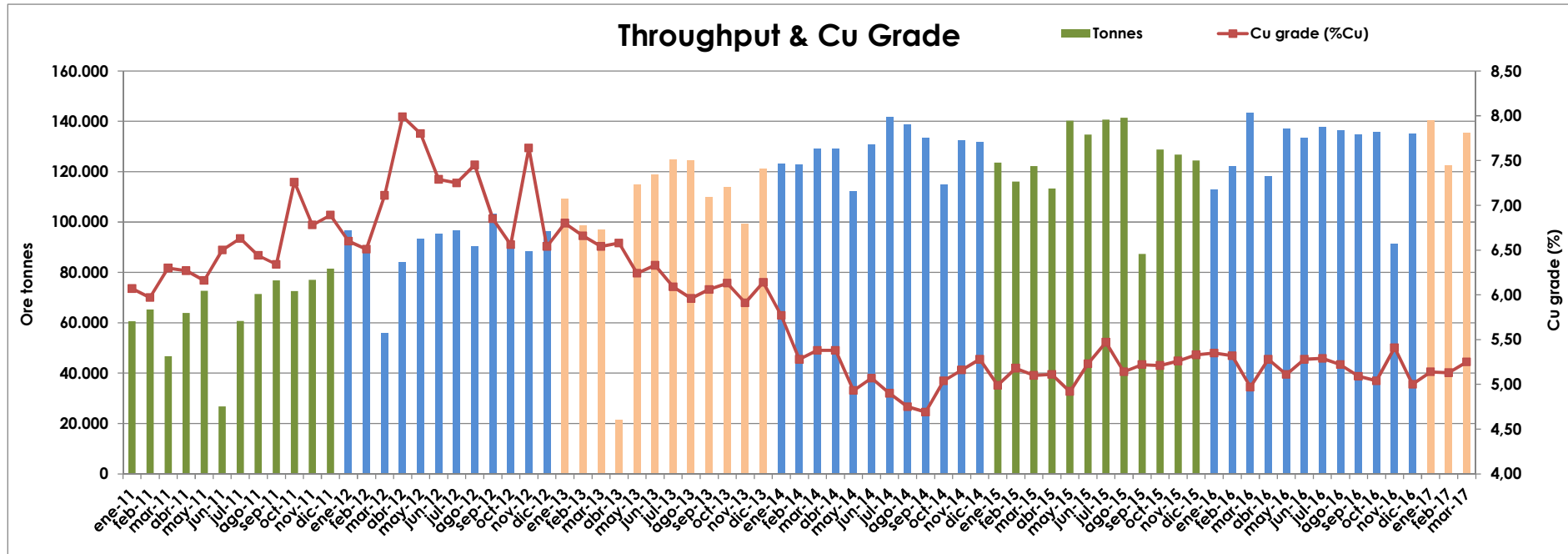


Lengthy process to achieve design capacity

‘Stable’ operations since April 2012

Key challenge is maintaining output at reducing grades

Plant Throughput Trend

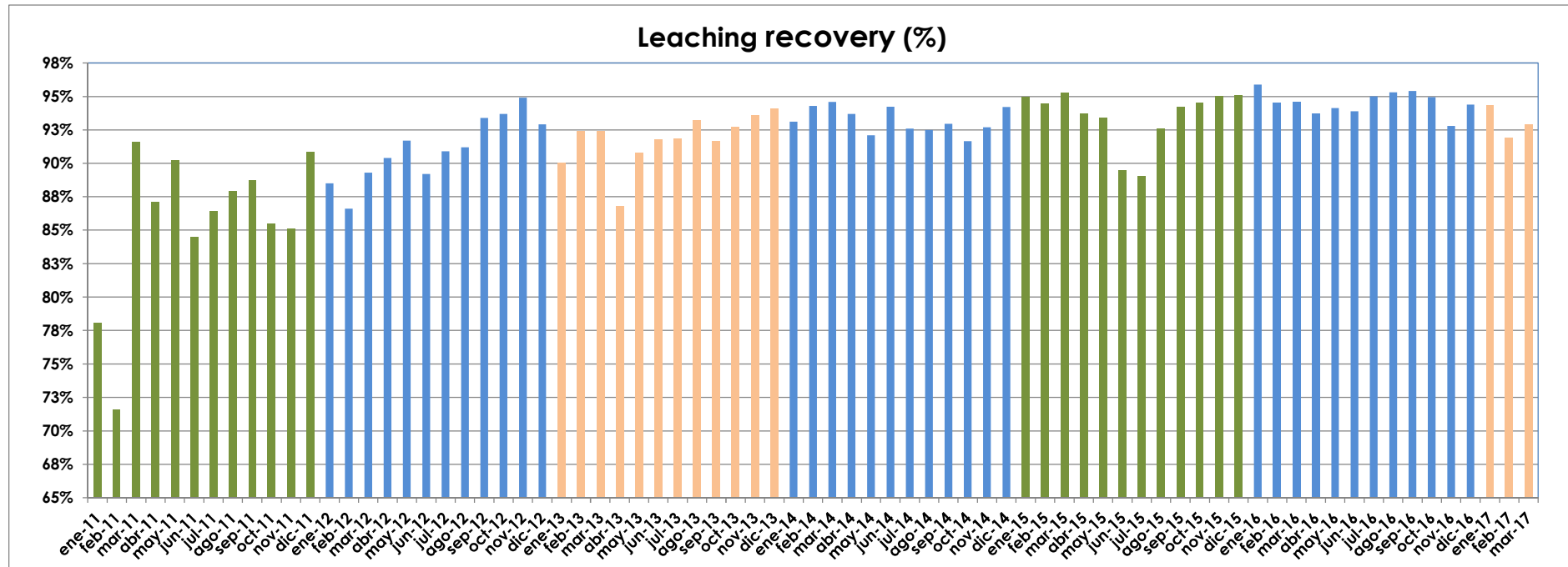


