

22 April 2014

ELEMENTOS DELIVERS POSITIVE CLEVELAND TIN MINE PRE-FEASIBILITY STUDY

Highlights

Stage 1 - Tailings Retreatment Project:

- Short lead-time to first production and earnings, with no further exploration drilling required;
- Mill capacity of 650ktpa to produce 1,000tpa of tin and 300tpa of copper in concentrates;
- Competitive cash costs: C1 US\$11,120/t tin and C3 US\$16,000/t tin;
- Low pre-production capital expenditure AU\$23.9M; and
- Pre-tax NPV AU\$30.9M and IRR 56%.

Stage 2 - Underground Mine:

- Mine throughput of 360ktpa to produce 1,900tpa of tin and 700tpa of copper in concentrates;
- Competitive cash costs: C1 US\$16,090/t tin and C3 US\$19,520/t tin;
- Low pre-production capital expenditure AU\$43.8M;
- Pre-tax NPV AU\$40.4M and attractive IRR 30%; and
- Existing mine development and infrastructure reduce capital costs.

Integrated Tailings and Underground Project Economics:

- Pre-tax NPV AU\$58.1M and IRR 42%;
- Cash flows from tailings retreatment project funds approximately 50% of the underground mine pre-production capital expenditure;
- Base case mine life of 13 years, significant potential to expand resource base; and
- Staged development provides optionality and time to improve underground mine economics.

Tailings Retreatment Project - Development Advanced:

- Environmental permitting advanced for tailings project and mine dewatering;
- Bankable Feasibility Study and engineering to commence immediately; and
- Targeting construction in 2015 and first production in 2016.

Optimisation Potential:

- Per tonne operating costs should be reduced by between 10% to 20%, by increasing the underground production rate from 360ktpa to 500ktpa. This is dependent on the definition of the additional resources from the current JORC Exploration Targets and will be one of the objectives of the company during the early operation of the tailings retreatment project;
- Increasing tailings retreatment rate from 650ktpa to 1,000ktpa improves tailings project NPV with only a small increase in pre-production capital expenditure; and
- Further scope to reduce operating and capital costs by the use of local contractors.

Elementos Limited (ASX: ELT) (“Elementos” or the “Company”) is pleased to report the completion of the Cleveland tin and copper project Pre-Feasibility Study (“PFS”), prepared by independent consultants Mining One and pitt&sherry.

The PFS demonstrates that the Cleveland tailings retreatment project and underground mine both have a positive NPV and IRR, with low capital intensity compared to peers. The tailings retreatment project will provide the Company with a short lead-time to production and a cash flow base, whilst providing optionality and flexibility in the way the underground mine is developed.

The Company’s strategy is to complete the Bankable Feasibility Study for the tailings retreatment project during 2014, commence construction in 2015, with first production in 2016. During the tailings projected six year operational life, free cash flows would be used to fund further underground resource conversion, with an aim to expand the production rate from 360ktpa to over 500ktpa.

The base case underground mine plan assumes a production rate of 360ktpa and a mine life of ten years. The underground mine would be phased into production during 2018, in parallel with the on-going tailings retreatment project.

The Company believes there is potential to expand the base case mine capacity to 500ktpa by defining a larger project resource inventory. This could significantly improve the underground project economics by lowering the unit operating costs for only a small incremental increase in the project capital expenditure. Preliminary financial modelling suggests a 500ktpa production rate would lead to a C1 and C3 cost reduction of between 10% and 20%.

A significant JORC Exploration Target of between 3 and 16 million tonnes was recently defined. The Company is also examining the potential of defining a number of shallow open cut mineable resources.

The Company believes the staged development strategy, in combination with project finance at each stage, could significantly reduce the future equity capital requirements. The Company also remains very optimistic about the future outlook for LME tin prices. Elementos’ strategy of early production will allow it to capitalise on the increasing price of tin, while also enhancing the overall economics of the underground project.

Elementos’ Managing Director, Calvin Treacy commented “This is a huge milestone for the Company. Firstly, turning around a PFS in less than 6 months, and secondly, but more importantly, demonstrating the economic viability of the Cleveland project with a development model that can be funded by a junior mining company. We now move to the next exciting phase of development, achieving our goal to become the next major tin producer in Australia”.

	Tailings	Underground	Integrated Project
Mine Life	6 years	10 years	13 years (3 year overlap)
Mining Method	Open (slurry and pump)	Underground (up-hole retreat benching, without backfill)	
Mill Throughput	650ktpa	360ktpa	650ktpa + 360ktpa
Mineral Resource (previously reported)	3.85Mt 0.30% tin 0.13% copper 0% tin cut-off	7.4Mt 0.65% tin 0.25% copper 0.35% tin cut-off	
Mining Inventory	3.85Mt 0.3% tin 0.13% copper 0% tin cut-off	2.9Mt 0.73% tin 0.27% copper 0.6% tin cut-off	
Cut-Off Tin Grade	0.0%	0.60%	
Production Target Base Case	3.85Mt ^a	3.70Mt ^b	
Tin Recovery	50%	71%	
Copper Recovery	40%	75%	
Average Tin in Concentrate	1,000tpa	1,900tpa	
Average Copper in Concentrate	300tpa	700tpa	
FINANCIALS			
Pre-Production CAPEX	AU\$23.9M	AU\$43.8M	AU\$23.9M
Sustaining Capital	AU\$4.8M	AU\$17.0M	AU\$70.6M
NPV ₈ (Ungeared Pre-tax)	AU\$30.9M	AU\$40.4M	AU\$58.1M
C1 Cash Cost (Tin)	AU\$12,350/t	AU\$17,880/t	
C3 Cash Cost (Tin)	AU\$17,780/t	AU\$21,690/t	
Project Cash Flow (Pre-tax)	AU\$51.1M	AU\$89.3M	AU\$134.1M
IRR (Pre-tax)	56%	30%	42%
INPUTS			
Tin Price	US\$25,500/t ^c	US\$25,500/t	US\$25,500/t
Copper Price	US\$6,750/t	US\$6,750/t	US\$6,750/t

^a This production target is based solely on an Inferred Mineral Resource. Normally an Inferred Mineral Resource indicates a low geological confidence. This is not applicable with a tailings resource. The stated production target is based on the company's expectations of future events and should not be solely relied on by investors when making investment decisions.

^b This production target is based on indicated resources (58%), inferred resources (22%), and an Exploration Target (20%). There is a lower level of geological confidence associated with an Inferred Mineral Resource, and there is no certainty that further exploration work will result in the determination of an Indicated Mineral Resource or that the production target itself will be realised. The potential grade and quantity of an exploration target are conceptual in nature, there has been insufficient exploration to determine a mineral resource and there is no certainty that further exploration work will result in the determination of mineral resources or that the production target will be realised.

^c US\$/AU\$ conversion rate of 0.90 assumed.

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Elementos is an Australian, ASX-listed, diversified metals company, including Cleveland, an advanced stage tin-copper and tungsten project in Tasmania, together with a number of prospective copper and gold assets in South America and Australia.

Please visit us at www.elementos.com.au

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COMPETENT PERSON STATEMENT

The information in this report that relates to Exploration Targets and Exploration Results is based on information compiled by Mick McKeown of Mining One Consultants, a Competent Person who is a Fellow of the Australian Institute of Mining and Metallurgy. Mick McKeown is a full-time employee of Mining One Pty Ltd, a mining consultancy which has been paid at usual commercial rates for the work which has been completed for Elementos Limited.

