PLATINA SCANDIUM PROJECT

POSITIVE DEFINITIVE FEASIBILITY STUDY

13 DECEMBER 2018

HIGHLIGHTS

- **Attractive financial return – Post-tax, real NPV$^{8\%}$ USD 166 million (AUD 234 million), after tax IRR 29% and fast payback of 5.3 years based on average scandium oxide price of USD 1,550/kg**
- **Staged production strategy – 20 tonnes/year of 99.99% purity scandium oxide growing to 40 tonnes/year as market demand increases**
- **Low development capital cost – Stage 1 USD 48.1 million (AUD 67.8 million) and stage 2 USD 11.1 million (AUD 15.6 million)**
- **Long life – Initial 30 year project life based on mining 33% of the Ore Reserves, with potential to significantly expand from both existing Ore Reserves and conversion of additional Mineral Resources**
- **Significant opportunity to enhance project value through resource expansion and the production of by-product credits including cobalt, nickel and high-purity alumina**

Platina Resources Limited ("Platina" or the "Company", ASX: PGM) is pleased to report the findings of a Definitive Feasibility Study ("DFS") for the Platina Scandium Project ("PSP") located in central New South Wales, Australia.

The DFS has confirmed the technical and financial viability of constructing a simple, low-strip ratio, open-cut mining operation and processing facility producing scandium oxide. The positive DFS demonstrates the opportunity to create substantial long-term sustainable shareholder value at a manageable capital cost. Key highlights of the DFS include:

- **Robust financials** - The DFS demonstrates a very robust financial case. Based on a mine life of 30- years, the project generates an after-tax net present value in real terms (8% discount rate) of USD 166 million (AUD 234 million), post-tax IRR of 29% and payback period of 5.3 years. The financial model incorporates an average scandium oxide price of USD 1550 /kg over the life of the project. Based on market research and discussions with end-users, the Company believes this is the price necessary to drive wider-scale adoption of scandium in alloys;
- **Low capital expenditure** - The DFS is based on a processing plant designed to initially produce 20 t/y of scandium oxide at a capital cost of USD 48.1 million (AUD 67.8 million), expandable to 40 t/y of scandium oxide for a very low incremental capital cost of USD 11.7 million (AUD 15.6 million), as market demand for lightweight aluminium-scandium grows;
- **High-grade, large resource base** - The strength of the PSP is the very large and high-grade scandium resources, which are amenable to simple, low-cost, open-cut mining techniques at a low waste to ore ratio (1.9:1). The DFS assumes that 33% of the available Ore Reserves are mined over 30 years, and additional Ore Reserves and Mineral Resources could provide for decades of additional production or further production expansion;
- **Conventional, well tested process route** - Ore mined at Red Heart will be processed through a conventional high pressure acid leach circuit ("HPAL") to produce 99.99% high-purity scandium oxide. The process methodology has been extremely well tested through bench and pilot scale test work to confirm operating and capital estimates for the DFS;

- **Access to infrastructure** - The processing facility will utilise an existing industrial site in Condobolin. This unique site provides access to existing infrastructure – labour, water, power, rail, and sealed roads – which results in lower capital costs, and simplifies the permitting and approvals process;
- **Potential for other revenue streams** - Like other laterite projects using the HPAL process route, once all the minerals are in solution from the HPAL process, recovery is achievable at relatively low incremental cost, thus providing a potential future opportunity to generate cobalt, nickel, platinum and aluminium products (to make high purity alumina) and generate additional cash flow; and
- **Significant community benefit** - The Company is very committed to delivering the PSP in an environmentally and socially responsible manner. The significant investment will provide jobs, training and contracts for the local communities.

Table 1 – Platina Scandium Project – Key Project Parameters

	USD	AUD
Stage 1 Annual Production	20 tonnes	
Stage 2 Annual Production (from Year 5)	40 tonnes	
Life-of-mine for financial model	30 years	
Net Present Value (8%), real, after-tax	166 million	234 million
Internal Rate of Return, post-tax	29%	
Payback Period (undiscounted)	5.3 years	
Stage 1 Capital Expenditure	48.1 million	67.8 million
Stage 2 Capital Expenditure	11.1 million	15.6 million
Total Life-of-Project Capital Expenditure*	104.1 million	146.5 million
Life-of-Mine Average Cash Operating Costs#	525/kg	739/kg
Life-of-Mine Scandium Oxide Price	1,550/kg	2,183/kg
USD to AUD Exchange Rate	0.71	

**Includes sustaining capital costs. # Mining, processing, general and administration costs. Excludes royalties*

The Company is now focused on completing the Environmental Impact Assessment, Mining Licence Application, Development Applications (mine and process plant), securing offtake and project financing.

Managing Director, Corey Nolan, commented:

"We are very pleased with the technical and commercial outcomes of the DFS and the compelling business case to develop the Platina Scandium Project.

While the solid oxide fuel cell industry has been the dominant consumer of scandium in recent years, scandium's greatest value lies in the functional properties it imparts when alloyed with aluminium. When used in combination with other common aluminium alloys, scandium can produce stronger, heat tolerant, weldable aluminium products. These products are being increasingly incorporated into transportation applications for light-weighting (electric vehicles) and lowering fuel efficiency requirements.

The Company's strategy is to capitalise on this significant market opportunity and bring the Platina Scandium Project into production as quickly as possible."

For further information, please contact:

Corey Nolan, Managing Director
Tel: (+61) 7 5580 9094
Email: admin@platinaresources.com.au

About Platina Resources Limited

Platina Resources Limited (ASX: PGM) is an Australian-based exploration and development company focused on precious and specialty metals, particularly platinum group metals ("PGM") and the strategic metal scandium.

The Company's flagship project is Owendale in central New South Wales, one of the largest and highest-grade scandium deposits in the world, which has the potential to become Australia's first scandium producer with cobalt, platinum and nickel credits. A Definitive Feasibility Study was completed in December 2018 and the Company is now in the process of completing the Environmental Impact Assessment, permitting activities, offtake and finance.

The Company also has interests in two gold-platinum group metal projects, including:

- Skaergaard (100% interest) - One of the world's largest undeveloped gold deposits and one of the largest palladium resources outside of South Africa and Russia, located in Greenland.
- Munni Munni (30% interest) - Situated in the Pilbara region of Western Australia, the Munni Munni Complex is one of Australia's most significant PGM occurrences. Munni Munni also has potential for conglomerate hosted gold and is a joint venture with Artemis Resources Limited.

For more information please see: www.platinaresources.com.au

Competent Person Statements

The information in this announcement that relates to Mineral Resources is based on information announced on 16 August 2018 and compiled by Mr John Horton, Principal Geologist, who is a Fellow and Chartered Professional of the Australasian Institute of Mining and Metallurgy and a full time employee of ResEval Pty Ltd. Mr Horton has sufficient experience that is relevant to the style of mineralisation and the type of deposit under consideration and to the activity which he has undertaken to qualify as a Competent Person as defined in the 2012 edition of the 'Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves'. This includes over 20 years of experience in Nickel Laterite deposits and over 9 years of experience with Scandium resource estimation. Mr. Horton is a consultant to Platina Resources Limited and consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Ore Reserves, is based on, is based on information announced on 13 December 2018 and prepared by Mr. Gary Benson, who is a Member of the Australasian Institute of Mining and Metallurgy and is a Principal Mining Engineer employed by Measured Group Pty Ltd. Gary Benson holds a Bachelor of Engineering (Mining) from the University of Queensland and has over 30 years' experience in the mining industry with much of this experience in Open cut metalliferous mining. Mr Benson has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he has undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Benson consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

Information in this announcement relating to the Platina Scandium DFS and Production Targets is based on technical data compiled by Mr Boyd Willis, an Independent Consultant trading as Boyd Willis Hydromet Consulting. Mr Willis is a Fellow and Chartered Professional of The Australasian Institute of Mining and Metallurgy (AusIMM). Mr Willis has sufficient experience which is relevant to metal recovery from the style of mineralisation and type of deposits under consideration and to the activity which they are undertaking to qualify as a Competent Person under the 2012 Edition of the 'Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves'. This includes over 21 years of experience in metal recovery from Laterite ore and over 9 years of experience with Scandium hydrometallurgy. Mr Willis consents to the inclusion of the technical data in the form and context in which it appears.

References to Previous ASX Releases

The information in this Director's Report that relates to the Mineral Resources and Ore Reserves were last reported by the Company in compliance with the 2012 Edition of the JORC Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves in market releases dated as follows:

- Platina Scandium Project Ore Reserves increase – 13 December 2018;
- Significant increase to the Owendale Mineral Resource – 16 August 2018
- High grade, refined scandium oxide produced from pilot program – 6 August 2018;
- Owendale pilot plant program completed successfully – 12 June 2018;

The Company confirms that it is not aware of any new information or data that materially affects the information included in the market announcements referred above and further confirms that all material assumptions underpinning the production targets and all material assumptions and technical parameters underpinning the Ore Reserve and Mineral Resource statements contained in those market releases continue to apply and have not materially changed.

Forward-Looking Statements and Reasonable Basis

This release contains "forward-looking information" that is based on the Company's expectations, estimates and projections as of the date on which the statements were made. This forward-looking information includes, among other things, statements with respect to the feasibility studies, the Company's business strategy, plan, development, objectives, performance, outlook, growth, cash flow, projections, targets and expectations and mineral resources.

Generally, this forward-looking information can be identified by the use of forward-looking terminology such as 'outlook', 'anticipate', 'project', 'target', 'likely',' believe', 'estimate', 'expect', 'intend', 'may', 'would', 'could', 'should', 'scheduled', 'will', 'plan', 'forecast', 'evolve' and similar expressions. Persons reading this release are cautioned that such statements are only predictions, and that the Company's actual future results or performance may be materially different.

Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the Company's actual results, level of activity, performance or achievements to be materially different from those expressed or implied by such forward-looking information.

Forward-looking information is developed based on assumptions about such risks, uncertainties and other factors set out herein, including but not limited to general business, economic, competitive, political and social uncertainties; the actual results of current exploration activities; conclusions of economic evaluations; changes in project parameters as plans continue to be refined; future prices of scandium and other metals; possible variations of ore grade or recovery rates; failure of plant, equipment or processes to operate as anticipated; accident, labor disputes and other risks of the mining industry; and delays in obtaining governmental approvals or financing or in the completion of development or construction activities. This list is not exhaustive of the factors that may affect our forward-looking information. These and other factors should be considered carefully and readers should not place undue reliance on such forward-looking information. The Company disclaims any intent or obligations to or revise any forward-looking statements whether as a result of new information, estimates, or options, future events or results or otherwise, unless required to do so by law.

Statements regarding plans with respect to the Company's mineral properties may contain forward-looking statements in relation to future matters that can be only made where the Company has a reasonable basis for making those statements.

Platina Scandium Project Definitive Feasibility Study Summary

1 Introduction

Platina proposes to develop the PSP in stages, each designed to meet market capacity while minimising technical and financial risk.

The ore will be mined by free-digging strip mining and hauled to the Plant Site near Condobolin. The process plant will be designed to treat high grade scandium ore (limonitic ore) through high pressure acid leaching to produce high purity (min, 99.99%) scandium oxide product.

The proposed stages of development are:

- Stage 1: small scale scandium oxide production (20 t/y); and
- Stage 2: increased scandium oxide production (40 t/y) by upgrading the processing train. Whilst not studied in this DFS, there is potential to produce cobalt, nickel, and high purity alumina (HPA).

The site layout and design consider an additional Stage 3 expansion with a second parallel processing train to meet expected market growth for scandium. Whilst considered for planning, Stage 3 is not part of the DFS assessment.

