



Heron Resources Limited

HERON RESOURCES LIMITED

AN AUSTRALIAN ZINC-COPPER PRODUCER

NOOSA MINING & EXPLORATION CONFERENCE

JULY 18, 2019

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AGENDA

ASX: HRR

- ▶ **COMPANY**
 - ▶ OVERVIEW | BOARD & MANAGEMENT | INVESTMENT PROPOSITION
- ▶ **MARKET**
 - ▶ ZINC FUNDAMENTALS
- ▶ **ASSET**
 - ▶ WOODLAWN ZINC-COPPER PROJECT | PATH TO PRODUCTION
- ▶ **FOCUS**
 - ▶ OPERATIONAL READINESS | HYDRO MINING | UNDERGROUND MINING | PROCESS PLANT | OFF-SITE LOGISTICS
- ▶ **GROWTH**
 - ▶ EXPLORATION STRATEGY | IN-MINE EXPLORATION | REGIONAL EXPLORATION
- ▶ **APPENDICES**
 - ▶ UNDERGROUND ORE & TAILINGS RECLAIM CONFIGURATION | MINERAL RESOURCES & RESERVES



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Compliance Statement (JORC 2012)

The technical information in this release relating to the exploration results and forward program at the Woodlawn Project is based on information compiled by Mr David von Perger, who is a Member of the Australian Institute of Mining and Metallurgy (Chartered Professional – Geology). Mr von Perger is a full time employee of Heron Resources Limited and has sufficient experience, which is relevant to the style of mineralization and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the JORC Code (2012 edition). Mr von Perger has reviewed and approved the technical information in this presentation.

An Exploration Target is term used within the JORC 2012 Code for an estimate of the exploration potential of a mineral deposit, however the potential quantity and grade is conceptual in nature and there is insufficient information to estimate a Mineral Resource and it remains uncertain if further exploration will result in the estimation of a Mineral Resource.

The zinc equivalent (ZnEq) calculation takes into account, mining costs, milling costs, recoveries, payability (including transport and refining charges) and metal prices in generating a Zinc equivalent value for Au, Ag, Cu, Pb and Zn. $ZnEq = Zn\% + Cu\% * 3.12 + Pb\% * 0.81 + Au\ g/t * 0.86 + Ag\ g/t * 0.03$. Metal prices used in the calculation are: Zn US\$2,300/t, Pb US\$ 2,050/t, Cu US\$6,600/t, Au US\$1,250/oz and Ag US\$18/oz. These metal prices are based on Heron's long term view on average metal prices. It is Heron's view that all the metals within this formula are expected to be recovered and sold. Metallurgical metal recoveries used for the formula are: 88% Zn, 70% Pb, 70% Cu, 33% Au and 82% Ag; these are based on historical recoveries at Woodlawn and supported by metallurgical test work undertaken during the 2015-16 feasibility study.

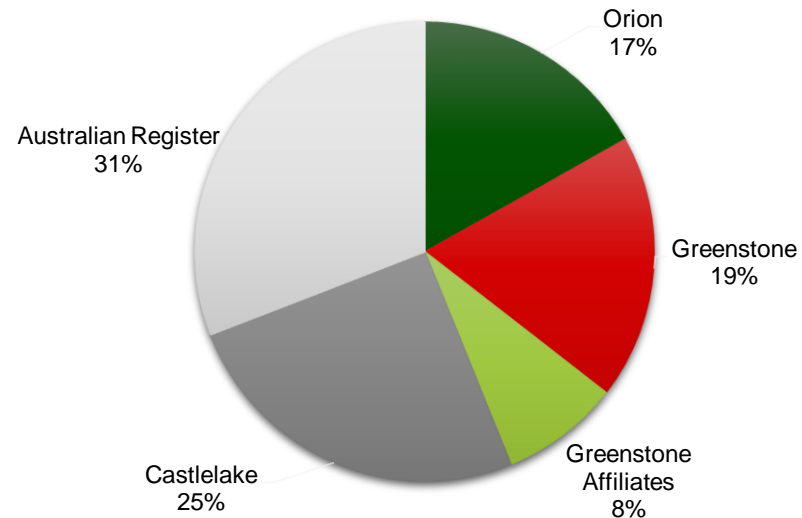
HERON RESOURCES OVERVIEW

Company snapshot

CAPITAL STRUCTURE

Shares	242 million
Options/Perf. rights	6.7 million
Top 20 Shareholders	86% of issued capital
Share price (as at 17 July 2019)	A\$ 0.535
Market cap (as at 17 July 2019)	A\$ 130.5 million
Cash (as at 30 June 2019)	A\$ 39.4 million
Debt	US\$ 60 million facility
Listed Investments	Ardea Resources, Alchemy Resources

SHARE REGISTER



HERON RESOURCES TEAM

Experienced Board & Management team

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BOARD



Stephen Dennis
Chairman (Non-Executive)



Mark Sawyer
Director (Non-Executive)



Wayne Taylor
Managing Director & CEO



Ricardo De Armas
Director (Non-Executive)



Borden Putnam III
Director (Non-Executive)



Peter Rozenauers
Director (Non-Executive)



Fiona Robertson
Director (Non-Executive)



Ian Pattison
Director (Non-Executive)

MANAGEMENT



Andrew Lawry
Chief Operating Officer



Simon Smith
General Manager, Finance & Company Secretary



David von Perger
General Manager, Exploration & Geology



Charlie Kempson
General Manager, Strategy & Business Development



Brian Hearne
General Manager, Woodlawn Mine



HERON RESOURCES INVESTMENT PROPOSITION

An Australian Zinc-Copper Producer



TODAY – STRONG FUNDAMENTALS

- ▶ Quality high-grade zinc and copper asset
- ▶ Production in ramp-up
- ▶ Sound commodity market fundamentals
- ▶ Supportive community & shareholder base
- ▶ Committed & experienced team



MARKET ZINC

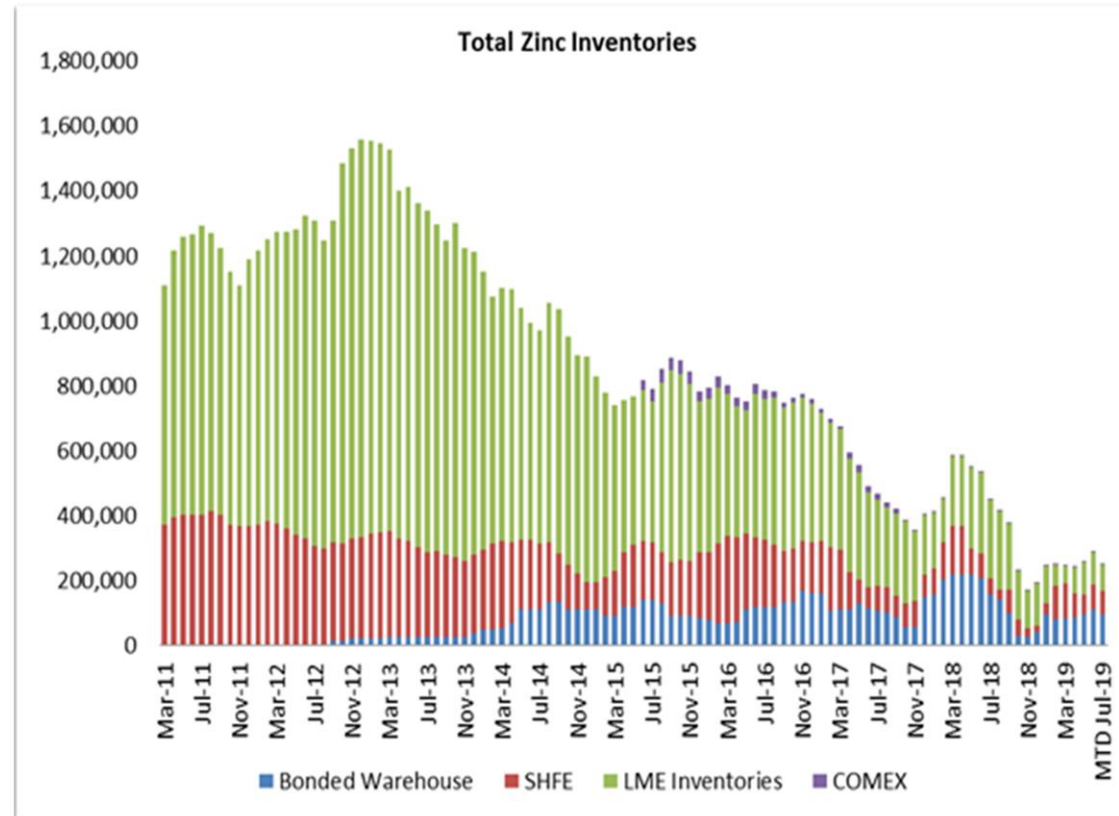
Strong Fundamentals – Short Term Tight Market To Continue