Substantial debottlenecking completed in advance of lower grades

Further opportunities limited – large capital required

Focus will continue on OEE, reliability & overall recovery

Leaching Recovery

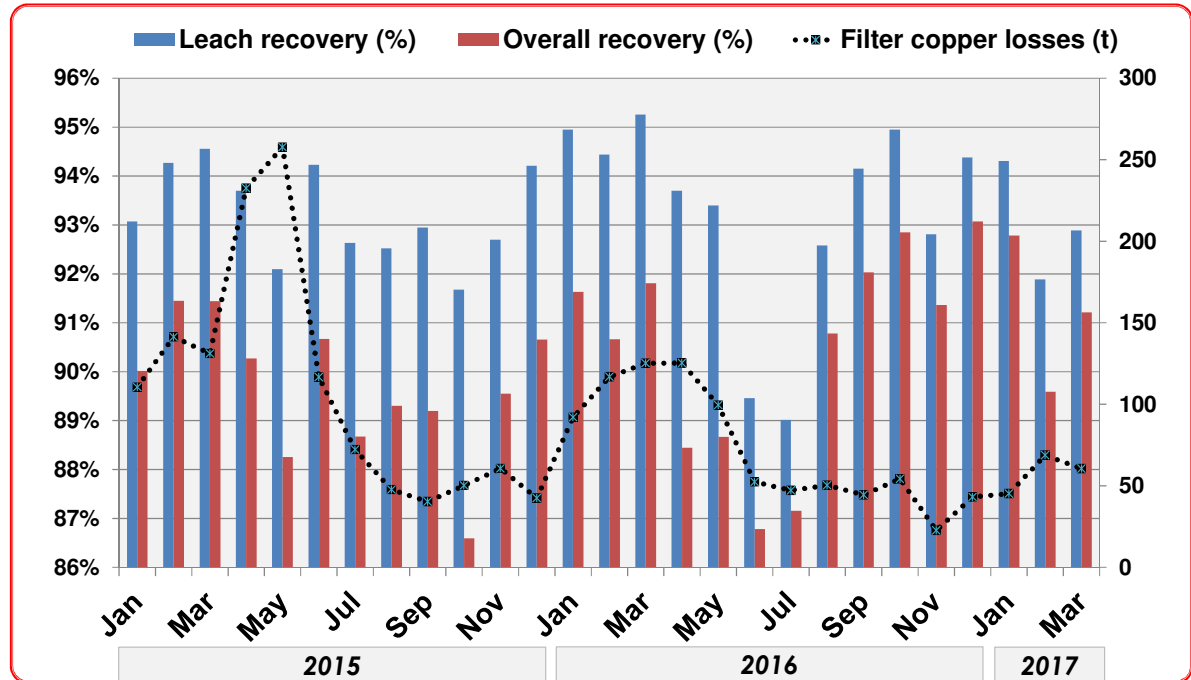


Major breakthroughs identified and implemented in 2011