The DFS scope for Stage 1 and 2 consisted of:

- Development of an open cut mine using conventional free dig, load and haul mining methods;
- Transportation of ore by public road from the Mine Site to the Plant Site and back loading of dewatered residue;
- Development of a HPAL processing plant to leach and extract the contained scandium from the ore;
- Development of a range of ancillary infrastructure including waste rock emplacements, water storage and management facilities, site access road and intersections; and
- Rehabilitation of the Mine Site and Plant Site to achieve final landforms suitable for agriculture and/or nature conservation.

For the DFS, a detailed capital estimate has been developed for Stages 1 and 2 with sufficient engineering having been undertaken for the estimate to have a level of accuracy of -10% to +15%. A detailed operating cost model has been developed which includes mining, processing and general and administration expenditures. The operating cost model has an accuracy of ±15%.

Platina's in-house technical team has been involved in components of the DFS, including

- John Horton – geology and mining;
- Roland Wells – site liaison and engineering;
- Boyd Willis – metallurgy and process flow sheet development; and
- Gideon Steyl– hydrogeology and environmental.

In addition to Platina's in-house technical team, work commissioned by the Company has been carried out by consulting firms covering a wide range of technical disciplines including:

- Ausenco Services (Ausenco) – process design, capital and operating cost estimates, compilation of the DFS report;
- Element 21 Pty Ltd (Element 21) – scandium solvent extraction and refining;
- ATC Williams Pty Ltd (ATC Williams) – residue storage and geotechnical;
- R.W. Corkery & Co Pty Ltd (Corkery) – environmental and permitting;

- Measured Group Pty Ltd (Measured Group) – mine planning;
- MCD Geo - financial modelling; and
- CM Group – Scandium market analysis.

2 Location, Title and Ownership

The PSP Mineral Resource and Red Heart Mine Site are located in central New South Wales, approximately 53 kilometres north-east of Condobolin and 11 kilometres south-west of Tullamore.

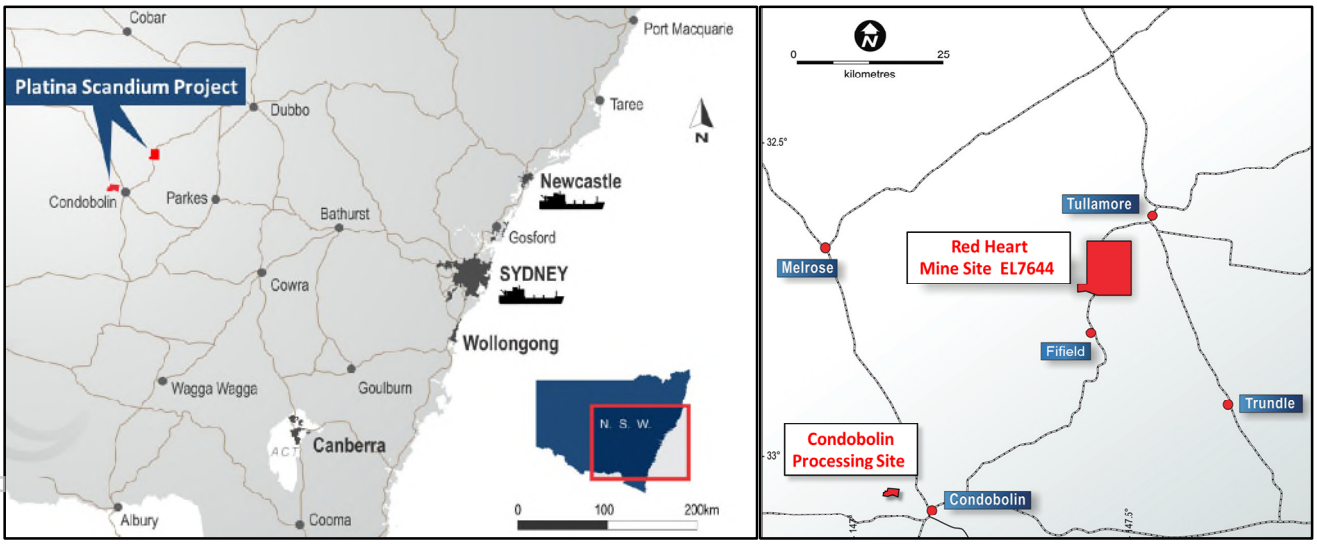
The processing plant will be constructed approximately 5 kilometres north-west of the township of Condobolin at the Condobolin Plant Site, 70 kilometres by public road south-west of the Mine Site.

Central New South Wales is a well-established mining district with a number of world-class mining projects in operation including Cadia, Lake Cowal and North Parkes. The district is also becoming an important source of technology metals including scandium, cobalt, nickel and high-purity alumina.

The Red Heart deposit is located within Exploration Licence EL7644 which is 100% owned by Platina Resources Limited and was granted on the 2 December 2010. Renewal has been offered for a further term of 5 years expiring in 2020. The licence is in good standing with the New South Wales Mines Department. The Company plans to lodge a Mining Lease Application covering the Red Heart Mine Site before the end of 2018. The licence measures approximately 9.3 km north-south and 7.8 km east-west.

Mineral royalties are payable to the New South Wales Government at 4% of sales (less allowable deductions).

Figure 1 – Location of the Platina Scandium Project



3 Exploration History, Geology and Mineralisation

The Red Heart mine site comprises a number of small, laterally extensive, ore zones with vertical widths of between 5 and 15 metres, and maximum depth of approximately 25 metres. The deposit is rich in scandium, cobalt, nickel, platinum and aluminium.

3.1 Exploration History

The Owendale intrusive was first recognised in 1961 by a Bureau of Mineral Resource (BMR) aeromagnetic survey. The area has been held under a series of exploration leases and companies since 1964, which included the early discovery of nickel-copper mineralisation by Anaconda Australia Inc at the Kelvin Grove prospect. The majority of exploration was completed by Helix Resources Limited from 1985 to 2006 with extensive

drilling of 37,000 metres of rotary-air-blast drilling, 9,000 metres of reverse circulation drilling and 5,000 metres of costeans. This identified a number of platinum group mineral anomalies that included placer, residual and primary mineralisation.

Platina floated on the Australian Securities Exchange with a core of Helix platinum projects including EL7644, which was granted in 2010. Platina exploration was undertaken in two phases, with extensive drilling between 2011 and 2014 that initially targeted the known platinum mineralisation areas. Although scandium was included in all of Platina's evaluation, the later exploration drilling in 2017 and 2018 was primarily focused on scandium.

Table 2 – Summary of Historical Drilling Programs at the Red Heart Mine

Company	Year	Drill Type	Hole Name Range	Drill Holes	Total Depth metres	Assayed Intervals metres	Scandium Intervals metres
Helix	1986 - 1994	DDH	FKD006 - FKD014	4	1,394	154	0
Not re-assayed	1988 - 1998	RAB	FIR002 - FIR949	249	10,277	9,049	0
	1989 - 1999	RC	FRC0026 - FRC0075	23	1,925	1,003	0
Helix	1988 - 1995	DDH	FKD012 - FKD016	3	1,413	143	16
Re-assayed	1988 - 1990	RAB	FIR001 - FIR527	199	7,309	6,408	3,276
	1989 - 1989	RC	FRC0004 - FRC0046	32	4,607	1,150	718
Platina	2017 - 2018	Aircore	FKD17_449 - FKD18_624	166	4,614	4,462	4,233
	2010 - 2014	DDH	FKD10_109 - OWDD004	14	2,529	334	275
	2011 - 2018	RC	FKD11_110 - FKD18_621	332	14,402	12,814	12,626
			Total	1,022	48,470	35,517	21,144

Table excludes deeper bedrock samples >15m below the laterite

3.2 Geology and Mineralisation

The mineralisation at the Red Heart mine site comprises a laterite profile developed over a Devonian age Alaskan-style intrusive complex that can be divided into a mafic-felsic series (monzonite) and an ultramafic series. The ultramafic series comprises dunite-wehrlite, olivine-pyroxenites and olivine-clinopyroxenite rocks. The relative abundance of nickel, cobalt, scandium and platinum in these ultramafic rocks has been enriched to higher grades in the laterite profile due to either a residual or supergene enrichment processes. The variations in element abundance in the original ultramafic basement rock affect the enriched concentrations in the laterite along with the development of the laterite and any erosion of the laterite profile.

The types of laterite-hosted mineralisation identified thus far show strong correlations with certain lithologies, including platinum-copper mineralisation overlying dunite-wehrlite rocks with variable cobalt, nickel and gold content; cobalt-nickel mineralisation with platinum credits associated with the underlying olivine pyroxenites; and elevated chrome and scandium has been noted where dunite-wehrlite lithologies predominate but mainly occur with clinopyroxenite lithologies.

The lateralisation process developed in the past over a long period of leaching which removed some elements and concentrated others by residual processes. Movement of water can also result in dissolution and precipitation of some elements by supergene processes. The Red Heart area is relatively flat and supergene enrichment appears to only result in vertical enrichment within the profile as there is no evidence of

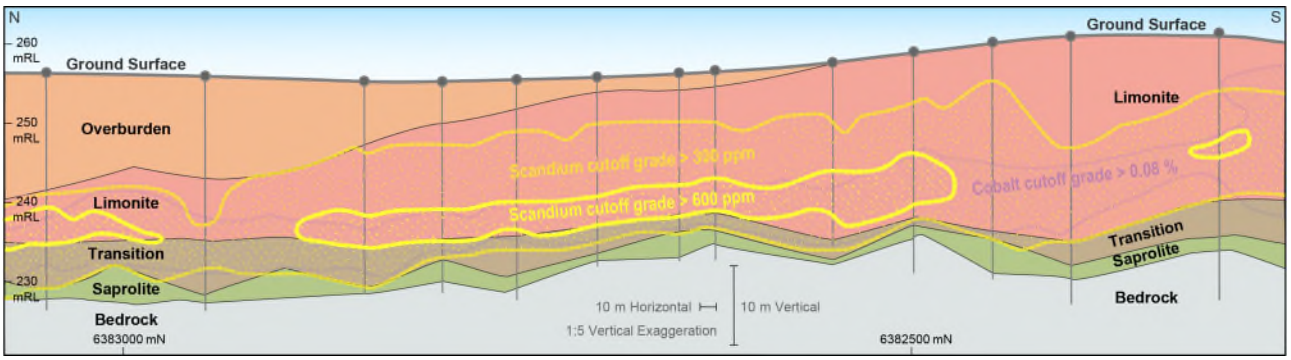
significant lateral movement or enrichment. The lateritisation process results in a thin laterally extensive zone depicted in the section in Figure 2

Much of the Mineral Resource is covered by alluvial or fill material comprised of quartz gravel, sands and other transported material.

Mineralogical analysis performed on various in-situ samples across the mineralisation footprint have verified that scandium ore is hosted within a goethite (15-42%) and hematite (15-40%) matrix.

The mineralisation within the laterite profile typically extends down to 30 metres depth from the surface with limited overburden removal required. Mineralisation within the deposit remains open in all directions.

Figure 2 – Typical cross section through the Red Heart deposit



3.3 Hydrogeology

The Red Heart mine site is located in a lateritic zone with low permeability and limited groundwater development potential. The mine pit floor base level is approximately 10 to 20 metres above the regional water table and development of the pit or residue storage facilities will not intercept aquifer systems.

A general water deficit is present in the area and no groundwater dependent ecosystems have been recorded in this area. Groundwater use in the area is minimal and generally used for limited stock watering. Groundwater monitoring is ongoing at the site and includes water level and hydro-chemical properties.

