



# Heemskirk Tin Project - Tasmania

CEO: Peter Blight

ITRI Investing in Tin Seminar

November 2013

ASX: SRZ

[www.stellarresources.com.au](http://www.stellarresources.com.au)

# Agenda

- ❑ Company Overview
- ❑ Project Background
- ❑ Achievements
- ❑ PFS Results
- ❑ Optimisation Targets
- ❑ Upside Case

# Corporate Snapshot



ASX Code	SRZ (listed April 2005)
Shares on Issue	223.4M
Share Price	5.2c (12 month range: 4-16c)
Market Capitalisation	\$12M
Cash	\$1.4M (Sep 13)
Investments	\$0.2M

## Ownership Structure

Top 20	60.6%
Bunnenberg	18.4%
RCF	16.2%
JP Morgan Noms	11.0%
HSBC Noms	2.9%

## Board & Management

Phil Harman	Non-Exec Chairman
Tom Burrowes	Non-Exec Director
Dr Markus Elsasser	Non-Exec Director
Dr David Isles	Non-Exec Director
Dr Tom Whiting	Non-Exec Director
Peter Blight	Chief Executive Officer
Chris Kemp	Company Secretary

# Stellar's well located tin assets



- 100% owned Heemskirk tin project
- 100% owned St Dizier tin deposit
- Significant mining district
- Easy access to water & power
- Sealed road between both deposits
- Rail & road connects to Burnie Port
- 18km from Australia's largest tin mine - Renison Bell

# Project History

- ❑ 1960s - Gippsland Ltd explored the outcropping Queen Hill tin deposit.
- ❑ 1970s – Aberfoyle Ltd earned a 60% interest.
- ❑ 1980s – Aberfoyle Ltd discovered Severn and Montana deposits.
- ❑ 1986 – Project suspended following the tin price collapse.
- ❑ 2008 – Stellar acquired 60% from Western Metals Ltd.
- ❑ 2012 – Stellar acquired remaining 40% from Gippsland Ltd.