Mick McKeown has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' Mick McKeown consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

COMPETENT PERSON STATEMENT

The information in this report that relates to Mineral Resources is extracted from the report "Cleveland JORC Resources Significantly Expanded" created on 5th March 2014 that is available to view on the website of Elementos Limited www.elementos.com.au. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

MINERAL RESOURCES AND REPORTING

Mineral Resources which are not Ore Reserves do not have demonstrated economic viability. The estimate of Mineral Resources may be materially affected by economic, environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.

The information in this report that relates to Exploration Results is extracted from the report "Cleveland Tin and Copper Exploration Target defined" created on 2nd April 2014 that is available to view on the website of Elementos Limited www.elementos.com.au. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

APPENDIX 1 – PFS SCOPE, METHODOGY AND RESULTS

1. Scope

Elementos commissioned independent consultants Mining One and pitt&sherry to undertake and complete a PFS of the tailings retreatment and tin and copper underground mining projects at Cleveland. The study investigated the technical and economic aspects of executing the tailings retreatment and underground mining projects in an integrated manner, with a focus on minimising capital expenditure wherever possible. For practical reasons, Stage 1 (tailings retreatment) and Stage 2 (underground mining) are discussed and modelled independently. The integration of these projects is discussed in Section 7 of this release.

The objective of this study was to deliver an outcome to a PFS level of accuracy ($\pm 25\%$) for the retreatment of the tailings resource and the redevelopment of the underground mine. An updated Mineral Resource estimate was prepared in accordance with JORC 2012 reporting rules as part of the PFS study (see ASX release “Cleveland JORC Resources Significantly Expanded” 5 March 2014).

Wherever possible, the PFS has been based on data, past practice and performance from more than 18 years of tin operations at Cleveland by Aberfoyle Ltd (“Aberfoyle”). This wealth of data from the commercial operation has provided a strong basis for the study.

The Cleveland project occurs within Exploration Licence EL7/2005, which has an area of 18 square kilometres and includes the historical mine, the tailings resources in Tailings Dams 1 and 2 (“TD1” and “TD2”), and the area occupied by the surface infrastructure for the former operations, see Figure 1-1.

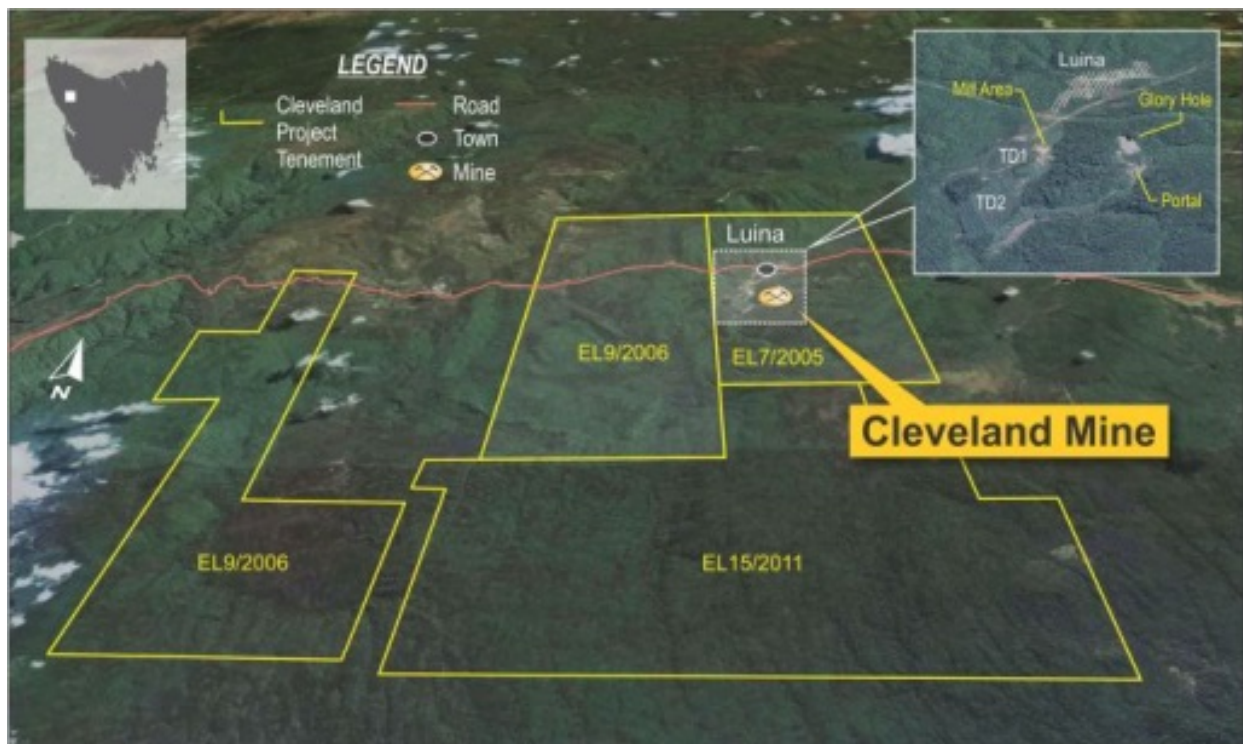


Figure 1-1: Cleveland Mine and Associated Tenements held by Elementos

1.1 Contributors

The table below sets out the contributors to the PFS:

Table 1-1: Contributors to the PFS

Area	Company	Contributors
Geology	Mining One Elementos	Mick McKeown Gustavo Delendatti
Mining	pitt&sherry pitt&sherry Mining One	Dan O'Toole Rob Johnston Mark Van Leuven
Metallurgy	Mining One Elementos	David Foster Mike Adams
Infrastructure	pitt&sherry	Rob Casimaty
Environment	pitt&sherry	Edith O'Shea
Financial Modelling	Mining One pitt&sherry Elementos	Mark Van Leuven Dan O'Toole Calvin Treacy

2. Mining Inventory

2.1 Tailings Retreatment

There is a high level of certainty and cross-correlation as to the composition and make up of the tailings resource based on Aberfoyle’s production records, surveying and drilling. The mining resource for this stage of the project is shown in Table 2-1 below.

Table 2-1: Cleveland Tailings Mining Resource

Tailings Mining Resource 0% Tin Cut-Off					
	Tonnage	Tin Grade	Tonnes Tin	Copper Grade	Tonnes Copper
Tailings	3.85Mt	0.30%	11,550t	0.13%	5,000t

2.2 Underground

The Cleveland underground resource is well defined with over 120,000 metres of diamond core drilling and 75,000 assay points. The combined Indicated and Inferred JORC Mineral Resource is 7.4 Mt at 0.65% tin and 0.25% copper at a 0.35% tin cut-off grade^d. This resource has been converted to a Mining Inventory by applying the following factors:

Upper Levels:

- Unmineable portion of the resource (due to prior mining) – 30%;
- Mining recovery – 90%; and
- Stope dilution – 12%.

Lower Levels:

- Unmineable portion of the resource (due to prior mining) – 10%;
- Mining recovery – 90%; and
- Stope dilution – 10%.