Platina has identified sufficient water supply for the mine site operations planned but tight groundwater conditions are considered beneficial for permitting and minimises potential environmental risks factors.

4 Mineral Resources

The Mineral Resources estimate for the Red Heart Mine incorporates more than 48,000 metres of drilling and potentially provides decades of additional production beyond the DFS 30-year mine life.

The Mineral Resources were reported in ASX announcement titled “Increase to the Owendale Mineral Resource” on 16 August 2018. There has been no change to the Mineral Resource since this announcement.

The Mineral Resources are reported at a 300 ppm scandium cut-off grade in Table 3 and Figure 3 displays a plan of the resource drilling and Mineral Resource classification. The available Mineral Resource is much greater than that required for the current DFS. The large Mineral Resource allows flexibility in terms of ore selection for mining to maximise the scandium grade and project value. Table 4 demonstrates the Mineral Resource at a higher cut-off grade of 600 ppm scandium (for comparison to previous Mineral Resource estimates); however, a 450 ppm scandium cut-off has been used as the cut-off for the DFS and mine schedule (see Section 6).

The Mineral Resource block model was constructed to represent the laterite profile using a regular block size of 12.5 metres by 12.5 metres by 1 metre with no sub-blocking except to 0.1 metres at surface (Figure 4).

Block grades were estimated using Ordinary Kriging. Unfolding of each laterite domain was used to reflect the geological profile and improve sample selection during estimation. Grades were estimated on a parent block basis using block discretisation of 5 by 5 by 1 points. A three-pass search ellipse was used during estimation at an increasing radius of 70 metres, 140 metres and 420 metres.

The Mineral Resource classification is based on strict drill hole spacing criteria used to determine the confidence categories of the mineralisation as follows:

- Measured Mineral Resource - regular pattern of 50 metre spaced drill holes;
- Indicated Mineral Resource - regular pattern of 100 metre spaced drill holes; and
- Inferred Mineral Resource - generally 200 metre drill hole spacing.

Red Heart is not only an extremely large scandium deposit but is also high quality as a result of the high grades, favourable morphology, low ore to waste ratios and favourable mineralogy for processing.

The combination of fundamental geological characteristics distinguishes Red Heart from other scandium deposits and drives the low capital and operating costs outlined in this report.

Table 3 – JORC Mineral Resources at a 300 ppm scandium cut-off grade

Resource	Tonnes	Grades				In-situ Metal Content			
Classification	**Mt**	**Sc ppm**	**Pt g/t**	**Ni %**	**Co %**	**Sc_2O_3* t**	**Pt koz**	**Ni t**	**Co t**
Measured	7.8	435	0.42	0.13	0.07	5,200	105	9,900	5,400
Indicated	12.5	410	0.26	0.11	0.06	7,800	106	13,400	8,100
Inferred	15.3	380	0.22	0.08	0.05	8,900	106	12,400	7,000
Total	**35.6**	**405**	**0.28**	**0.10**	**0.06**	**22,000**	**317**	**35,700**	**20,500**

** Scandium Oxide (Sc_2O_3) product is calculated from scandium metal using a 1.53 factor*

Table 4 - JORC Mineral Resources at a 600 ppm scandium cut-off grade

Resource	Tonnes	Grades				In-situ Metal Content			
Classification	**Mt**	**Sc ppm**	**Pt g/t**	**Ni %**	**Co %**	**Sc_2O_3* t**	**Pt koz**	**Ni t**	**Co t**
Measured	0.74	685	0.39	0.17	0.16	800	9	100	1,200
Indicated	0.75	670	0.32	0.14	0.11	800	8	1,100	800
Inferred	0.26	645	0.22	0.10	0.07	300	2	300	200
Total	**1.76**	**675**	**0.34**	**0.15**	**0.12**	**1,800**	**19**	**2,600**	**2,200**

** Scandium Oxide (Sc_2O_3) product is calculated from scandium metal using a 1.53 factor*

Figure 3 – Location of the Red Heart drilling campaigns and Mineral Resource classification

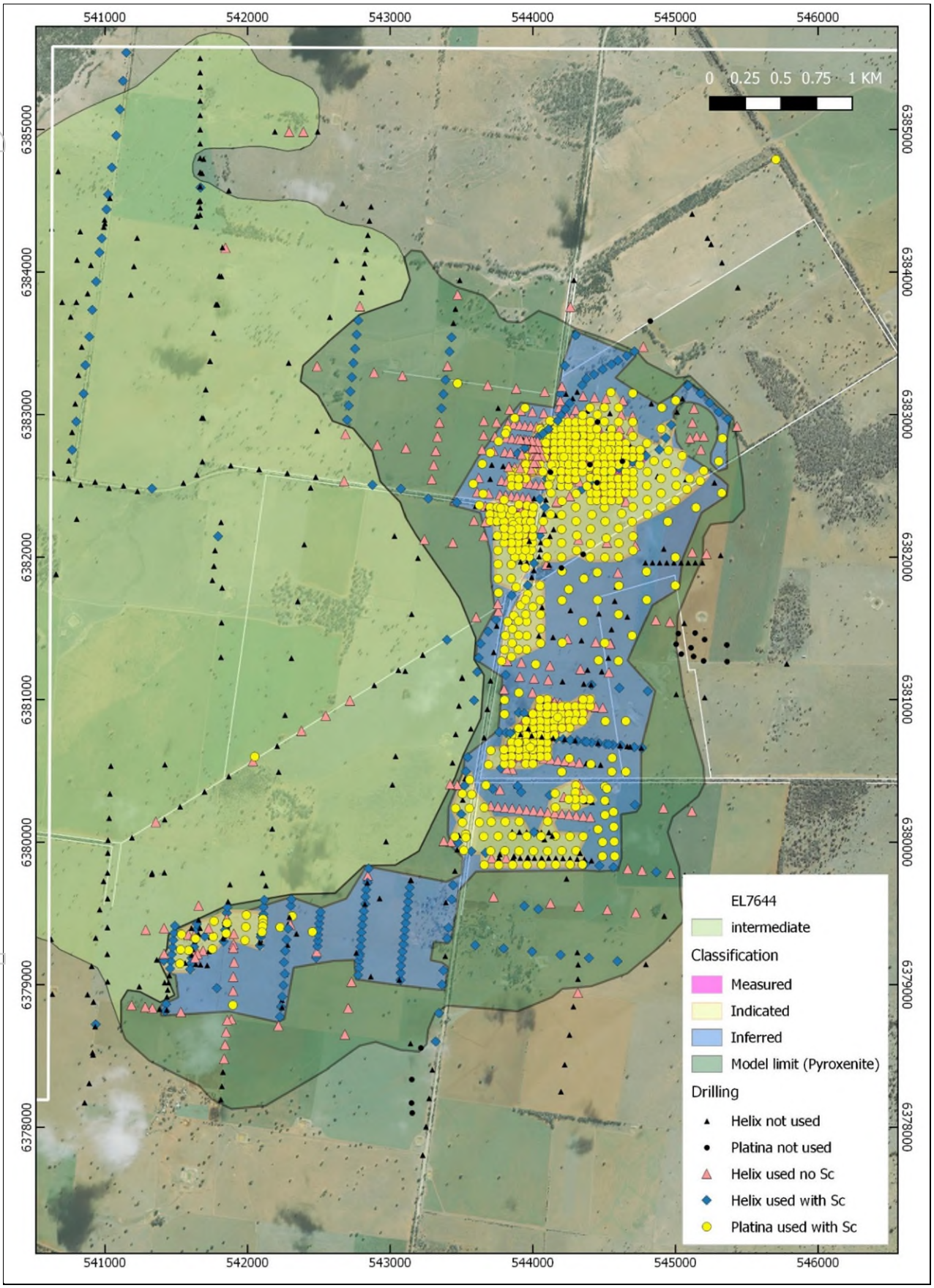
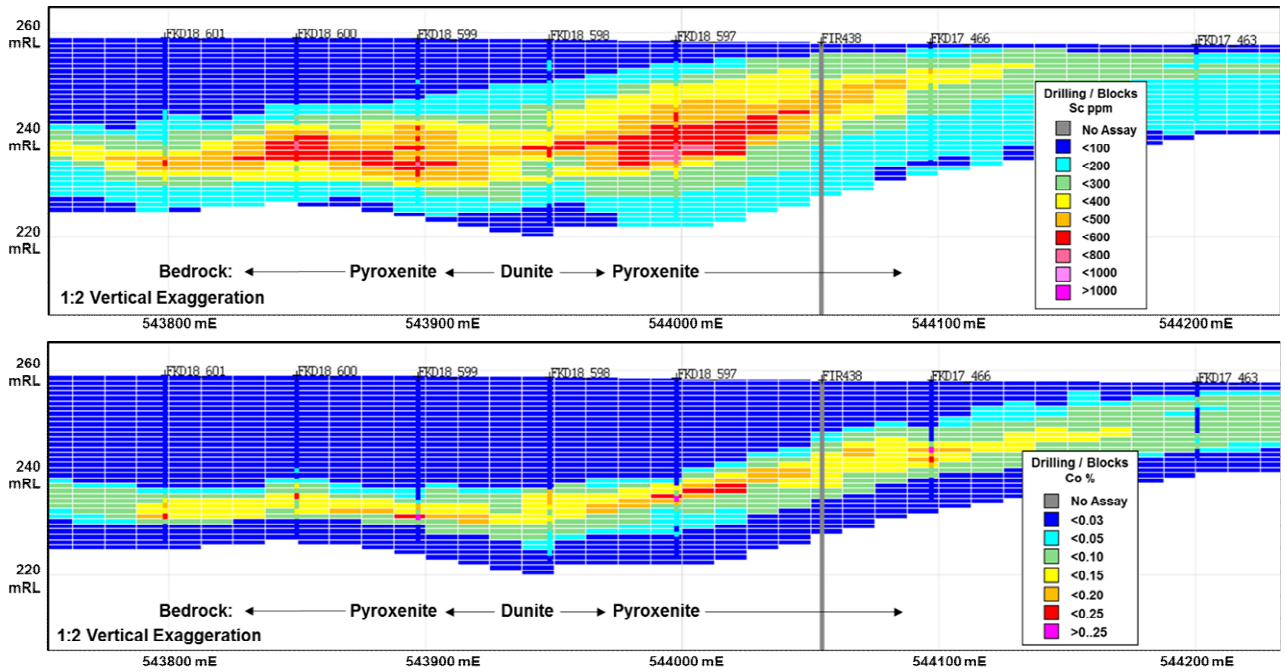


Figure 4 – Cross section through 6392100 mN demonstrating the distribution of scandium and cobalt



5 Production Profile

The PSP is planned to become a dominant global and western world source of scandium for the solid fuel cell and aluminium alloy markets. The PSP will be developed in stages, each designed to meet market capacity while minimising technical and financial risk. The proposed stages of development are:

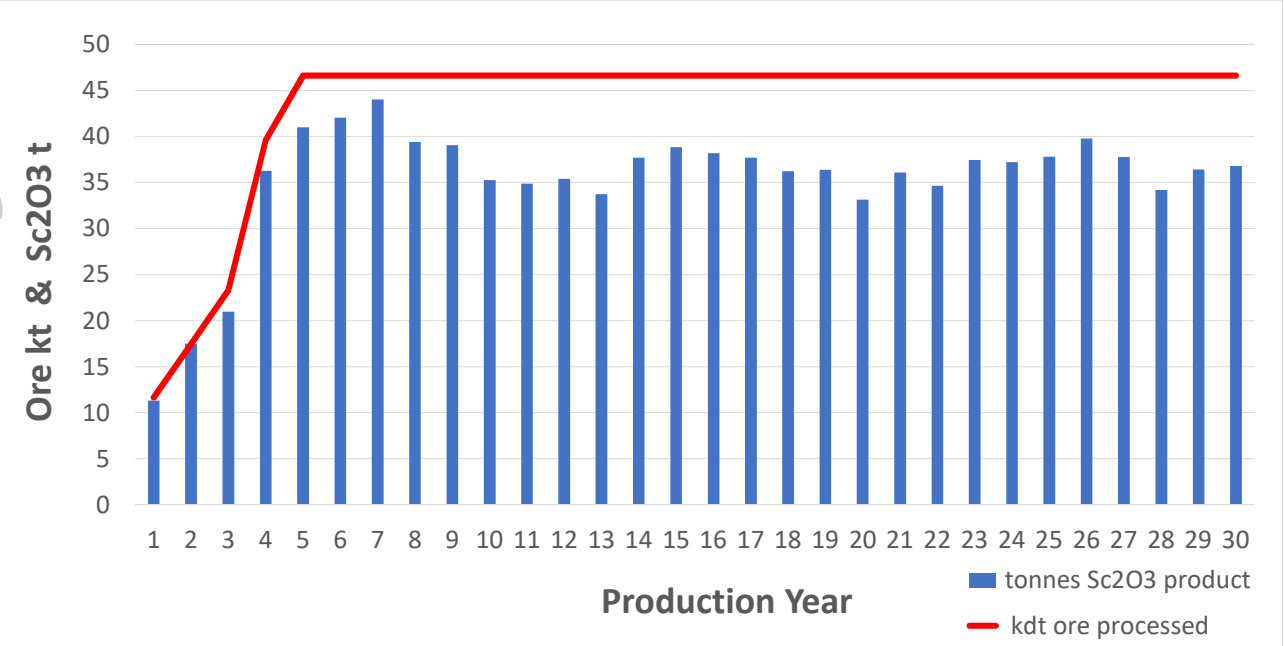
- Stage 1: small scale scandium oxide production (20 t/y); and
- Stage 2: increased scandium oxide production (40 t/y) by upgrading the processing train and the potential production of cobalt, nickel and HPA (note that by-products have not been considered for this DFS).

The following timeline represents the plant ramp-up period and expansion:

- Year 1 – ramp-up, 50% of Stage 1 throughput;
- Year 2 – ramp-up, 75% of Stage 1 throughput;
- Year 3 – full production, 100% of Stage 1 throughput;
- Year 4 – expansion, 170% of Stage 1 throughput; and
- Year 5 to Year 10 – Stage 2 full production, double Stage 1 production.

For the DFS 30-year financial model, only 2.4 million tonnes (58%) of Ore Reserves are required from the total 4.1 million tonnes of Ore Reserves available. Figure 5 displays the annual plant ore profile and scandium oxide production.

Figure 5 – DFS Annual Ore Processed and Scandium Oxide Production



6 Mining Operations and Ore Reserves

Mining studies indicate that the Red Heart operation will be a small but long-life open pit operation with a low life-of-mine waste to ore ratio of 1.9. The DFS only considers the first 30 years of production, which uses only 58% of the available Ore Reserves.

Platina commissioned Measured Group Pty Ltd, based in Brisbane, Queensland, to undertake all mine planning activities, including:

- Mine planning criteria (dilution, ore losses and cut-off grade criteria);
- Open pit optimisation to determine pit shells for eventual economic extraction of the orebody;
- Mine design;
- Mine infrastructure and layout;
- Mine production scheduling;
- Mining capital and operating cost estimation; and
- JORC (2012) Ore Reserve reporting.

The key non-mining related optimisation inputs and modifying factors utilised were derived from the DFS level assessment work, including:

- Processing costs for the plant designed by Ausenco;
- Metallurgical factors established by Platina from test work; and
- Average life-of-mine selling price of USD 1,550 per kilogram of scandium oxide by CM Group.

6.1 Mining Losses and Dilution

Mining losses and dilution are expected to be minimal due to the thick blanket morphology of the deposit and the use of small mining equipment operating at relatively slow total mining rates. Ore Reserves and all mining schedules include a 95% ore mining recovery. There is no additional allowance for dilution as this has already been incorporated during block grade estimation.

6.2 Cut-off Grade

The primary parameters for the cut-off include scandium oxide price, scandium recovery, reagent and consumable cost, fixed processing costs, mining costs and royalties. Based on this and contribution to sustaining capital and site overheads, the breakeven cut-off grade is approximately 300 ppm Scandium.

The project assessment is not based on marginal economics as is common practise for low grade mining operations. The cut-off grade for high-grade ore is 550 ppm scandium and for medium-grade ore is 450 ppm scandium. These are selected to present an improved payback and project value. All material above 300 ppm scandium will also be stockpiled as low grade for potential future processing.

6.3 Pit Design Assumptions

Pit design parameters relating to pit slope angles, access ramp widths, pit floor design parameters, temporary slope design, mining and in-pit dumping slope criteria and other matters are summarised in Table 5.

Table 5 – Pit Design Assumptions

Item	Units	Amount
Crest property setback	m	12.5
Pit face angle	degrees	75
Bench height (between berms)	m	5
Berm width at bench height	m	2.5
Ramp gradient	%	15
Ramp minimum width	m	7.5
Overall slope angle	degrees	60
Grade Criteria	Lowest surface with 300 ppm Sc and 0.1% Co	

6.4 Pit Optimisation

Only Measured and Indicated Mineral Resources were used for the ranking and optimisation studies to generate the Ore Reserve. Pit designs included the removal of subgrade material on the pit floor for stockpiling as future resources and avoid sterilisation by subsequent backfilling.

Measured Group used Vulcan software for pit design and Spry software for mine development and scheduling. Scheduling used a strip mining approach broken down to mining blocks 12.5 metres by 25 metres in width and a nominal bench height of 5 metres. The schedules determine the amount of mine excavation required to achieve the production targets and determine the amount of ex-pit dumping required until sufficient in-pit dumping space is available for the placement of waste and residue.

The Ore Reserve statement outcomes are outlined in Table 6 and subject to a separate ASX release titled “Platina Scandium Project Ore Reserve Increase”, 13 December 2018.

Table 6 – JORC Ore Reserve at a 450 ppm scandium cut-off grade (Dec 2018)

Ore Reserve Classification	Tonnage Dry Kt	Scandium ppm	Cobalt %	Nickel %	Sc_2O_3 t	Cobalt t	Nickel t
High Grade (HG) Ore >550 ppm Sc cut-off							
Proven	1,576	650	0.13	0.16	1,565	2,079	2,516
Probable	438	610	0.07	0.08	408	326	368
Sub-Total	2,014	640	0.12	0.14	1,973	2,406	2,884
Medium Grade (MG) Ore 450 to 550 ppm Sc cut-off							
Proven	1,479	500	0.06	0.10	1,131	865	1,538
Probable	534	500	0.06	0.07	408	328	399
Sub-Total	2,013	500	0.06	0.10	1,539	1,193	1,937
Total HG and MG Ore >450 ppm Sc cut off							
Proven	3,054	575	0.10	0.13	2,696	2,945	4,054
Probable	972	550	0.07	0.08	816	654	767
Total	**4,027**	**570**	**0.09**	**0.12**	**3,512**	**3,599**	**4,821**

** Scandium Oxide (Sc_2O_3) product is calculated from scandium metal using a 1.53 factor*

6.5 Mine Design

Mine development includes mining, backfilling and rehabilitation. The development will be undertaken on individual blocks of 25 metres by 12.5 metres or 25 metres by 25 metres pit floor pits and progressive cut-backs. These will be arranged in strips of three cuts wide and taken in successive slices of 25 metres by 75 metres on the pit floor or about 100 metres wide at surface. The initial planned strip is 330 metres in length but this will vary depending on the final pit limit.

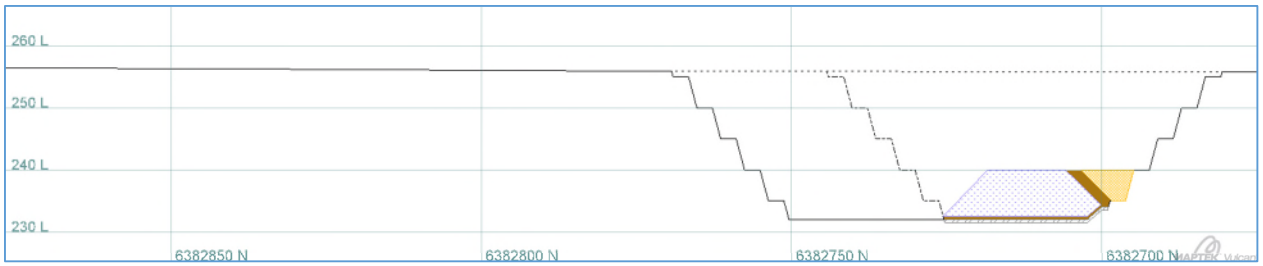
Figure 6 provides an example of the planned progression of the first two planned strips in cross section as mining advances to backfill of the plant residue encased in a clay seal as a residue storage facility (RSF).

The initial starter pit will have a square footprint of around 60 metres by 60 metres along with a canyon ramp access of 140 metres by an average of 20 metres at the surface. This will provide a straight 7.5 metre wide ramp with visual access that avoids additional passing width requirements. The initial canyon style ramp to gain first access will eventually constrain the pit development and will change to ramps along the advancing pit face. Progressive cut backs will provide void spaces suitable for the development of back-filling and residue encasement.

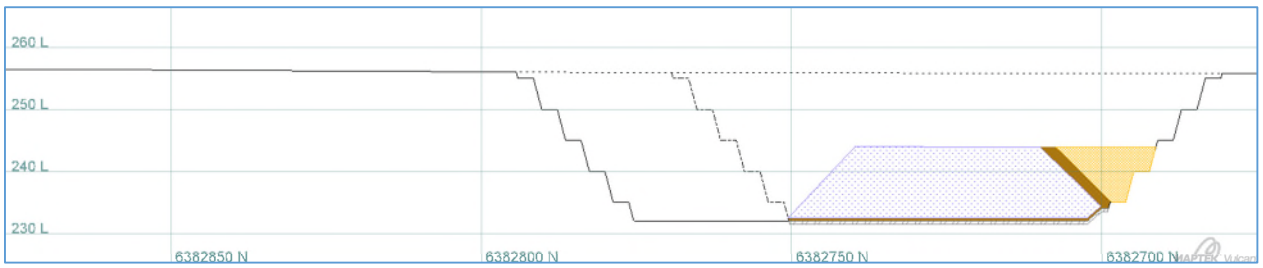
Figure 7 outlines the three high grade areas to be incorporated in to the mining scenarios.