Further opportunities addressed in 2012, 2013

Replacement of vacuum filters – addresses losses post leaching

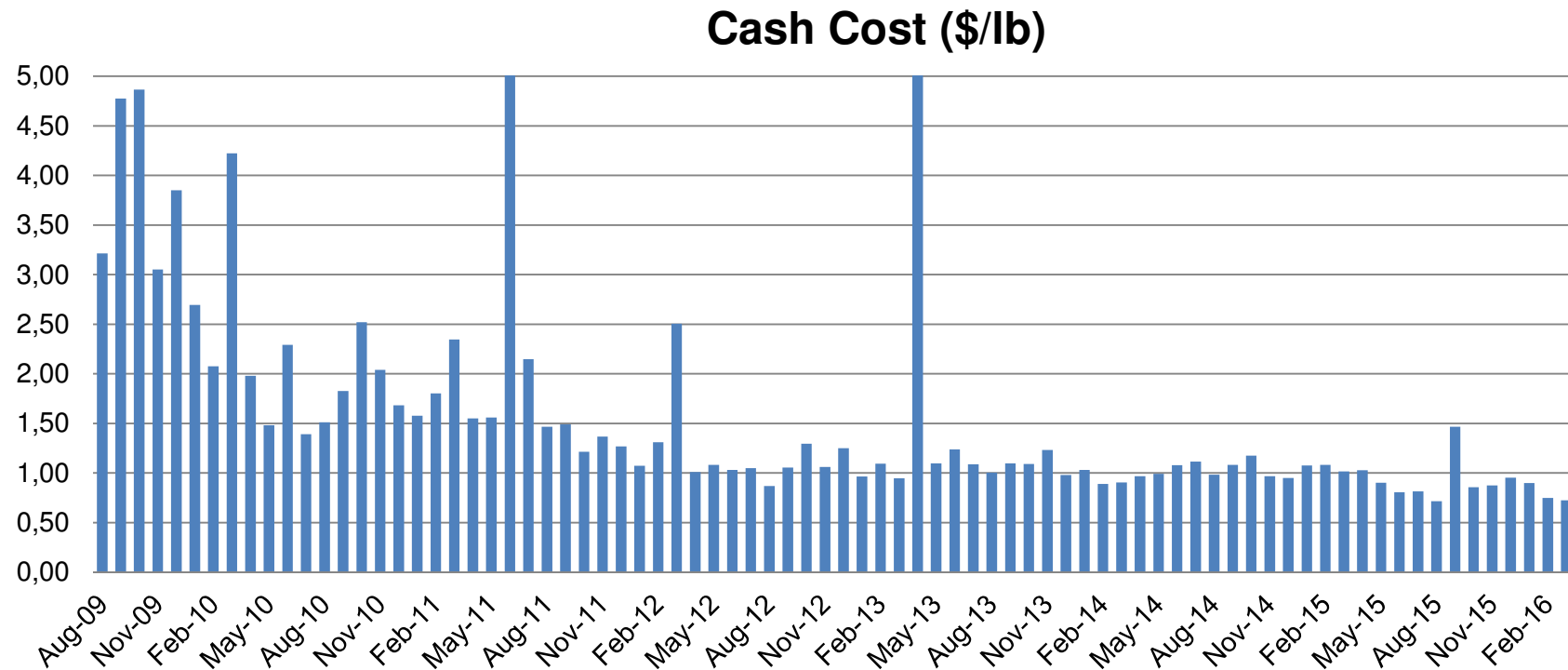
Overall Recovery



3 new pressure filters and 2 pulp coolers were installed to improve recoveries; commissioned and operational 2015-2016