Cut-off grade has been estimated for the mining inventory based on:

- Metal price assumptions of US\$25,500/t tin and US\$6,750/t copper;
- Mining costs of AU\$64.62/t, processing costs of AU\$26.61/t, administration costs of AU\$6.37/t (all costs are per tonne of mined ore);
- Mine development costs of AU\$2,950/m; and
- Transport and smelting charges of AU\$1,442/t of tin.

^d ASX release “Cleveland JORC Resources Significantly Expanded” 5 March 2014.

With these factors applied, the Mining Inventory has been estimated as shown in Table 2-2 below.

Table 2-2: Cleveland Mining Inventory (0.6% Tin Cut-Off Grade)

Underground Mining Inventory 0.6% Tin Cut-Off					
	Tonnage	Tin Grade	Tonnes Tin	Copper Grade	Tonnes Copper
Upper Levels	2.0Mt	0.75%	15,000t	0.30%	6,000t
Lower Levels	0.9Mt	0.66%	6,000t	0.18%	1,600t
Total	2.9Mt	0.73%	21,000t	0.27%	7,600t

3. Mining

The PFS mining study was assessed using an owner operator model. The Board views that it is imperative to build organisational core competency in mining. Key attributes of the Cleveland project that lend itself to this philosophy include:

- The staged development with a tailings project first reduces pressure on the underground development, and early operations provide an excellent environment for developing internal skill sets;
- Production rates are generally consistent from year-to-year;
- The mining fleet is very small at the planned production rates;
- The mining conditions are expected to be very conducive to low dilution and high recoveries, without the need for any specialist equipment; and
- There is a ready source of experienced mining personnel in the immediate locality (Waratah, Burnie, Tullah, Rosebery).

3.1 Tailings Reclamation Mining -Stage 1

The chosen mining method for the Stage 1 tailings reclamation is excavator to pump box mining. This method offers flexibility so that alternative excavation methodologies can be applied depending on circumstances, which limits the requirement for infrastructure (roads and stockpile areas) development.

Using this method, an excavator loads the tailings into a mobile pump box (screening can be included at the front end of the mobile pump box). Water is added within the pump box so that a slurry can be mixed to the required density and pumped to the processing plant. The pump box can be track mounted so that it can traverse soft or rough terrain of differing moisture content.

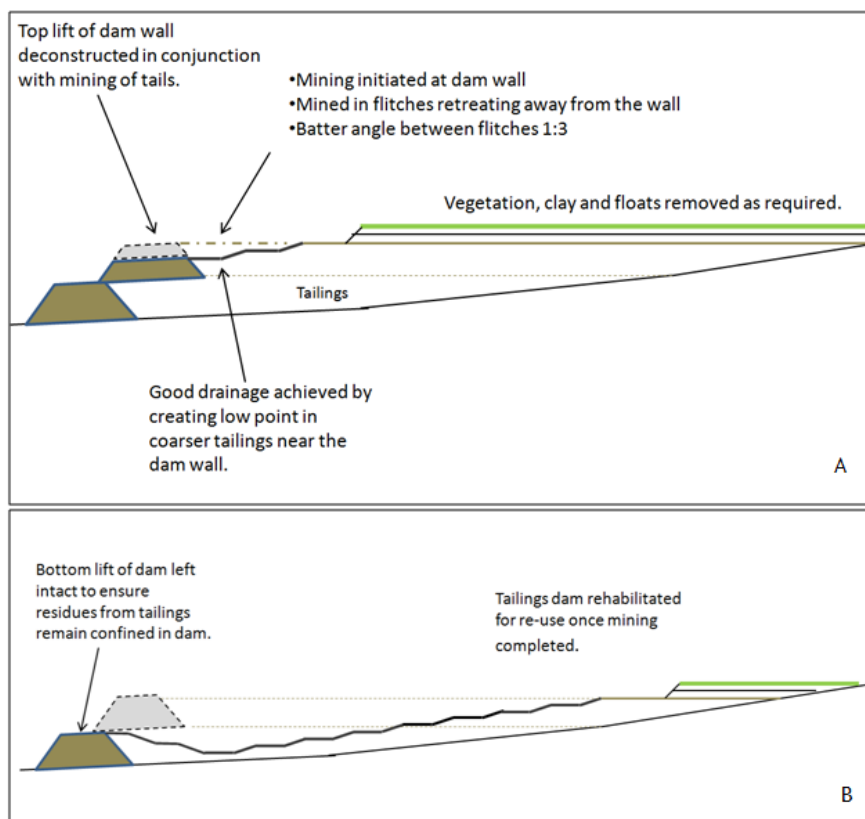


Figure 3-1: Proposed Mining Method of the Tailings Resources

3.2 Underground Mining - Stage 2

Stage 2 will utilise the existing decline and mine development were possible to access ore and thereby reducing capital expenditure.

The traditional open stoping mining methods previously adopted at Cleveland were proven to be successful and ground conditions were good throughout the mine. Accordingly, the preferred mining method for the Stage 2 development and operation of the Cleveland Underground Mineral Resource is based on the historically proven method of "up-hole retreat benching, without backfill" (refer Figure 3-2 and Figure 3-3).

For this method, ore is extracted bench by bench rather than stope by stope. The benching comprises uphole drilling starting at one end of the development and retreating backwards to the ramp access. Ore is loaded from the bench by remote controlled vehicles. Top down benching using this method does not require special arrangements for leaving pillars and multiple benches may be worked simultaneously. This method has a number of benefits including:

- Simple mining method;
- Lower operating and capital cost compared with options requiring backfill; and
- A top down method – enabling earlier access to ore.

With several benches in operation, the proposed production rate of 360ktpa is considered achievable.

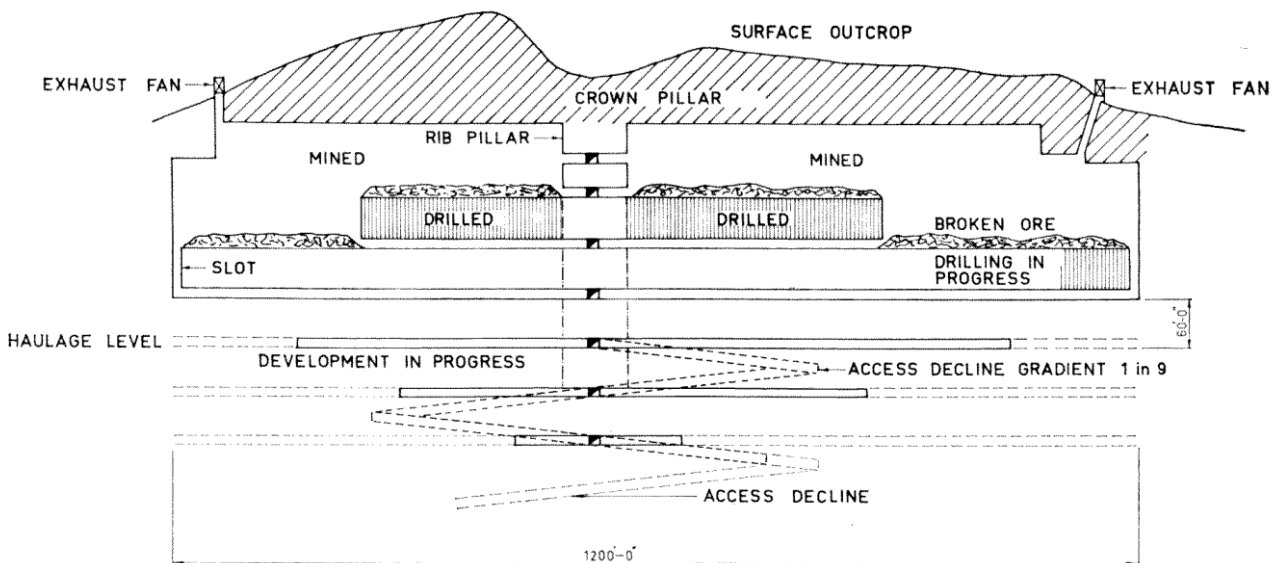


Figure 3-2: Generic Example of Preferred Mining Method (Carter, 1971)