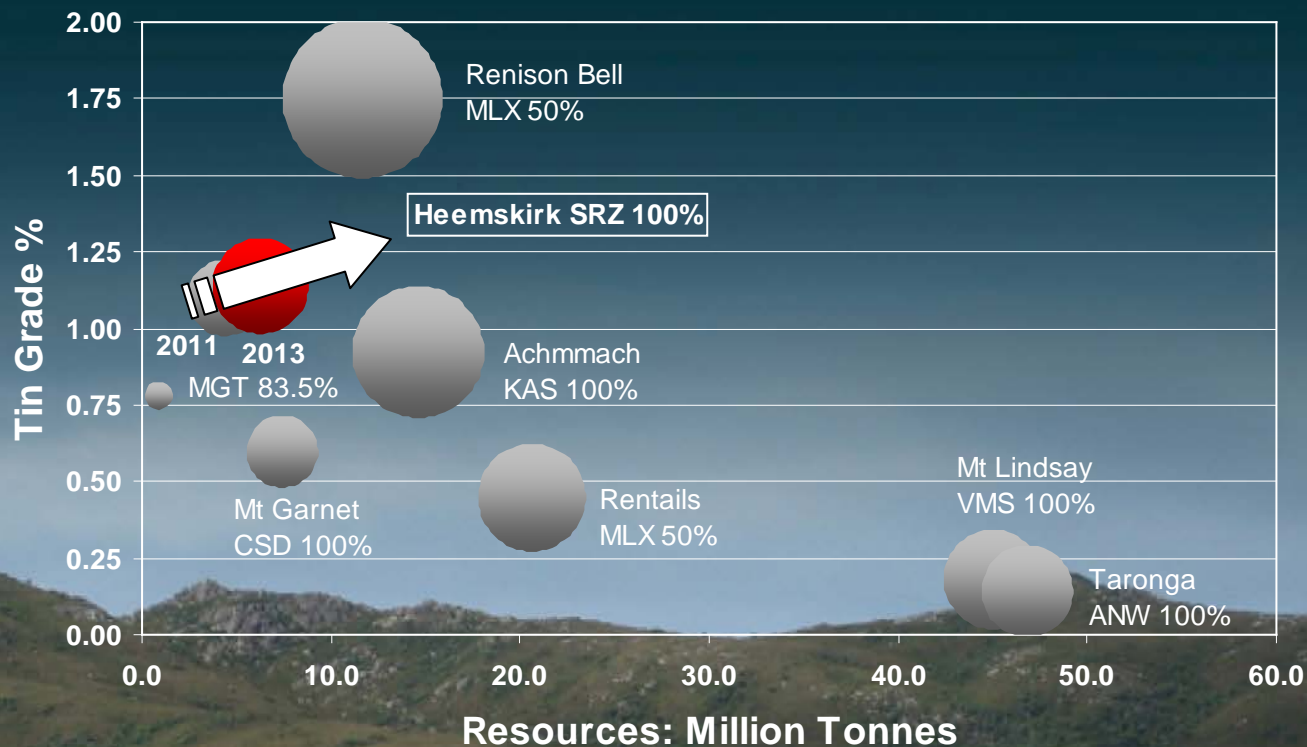
# Significant achievements at low cost

Outcomes achieved on \$10 million of project spending to date

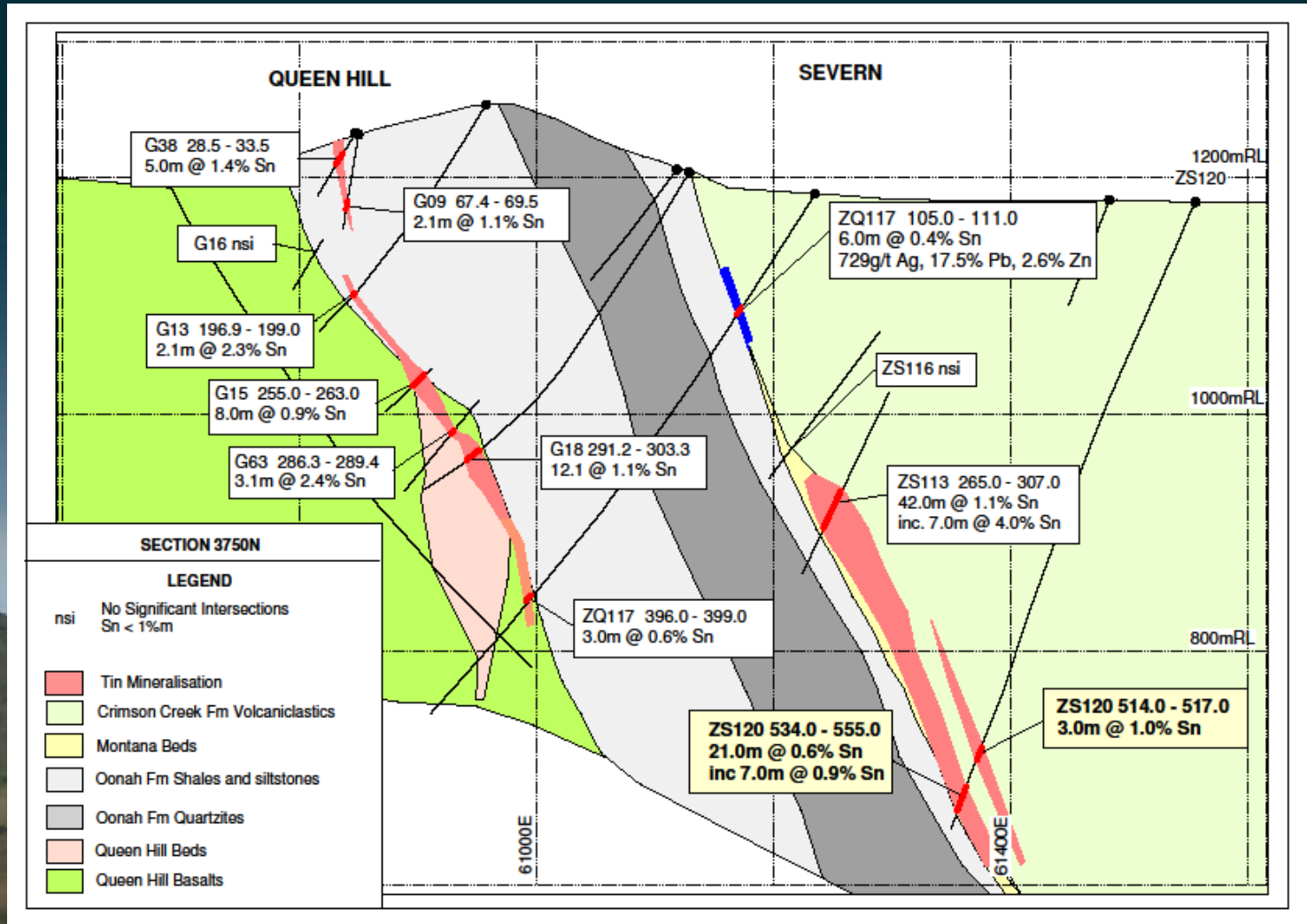
- Maximised tin price leverage by moving to 100% ownership.
- Increased resource by 49% to 71,500t contained tin - worth \$1.6bn.
- Demonstrated presence of high grade tin – best result: 7m@4% tin.
- Demonstrated recovery of 70% through bench scale met testing.
- Established environmental baseline.
- Completed a positive preliminary feasibility study.