▶ Market Commentators

- ▶ Current smelter bottleneck resulting in continued refined metal deficits¹
- ▶ The gap between demand and supply for global zinc is expected to progressively move into surplus in 2022²
- ▶ Concern over potential impacts from the macro economic backdrop continue – impacts both supply and demand

▶ Stocks

- ▶ 252kt (LME, SHFE, Bonded, COMEX)
- ▶ 6.1 days consumption (<10 days is considered tight)



Source: Scotia Daily Mining Scoop 12 July 2019

1. Teck Resources Limited 2019 RBC Capital Markets Global Mining & Materials Conference.
2. Mining Technology, *Global zinc market to grow at 3.8% in 2022*, 1 February 2019, <https://www.mining-technology.com/comment/zinc-outlook-2019/>

ASSET WOODLAWN ZINC-COPPER PROJECT

Key Project Physicals – 2016 Feasibility Study (FS)

- ▶ 1.5Mtpa Production Rate
 - ▶ Split campaign - hard rock from underground operations or tailings reclaim.
- ▶ 9.3 year LOM (Reserves only)
 - ▶ Significant potential for upside
- ▶ Reserves
 - ▶ Underground 2.8Mt @ 14% ZnEq¹
 - ▶ Reclaimed Tailings 9.5Mt @ 6% ZnEq¹
- ▶ Steady State Gross Production
 - ▶ 40ktpa Zn (88Mlbs)
 - ▶ 10ktpa Cu (20Mlbs)
 - ▶ 12ktpa Pb (25Mlbs)
 - ▶ +Ag/+Au



¹ Refer to slide 3 for ZnEq definition and slides ii and iii for Reserves table

ASSET WOODLAWN ZINC-COPPER PROJECT

Unrivalled infrastructure

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Administration

Flotation Building

IsaMill™, Reclaim and Tailings Thickeners

Concentrate Filtering and Store

Ball Mill – Primary Grind (UG)

Fine Ore Bin

Assay Laboratory

Screening

Water Treatment Plant

Reagent Store

Primary Jaw Crusher

Workshop and Stores

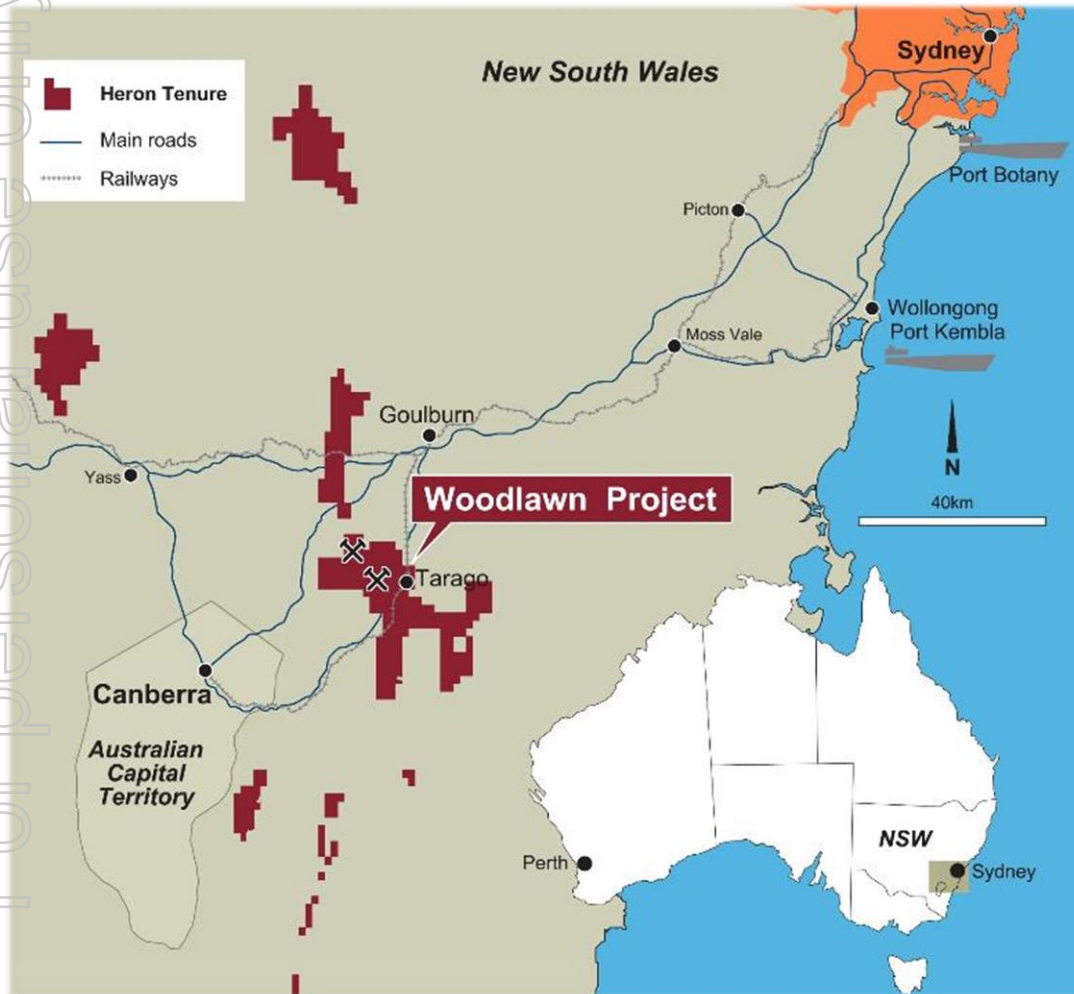
Secondary Cone Crusher

July 18, 2019



ASSET WOODLAWN ZINC-COPPER PROJECT

Premier location in favorable jurisdiction with existing infrastructure – cost effective solutions