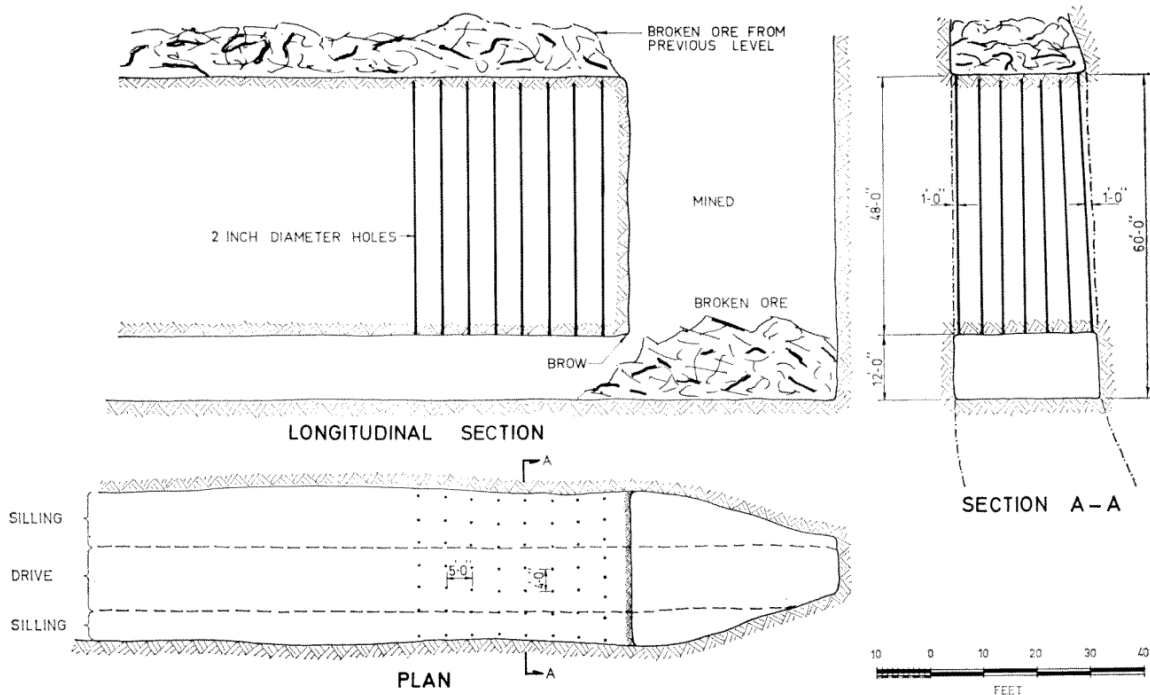


Figure 3-3: Schematic Diagram of Historical Mining Method (Carter, 1971)

3.2.1 Mine Design

The underground mine will utilise the existing decline and mine development were possible, thereby significantly reducing capital expenditure. The mine workings are currently flooded and the PFS includes the costs of dewatering and decline refurbishment.

The current decline provides access from the Surface to Level 26 (950mRL) and will require rehabilitation. Below Level 26, the decline will need to be extended for a further 250m vertically to 750mRL. This has been allowed for in the financial modelling for the PFS.

Table 3-1: Summary of Development Design Parameters

Development	Nominal Size		Gradient (Nominal)												
	Height (m)	Width (m)													
Decline	5.5	5.0	1:7 Down												
Decline Truck Turn	5.5	5.0	1:50 Up												
Sumps	5.0	5.0	1:7 Down												
Return Air Access	5.5	5.0	1:50 Up												
Escape Way Cuddies	5.0	5.0	1:50 Up												
Diamond Drill Drives	5.0	5.0	1:50 Up												
Level Access	5.5	5.0	1:50 Up												
Level Stockpiles	5.5	5.0	1:50 Up </tr <tr> <td>Ore Drives</td> <td>5.0</td> <td>5.0</td> <td>1:50 Up</td> </tr> <tr> <td>Refuge Cuddies</td> <td>5.0</td> <td>5.0</td> <td>1:50 Up</td> </tr> <tr> <td>Sumps</td> <td>5.0</td> <td>5.0</td> <td>1:7 Down</td> </tr>	Ore Drives	5.0	5.0	1:50 Up	Refuge Cuddies	5.0	5.0	1:50 Up	Sumps	5.0	5.0	1:7 Down
Ore Drives	5.0	5.0	1:50 Up												
Refuge Cuddies	5.0	5.0	1:50 Up												
Sumps	5.0	5.0	1:7 Down												