# Grade and tonnage rising

Heemskirk: highest grade undeveloped ASX listed tin resource



# High grade intersections – ZS113





# PFS technical and cost summary

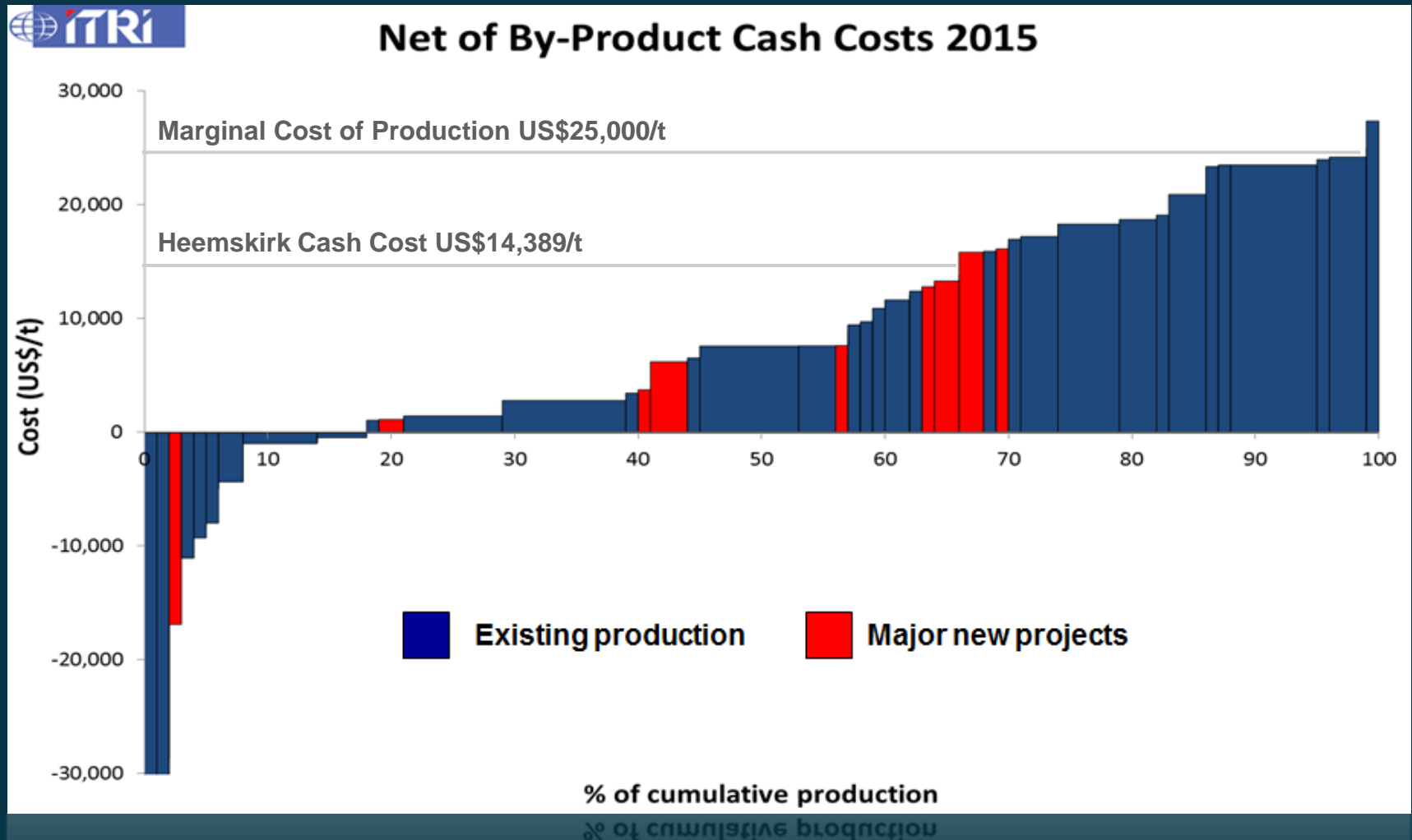


Description	Units	Value
Mining inventory	Mt	3.95
Mined ore tin grade	% tin	1.06
Average Mill Throughput	Mtpa	0.6
Initial mine life	Years	6.75
Tin recovery	%	70
Average concentrate grade	%	48
Average tin in concentrate production	tpa	4,327
Mine gate costs	US\$/t tin in concentrate	14,389
Pre-production capital expenditure	US\$M	114

Mining inventory includes indicated and inferred Mineral Resources that have had mining dilution, recovery and economic factors applied to mine design, creating an inventory of potential stope and development tonnes.

