

TSX:HER

ASX:HRR

# 2017 AGM Presentation Building an Australian zinc producer

November 2017

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#### Compliance Statement (JORC 2012 and NI 43-101)

This presentation incorporates by reference the complete ASX announcement relating to the Feasibility Study results which were released to the market on 29 June 2016 and is entitled "Heron Resources delivers robust Feasibility Study for Woodlawn Project" ("FS Announcement"). The FS Announcement is available from the Company's website at www.heronresources.com.au or from the ASX or SEDAR, and contains the JORC Table 1 relating to the Mineral Resources and Ore Reserves as well as the detailed technical and financial assumptions which underpin the FS results. These detail assumptions are included in the 'Technical Report (NI 43-101) Feasibility Study for the Woodlawn Project' as released on SEDAR 25 July 2016.

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) and "qualified person" as this term is defined in Canadian National Instrument 43-101 ("NI 43-101"). Mr von Perger has reviewed and approved the technical information this presentation.

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 testwork undertaken during the 2015-16 feasibility study. Commodity prices and metallurgical recoveries are factored into the zinc equivalent calculation using a standard metal equivalent formula.



## HERON RESOURCES CORPORATE SUMMARY Everything in place

### MARKET Zin

## ASSET

- Zinc (& Copper)
  - Strong supply / demand fundamentals

#### Woodlawn Project (NSW, Australia)

- High quality Zn+Cu+Pb+Ag+Au deposit
- Robust 'starter' business case
- Unrivalled infrastructure & permitted
- Significant exploration upside

#### FINANCED

FOCUS

#### **Development Funding**

- A\$240M full funding package secured
- Fully funded through construction and production ramp-up

#### **Project Delivery**

- Construction underway
- Resourcing for operations
- 1<sup>st</sup> product shipment Q1 2019
- Growth through in-mine and regional discovery



0.6 - 151.6m/ 55% ZnEq (23.0% Zn, 14.2% Pb, 6.0% Cu, 0.11g/t Au, 52g/t Ag) WNND0114

## HERON OVERVIEW Company snapshot





**CAPITAL STRUCTURE** 

Dual listing:	ASX: HRR TSX: HER
Shares:	2,417 million (242 million post consolidation)
Options:	21 million (2 million post consolidation)
Share Price:	A\$0.072
Market Cap:	A\$174 million
Cash: (30 Sep 2017)	A\$124 million (unrestricted)
Investments:	A\$17 million* (Includes 10 million 25c ARL options &
	3.33M 77c ARL

BOARD

Chairman Stephen Dennis MD & CEO Wayne Taylor

Non-Executive Director Borden Putnam III

Non-Executive Director Fiona Robertson

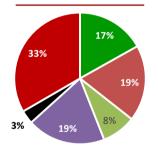
Non-Executive Director Mark Sawyer

Non-Executive Director Peter Rozenauers

*Non-Executive Director* Ricardo De Armas



SHARE REGISTER



- Orion
- Greenstone
- Greenstone Aff
- Castlelake
- Canadian Register
- Australian Register



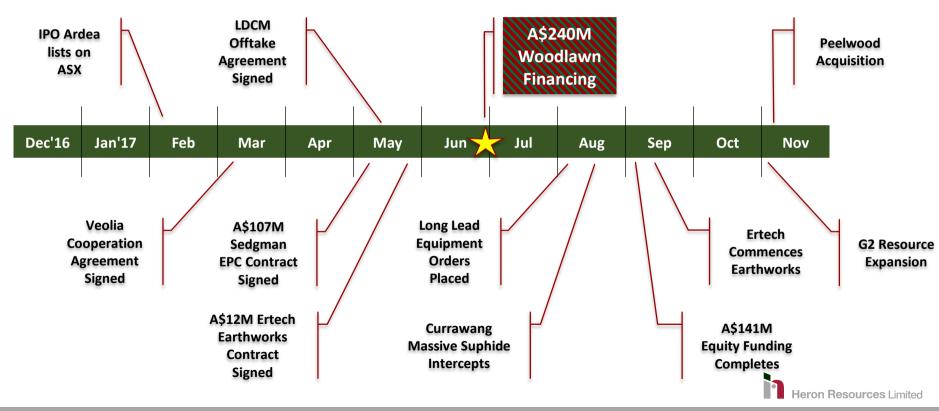
**PROJECT PORTFOLIO** 



Loyalty options)