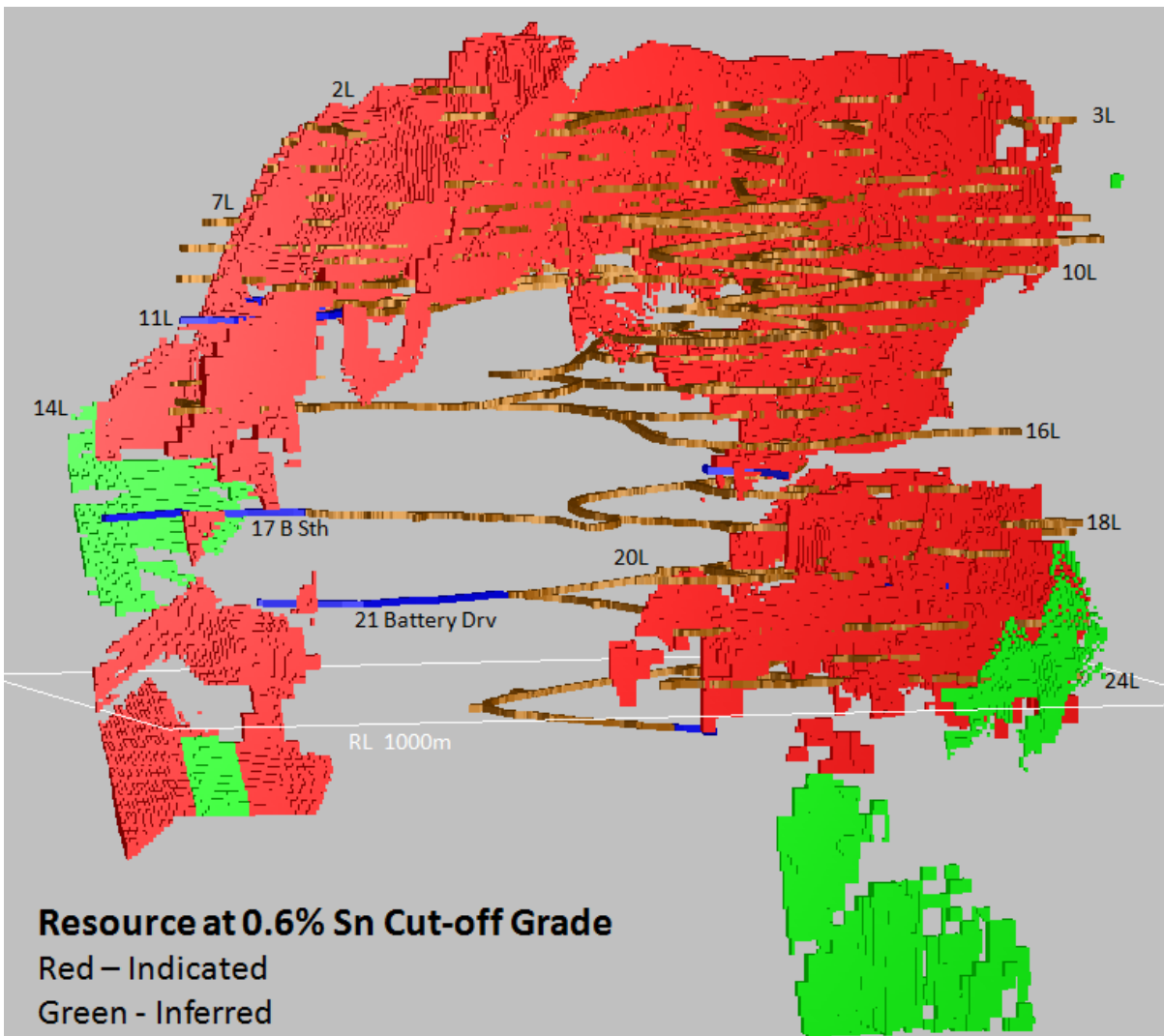


Figure 3-4 Resource at 0.6% Tin Cut-Off Grade Showing Existing Decline and Selected Drives

4. Mineral Processing

4.1 Tailings Retreatment

The flowsheet and recoveries for the tailings retreatment operation are based on the Aberfoyle bench and pilot-scale testwork on tailings samples, augmented by the more recent work undertaken by Rockwell Minerals Ltd and Lynch Mining Pty Ltd.

The process flowsheet (Figure 4-1 below) is based on the standard mineral processing methods tested in pilot and batch-scale testwork conducted by Aberfoyle. The main process steps are:

- Light attrition milling;
- Desliming;
- Classification;
- Sulphide flotation (producing low-grade copper concentrate);
- Cassiterite flotation; and
- Fine-particle scavenging.

The proposed cassiterite recovery from the tailings retreatment is 50%, producing a 40% tin concentrate grade. There is no definitive information on copper recoveries from the tailings. A copper recovery of 40%, producing a 20% copper concentrate grade has been assumed, and further testwork is required to confirm this.

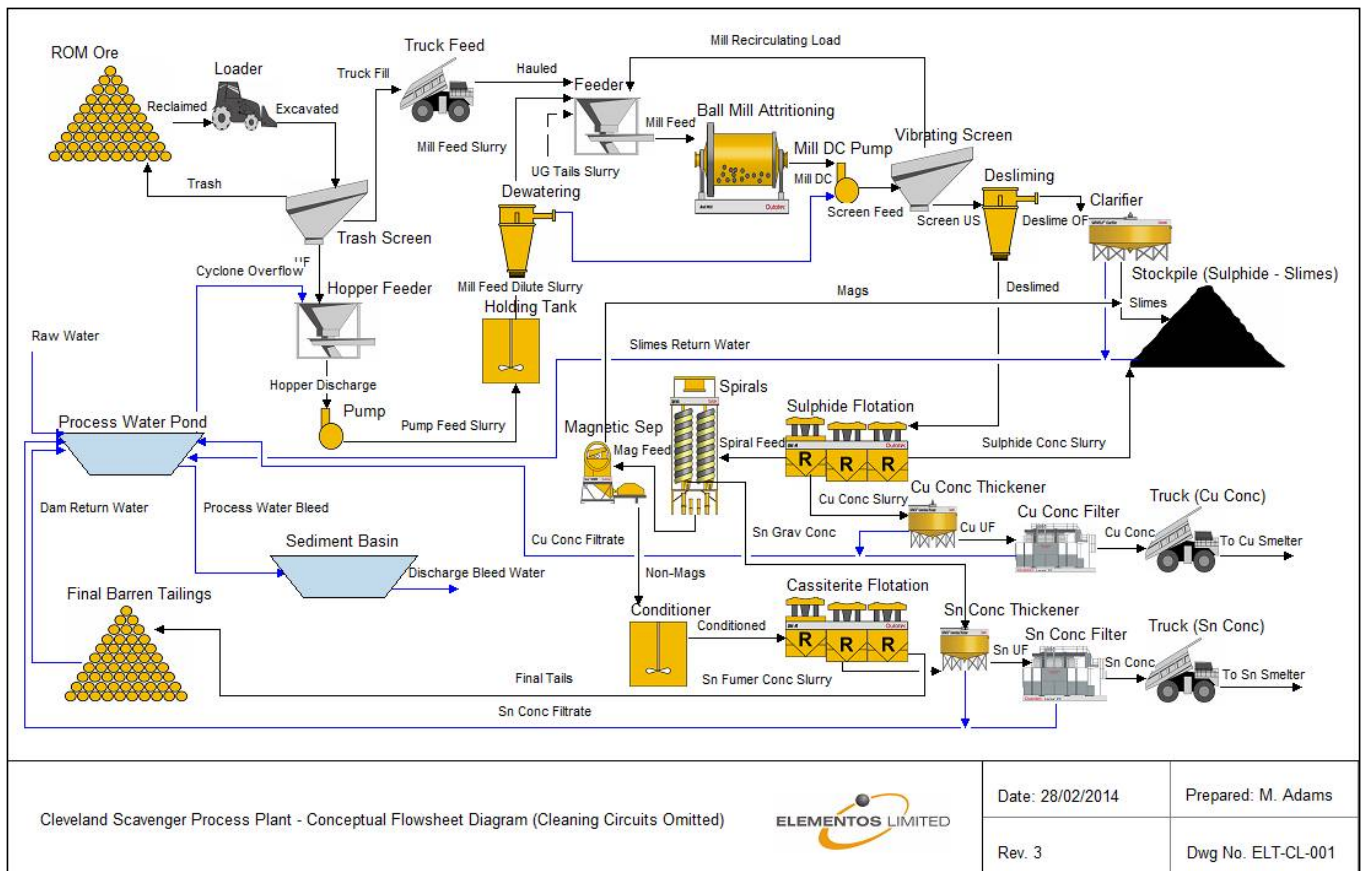


Figure 4-1: Tailings Retreatment Conceptual Flowsheet

4.2 Underground Ore Processing

The PFS uses the flowsheet, production results and metallurgical data from the previous Aberfoyle operation at Cleveland as a basis for the treatment of the underground ore.

The proposed flowsheet (see Figure 4-2) shows a flotation circuit to recover copper and a gravity concentration to recover coarse tin. Note, the last step of the process, not shown on the flowsheet, is to employ a second flotation circuit to recover the fine tin.