# Competitive mine gate costs

Mine gate cash cost of US\$14,389/t is 42% below industry marginal cost



# PFS shows economic viability



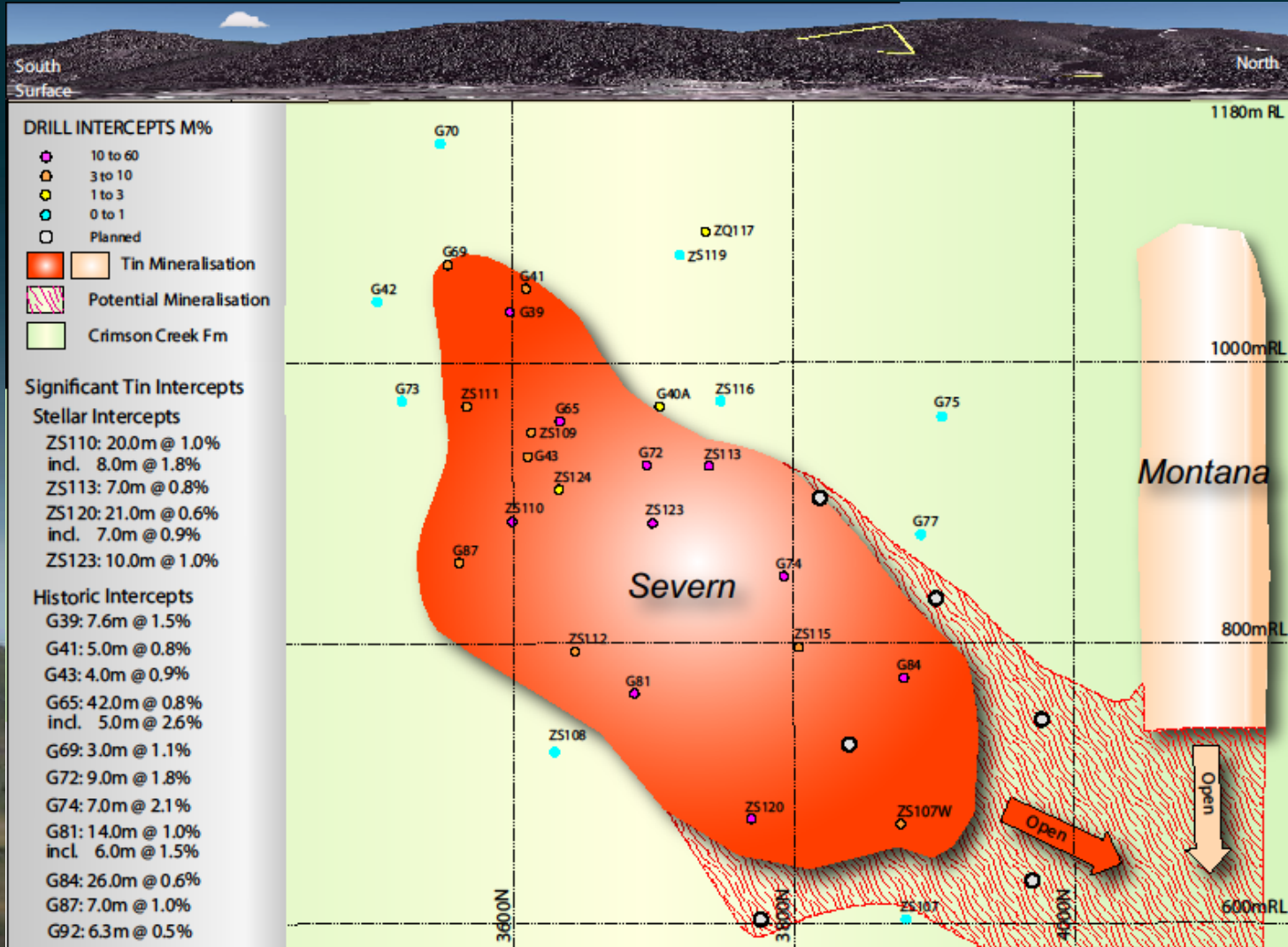
Description	Economic Outputs		
Tin price scenarios	-10%	Base Case	+10%
LME tin price US\$/t	22,950	25,500	28,050
NPV <sub>8%</sub> A\$M	11	61	103
IRR %	10	19	26
Payback years	4.7	3.7	3.1
Operating margin A\$/t ore treated	51	70	86
Total cash surplus A\$M	77	152	215

Base case LME tin price is the median of nine analyst estimates for 2016 and beyond. It is also the marginal cost of tin production according to International Tin Research Institute cost curve analysis.