Significant reduction in copper losses post leaching

Unit Cost of Production

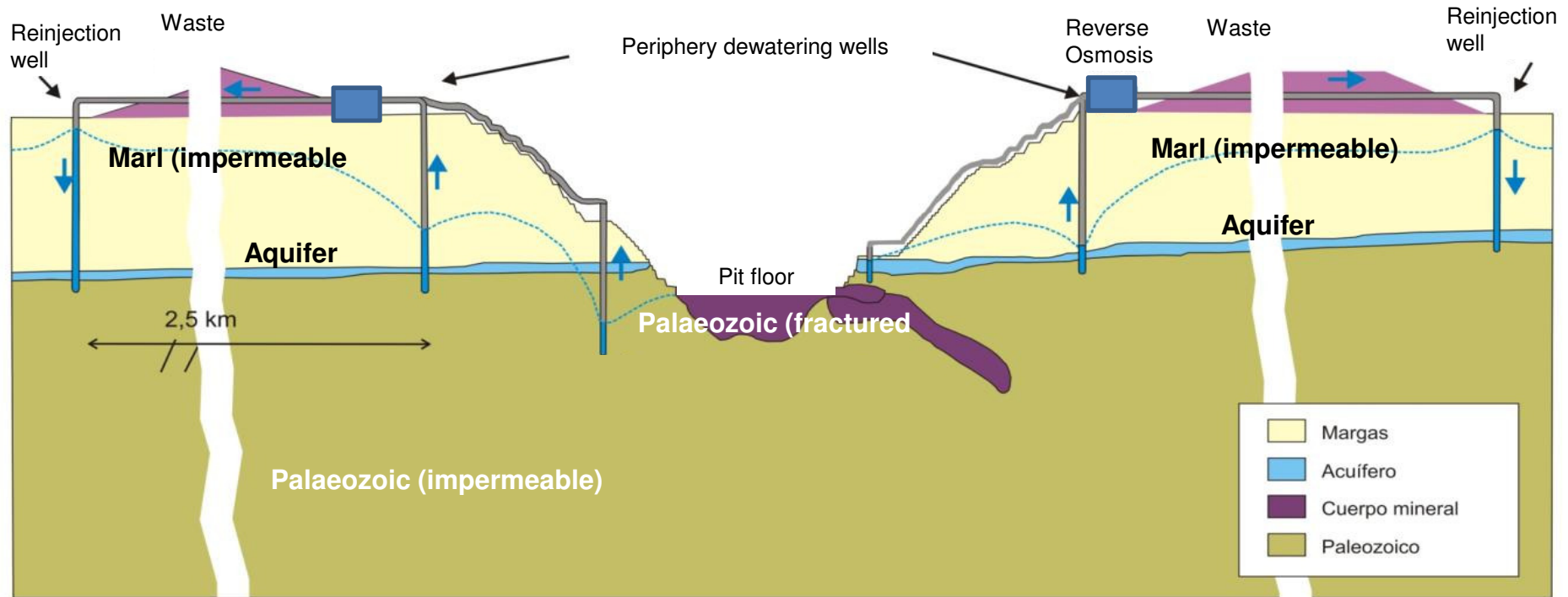


Clearly linked to production outcomes

Consistent performance since April 2012 – even with lower grade

Ongoing focus on cost reductions / throughput & recovery

Aquifer DRS Schematic



Perimeter wells to reduce pit inflows

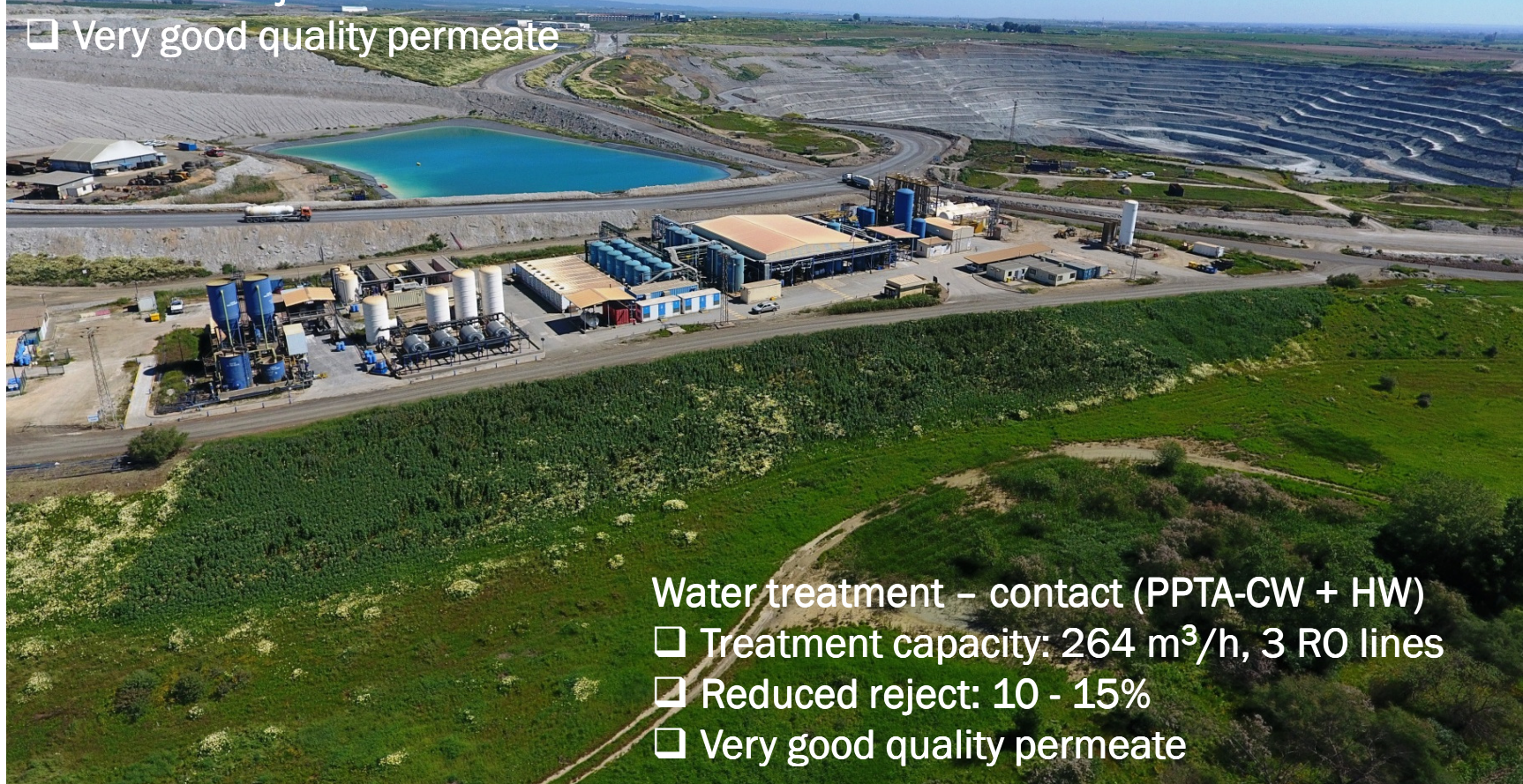
Treatment and reinjection of drained water

Compensation needed for water 'lost' from the aquifer

Water Treatment Plants

Water treatment and drainage /reinjection (PPTA-DRS)

- ❑ Treatment capacity: 576 m³/h, 3 RO lines
- ❑ Reduced reject: 2.5 - 8%
- ❑ Very good quality permeate



Water treatment – contact (PPTA-CW + HW)

- ❑ Treatment capacity: 264 m³/h, 3 RO lines
- ❑ Reduced reject: 10 - 15%
- ❑ Very good quality permeate



FIRST QUANTUM
MINERALS LTD.