The general process is as follows:

1. Run of mine ore is crushed producing a screened product at a rate of 360ktpa;
2. Crushed ore is conveyed to a heavy media cyclone where it is separated on the basis of specific gravity. Some 30% of the feed to the heavy media section is rejected;
3. Heavy media cyclone sinks are pumped to a ball mill;
4. Ball mill output is pumped to a cyclone splitting, oversize reports back to ball mill feed, and undersize reports to copper sulphide flotation circuit;
5. The tailings from the sulphide flotation are pumped to the gravity separation circuit;
6. Gravity concentrate is magnetically treated prior to being filtered and bagged;
7. Middling material is pumped to the regrind circuit, and then undergoes further treatment in the tailings retreatment plant; and
8. The gravity tailings are pumped to an attritioning mill for further treatment in the tailings retreatment plant.

Table 4.1 shows the proposed recoveries. For comparison, historical recovery results achieved tin recoveries as high as 69% and copper recoveries of up to 76%.

Table 4-1: Proposed Process Recoveries

Process	Recovery	Concentrate Grade Produced
Gravity Circuit	52% of total cassiterite	55% tin
Cassiterite Flotation Circuit	19% of total cassiterite	40% tin
Sulphide Flotation	75% of total chalcopyrite/bornite	20% copper

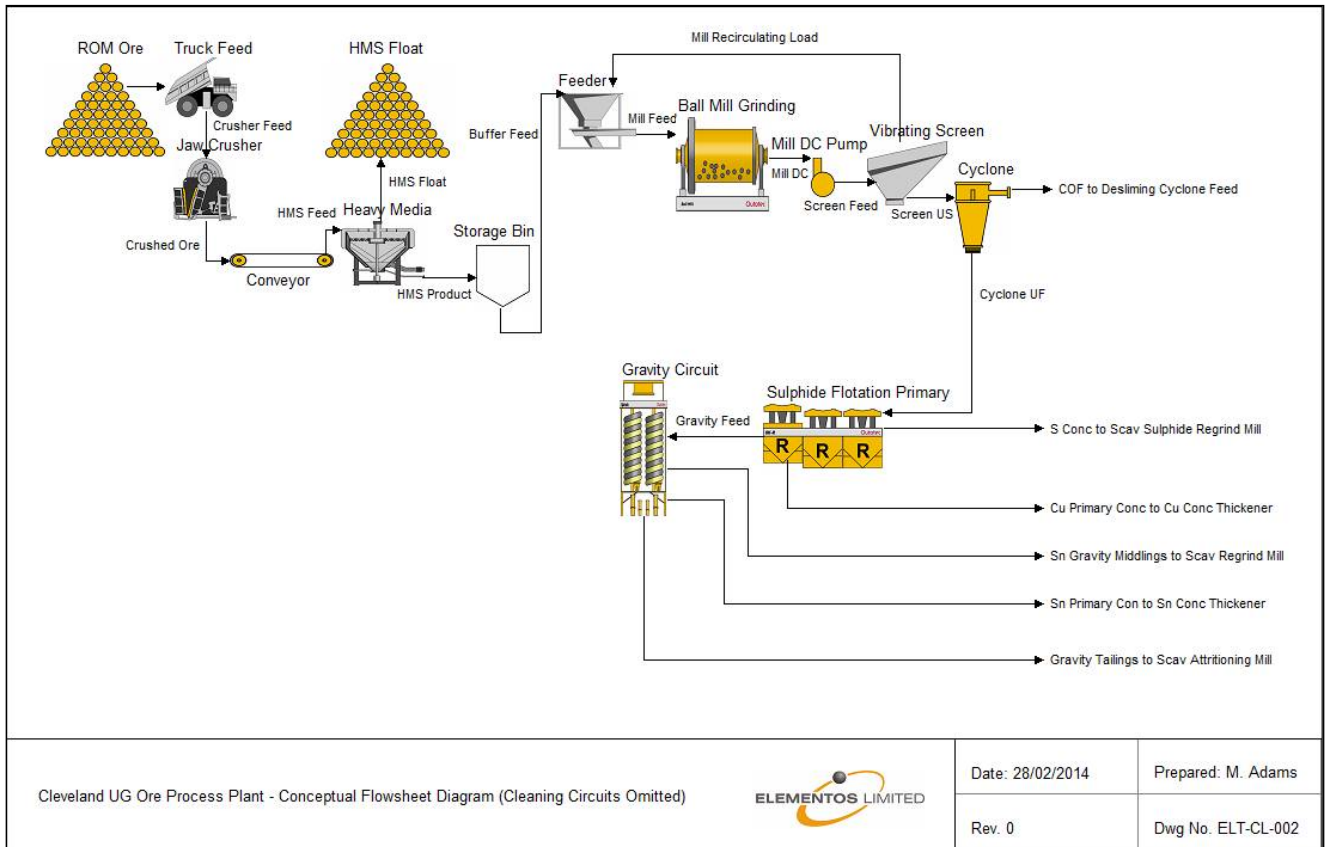


Figure 4-2: Underground Ore Processing Conceptual Flowsheet

4.3 Tailings Storage

After evaluating several options (including Aberfoyle’s previously proposed Tailings Dam 3), it is proposed that a new Tailing Storage Facility (“TSF4”) be located to the south of the existing TD1 on the opposite side of the Whyte River. The embankment will run parallel to the river, with the storage extending south. The exact positioning is subject to the results of geotechnical and geological fieldwork outcomes.

The proposed development plan calls for the existing tailings dams to be dismantled and refurbished as the tailings retreatment takes place. The total planned site tailings storage capacity is approximately 3.5M cubic metres and is sufficient for Stages 1 and 2 of the proposed operation.

5. Infrastructure

5.1 Power

The power supply for the project will be from the existing mains power supply available along Waratah Road that supplies Savage River Mine. Discussions with Transend Networks Pty Ltd indicate that the lines supplying Savage River are 66 kV. This would be stepped down to 11 kV using a transformer placed within the proposed Mining Lease near Waratah Road.

It is anticipated that the maximum power draw for the tailings retreatment operation will be 1.5 MW, and 3.2 MW for the underground mining and mineral processing.

5.2 Access Roads

The proposed development will utilise the existing access off Waratah Road at Luina. Whilst all roads on site will be upgraded to Forestry class 3 roads, they will follow existing site roads which remain in fair condition. The only new planned road access is to TSF4. The road will include a bridge/culvert crossing of the Whyte River south of TD1.

5.3 Water Supply

5.3.1 Potable Water

Potable water will be provided using bottled water delivered to the site.

5.3.2 Non-Potable Domestic Water

Non-potable domestic water includes water for toilet flushing, washing and general cleaning. This water will be sourced from rainwater tanks connected to all building roofs. If this source is insufficient during prolonged dry periods then additional water may be delivered in tanker trucks to supplement the supply. However the mine site typically experiences high annual rainfall.

5.3.3 Process Water

Mine process water will be extracted from the following sources:

- Treated decant water from the tailings storage facility;
- Mine dewatering; and
- Water extracted from the Whyte River.

5.3.4 Fire Water

The fire water system will comprise four hours fire fighting flow storage, in the form of two concrete tanks. These will be topped up from the Whyte River and/or the process water supply. The tanks will be located above the 340m reference contour to enable fire fighting flows to be achieved at a minimum pressure of 20m under gravity.