## HERON RESOURCES 12 MONTH REVIEW

Locking in the pathway to production - major milestones



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# MARKET ZINC 12 MONTH REVIEW

Letting the numbers tell the story

		29 November 2016	15 November 2017		
Zinc Price		US\$2,872/t	US\$3,200/t	+US\$328/t	+11%
Zinc Stocks	TOTAL (LME + Shanghai)	594kt	316kt	-278kt	-47%

#### Price:-

- Prior 12 months (Nov '15 - Nov '16) 54% increase in zinc price

### Supply < Consumption:-

- 2017 Projected FY Deficit 398kt<sup>1</sup> → >700kt<sup>2</sup>
- 2018 Projected Deficit 223kt<sup>1</sup>  $\rightarrow$  >500kt<sup>2</sup>

#### <sup>1</sup> ILZSG Oct '17

<sup>2</sup> Commodity forecaster/commentators

→ Sustained pricing supported by supply/demand fundamentals

→ Sets the scene for an excellent entry to first product shipment Q1 '19



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## MARKET ZINC FUNDAMENTALS



Source: LME, RBA, SHFE, Terra Studio

### Teck<sup>1</sup> (Sep 2017) – Zinc Market Observations from 'World's Largest Net Zinc Miner'

Mine production growth for zinc insufficient to meet demand (projection to 2020)

4.3Mtpa of additional zinc production required to satisfy demand to 2025

Speculated price induced reaction of increased Chinese mine zinc production has not occurred (down 6% YTD)

Zinc metal inventories approaching historical lows

Zinc's expanding consumption base -Giga Steel, zinc thermal spray, continuous galvanised rebar and zinc micro-nutrient fertiliser

1 Retrieved from http://www.teck.com/media/P3-7inc%20Mediet.odf

# ASSET WOODLAWN ZINC-COPPER PROJECT

#### **Unrivalled infrastructure**



## **Production Rate 1.5Mtpa** 9.3yr LOM (Reserves only) Reserves UG 2.8Mt @ 14% ZnEq<sup>1</sup> Tailings 9.5Mt @ 6% ZnEq **Steady State Gross Production** 40ktpa Zn (88Mlbs) 10ktpa Cu (20Mlbs) 12ktpa Pb (25Mlbs) + Ag / + Au Infrastructure

Access – sealed B-double rated road Power – NSW state grid sub-station Population Centres – Tarago (11km), Bungendore (30km), Goulburn (48km), Canberra (70km)

Port – Port Kembla 211km

Water - Willaroo Bore Field

<sup>1</sup> Refer to Slide 2 for definition

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# FOCUS WOODLAWN CONSTRUCTION

State-of-the-art 1.5Mtpa process plant & infrastructure



## **Project Delivery**

Earthworks: Ertech EPC: Sedgman Operational Readiness: Heron

#### The Physicals:-

- 2M m<sup>3</sup> earthworks
- 3,600 m<sup>3</sup> concrete
- 995t steel
- 34km piping
- 58km electric cable
- 233 items of mechanical equip
- 110 items electrical equip
- 208,000 person hours

## FOCUS WOODLAWN EARTHWORKS Progressing to schedule

## Project Delivery



Contractor:	Ertech
Value:	A\$12M
Equipment Fleet:	40 units
Personnel:	50
Daily Movement:	10,000 bcr

Critical Path: On track to deliver process plant pad well before concrete works are scheduled to commence