Figure 6 –Cross Section displaying mining and rehabilitation

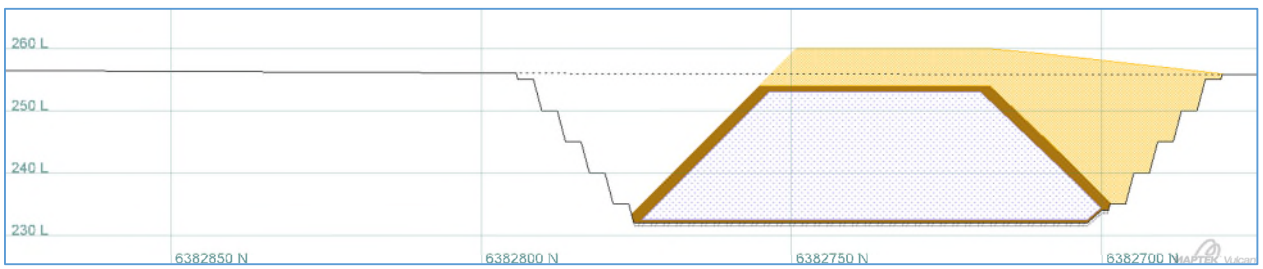
Strip 1: Cut1 1 Mining



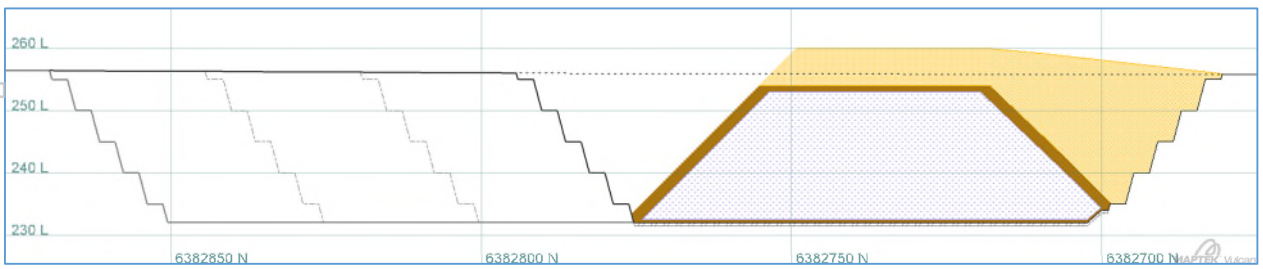
Strip 1: Cut1 2 Mining and Initial RSF



Strip 1: Cut1 3 Mining and RSF partial build-up



Strip 1: RSF partial RSF completion



Strip 2: Cut 1 1 2 3 Mining

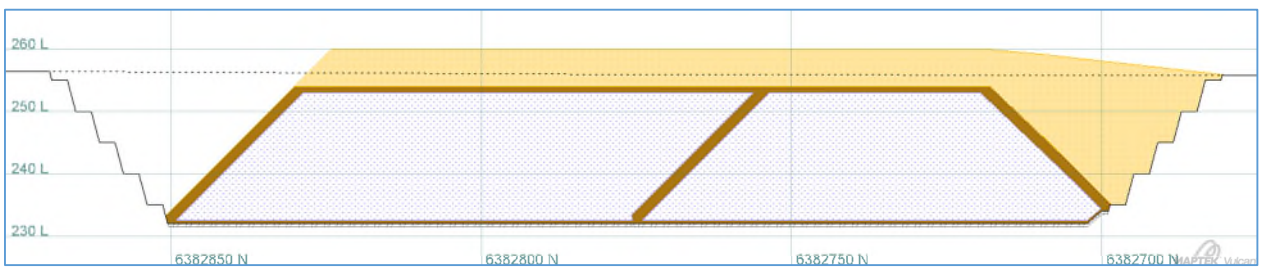
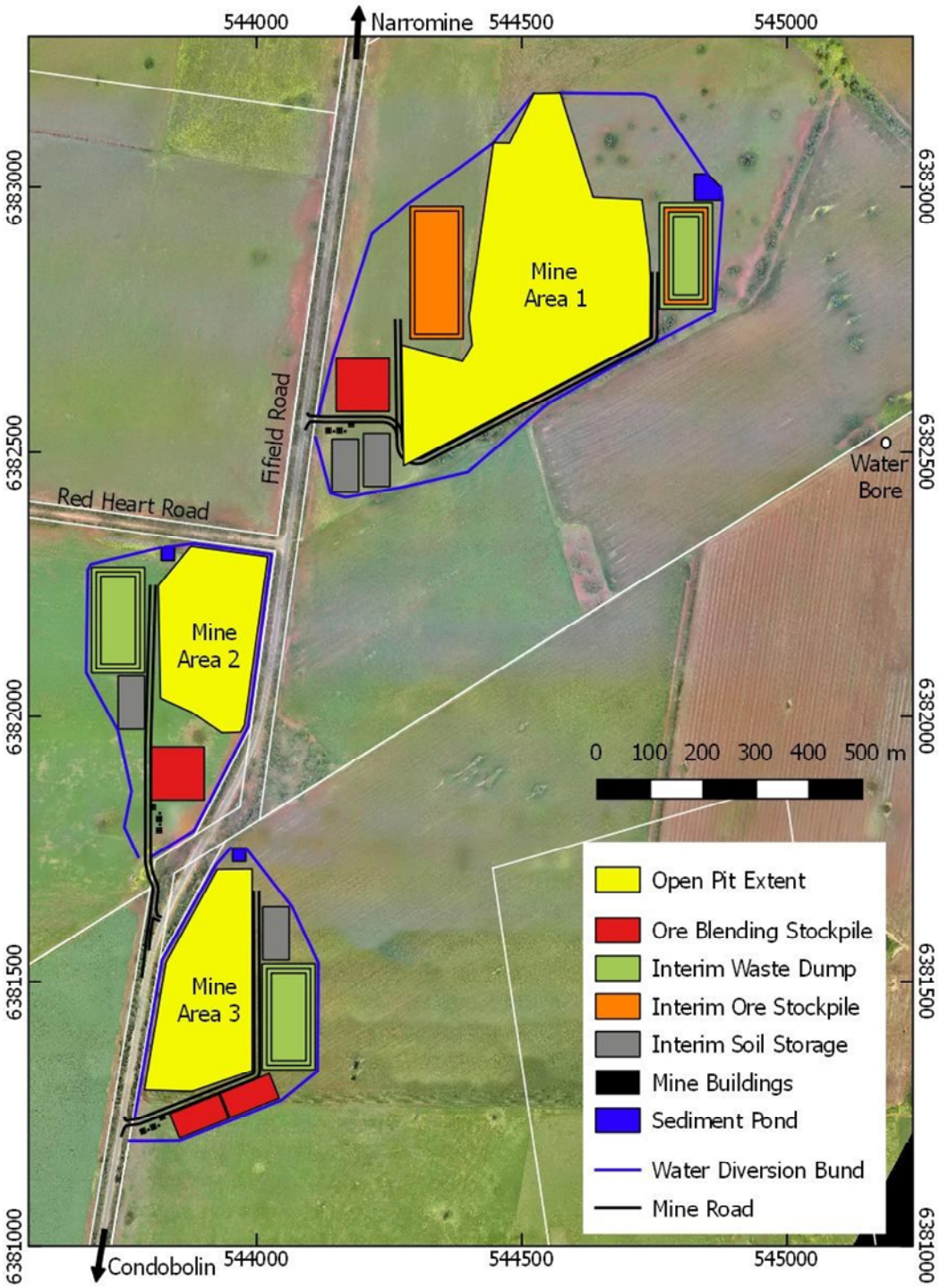


Figure 7 – Three High Grade Areas to be incorporated in to the Mining Scenarios



6.6 Mining Process

The mine operation and mining fleet will encompass three operational areas:

- Mining of ore and waste rock;
- Haulage of ore to the Plant Site and back-haulage of residue to the Mine Site; and
- Placement and encasement of residue in-pit and back-filling to allow for remediation activities.

Laterite ore is recovered from the deposits using free digging, open pit mining techniques utilising hydraulic excavators and Moxy mine trucks. A mixed ancillary fleet will be available to support load & haul, stockpile management, rehabilitation and in-pit dumping of waste and residue from the processing plant at Condobolin.

Mining will be conducted on a campaign basis. At full production, stage 1 ore mining will comprise 23,300 tonnes per annum, and stage 2 at 46,600 tonnes per annum.

Mining will generally be undertaken in a manner that will complete the excavation of individual cut-backs prior to any dispatch of feed to the plant. The plant feed will then comprise a blended parcel of similar grade material being fed over a period of time, up until depletion of that cut- parcel, after which a new cut-back is commenced and fed. This process is suited to campaign mining and will allow periodic supervision of grade control, which will minimise mining supervision and overheads. As the plant expansion stages are implemented and throughput increased, the ore mining will approach a continuous operation, however the campaigns of cut-back development will continue to maintain the same ore feed through a blending strategy.

Back-filling of the pit will commence immediately on completion of each cut-back. This will include initial capping of the floor with compacted clay before the build-up of the residue encasement walls and residue placement in the progress sequence. The residue cells will be constructed as an internal pyramid structure at an angle that will permit mining of the neighbouring strips at a later date. The wedge between the residue cell and the pit wall will be back-filled with waste or low-grade material on at least two sides with open faces towards the working pit cut-backs and the next immediate mining strip. The back-fill operation will maintain a safe working back-fill bench and will stabilise the residue emplacement structure long term. It will also allow back-fill ramps to provide access to upper benches as the pit fills. This arrangement ensures that Ore Reserves are not sterilised with residue back-fill and safeguards allow full ore recovery.

Ore is trucked to the Plant Site located at Condobolin, 70 km by road using A-double road trains. The trucks tip the ore onto a stockpile at the Plant Site and return with the residue for mine rehabilitation.

Figure 8 – Mining Equipment fleet proposed for the Red Heart Mine

7 Metallurgy and Processing

Platina has designed a process plant that will initially produce 20 t/y of scandium oxide, with subsequent expansion to 40 t/y as demand increases. The process flow sheet developed is based on extensive metallurgical test work including a 6-tonne continuous integrated pilot plant.

7.1 Historical Metallurgical Test Work

Platina has undertaken metallurgical testwork for scandium recovery for more than six years, including several bench scale testwork programs and a 12-day continuous pilot plant operation in 2018 at SGS in Perth, Western Australia. The pilot flowsheet included ore preparation, HPAL, leach residue thickening and filtration, scandium solvent extraction and precipitation (operated by Element 21 Pty Ltd), two stage final neutralisation and tailings filtration. Final scandium refining was completed in Brisbane by Element 21.

Based on the bench scale leaching of the pilot plant bulk sample, a scandium extraction rate of 90% and an overall recovery rate of 87.5% was selected for the DFS. Although higher extractions have been achieved, a conservative value has been chosen due to lower pilot plant extractions. Subsequent check analysis by XRF revealed a 2% under-statement of pilot leach extraction. Bench scale leaching of the pilot plant bulk sample achieved scandium extractions of 90-92%. Table 7 summarises the ore samples tested and HPAL results under optimal leaching conditions.

Table 7 –Testwork Sample Head Assays and Leaching Response

Year and Sample	Head Grade (ppm)			Acid/Ore	Free Acid	Extraction (%)		
	Sc	Ni	Co	kg/t	g/L	Sc	Ni	Co
2012 Sample	517	317	121	350	40.3	91.0	91.7	91.9
2015 Composite	614	1,240	953	313	28.2	87.9	94.9	98.2
2016 Composite	566	1,780	1270	319	30.2	92.6	94.9	95.4
2017 Composite 1	734	1,010	910	340	41.6	87.3	95.3	97.9
2017 Composite 2	589	2,160	470	340	44.1	83.4	97.2	99.0
2018 Pilot Plant Bulk Sample	579	1,210	710	380	47.2	92.2	97.0	99.5
2018 Continuous Pilot Plant	577	1,080	724	340	37.9	83.4	95.3	95.1

The results of the continuous pilot plant, along with supporting testwork by specialist technology providers, formed the key inputs to the process design criteria. The Company is continuing to pursue opportunities for optimisation of the process plant and has a number of metallurgical study programs underway.