Looking Ahead

Corporate Responsibility – leadership, safety, community

Managing Water – eliminate as an operational constraint

Operating Discipline – stability, cost & continuous improvement

LOM Opportunities – optimized mining, primary ore processing



LOM Opportunities

Optimizing LOM Schedule – grade across future years is variable; we are reviewing a staged design to evaluate treatment of lower grade material

Treatment of Gossan / Primary ore – study underway to review atmospheric leaching of primary sulphides resource

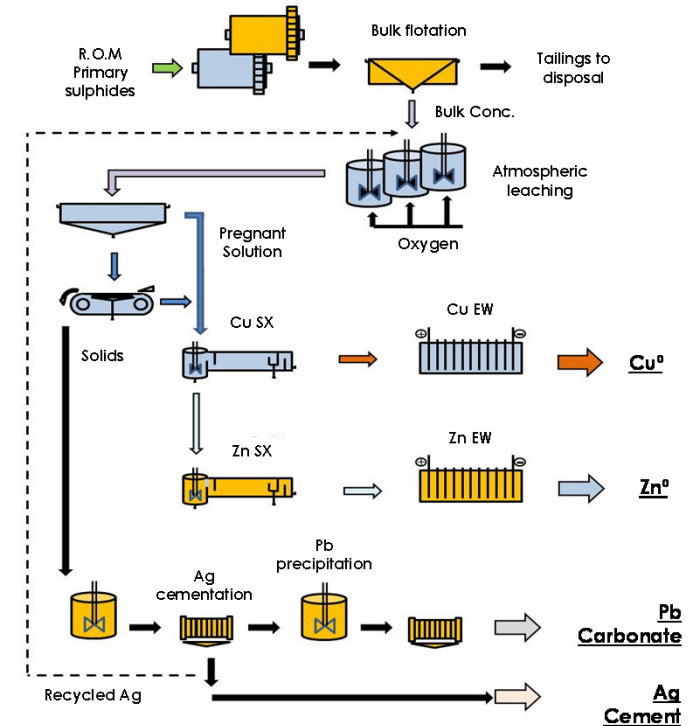
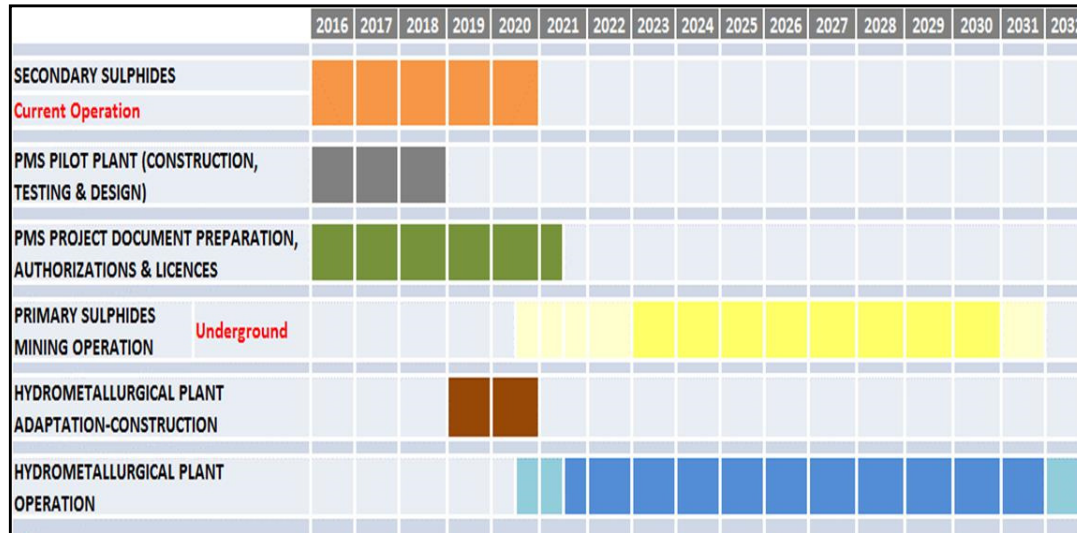
Can use existing facilities (with modifications and expansion) to extend the life of the mine and recovering valuable metals such as copper, zinc, lead and silver