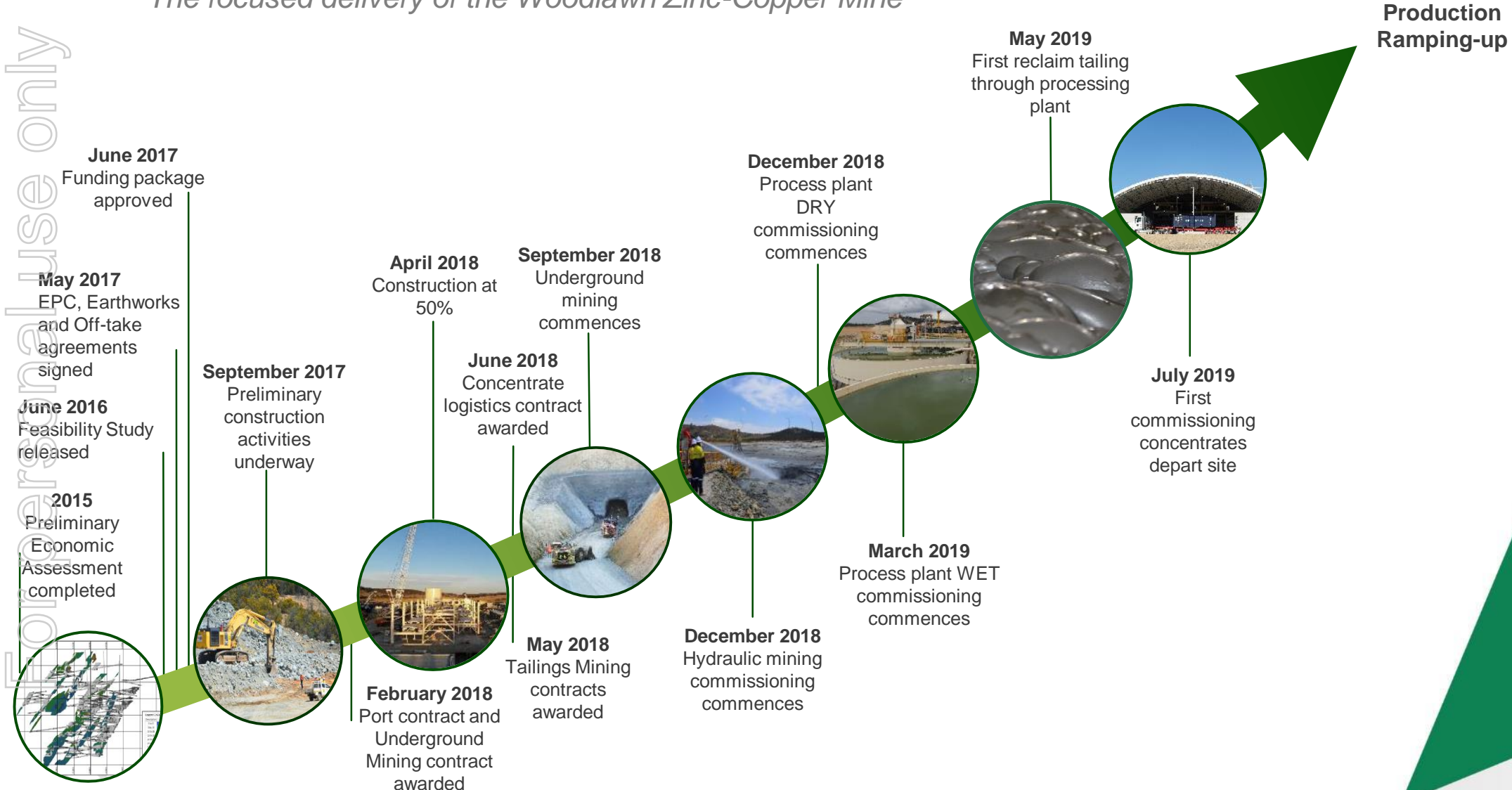


- ▶ Transport – Base metal concentrates to Port Botany and Port Kembla via existing road-rail infrastructure:
 - ▶ Roads - sealed B-double rated
 - ▶ Rail - Goulburn rail yard (approx. 50km)
 - ▶ Intermodal solution is highly attractive
- ▶ Power – NSW State grid sub-station
- ▶ Water – Willaroo Bore Field
- ▶ Population Centres – skilled labour and community infrastructure

ASSET PATH TO PRODUCTION

The focused delivery of the Woodlawn Zinc-Copper Mine

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FOCUS OPERATIONAL READINESS

In production ramp-up



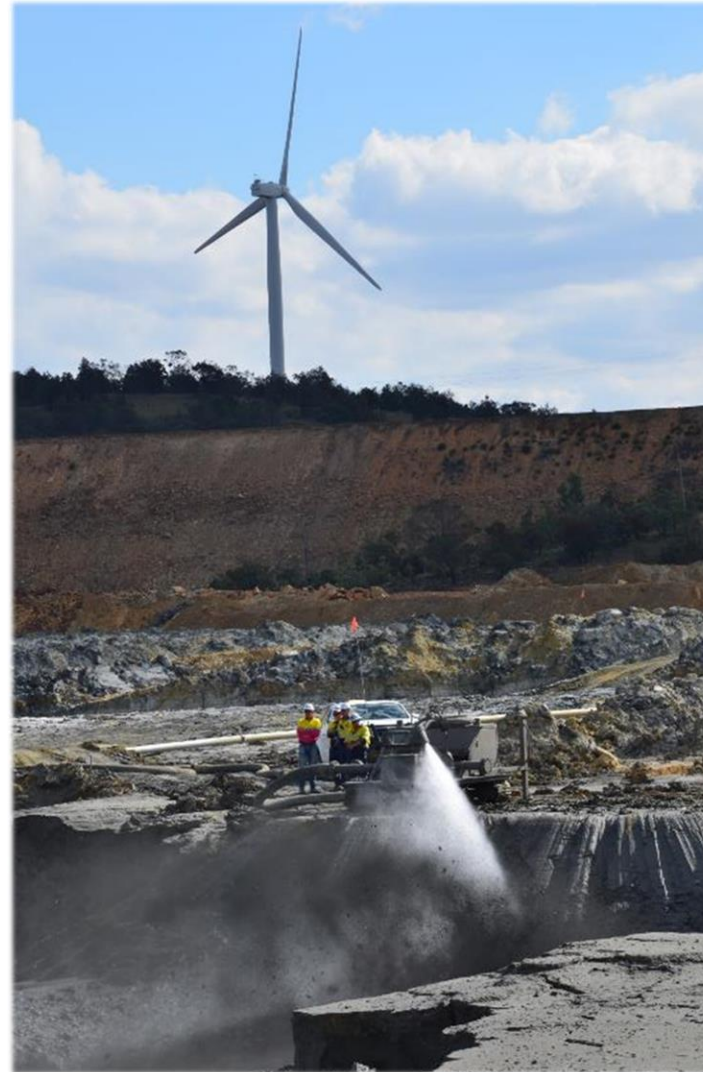
- ✓ Hydraulic mining in production mode. Grades in line with Reserves
- ✓ DRY, WET and load commissioning of retreatment circuit complete
- ✓ Stockpiling of ore from underground delivered to ROM - commissioning material ready to treat
- ✓ Plant operation commenced 6 May – ramping up throughput
- ✓ Commissioning concentrates produced
- ✓ Off site logistics underway for product delivery



FOCUS HYDRO MINING

Operational and in production

- ✓ Hydraulic mining circuit fully operational and in production
- ✓ Optimising performance – achieved 4,332t (5 July 2019) – equates to 1.6Mtpa run rate
- ✓ Excellent flow densities and excavation control



FOCUS UNDERGROUND MINING

Operations on track and to schedule

- ✓ Underground development in line with schedule
- ✓ 2.3km of underground development completed
- ✓ Steady recent trend of above plan monthly advance continues
- ✓ First ore from underground delivered to run-of-mine (ROM) pad (G2 lens)
- ✓ Primary ventilation & second means of egress well advanced
- ✓ Paste plant commissioning mid-July 2019