7.2 Process Flow Sheet

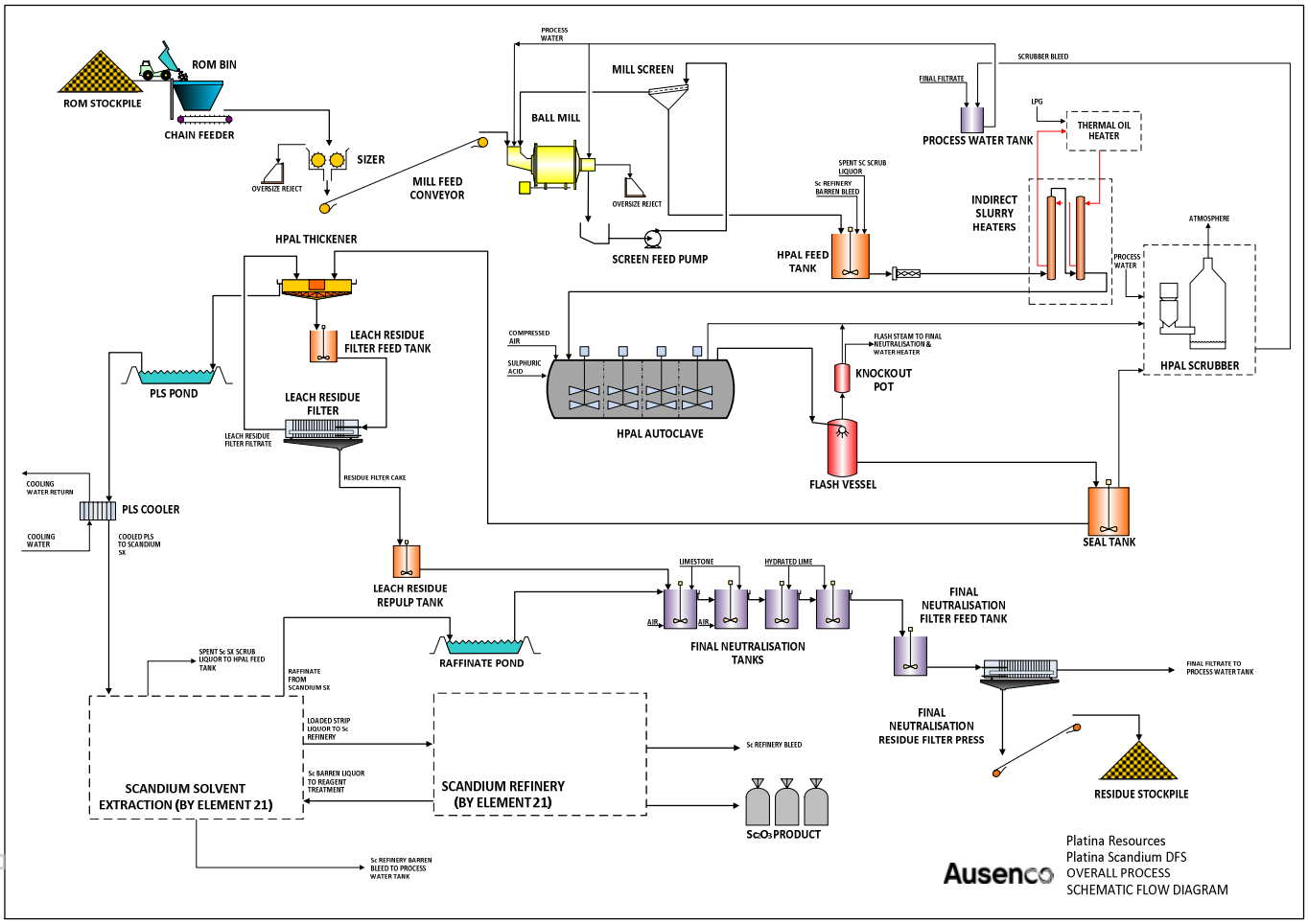
The process flowsheet is designed to recover scandium via high pressure acid leaching and solvent extraction (SX), including:

- An ore preparation circuit incorporating crushing, screening and grinding;
- Ore slurry from the ball mill is heated in self-cleaning indirect heat exchangers, using a thermal fluid. The hot slurry is leached at 255°C with concentrated sulphuric in an autoclave for 90 minutes. After being let down to atmospheric pressure the slurry is clarified and the pregnant leach solution (PLS) is pumped to the SX circuit;

- The SX process developed by Element 21 extracts scandium from the PLS. Following an impurity removal step the scandium is recovered as a hydroxide, with a further refining stage generating a 99.99% scandium oxide product; and
- Barren solution and leach residue are treated by two stages of pH adjustment to neutralise all free acidity and precipitate heavy metals. The resulting slurry is dewatered on a pressure filter, producing a competent tailings filter cake for in-pit disposal. The residue will be transported back to the mine site for permanent emplacement.

A gypsum precipitation section is added for the Stage 2 plant. This treats the raffinate from SX by adding limestone slurry to produce a separate by-product stream of gypsum. This effectively reduces the amount of residue for back-hauling and depositing at the mine site while producing a useful local agricultural product.

Figure 9 – Platina Scandium Project Process Plant Flowsheet

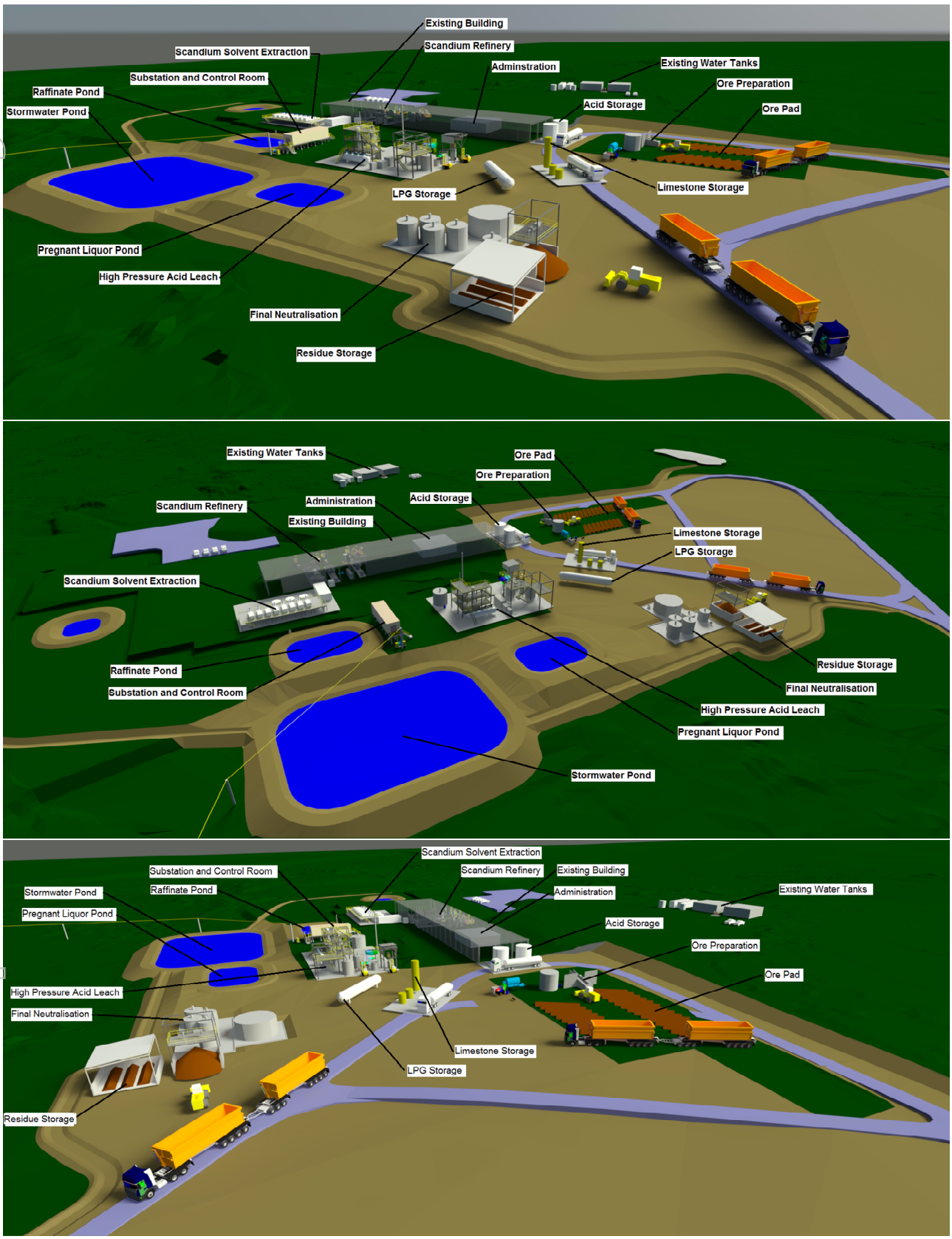


7.3 Reagents

Sulphuric acid consumption totals of 8,205 t per annum during Stage 1 and 16,410 t per annum during Stage 2 operations. The sulphuric acid will be delivered in standard ISO tanks of approximately 30 tonnes to an on-site storage facility.

Other major reagents, in order of Stage 1 annual cost, include limestone, oxalic acid, hydrated lime, hydrochloric acid and caustic soda. Major utilities and their consumption rates, in order of annual cost, include LPG: 827 t/y in Stage 1 and 785 t/y in Stage 2, 22 kV power: 4,086 MWh/y in Stage 1 and 6,106 MWh/y in Stage 2, and municipal water: 36.7 ML/y in Stage 1 and 73.5 ML/y in Stage 2.

Figure 10 – Detailed 3D Images of the Processing Plant Facility



8 Capital Cost

The capital cost for the design and construction of the mine, process plant and associated infrastructure for Stage 1 of the PSP is USD 48.1 million. The capital cost for Stage 2 of the PSP is USD 11.1 million.

8.1 Cost Basis

Table 8 presents a summary of the capital cost estimates for Stage 1 and Stage 2. The estimates have a base date of the third quarter 2018 ('3Q 2018') and are reported in United States Dollars (USD). Sufficient engineering has been undertaken for the capital cost estimates to be determined with an accuracy of -10% to +15%.

8.2 Stage 1 Capital Expenditure

Mine direct costs total USD 1.1 million. Mine infrastructure will be minimal due to the small scale of the operation and availability of contractor facilities in nearby Tullamore. The site is well serviced with a domestic powerline and a significant network of sealed regional roads. Mobile equipment will be supplied, operated and serviced by contractors. Hence capital costs are modest and site establishment will be limited. There is no fixed plant at the Mine Site.

The major capital costs component is the process plant and associated infrastructure at process plant. Stage 1 processing plant direct costs of USD 30.6 million including the purchase price of the plant and equipment, manufacturing costs, labour associated with the construction and delivery of the equipment to site.

8.3 Stage 2 Expansion

A key focus of the process plant design and equipment selection was to facilitate the transition from Stage 1 to Stage 2 in such a way that the combined capital costs at the completion of the Stage 2 expansion are competitive with projects aiming to commence at higher production rates.

The major capital costs component is the process plant. Stage 2 processing plant direct costs of USD 7.62 million.

For the Stage 2 processing plant, the increased throughput is achieved by a combination of operating some areas for longer periods and by modifying and/or upgrading some other plant areas. The HPAL autoclave in the Stage 1 plant is sized for the Stage 2 throughput, such that the leach expansion can be achieved simply by the addition of an additional stage of pressure letdown and slurry heating.