Poly Metallurgical Refinery - PMR



- ☐ Pilot Plant constructed and operated over 12 months to test processing of Primary and Gossan ore.
- ☐ Developing proprietary technology in close cooperation with technology suppliers, e.g. Outotec
- ☐ Positive results to date; efficient recovery of metals: Cu, Zn, Pb, Ag.; investigating recovery of gold
- ☐ Full scale plant could extend the mine life beyond 2030
- ☐ Significant investment required; positive returns

PMR Project – Pilot Plant



❑ Pilot Plant results will feed into full scale plant design

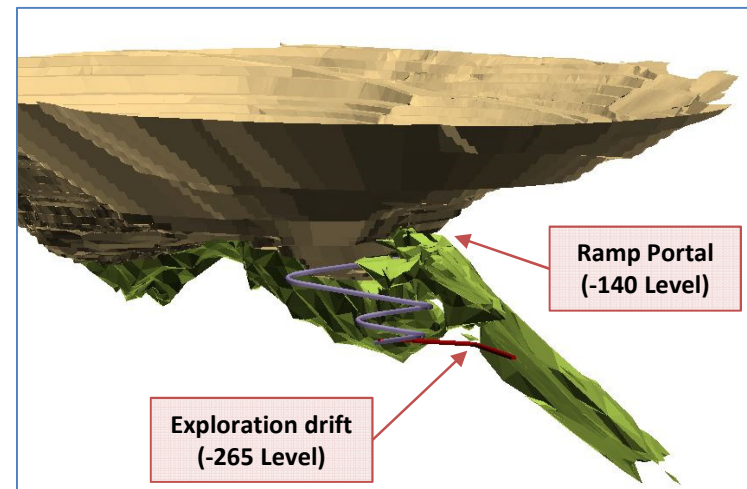
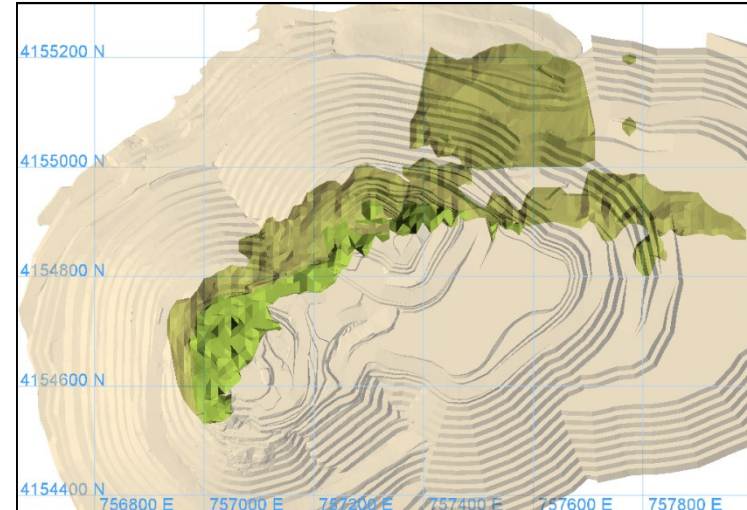
PMR Project - Underground Ramp

Objectives:

- To increase the Primary Ore reserves, upgrade resources and access new drilling targets.
- To improve UG mine design & planning.
- Advancing development of future UG mine.
- Permitting test for UG mine.

Other opportunities:

- Improve geotechnical knowledge of future mine development areas.
- Access to fresh ore (additional bulk sampling for Pilot Plant).
- To test the mining method (trial stope).



Questions



Thank you