FOCUS PROCESS PLANT

Ramping-up

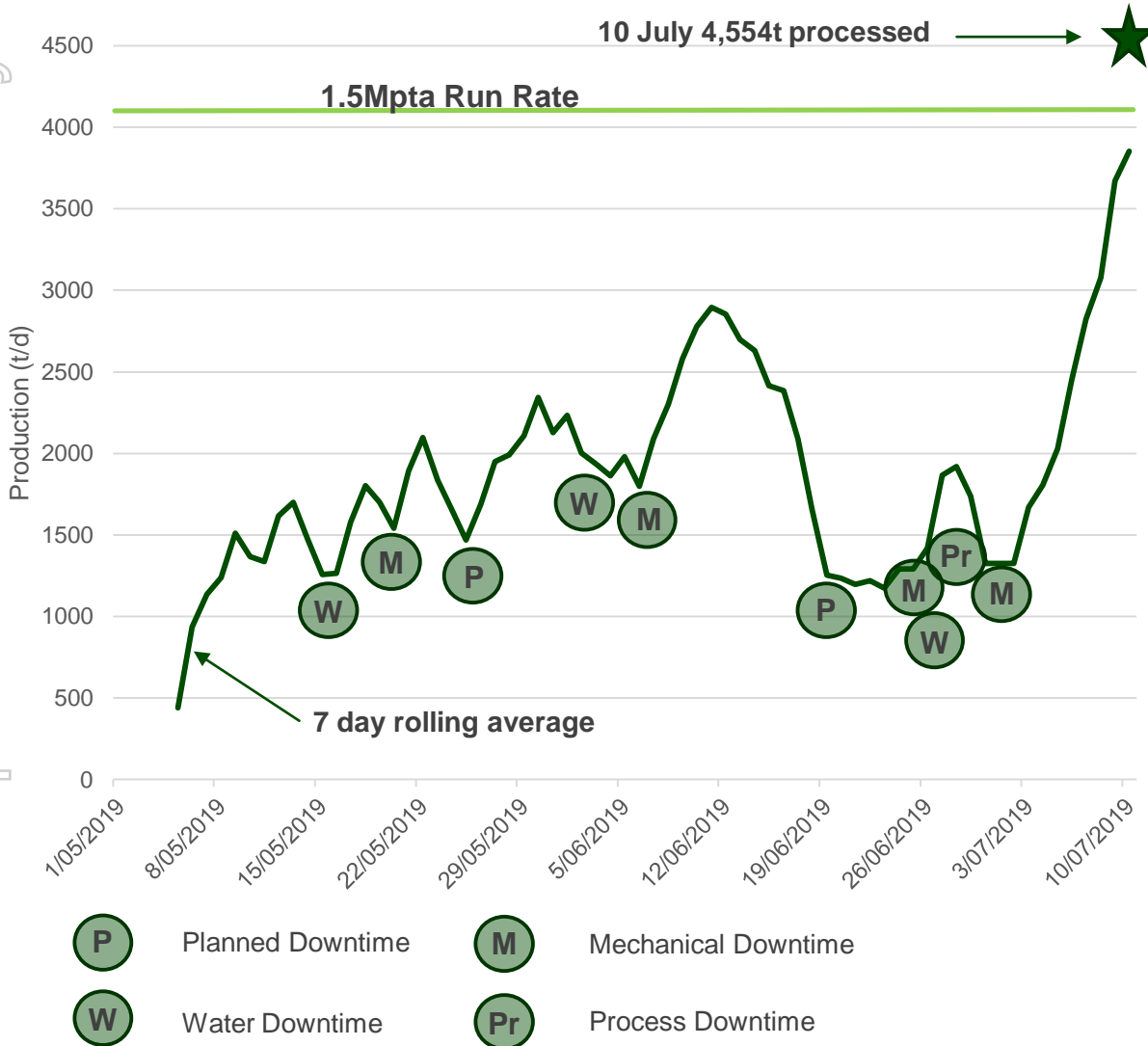


- ✓ Plant feed commenced on reclaimed tailings – 6 May 2019
- ✓ Initial attention on mechanical performance and reliability – pumps, valves, motors, pipes
- ✓ Throughput ramp-up - design (190t/hr) achieved 10 July 2019
- ✓ Full shift zinc concentrate production >55% Zn achieved 9 July 2019
- ✓ Commissioning of UG only component (crushing & ball mill) to commence mid-July 2019



FOCUS PROCESS PLANT

Production Ramp-up Progress



THE EARLY STAGES OF RAMP-UP

- ▶ New Plant – critical to prove process plant capability
 - ▶ Mechanical reliability
 - ▶ Electrical reliability
 - ▶ Process flow integration
 - ▶ Feed stock
 - ▶ Water
 - ▶ Reagents
- ▶ First commissioning concentrate production – lower grade
 - ▶ Options - sales, blending, re-processing



FOCUS OFF-SITE LOGISTICS

First zinc concentrates departed site 10 July 2019



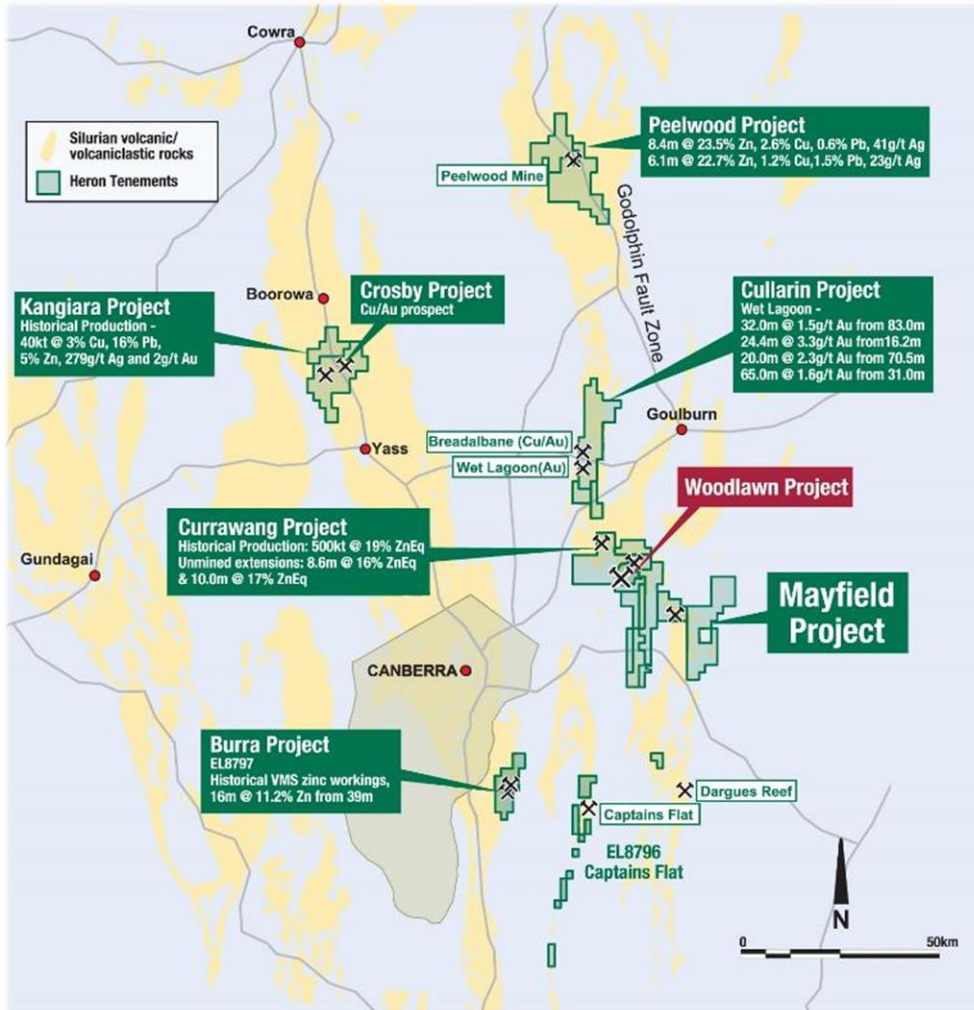
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GROWTH EXPLORATION STRATEGY