Table 8 – Capital Cost Estimate for Stages 1 and 2

Description	Stage 1 USD M	Stage 1 AUD M	Stage 2 USD M	Stage 2 AUD M
Mining	1.1	1.5	0	**0**
Process Plant	21.1	29.7	7.1	**9.9**
Reagents	2.1	3.1	0.3	**0.4**
Plant Services	4.8	6.7	0.3	**0.4**
Process Plant Infrastructure	2.6	3.6	0	**0**
In-directs	8.7	12.2	2.1	**3.0**
Owners Costs	3.5	4.9	0.4	**0.5**
Contingency	4.2	5.9	1.0	**1.4**
Total Cost	**48.1**	**67.8**	**11.1**	**15.6**

Notes on the capital costs:

- The majority of the USD 30.6 million stage 1 plant direct costs are based on written budget quotations from suppliers and vendors;
- Indirect costs include EPCM, site establishment, spare parts, first fills and vendor representatives;
- Owners costs include insurances, management costs, construction accommodation costs, overheads and commissioning costs; and
- Contingency for stage 1 is assessed as 13.3% of the project direct costs and 9.7% of the total project cost.

8.4 Sustaining Capital

General maintenance has been allowed for under the operating cost estimate. At the process plant, an allowance of 3.5% per annum of total capital expenditure over the life-of-project has been allowed for in the financial evaluation for the replacement or major overhaul of plant and machinery. At the mine, an allowance of USD 100,000 every three years has provided to replace or refurbish plant and equipment.

Table 9 – Total Life-of-Mine Capital costs including Sustaining Capital Costs

	USD	AUD
Stage 1 Capital Expenditure	48.1 million	67.8 million
Stage 2 Capital Expenditure	11.1 million	15.6 million
Sustaining Capital Expenditure	58.2 million	82.0 million
Total Life-of-Project Capital Expenditure	**104 million**	**146.5million**

9 Operating Costs

The PSP's unique combination of project fundamentals drives the low operating costs.

The operating cost includes mining, processing and general & administration (G&A). The operating cost estimate is presented in Australian Dollars (AUD) and uses prices obtained in the second and third quarter of 2018. Subtotals are also reported in United States Dollars (USD). The cost model includes market pricing inputs and quotations from suppliers for consumables. The estimate has an accuracy of ±15%.

The annual operating cost for the PSP is presented in Year 3 and Year 5 which represent the full annual capacity of stage 1 and 2, respectively, and the life-of-mine (LOM) based on cost per kg of scandium oxide product (Sc_2O_3) at the nominated throughputs – see Table 10

The operating cost estimate includes a 2 year ramp-up period as well as the expansion of the process plant by year 5, to double the throughput to 46,600 dt/y (Stage 2) from 23,300 dt/y (Stage 1).

Table 10 – Operating Cost Summary

USD per kilogram	Year 3	Year 5	LOM Average
Mining Costs	76	80	81
Processing Costs	490	359	399
General and Administration	63	39	44
Total On-Site Cash Operating Costs	**629**	**478**	**525**
Royalties (State Royalties and Technology Licensing)	55	66	67
Total Operating Costs	**684**	**544**	**592**
Sustaining Capital	53	36	42
Total All-In Sustaining Costs	**737**	**580**	**634**

9.1 Mining costs

The operating costs for mining and haulage were developed by Measured Group. The mining costs include grade control, fuel, labour, and include all mining, rehabilitation and haulage costs of ore and waste residues between the mine and Condobolin.

9.2 Processing costs

The operating costs for the process plant have been developed by Ausenco and include labour, power, reagents, consumables, and mobile equipment and maintenance.

9.3 General and administration costs

The general and administration costs have been developed by Ausenco and Platina and include shire rates, marketing, insurances, environmental bonds, product transport to buyers, accounting/banking, and IT/computing.

10 Financial Evaluation

10.1 Financial analysis

Cash flow modelling of the PSP demonstrates a post-tax, 100% equity Net Present Value (NPV) at an 8% discount rate of USD 166 million (AUD 234 million). This generates a post-tax IRR of 29% and a payback period of 5.3 years.

The financial modelling utilises real dollars and therefore does not factor any inflationary impacts on revenue, operating and capital costs, and uses an 8% real discount rate for the NPV calculation.

The after tax cash flows do not include any allowances for tax losses.

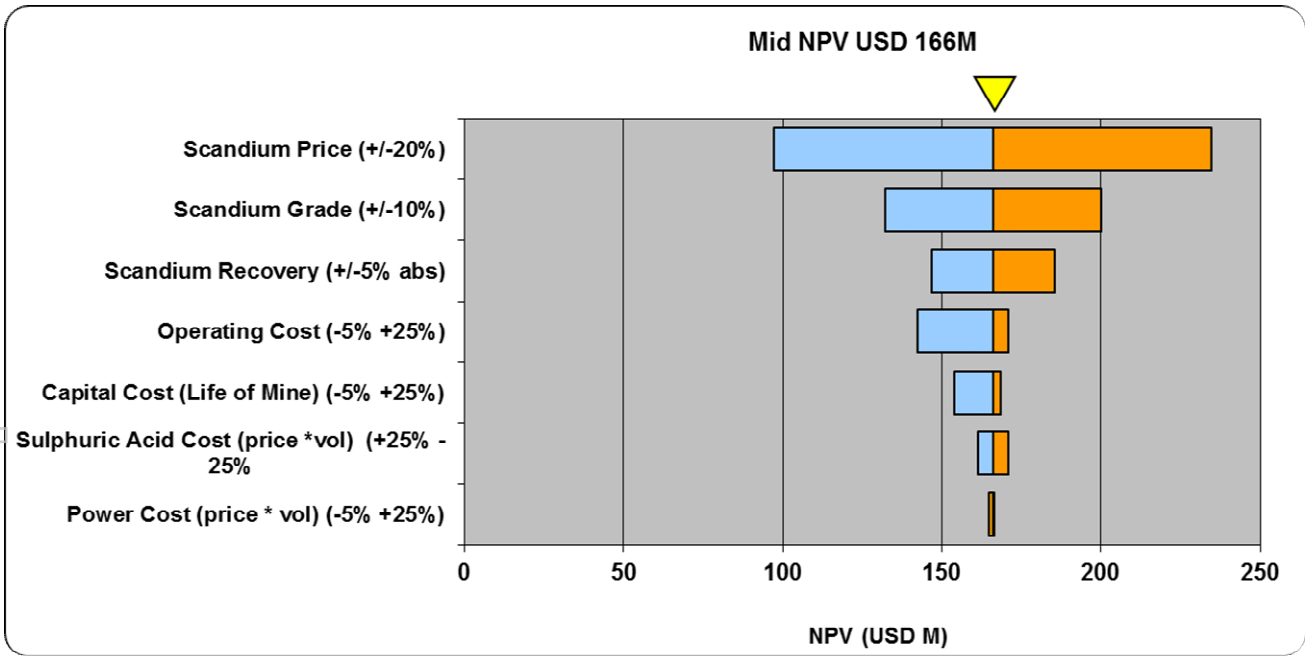
Table 10 – Financial Summary

	USD	AUD
Net Present Value (8%), real, after-tax	166 million	234 million
Internal Rate of Return After Tax	29%	
Payback Period (undiscounted)	5.3 years	
Life-of-mine	30 years	
Average Annual Revenue over 30 years	54.8 million	77.2 million
Average Annual EBITDA over 30 years	33.8 million	47.7 million
Average scandium price over life-of-mine	1,550/kg	2,183/kg
Engineering Design and Construction Period	24 months	
USD to AUD Exchange rate	0.71	
Corporate Tax Rate	30%	
State Royalty Rate (before allowable deductions)	4%	

10.2 Sensitivity Analysis

The NPV sensitivity analysis is shown in Figure 11 which illustrates the scandium oxide price as having a major impact on the project economics.

Figure 11 – NPV Sensitivity Analysis to Selected Variables



11 Sales and Marketing

Platina's objective is to become a low-cost, long-term supplier of high quality scandium oxide for the solid fuel cell and aluminium alloy industry.

11.1 Marketing Strategy

The Company will produce and market a minimum 99.99 scandium oxide product and have processing flexibility to produce higher or lower specification products depending on customer requirements.

Figure 12 – Scandium Oxide Produced in the Platina Pilot Plant Program

The Company has held discussions with a number of potential offtake partners and has received interest from several, although formal off-take agreements have yet to be completed.

11.2 Scandium Markets

Scandium markets are small, high value specialised niche businesses. There are no reliable statistics published for global supply and demand and few consultants actively review the commodity. This analysis draws on the information published by the United States Geological Survey (USGS) in the Mineral Commodity Series profile on Scandium, a multi-client study by an independent consultant, CM Group, together with the market research undertaken by the Platina team.

11.3 Scandium Supply

All scandium production is by-/co-product from two main industries in China, TiO2 sulphate pigment plants and zirconium oxychloride plants. Scandium is present in the feedstocks to these process plants and is recovered from the final effluent streams by solvent extraction. Global production is estimated at between 15-20 t/y of scandium oxide, from estimated installed production capacity of around 70 tonnes. A new by-product recovery plant is undergoing commissioning at the Sumitomo Metal Mining Taganito nickel/cobalt operation in the Philippines.

11.4 Scandium Demand

Bloom Energy is the largest consumer of refined scandium oxide at an estimated 12 tonnes in 2017 for their solid oxide fuel cell technology. This application will continue to grow at 10-20%/yr.

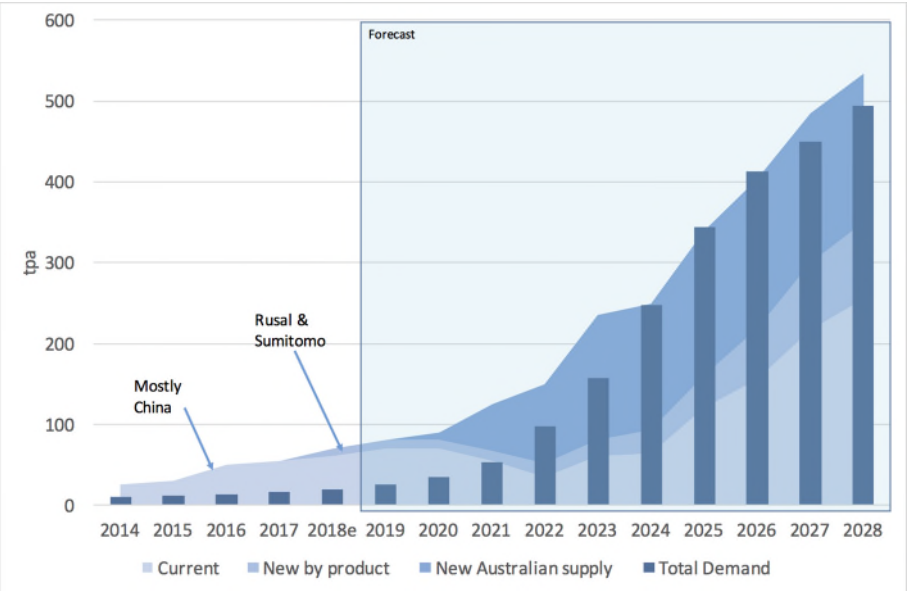
Other uses include lighting, ceramics and aluminium alloys. The area that offers the highest potential for growth is AlSc alloys, which consumed an estimated 2 tonnes in 2017. Scandium increases the strength of aluminium alloys markedly at relatively small concentrations (0.1-0.5% (w/w)), as well as improving the

ability to weld these materials. They have been used historically by Russia in its military aircraft and both Boeing and Airbus have studied their application. It is likely, however, that growth in the use of AlSc alloys will come from areas outside aerospace, such as heat exchangers.

11.5 Scandium Supply-Demand Balance

CM Group has developed a forecast for the scandium supply demand balance shown in Figure 13.