## FOCUS WOODLAWN EPC Construction ready



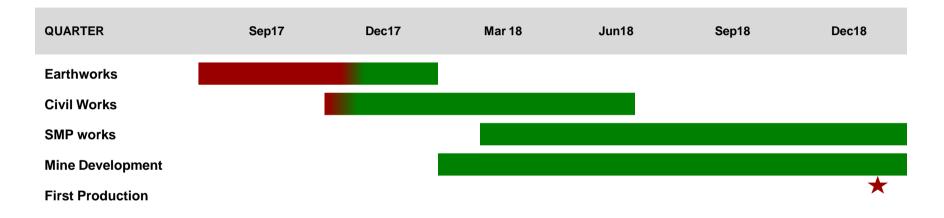
### **Project Delivery**

**Contractor:** Sedgman A\$107M (guaranteed max. price) Personnel: 50-75 FTE (current) 250 (peak) **Current Activities: Detailed Design Equip Purchase** Site Facilities Package Tenders Critical Path: Expected early delivery of the IsaMill removes it from the CP

	Current Activities	
FOCUS WOODLAWN OPERATIONAL READINESS Building strong foundations	Mine Planning	Adding G2
	UG Mining Contract	Tendered
	Tails Mining Contract	Tendered
Martiner h Modelawn h Martiner h Modelawn Zinc-Copper Mine	Port Contract	Tendered
L CODE AND C CODE	Port Logistics	Pre-tender
Phone: 02 9119 8111 Email: horor @ heronresources.com.au THIS PROTECT EQUIPMENT MUST BE WORK INTHIS STE	Power Contract	Pre-tender
	Compliance	Env Monitoring
		Statutory Reporting
		Mgmt Plan Devel
	Ops Team	Recruitment Plan
		Expanding the Team

# FOCUS WOODLAWN DELIVERY SCHEDULE

#### Expedited project schedule

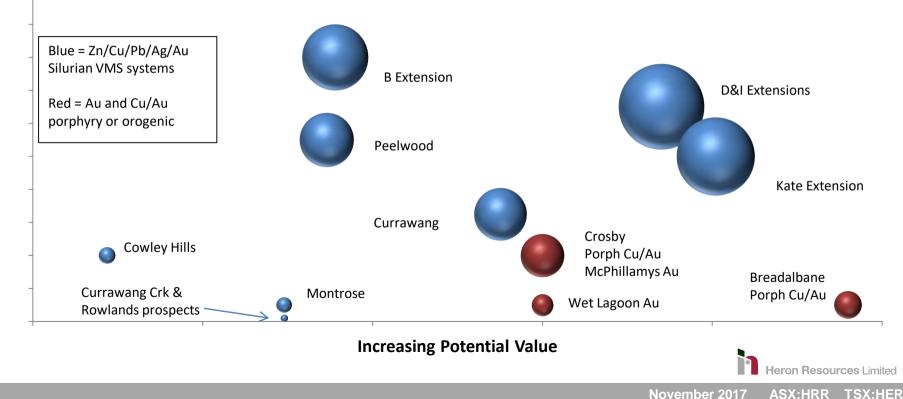


## Targeting first production end 2018 / early 2019



# **GROWTH WOODLAWN EXPLORATION**

### Building the growth pipeline



# **GROWTH WOODLAWN EXPLORATION STRATEGY**

Building the business beyond the Feasibility Case

## **Prioritised Organic Growth**



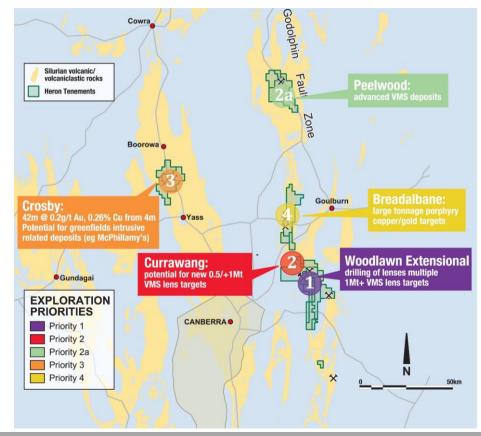
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### In Mine Exploration

- Shallow extensions G, G2, Lisa, D lenses
- Adjacent trends & step out targets
- Deeper extensions All 12 known lenses