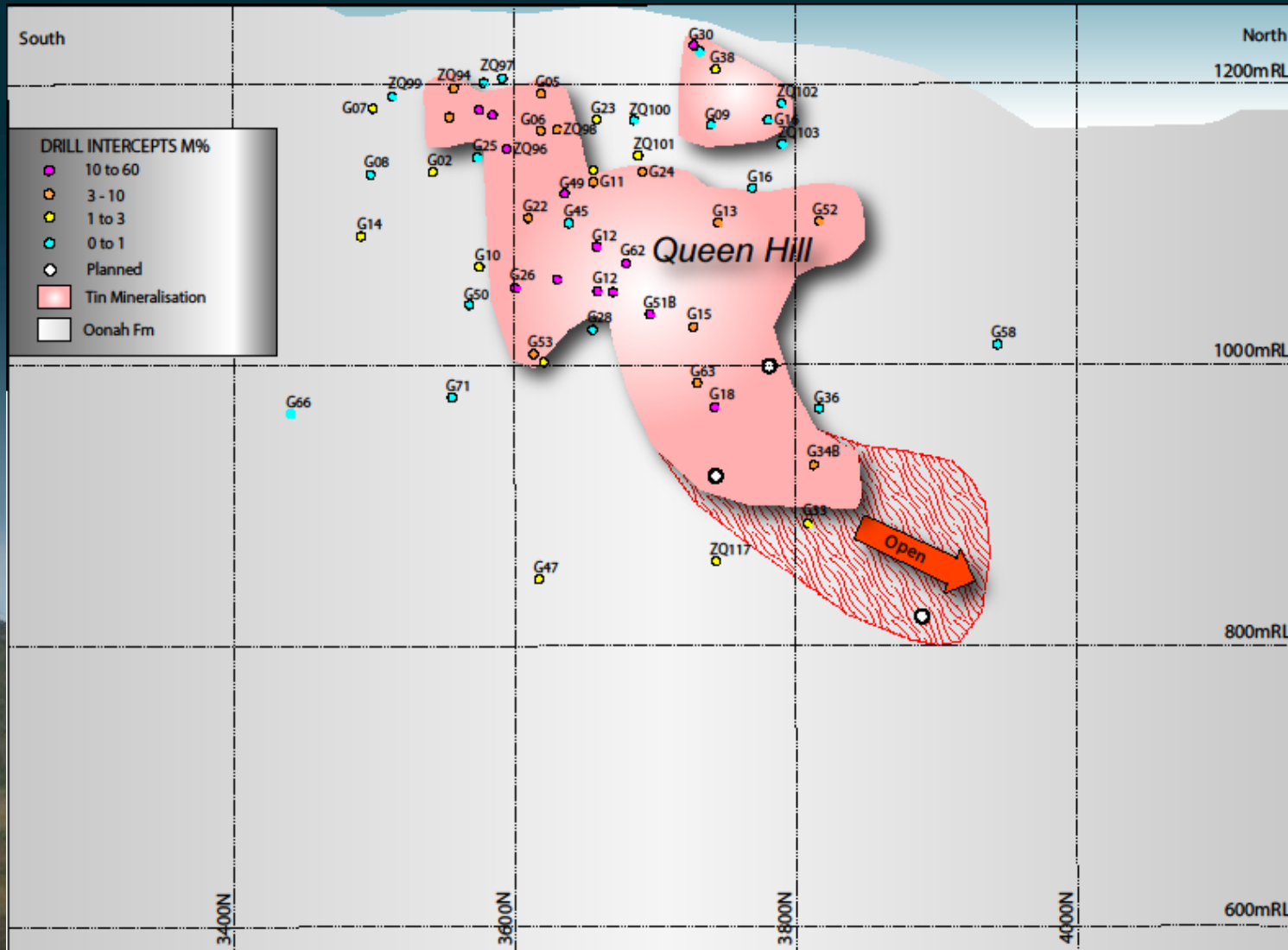
# Optimisation Targets

- ❑ Drilling of high grade mineralisation
- ❑ Resource expansion drilling
- ❑ Further metallurgical testing to improve recovery
- ❑ Exploration of open pit targets at St Dizier