Committed to exploration of in-mine and regional targets to extend mine life

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9.3 YEAR MINE LIFE (RESERVES ONLY)

Prioritised mine life extension opportunities:

1. Convert UG Resources
 - ▶ 2.8Mt P+P Reserves from 7.2Mt M+I+I Resources¹
2. Extensions to existing VMS lenses
3. New discoveries in-mine (4 of 14 lenses discovered after mining ceased)
4. Near mine deposits & prospects
5. Regional deposits & prospects
 - ▶ Dominant Regional Position
 - ▶ Tenure of 1,200km²
 - ▶ Coverage of VMS host rocks
 - ▶ Acquiring 'forgotten' projects

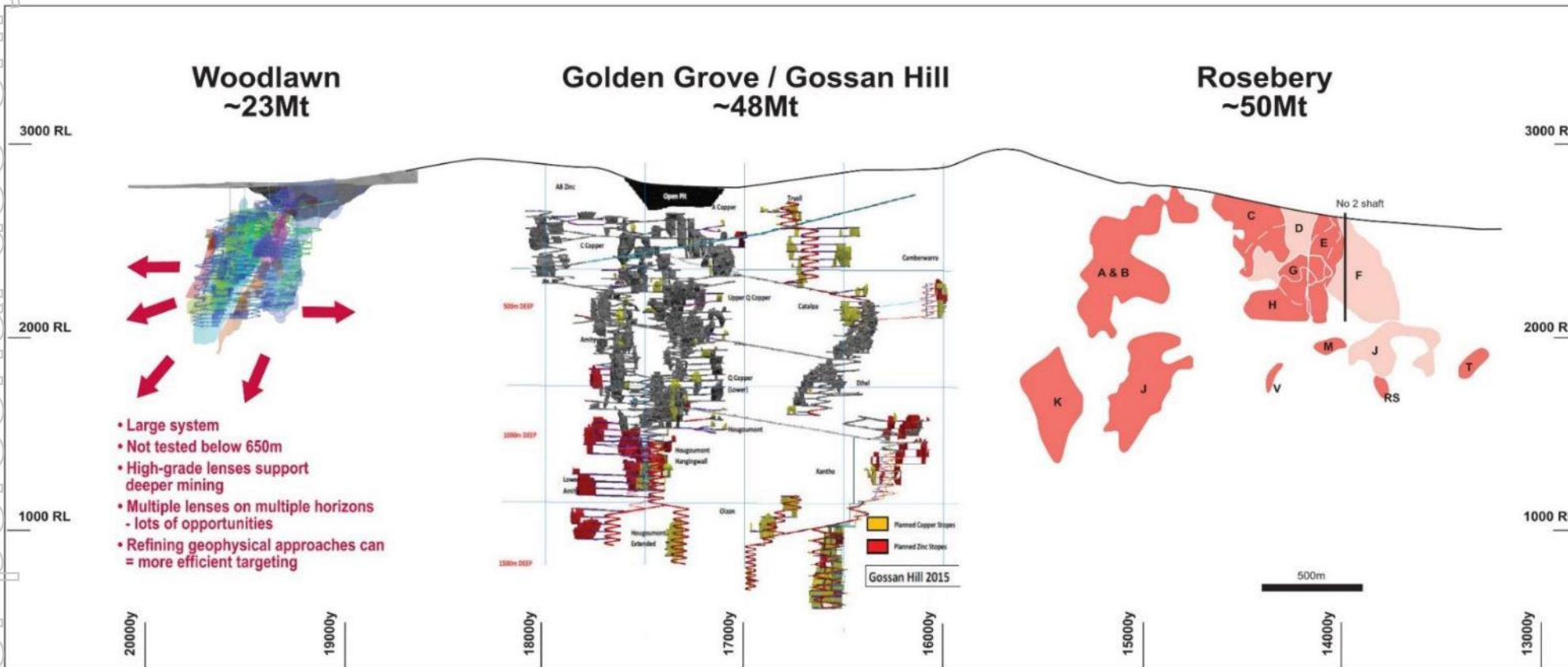
¹ Refer to Slide 27 for detailed breakdown



GROWTH WOODLAWN IN-MINE EXPLORATION

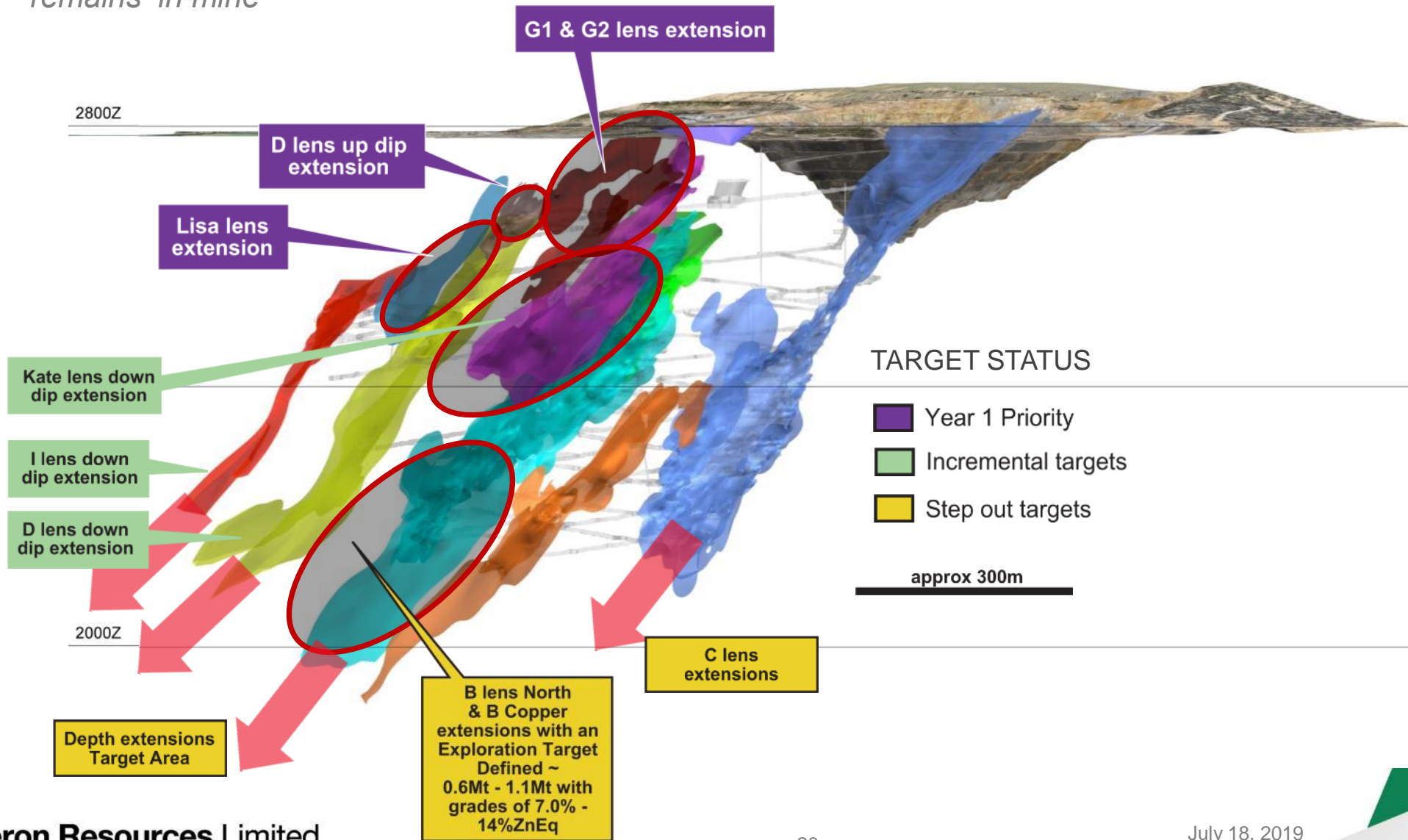
Limited Testing – Comparison with more extensively tested Australian VMS deposits.