Near Mine (Regional) Exploration

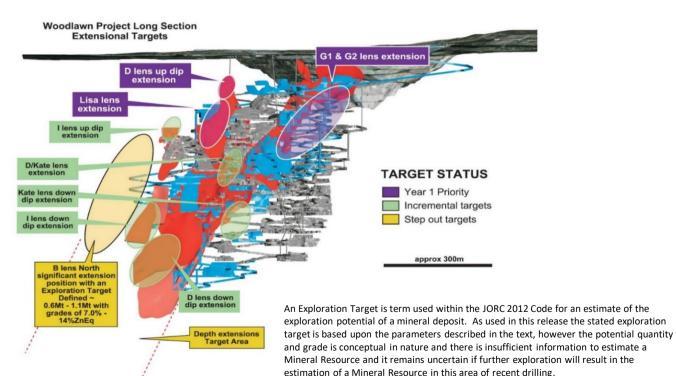
- Regional prospects
- Commanding land tenure position



# **GROWTH WOODLAWN IN-MINE EXPLORATION**

Refer to page 2 for the ZnEq calculation assumptions

#### **Targeted additions to the Mine Plan**



**Immediate Value-Add** 

Numerous extensional positions

Majority supported by existing planned capital development

Initial step - G2 Lens resource addition

Short term – Focus turning to the next shallow positions:-

D Lens

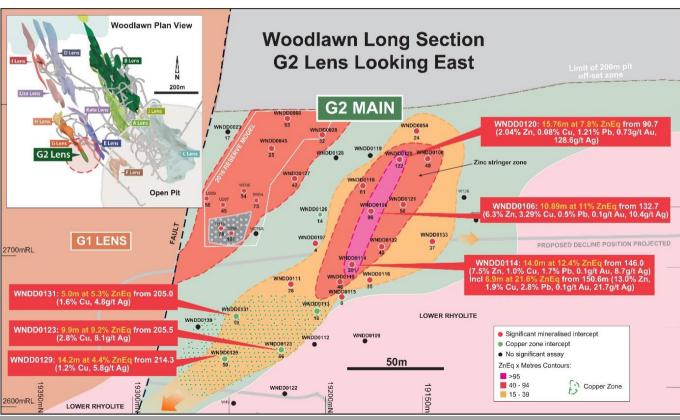
Lisa Lens

Progressively targeting to optimise mine development

Significant untapped potential remains 'in-mine'

# GROWTH WOODLAWN IN-MINE EXPLORATION

#### G2 Lens – Adding to the plan



### Immediate Value-Add

First mineralisation to be accessed underground

Returned high grade results from G2 & G2 H/W

#### New Resource model:-

Indicated Category139kt @ 10.1% ZnEq<sup>1</sup> (4.5% Zn, 0.8% Cu, 2.3% Pb, 0.4g/t Au, 33g/t Ag)

Inferred Category 58kt @ 13.3% ZnEq (4.0% Zn, 1.0% Cu, 2.2% Pb, 1.2g/t Au, 117 g/t Ag)

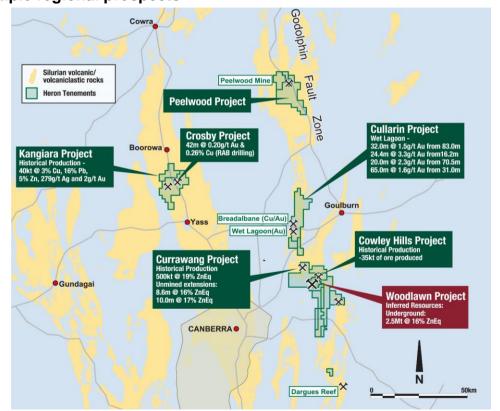
Mine planning and Reserves in progress

Metallurgical test work program

Processing recent DHEM survey

Extension potential (not closed off)

## GROWTH WOODLAWN REGIONAL POTENTIAL Multiple regional prospects



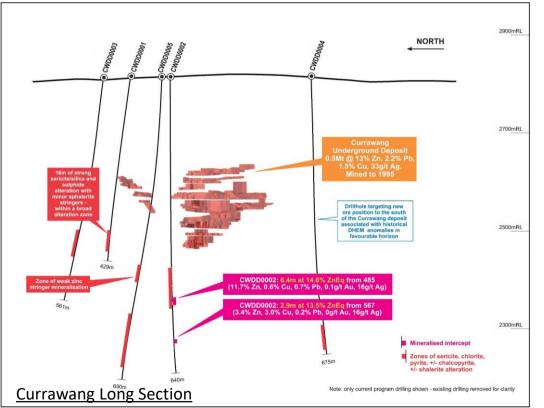
## High Quality VMS District

**Dominant Regional Position** Tenure of 1,067 km2 Coverage of VMS host rocks Acquiring 'forgotten' projects **Confirmed Prospectivity – Historical** Satellite Production **Currawang Mine Cowley Hills Mine Prospect & Target Generation** New and historic remote sensing datasets Geochem anomalies Extensive areas under cover Limited systematic exploration for >30 yrs