5.3.5 Wastewater Treatment and Disposal

Domestic wastewater from on site employees will be treated by a package Aerated Wastewater Treatment System with disposal to the mine process water system. Expected flows into the treatment plant are estimated to be of the order of 5,000 – 6,000 litres per day.

6. Environmental

6.1 Tailings

An environmental permitting process is underway for the tailings retreatment project and the dewatering of the existing mine. A draft Development Proposal and Environmental Management Plan (“DPEMP”) has already been submitted to the Tasmanian Environmental Processing Authority (“EPA”).

Although the EPA will be the principal assessment agency, the actual Development Application (“DA”) for the operation will need to be submitted to the Waratah–Wynyard Council once the DPEMP has been finalised.

Once the EPA has completed its assessment, it will advise the Council of the environmental approval conditions that must be included in its planning permit.

Before mining can commence, a Mining Lease will need to be issued by the Minister for Mines, under the *Mineral Resources Development Act 1995*. A Mining Lease Application (“MLA”) will be submitted to Mineral Resources Tasmania.

6.2 Underground

An environmental permitting process for the development of an underground operation and associated infrastructure will, in all likelihood, need to be undertaken as there will be significant changes in site operations between Stage 1 and Stage 2. The Tasmanian EPA will be the principal assessment agency and will assess the project through a separate DPEMP prepared by the Company.

The EPA will assess the project under the *Environmental Management and Pollution Control Act 1994*.

It is believed that having gained approval for Stage 1, the approval process for Stage 2 will be simplified.

6.3 Baseline Studies

A number of baseline studies will be required for the project planning and DPEMP process. These are outlined in the Table 6.1 below.

Table 6-1: Baselines Studies

Study	Comments
Flora and Fauna Assessment	Completed
Surface Water Monitoring	Continue with program at tailings retreatment project
Groundwater Monitoring	Continue with program from tailings retreatment project. Note that additional monitoring at depth will be required.
Groundwater Modelling	To determine constraints regarding waste rock storage and dewatering.
Aboriginal Heritage Assessment	Completed unless additional disturbance areas proposed
European Heritage Assessment	Likely required due to close proximity of underground to historic workings
Traffic Impact Assessment	Only if additional transport requirements
Geochemical Assessment of Underground Material	Static and kinetic testing required
Geotechnical Survey	Both underground and any changes to existing tailings dams
Basic Metallurgical Assessment of underground ore	To inform any changes in water/materials balances

7. Financial

The underlying project development strategy for Cleveland is to generate positive cash flows from the Stage 1 tailings retreatment project, which will provide partial capital funding for the Stage 2 underground mining project.

The Cleveland project presents a unique opportunity to execute this strategy due to the high degree of optionality inherent in the project.

The following financial data is presented for the tailings and underground stages:

- Capital expenditure pre-production and post-production (sustaining capital);
- Operating costs; and
- Financial information (NPV, IRR and Project Cash Flow).

Section 7.4 “Integrated Project” considers the effect of running Stages 1 and 2 in parallel, after 3 years of tailings retreatment. The tailings retreatment project would provide approximately 50% of funding of the underground stage. By staggering Stages 1 and 2, the Company will have the capability to execute both stages effectively and efficiently.

For modelling purposes, it is assumed that:

- Stage 1 Tailings Retreatment – first concentrate shipped in December 2015;
- Stage 2 Underground – first concentrate shipped in December 2018; and
- In the first year of production, the mining rate is 50% of planned annual capacity, and all pre-production capital is spent in years 0 and 1.

All other inputs used for all modelling is shown in Table 7-1.

Table 7-1: Input Assumptions for the Cleveland PFS Discounted Cash Flow Model

Inputs	Tailings	Underground
Tin Recovery	50%	71%
Copper Recovery	40%	75%
Average Tin in Concentrate	1,000tpa	1,900tpa
Average Copper in Concentrate	300tpa	700tpa
Average Tin Concentrate Grade	40%	50%
Average Copper Concentrate Grade	20%	20%
Tin Price	US\$25,500/t	US\$25,500/t
Copper Price	US\$6,750/t	US\$6,750/t
Tax	Pre-tax	Pre-tax

7.1 Tailings Retreatment

7.1.1 Tailings Retreatment Capital Costs

	Pre-Production (AU\$ Million)	Sustaining Capital (AU\$ Million)
Mineral Processing Plant	\$12.2	-
Surface Infrastructure	\$6.0	\$2.5
EPCM/Owners Costs	\$3.4	-
Contingency	\$2.3	\$2.3
Total	\$23.9	\$4.8

7.1.2 Tailings Retreatment Operating Costs (AU\$)

C1 Average Cash Cost (Tin after Copper Credit)^e	\$12,350/t
C3 Average Cash Cost (Tin after Copper Credit)^f	\$17,780/t
Mining Cost	\$3.50/t
Processing Cost	\$13.40/t
General Administration	\$1.38/t
Total Cost per Tonne of Ore (ex Freight)	\$18.28/t
MARGIN	
Value of Recovered Metal per Tonne of Ore	\$46.40/t
Gross Operating Margin	61%

7.1.3 Tailings Retreatment Financials (AU\$)

NPV₈ (Ungeared Pre-tax)	\$30.9M
Project Cash Flow (Pre-tax)	\$51.1M
IRR (Pre-tax)	56%

^e C1 cash cost is the sum of mining, processing, administration, transport and off-site refining

^f C3 cash cost is the sum of C1 costs plus depreciation, amortisation and royalties

7.2 Underground

7.2.1 Underground Capital Costs

	Pre-Production (AU\$ Million)	Sustaining Capital (AU\$ Million)
Mobile Equipment	\$15.0	-
Mineral Processing Plant	\$11.4	-
Underground Development	\$8.9	\$13.2
Surface Infrastructure	\$3.5	\$1.8
EPCM/Owners Costs	\$3.0	-
Contingency	\$2.0	\$2.0
Total	\$43.8	\$17.0

7.2.2 Underground Operating Costs (AU\$)

C1 Average Cash Cost (Tin after Copper Credit)^g	\$17,880/t
C3 Average Cash Cost (Tin after Copper Credit)^h	\$21,690/t
Mining Cost	\$64.62/t
Processing Cost	\$26.61/t
General Administration	\$6.37/t
Total Cost per Tonne of Ore (ex Freight)	\$97.60/t
MARGIN	
Value of Recovered Metal per Tonne of Ore	\$161.90/t
Gross Operating Margin	40%

7.2.3 Underground Financials (AU\$)

NPV₈ (Ungeared Pre-tax)	\$40.4M
Project Cash Flow (Pre-tax)	\$89.3M
IRR (Pre-tax)	30%

^g C1 cash cost is the sum of mining, processing, administration, transport and off-site refining

^h C3 cash cost is the sum of C1 costs plus depreciation, amortisation and royalties

7.4 Integrated Project

7.4.1 Integrated Project Capital Costs

	Pre-Production (AU\$ Million)	Sustaining Capital (AU\$ Million)
Tailings Mineral Processing Plant	\$12.2	-
Underground Mobile Equipment	-	\$15.0
Underground Mineral Processing Plant	-	\$16.4 ⁱ
Underground Development	-	\$22.0
Surface Infrastructure	\$6.0	\$7.9
EPCM/Owners Costs	\$3.4	\$3.0
Contingency	\$2.3	\$6.3
Total	\$23.9	\$70.6