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GROWTH WOODLAWN IN-MINE EXPLORATION

Targeted additions to the mine plan with immediate value-add – significant untapped potential remains 'in-mine'

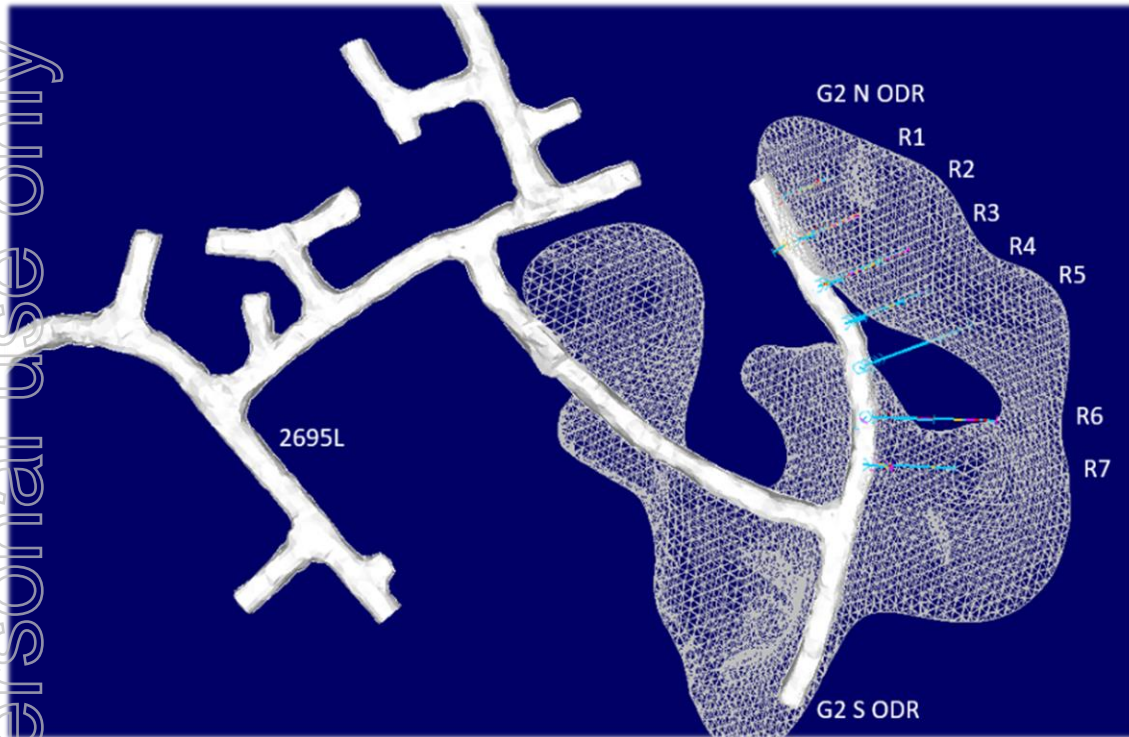


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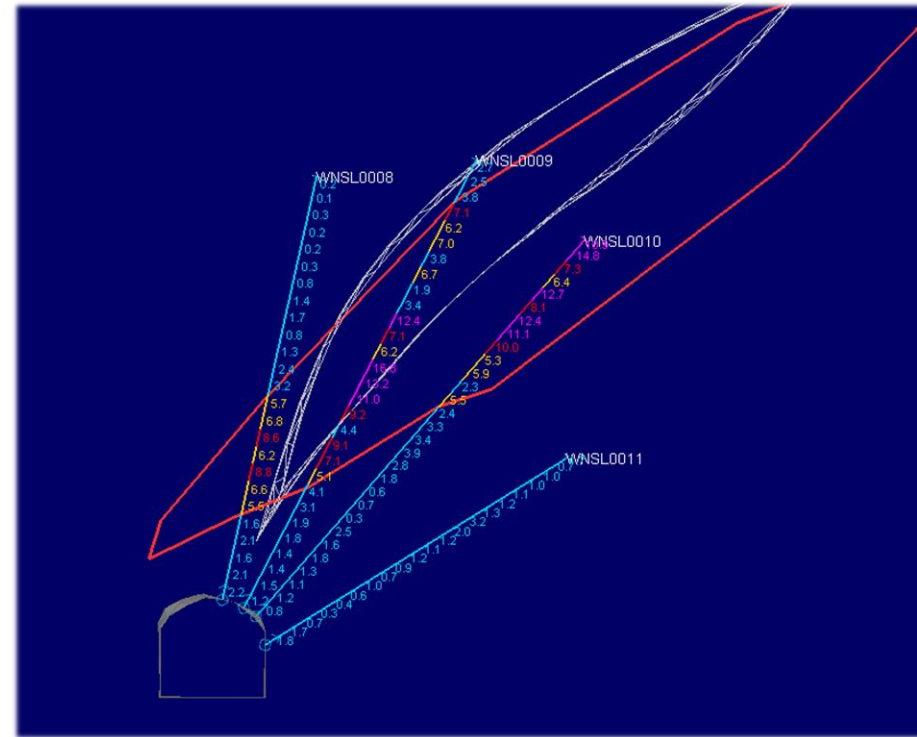


GROWTH WOODLAWN IN-MINE EXPLORATION

Upper level potential



Plan G2 lens surface



Ring R3 - Widening of model and flattening (ZnEq grades shown)

G2 definition drilling progress – confirming and refining lens boundaries

Underground diamond drill program scheduled to start Q3 2019 targeting G, H and Kate lens extensions