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# **GROWTH CURRAWANG**

#### **Early exploration success**



### **Regional Priority**

10km NW of Woodlawn

Mined 1992-1996:-0.5Mt @ 13% Zn, 1.5% Cu, 2.2% Pb, 33g/t Ag

No drilling since 1996

Completed 5 hole drilling program

Intercepted semi-massive zinc and copper sulphides:-

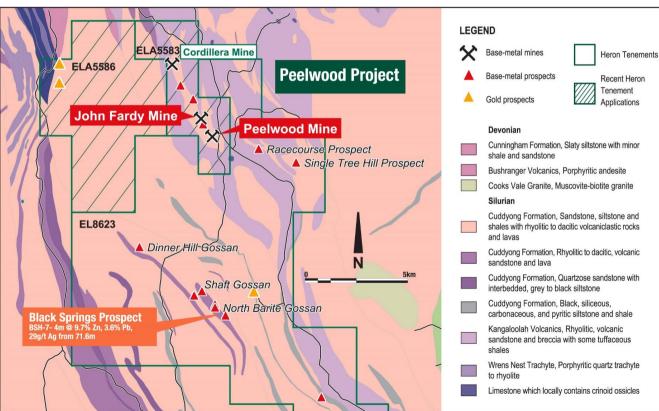
6.4m @ 14.6% ZnEq from 485m (11.7% Zn, 0.6% Cu, 0.7% Pb, 0.1g/t Au, 16g/t Ag)

2.9m @ 13.5% ZnEq from 567m (3.4% Zn, 3.0% Cu, 0.2% Pb, 16g/t Ag)

Co-funded by NSW Government's Cooperative Drilling Program

# **GROWTH PEELWOOD**

Advanced VMS deposits



### **Regional Priority**

#### 105km N of Woodlawn

New ELA5583 & ELA5586 – extending coverage of a VMS camp

John Fardy & Peelwood Mines - a 'forgotten' asset

Numerous historical high grade workings

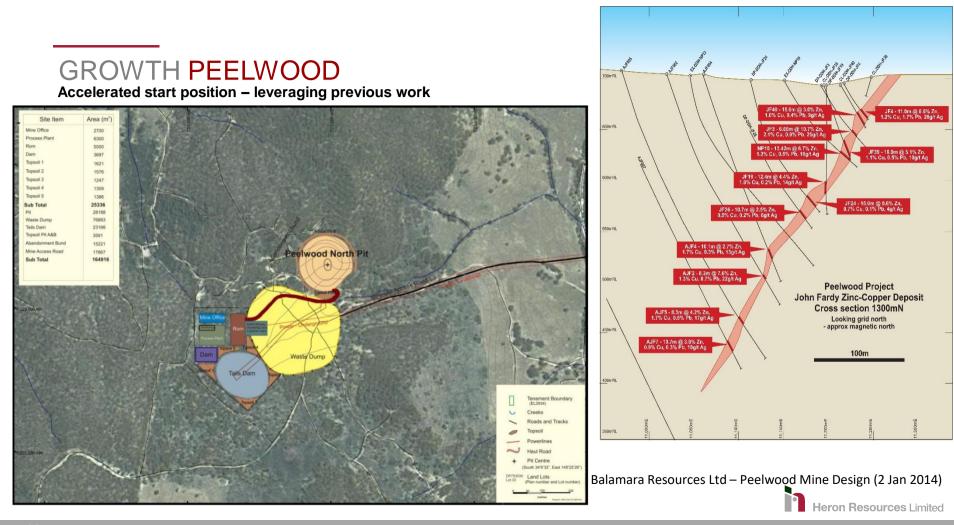
#### High grade VMS drill results:-

8.4m @ from 36m (JF16) (23.5% Zn, 2.6% Cu, 0.6% Pb, 41g/t Ag)