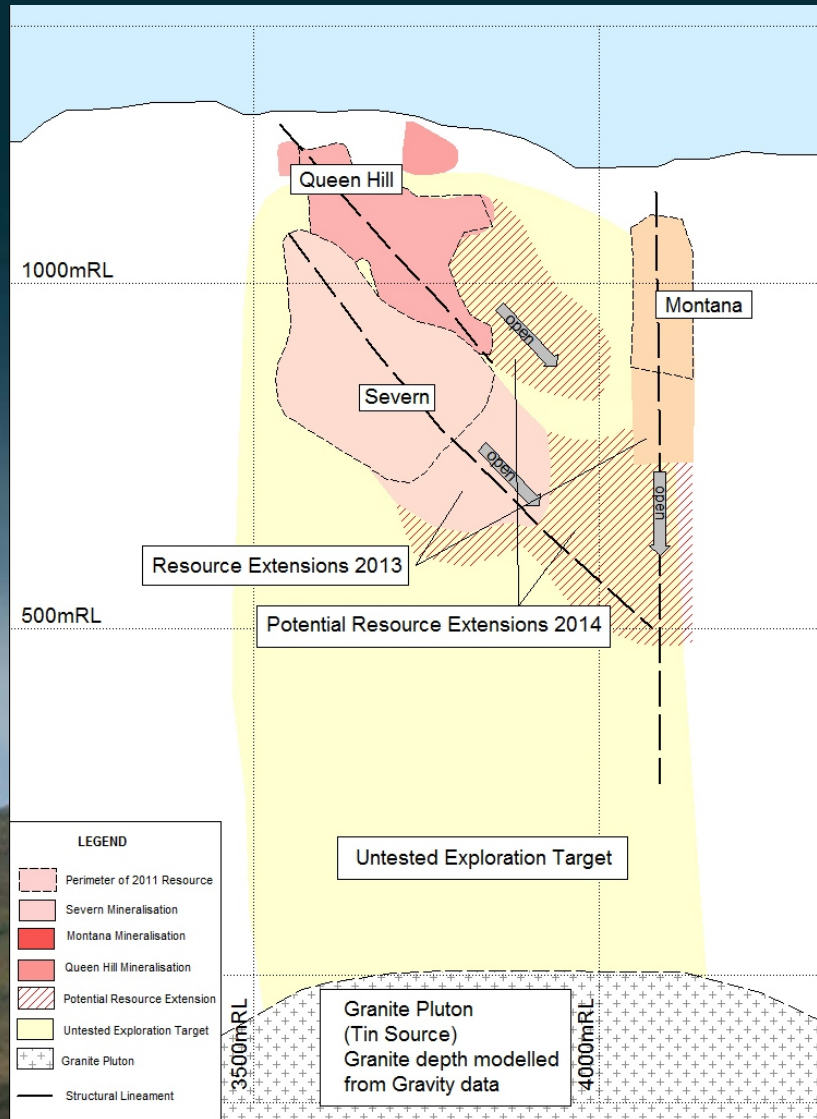
# Severn/Montana drill targets



# Queen Hill drill targets



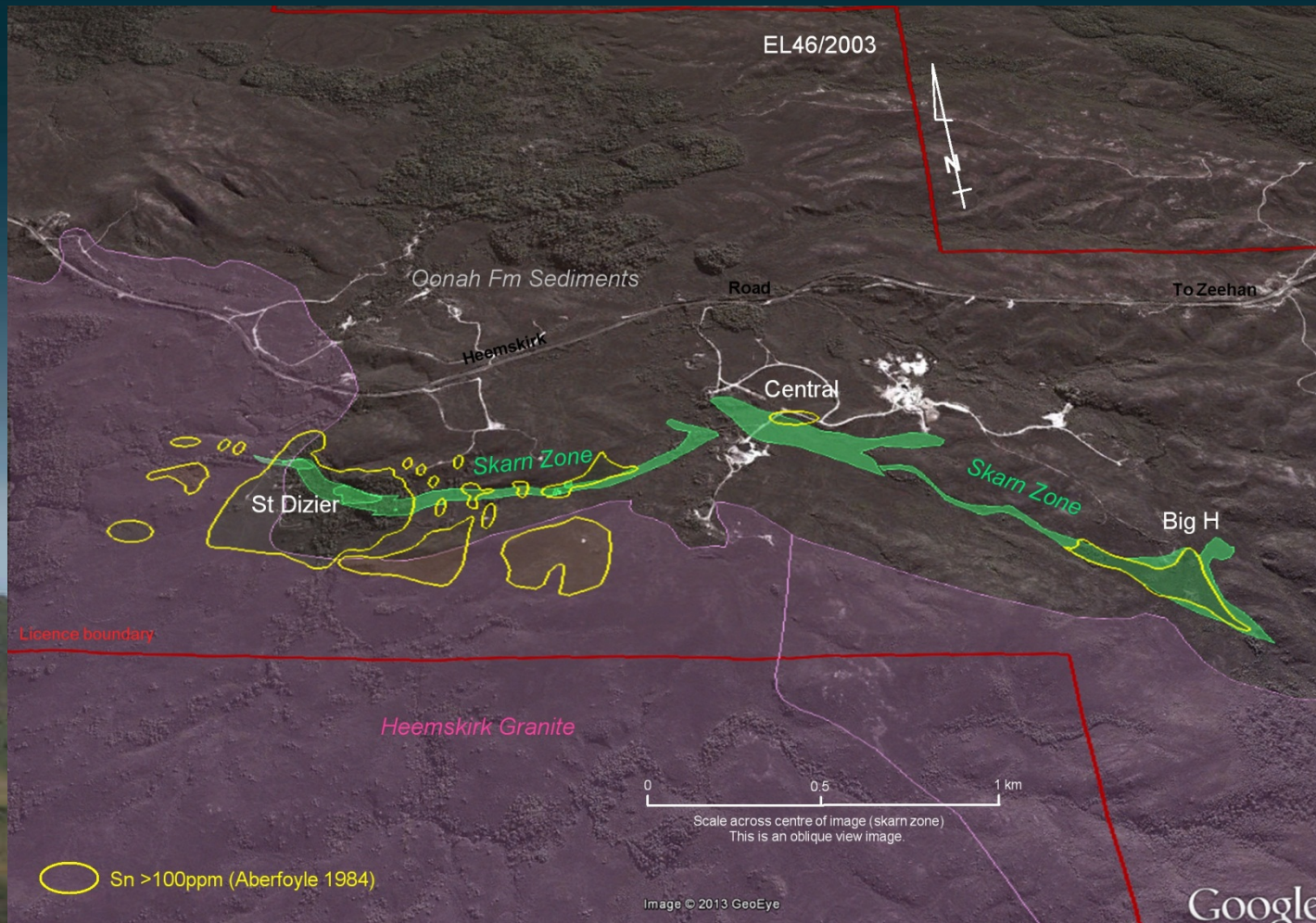
# Target area: 1km to granite source



# St Dizier – outcropping tin target



2.5 km of tin mineralised skarn

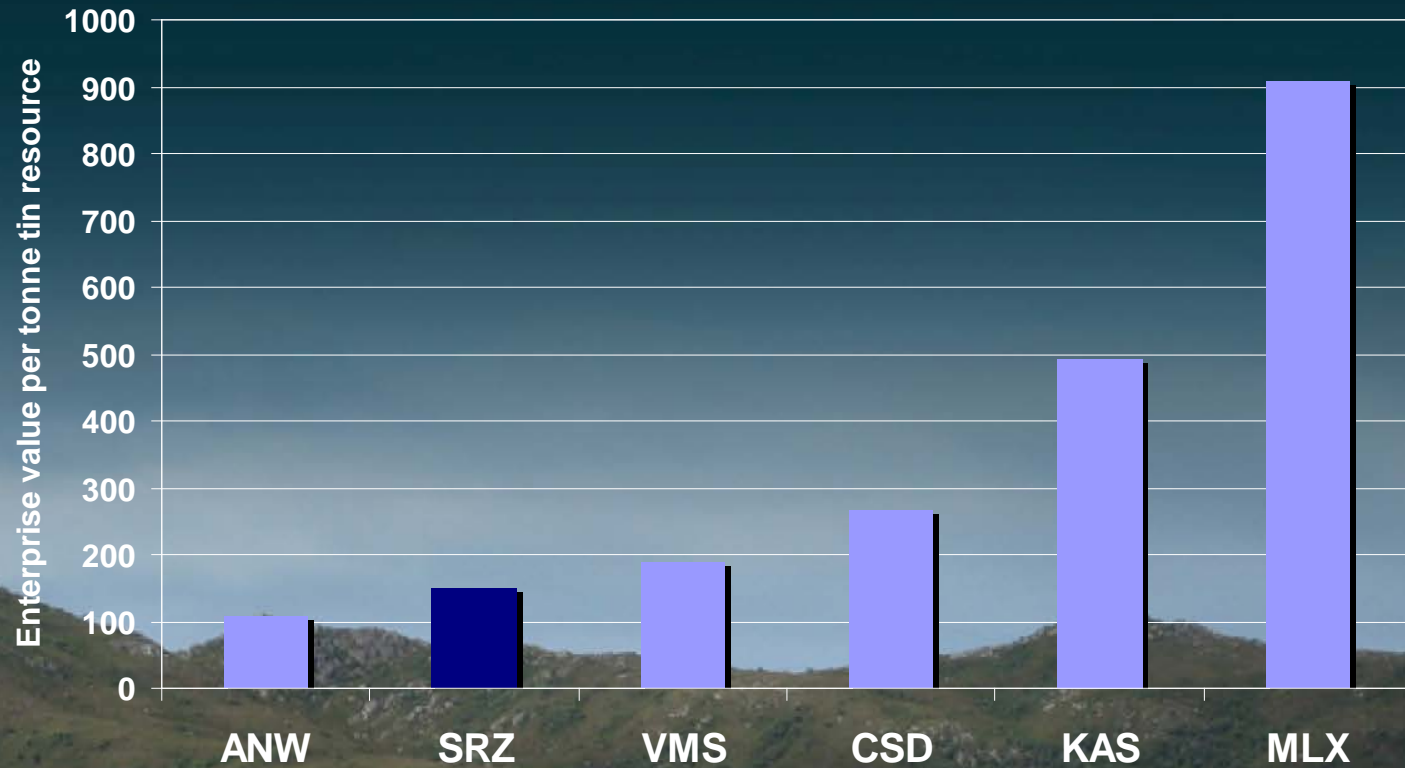




# Upside potential from optimisation

- Higher grade at Severn: increasing overall head grade from 1.06% to 1.17% adds \$44 million or 72% to NPV.
- Resource expansion: Each additional year of life adds \$13 million or 22% to NPV.
- Improved metallurgical performance: increasing recovery from 70% to 70.7% adds \$4.9 million or 8% to NPV.
- Addition of an open pit resource: low cost tonnes, developed quickly to provide early cash flow to fund underground development.

# Stellar undervalued relative to peers



# Disclaimer



## *Forward Looking Statement*

*This presentation may contain a number of forward-looking statements. Known and unknown risks and uncertainties, and factors outside of Stellar's control, may cause the actual results, performance and achievements of Stellar to differ materially from those expressed or implied in this presentation. To the maximum extent permitted by law and stock exchange listing rules, Stellar does not warrant the accuracy, currency or completeness of the information in this presentation, nor the future performance of Stellar, and will not be responsible for any loss or damage arising from the use of the information.*

## *Competent Persons Statement – Heemskirk Mineral Resource*

*The information in this report that relates to Mineral Resources was prepared in accordance with the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' ("JORC Code") by Tim Callaghan of Resource and Exploration geology, who is a Member of The Australian Institute of Mining and Metallurgy ("AusIMM"), has a minimum of five years experience in the estimation and assessment and evaluation of Mineral Resources of this style and is the Competent Person as defined in the JORC Code. This report accurately summarises and fairly reports his estimations and he has consented to the resource report in the form and context it appears.*

## *Competent Persons Statement – Heemskirk Mining Inventory*

*The information in this report that relates to Mining Inventory is based on information reviewed by Phil Bremner, who is a Fellow of The Australasian Institute of Mining and Metallurgy. Mr Bremner is an employee of Mining One Consultants Pty Ltd. Mr Bremner has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC code). Mr Bremner consents to the inclusion in the presentation of the matters based on his information in the form and context in which it appears.*

## *Competent Persons Statement – Exploration*

*The drill and exploration results reported herein, insofar as they relate to mineralisation, are based on information compiled by Mr R.K. Hazeldene who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Hazeldene has sufficient experience relevant to the style of mineralisation and type of deposits being considered to qualify as a Competent Person as defined by the 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code, 2004 Edition). Mr Hazeldene consents to the inclusion in the presentation of the matters based on his information in the form and context in which it appears.*

An aerial photograph of a small town nestled in a valley. The town features several buildings, including a prominent large wooden structure with a green roof. The surrounding landscape is lush with green trees and rolling hills. In the background, there are several mountain peaks under a blue sky with scattered white clouds.