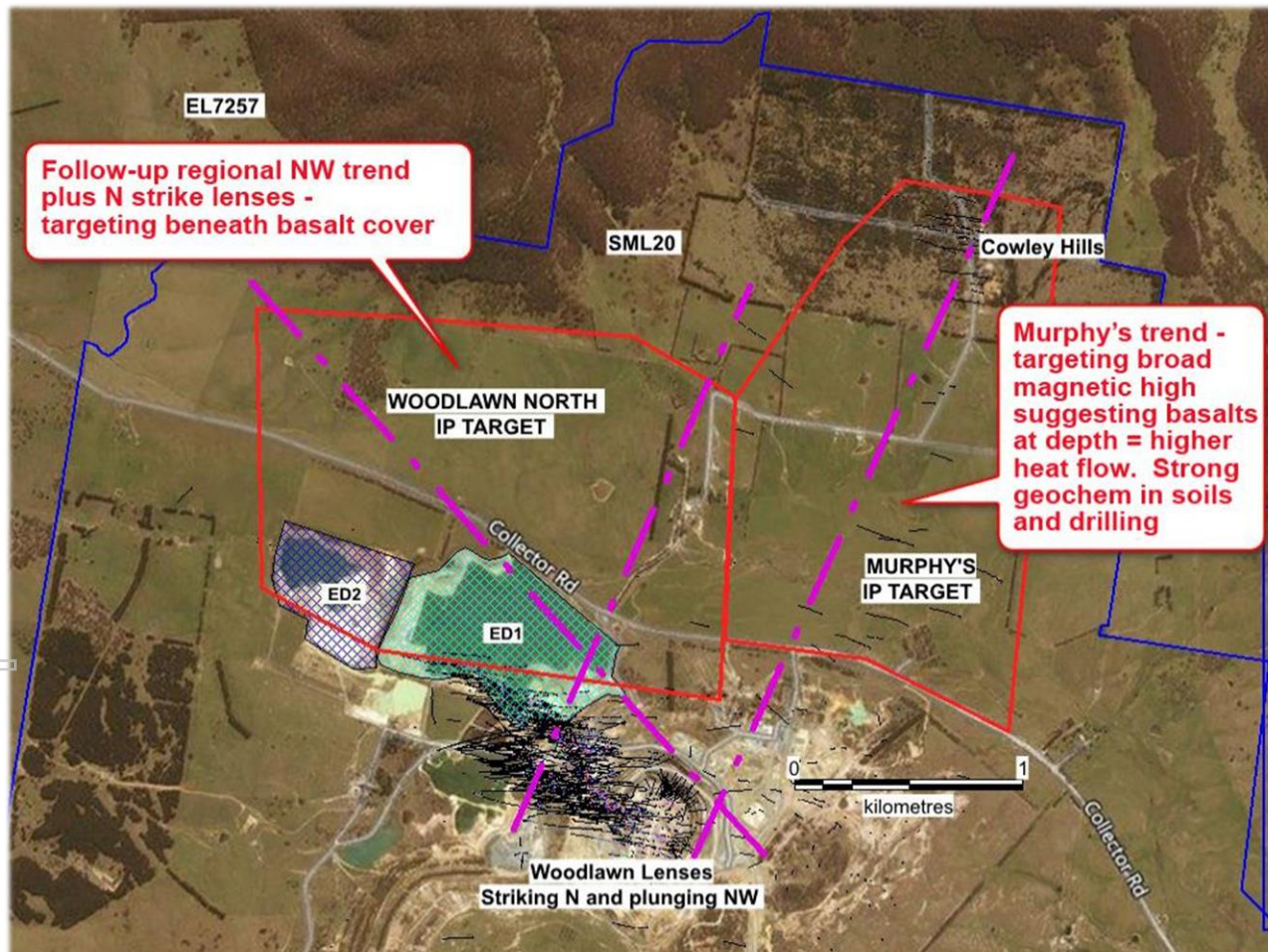
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GROWTH WOODLAWN REGIONAL POTENTIAL

Woodlawn North IP Survey – March 2019

TARGET: WOODLAWN REPEATS NORTH OF EXISTING MINE ON GRANTED MINING LEASE



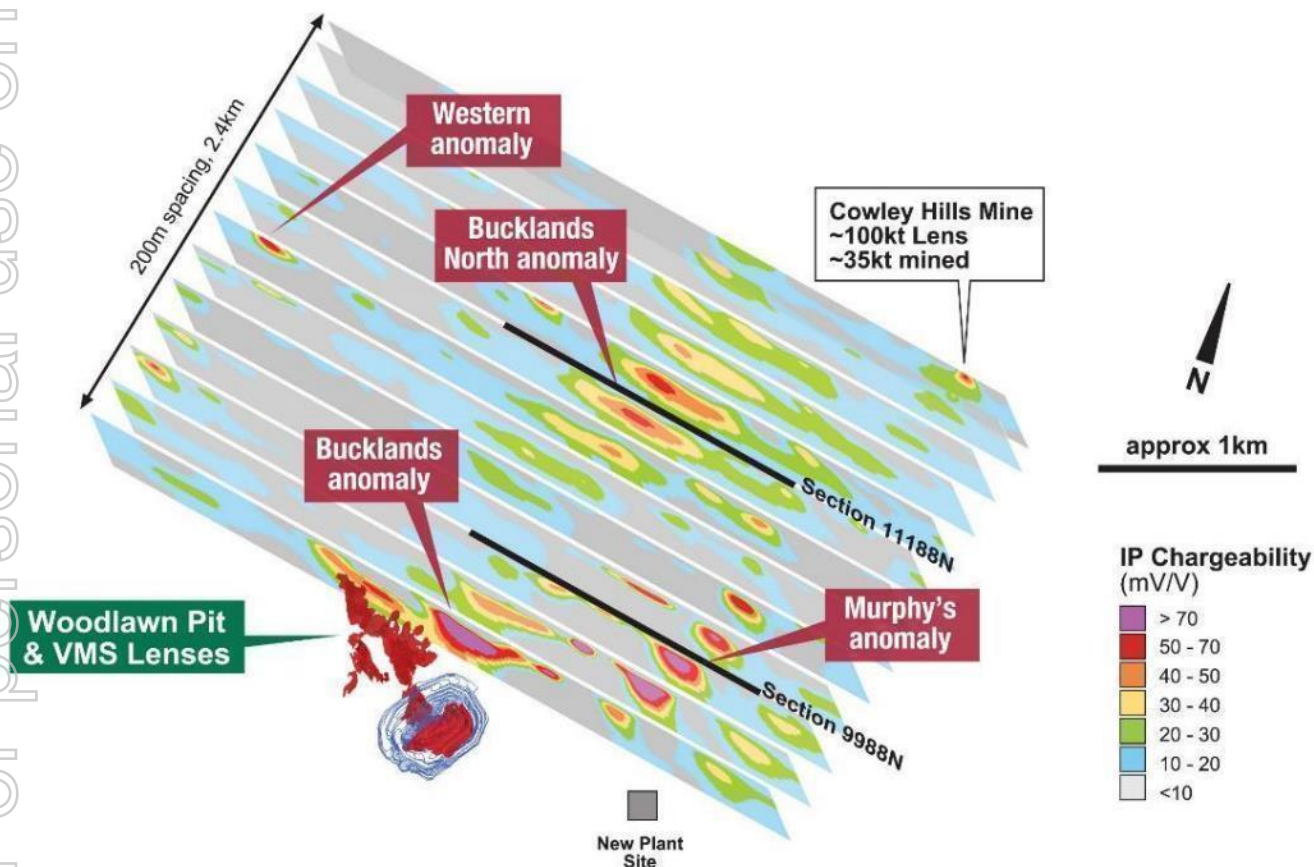
- ▶ 1970s surveys - good Induced Polarisation (IP) response
- ▶ Historical survey limited to ~150m depth. Modern surveys good to 700-800m depth (optimal conditions)
- ▶ IP measures broad patterns of conductivity also chargeability which measures disseminated sulphides
- ▶ Supporting evidence of mineralisation - surface geochem and limited shallow historical drilling
- ▶ Survey completed on 200-400m spaced lines
- ▶ Significant anomalies detected



GROWTH WOODLAWN REGIONAL POTENTIAL

Woodlawn North IP Survey – March 2019

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RESULTS –

- ▶ A number of significant anomalies
- ▶ Chargeability response indicative of sulphide content of the rock
- ▶ Murphy's target drill tested and intersected a graphitic shale in proximity to the anomaly
- ▶ Bucklands North target drill tested and returned a zone of moderate sericite, carbonate, pyrite/pyrrhotite alteration near centre of the anomaly with some quartz veining – possible near miss and DHEM to be conducted
- ▶ Bucklands target – currently being drilled, early strong alteration



SUMMARY HERON RESOURCES

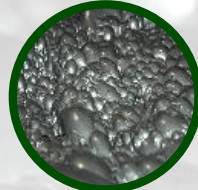
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TODAY – STRONG FUNDAMENTALS

- ▶ Quality high-grade zinc and copper asset
- ▶ Production in ramp-up
- ▶ Sound commodity market fundamentals
- ▶ Supportive community & shareholder base
- ▶ Committed & experienced team



NEXT PHASE – KEY GROWTH DRIVERS

- ▶ Nameplate production
- ▶ Cash flow positive
- ▶ Closure on Sedgman dispute
- ▶ In-mine exploration to expand LOM
- ▶ Highly prospective tenement package