7.4.2 Integrated Financials (AU\$)

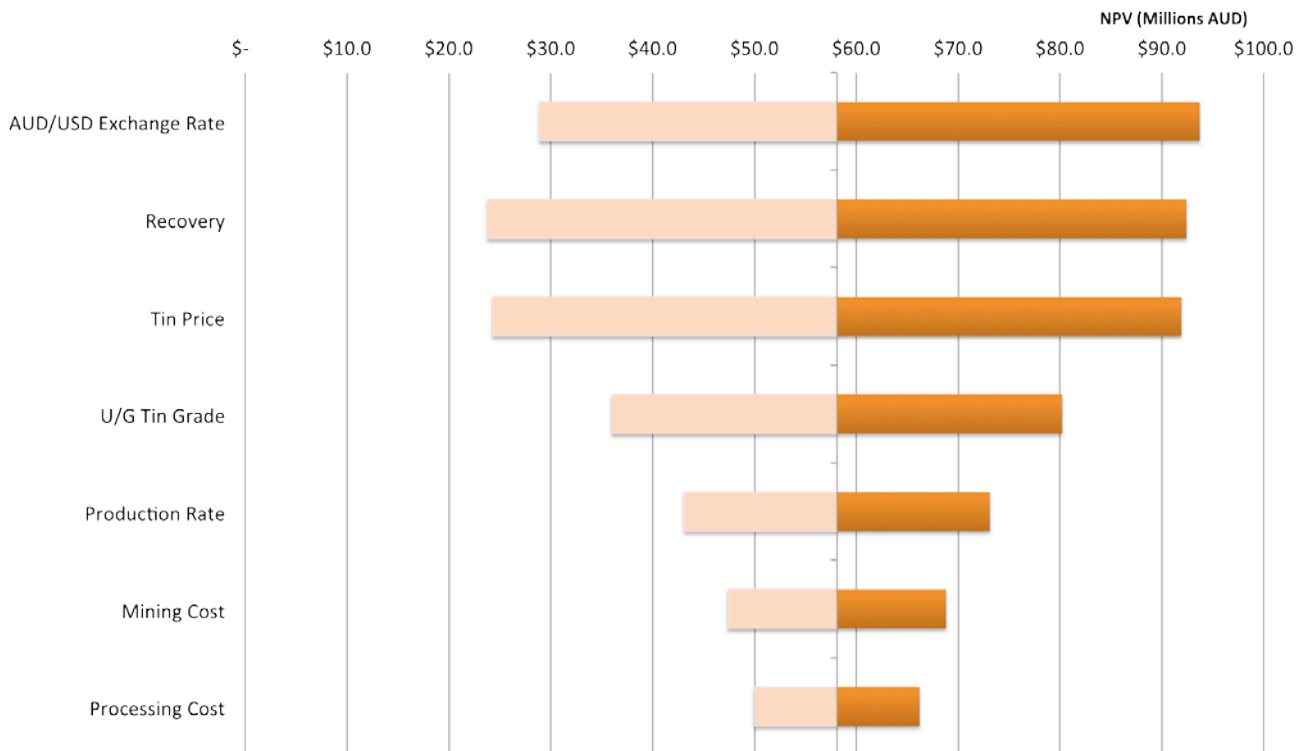
NPV ₈ (Ung geared Pre-tax)	\$58.1M
Project Cash Flow (Pre-tax)	\$134.1M
IRR (Pre-tax)	42%

ⁱ An allowance for an additional AU\$5M has been made for mineral processing plant or reconfiguration of existing plant in the case where Stages 1 and 2 run in parallel (as is the case of the integrated model). This allowance is currently an estimation.

7.4.3 Integrated Project Financial Sensitivity

A sensitivity analysis was completed to understand the influence of key variables on the integrated project NPV. Each of the key variables analysed were flexed $\pm 10\%$ whilst holding all other variables constant as per the base case model.

The effect of the $\pm 10\%$ changes on the project NPV is depicted in the Tornado Diagram below compared to the based case NPV of AU\$58.1M.



The table below shows the tin price sensitivity on the NPV and IRR of the integrated project. Note: The base case NPV is AU\$58.1M and IRR of 42% at a tin price per tonne of US\$25,500 (exchange rate of US\$0.90/AU\$1.00).

Tin Price US\$ per Tonne	NPV AU\$ Millions	IRR
\$23,000	24.9	23%
\$24,000	38.2	30%
\$25,000	51.5	38%
\$26,000	64.7	45%
\$27,000	78.0	53%
\$28,000	91.3	61%
\$29,000	104.5	69%
\$30,000	117.8	77%

8. Development Timetable

Below is the proposed development timetable based on the currently available information:



9. Opportunities

Through the PFS process, several opportunities to improve the project economics and/or operational efficiency have been identified. The following opportunities will be investigated in the next phase of development:

1. **Increase Mining Rates.** Increases in mining rate deliver increased profitability due to significant fixed costs at both stages. The key areas for investigation are:
 - o **Underground Exploration.** The Company has recently released a report defining a large Exploration Target for both tin and copper. Successful underground exploration will potentially lead to an expansion of the resources ultimately allowing an extension of mine life and/or an increase in production rate;
 - o **Exploit Near Surface Mineralisation.** Based on the current block model, there is potential to define near surface resources that could be exploited using lower cost mining methods during the project; and
 - o **Increase Mining Rate of Tailings.** Discussions with consultants and preliminary investigations suggest that for modest additional capital expenditure, a 1Mtpa operation would deliver significant reductions in operating costs and an improvement to project NPV.
2. **Reduction of Tailings Project Capital Costs.** Discussions with other companies that have undertaken similar projects in Tasmania suggest there is potential to significantly reduce capital expenditure by using local contractors and a modified Engineering, Construction and Project Management contract.
3. **Improvement in Tin Recovery.**
 - o Improvements in fine particle cassiterite gravity processing has potential to improve overall cassiterite recovery and will be investigated in the next phase of development; and
 - o A concept study into the viability of building a small-scale batch pyrometallurgical processing unit to upgrade low-grade tin concentrate has been undertaken with promising capital and operating expenditure costs. It is accepted that upgrading low-grade concentrate would allow an improvement in the overall tin recovery.

10. Next Steps

The Company now moves into the next stage of development with a focus on three core areas:

1. Project development;
2. Development of corporate core competencies; and
3. Development of strategic relationships.

10.1 Project Development

The project focus is on fast tracking the Stage 1 Tailings Retreatment Project by:

- Completing the environmental approval process;
- Commencing a metallurgical testing program on samples already collected; and
- Commence engineering with input from the metallurgical testing program.

The Company will also investigate the opportunities highlighted in the previous section in parallel with Stage 1.

10.2 Corporate

The Company is developing an experienced project delivery team with a targeted recruitment program. It is an objective of the company to build strong core capabilities in mineral processing, project delivery and mining, supplemented by a strong team of external consultants.

10.3 Strategic Relationships

The Board acknowledges that developing a strong network of strategic relationships will be a critical element in the success of the Company and project. The Company will continue to leverage existing relationships and develop new ones in a structured way.