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# APPENDICES – PFS Result

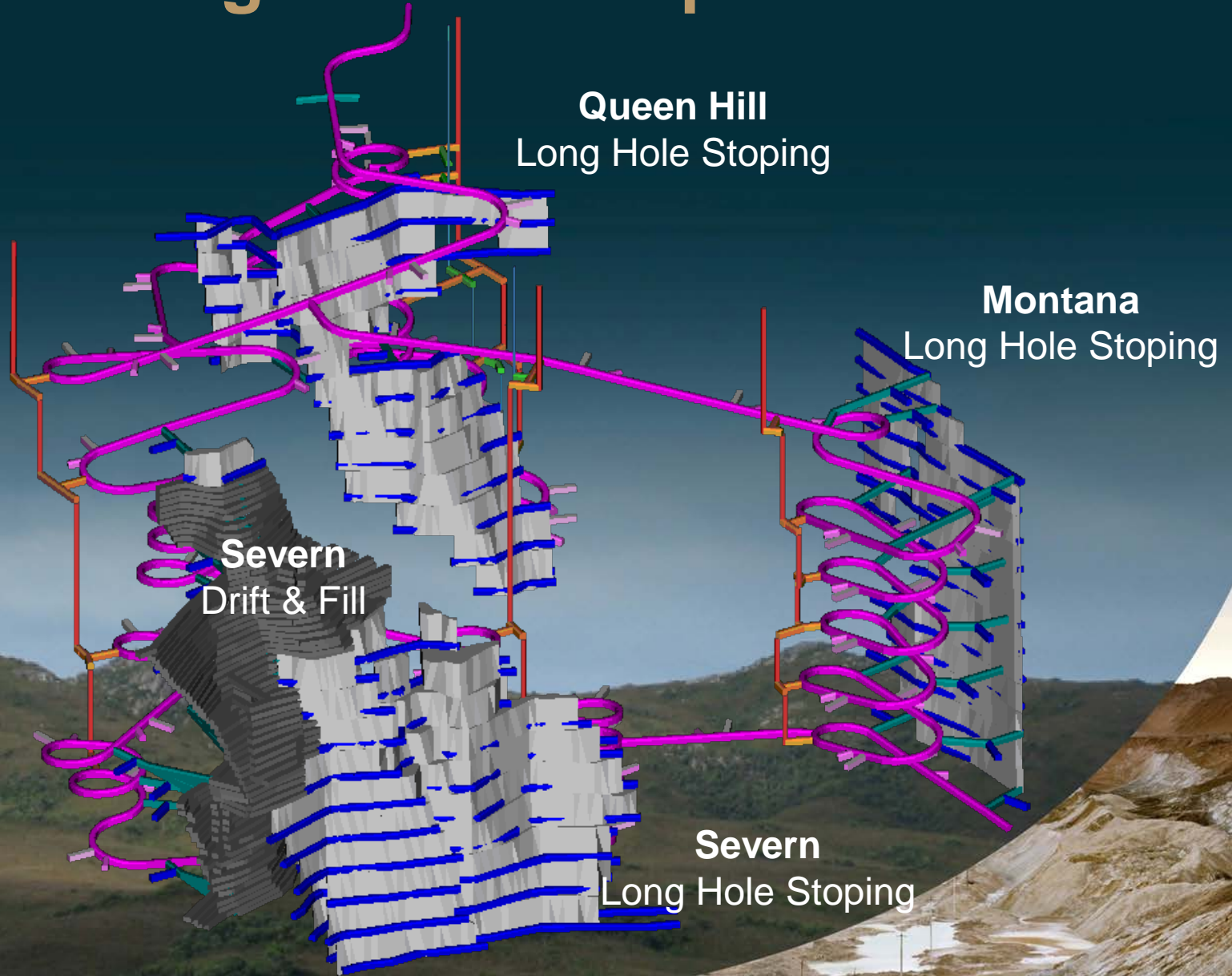


# Preliminary feasibility completed

- Production scheduling: Mining One Pty Ltd
- Geotech and mine design: Mining One Pty Ltd
- Metallurgy: Asther Pty Ltd and ALS AMMTEC
- Plant engineering and infrastructure: GR Engineering Pty Ltd
- Environmental: J Miedecke & Partners Pty Ltd
- Options studies: GR Engineering Pty Ltd



# PFS underground mine plan



# PFS Pre-production capital expenditure

Item	US\$ Million	AU\$ Million
Mine	34.1	37.9
Process facilities including first fills and spares	68.0	75.5
Infrastructure including tailings storage facility	6.4	7.2
Owners costs	1.4	1.5
Contingencies	4.0	4.5
<b>Total project pre-production capital</b>	<b>113.9</b>	<b>126.6</b>

A\$/US\$ exchange rate assumption of 0.90

- Capital requirement reduced by:
  - ✓ Pre-concentration of run of mine ore
  - ✓ Existing infrastructure



# PFS life of mine cash operating costs

Item	US\$/t tin in conc	AU\$/t ore
Mining	8,137	65.2
Processing	4,131	33.1
<b>Direct Cash Cost (mining+processing)</b>	<b>12,268</b>	<b>98.3</b>
Mine sustaining	1,735	13.9
Site sustaining	175	1.4
Corporate overheads	212	1.7
<b>Total mine gate operating cost</b>	<b>14,389</b>	<b>115.3</b>

A\$/US\$ exchange rate assumption of 0.90