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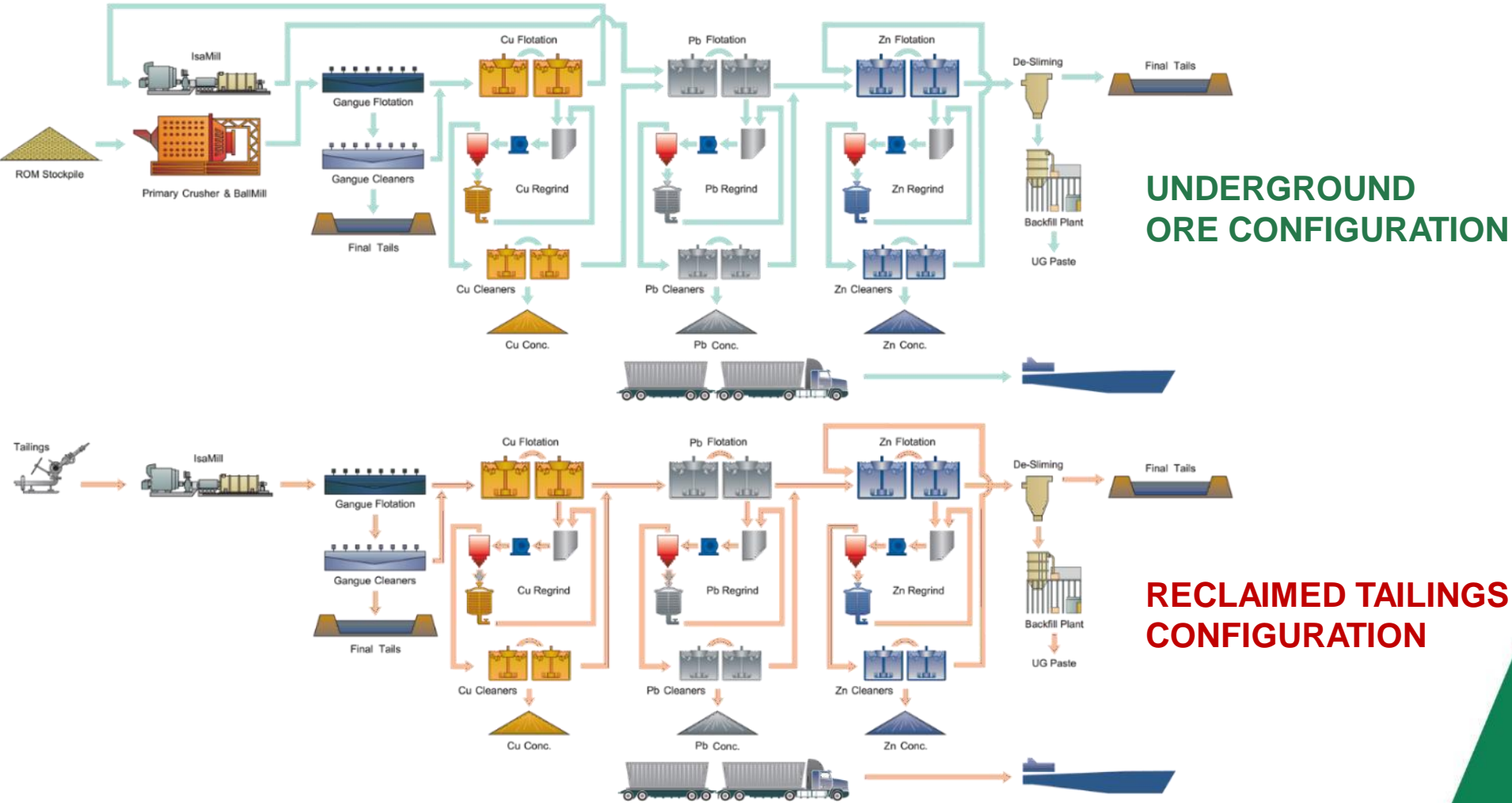


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FOCUS PROCESS PLANT

Two ore sources (underground and tailings) reduce risk and increase operational flexibility.

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UNDERGROUND – MINERAL RESOURCES AND ORE RESERVES

Woodlawn Total Underground Mineral Resource 2017 (ASX Release 13 Nov 2017)
(7% ZnEq cog for Polymetallic and 1% Cu cog for Copper)

Indicated + Measured Mineral Resource

			Tonnes Mt	ZnEq %	Zn %	Cu %	Pb %	Au g/t	Ag g/t
All Lenses	Polymetallic	Ind+Mea	2.7	21.6	10.9	1.5	4.0	0.7	79
All Lenses	Copper	Ind+Mea	1.9	9.7	0.7	2.6	0.1	0.2	14
Total	Combined	Ind+Mea	4.6	16.7	6.7	1.9	2.4	0.5	52

Inferred Mineral Resource

			Tonnes Mt	ZnEq %	Zn %	Cu %	Pb %	Au g/t	Ag g/t
All Lenses	Polymetallic	Inf	1.9	16.9	7.3	1.5	3.0	0.8	61
All Lenses	Copper	Inf	0.7	9.2	0.7	2.5	0.1	0.2	12
Total	Combined	Inf	2.6	14.9	5.6	1.8	2.2	0.6	48

Total Mineral Resource

			Tonnes Mt	ZnEq %	Zn %	Cu %	Pb %	Au g/t	Ag g/t
All Lenses	Polymetallic	Ind+Mea+Inf	4.6	19.7	9.4	1.5	3.6	0.7	71.6
All Lenses	Copper	Ind+Mea+Inf	2.6	9.6	0.7	2.6	0.1	0.2	13.5
Total	Combined	Ind+Mea+Inf	7.2	16.0	6.3	1.9	2.3	0.5	50.6

Woodlawn Underground Mineral Reserve Estimate 2016

Type	Reserve Category	Quantity (Mt)	ZnEq(%)	Zn(%)	Cu(%)	Pb(%)	Au(g/t)	Ag(g/t)
Polymetallic	Proven	0						
Polymetallic	Probable	1.8	16	8.1	1.2	2.9	0.56	57
Copper	Proven	0						
Copper	Probable	0.96	8.8	0.61	2.4	0.13	0.23	14
Total	Probable	2.8	14	5.5	1.6	1.9	0.45	42



TAILINGS – MINERAL RESOURCES AND RESERVES

Mineral Resource Estimate - Woodlawn Retreatment Project (2016)

Resource Category	Grades						
	Quantity (Mt)	ZnEq (%)	Zn (%)	Cu (%)	Pb (%)	Au (g/t)	Ag (g/t)
Measured + Indicated Mineral Resources							
North Dam	2.7	6.0	2.40	0.42	1.30	0.27	34
South Dam	3.3	6.0	2.50	0.46	1.20	0.25	27
West Dam	3.8	6.5	2.0	0.62	1.40	0.40	35
Total Mea+ Ind	9.8	6.2	2.30	0.51	1.3	0.31	32
Inferred Mineral Resources							
North Dam	0.2	6.2	2.40	0.42	1.30	0.27	34
South Dam	0.9	5.6	2.30	0.48	1.20	0.25	24
West Dam	0.0	-	-	-	-	-	-
Total Inferred	1.1	5.8	2.30	0.47	1.20	0.25	27
Total Mea+Ind+Inf	10.9	6.2	2.30	0.51	1.29	0.30	32

Woodlawn Tailings Mineral Reserve Estimate 2016

Reported with no cut-off grade applied

Reserve Category	Quantity (Mt)	ZnEq(%)	Zn(%)	Cu(%)	Pb(%)	Au(g/t)	Ag(g/t)
Proven	6.4	6.0	2.2	0.5	1.3	0.29	31
Probable	3.2	6.0	2.1	0.5	1.3	0.33	32
Total (Proven + Probable)	9.5	6.0	2.2	0.5	1.3	0.31	31