6.1m @ from 45m (JF38) (22.7% Zn, 1.2% Cu, 1.5% Pb, 23g/t Ag)

Previously defined resources, reserves and project studies – Balamara 2009

Moving rapidly up the priority list



# HERON RESOURCES INVESTMENT PROPOSITION

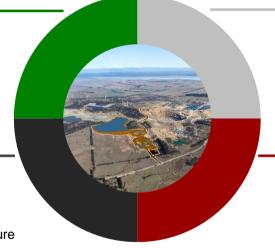
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### **MARKET - ZINC**

- Supply / demand fundamentals support price strength
- Woodlawn production timed to meet tight physical market

### **ASSET - WOODLAWN PROJECT**

- High quality deposit
- · Compelling 'starter' business case
- Favourable jurisdiction & excellent infrastructure
- Longevity through discovery upside



### FOCUS - EXCLUSIVELY WOODLAWN

- 100% focus Woodlawn production
- Construction underway
- 1<sup>st</sup> product shipment Q1 2019
- Growth through strong regional position

### FINANCED - FOR DEVELOPMENT

- A\$240M full funding package
- Three supportive cornerstone investors

Woodlawn remains one of the few new zinc projects fully funded to production and, with construction now underway, places Heron on track to participate in a pricing environment supported by the strong zinc physical market



Wayne Taylor – Managing Director

### ASX: HRR TSX: HER

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# APPENDIX: OTHER INFORMATION





# 2016 WOODLAWN MINERAL RESOURCES

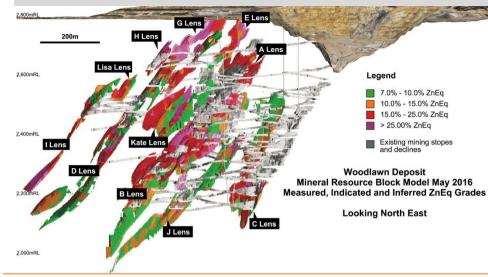
### Retreatment



#### Woodlawn Reclaimed Tailings Mineral Resource – All Dams

Resource Category	Tonnes (Mt)	ZnEq (%)	Zn (%)	Cu (%)	Pb (%)	Au (g/t)	Ag (g/t)
Mea+Ind	9.8	6.2	2.3	0.51	1.3	0.31	32
Inferred	1.1	5.8	2.3	0.47	1.2	0.25	27

## Underground



#### 7% ZnEq cog for Polymetallic & 1% Cu cog for Copper

Туре	Resource Category	Quantity (Mt)	ZnEq (%)	Zn (%)	Cu (%)	Pb (%)	Au (g/t)	Ag (g/t)
Poly- metallic	Mea+Ind	2.7	22	11	1.5	4.0	0.7	79
Copper	Indicated	1.9	10	0.7	2.6	0.1	0.2	14
All Total	Mea+Ind	4.6	17	6.7	1.9	2.4	0.5	52
All Total	Inferred	2.6	15	5.6	1.8	2.2	0.6	48



Heron Resources Limited

# WOODLAWN MINERAL RESERVES & MINE PLANNING

A new high grade underground mine

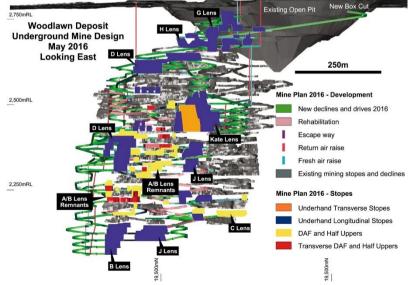
Reclaimed Tailings Mineral Reserves - 9.5Mt



9.5Mt @ 6% ZnEq (2.2% Zn, 0.5% Cu, 1.3% Pb, 0.31g/t Au, 31g/t Ag)







01-10-

# WOODLAWN PROCESS PLANT

#### Campaign treatment from two de-coupled ore sources