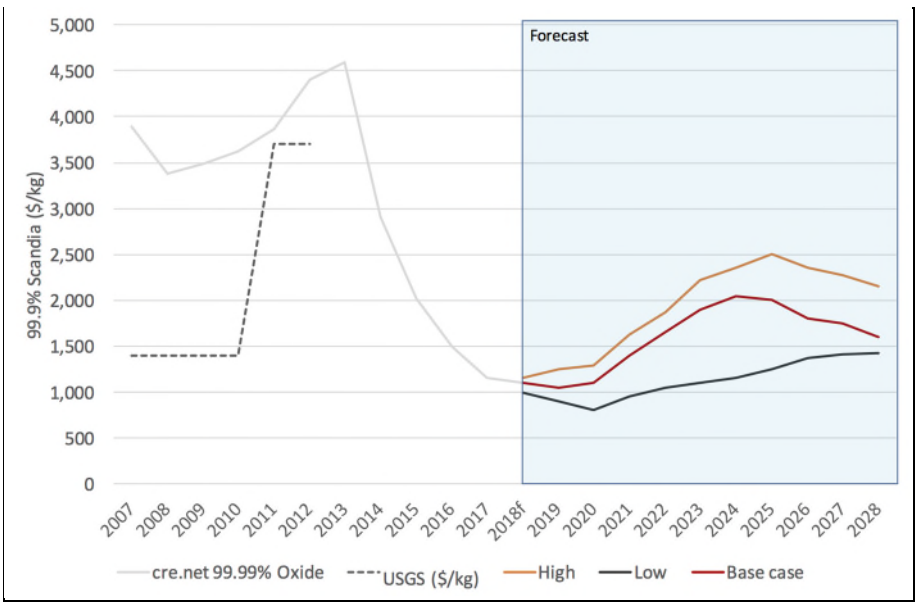
Figure 13 - Forecast Supply and Demand for Scandium Oxide. Source: CM Group



11.6 Scandium Price Forecasts

The CM report produced three price forecasts for scandium oxide as displayed in Figure 14. However, the Company has adopted a more conservative approach with a flat price over the life-of-mine of USD 1550 /kg. Based on market research and discussions with end-users, the Company believes this is the price necessary to drive wider-scale adoption of scandium in high performance alloys.

Figure 14 - Historical and CM Group Forecast Price for Scandium Oxide. Source: CM Group



12 Infrastructure

The plant has been designed to utilise an abandoned industrial site, incorporating existing infrastructure and services, which delivers significant capital cost savings.

The processing facility is located on land that was formerly the Condobolin Abattoir. Existing facilities on site include:

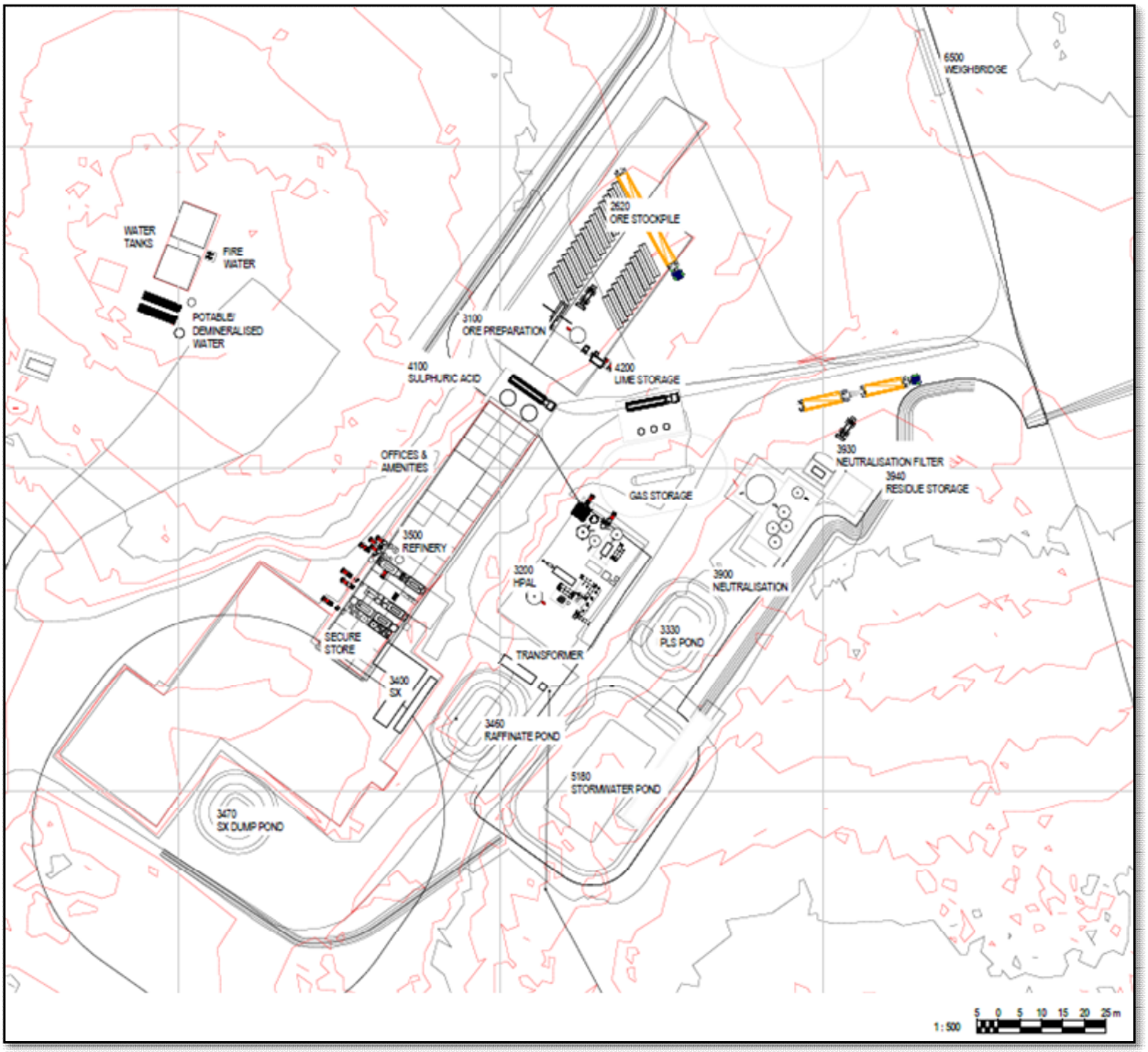
- Power line capable of delivering the power requirements for stage 1 and 2;
- Treated water supply and existing water storage tanks;
- Concrete pads, buildings and ponds;
- Two on-site houses;
- Adjacent to the main east-west rail line; and
- Near established towns eliminating the need to establish on-site accommodation.

Re-use of some of these facilities including roads, power supply and water storage tanks, water supply, ponds and some of the existing concrete structures is proposed.

The Plant Site layout is shown in Figure 15. The layouts take advantage of the natural fall of the land, which will be a zero discharge site. All rainfall that comes in contact with the process areas drains to one of the four stormwater ponds located to the north, southeast and eastern side of the process plant.

There are two existing vehicle entry points to the plant site segregating the heavy and light vehicle traffic. Heavy vehicles carrying ore and bulk deliveries such as acid, LPG, lime and limestone enter via the heavy vehicle entrance gate and travel via the loop to deliver materials to the plant site. All bulk deliveries are unloaded at nominated points along the heavy vehicle loop road. Residue is back loaded on the ore trucks for return to the mine site.

Figure 15 – Layout of the Condobolin Processing Site Facilities



13 Permitting

NSW-based approvals, leases, licences and permits would be required for the PSP including:

- Development Consent (mine and process plant);
- Mining Lease (for the Mine Site only);
- Environment Protection Licences;
- Water-related Licences;
- Aboriginal Heritage Impact Permits; and
- Roads Act Section 138 Permit.

Development applications and associated approvals for the Mine Site and the Plant Site would be prepared and managed separately.

Prior to granting of a Mining Lease, the Company will be required to have land access agreements with the landowners at the Red Heart mine. The company has commenced this process but at the time of the DFS these agreements were not finalised.

14 Environmental and Social

The Red Heart mine and Condobolin processing facilities areas are free of National Parks or conservation areas. No significant, unique or endangered species of flora or fauna or indigenous artefacts have been identified in any studies. The socio-economic impacts are expected to be positive with the creation of local employment, contracts and training.

14.1 EIS Progress

Mine and plant site environmental studies and assessments have been undertaken and include baseline studies for:

- Ground water;
- Noise;
- Dust;
- Traffic;
- Soil;
- Flora and fauna;
- Heritage; and
- Waste geochemistry.

Environmental monitoring is ongoing with a Preliminary Environment Assessment (PEA) issued and presented in 2018 with feedback provided to set the scope of work for the in-progress EIS.

A key feature of the mining operations is that ore residue from the Condobolin plant will be used to backfill the mine pits so that original shaped landform can be re-established to permit resumption of normal agricultural activities. This is an innovative and sustainable mining approach design for long term operations. There will be no tailings dams constructed at the Red Heart mine.

The plant will be constructed at the old Condobolin Abattoir site where existing dams and structures have been incorporated into the overall design to provide the site with total on-site containment of water and site consumables to ensure no effect on the surrounding ground water reserves, Gumbend Lake or the Lachlan River.

14.2 Community Benefits

The mining and haulage operations will initially provide 5 local jobs and this will increase to 10 jobs when the processing plant is fully operational at stage 2. The stage 1 plant will require a workforce of 58 and when stage 2 is completed the workforce will rise to 75. It is proposed to recruit and train local employees to establish and maintain a skilled workforce necessary to support this long-term continuous operation.

The project contributions to Council will assist in community development initiatives and local projects for the benefit of all shire residents.

15 Project Execution Plan

There are three main elements to the PSP:

- Red Heart mine site;
- Condobolin process plant; and
- Offsite infrastructure.

Platina will undertake the mine development utilising the services of contractors to establish the mine infrastructure, security fencing and to undertake mine pre-strip activities.

The offsite infrastructure consists of the road intersection upgrades. This work would be undertaken by specialist road construction contractors under the supervision of the consultant responsible for the design of the intersections.

A contractor shall be appointed to deliver the process plant utilising an engineering, procurement and construction management (EPCM) delivery model.

The overall schedule to deliver the PSP is 21 months.

A contracting strategy has been developed for delivery of the process plant that utilises four major contracts for:

- Earthworks;
- Concrete;
- Structural, mechanical, and piping; and
- Electrical, instrumentation and controls.

The contracting strategy has been developed with due consideration for the mitigation of risks and understanding the regional construction contractor capabilities. The organisation, roles and responsibilities to execute the PSP have been defined. An Owner's Team and EPCM Contractor will be required. A Project Execution Plan will be developed. This is the overarching or 'high-level' plan that focuses on strategic drivers and organisational arrangements required to deliver the project including roles, team alignment and general administration.

16 Risks and Opportunities Assessment

The DFS included a detailed risk assessment, including a plan of mitigation strategies to address all key technical and commercial risks, and opportunities assessment.

16.1 Risk Assessment

Project risks with a 'high" risk weighting are outlined below:

- Market and price for scandium oxide - The market survey has determined a forecast price range for the scandium oxide product, and this pricing has been used in the financial and sensitivity analysis;
- Autoclave damage - There is a technical risk of damaging the autoclave and ancillary equipment within the HPAL area of the plant associated with stresses encountered during heat up/cool down cycles. To mitigate this risk the HPAL area has been designed to run for extended campaigns to minimise the number of heating cycles;
- Solvent extraction fire - A risk with low probability but high consequence is a fire within the solvent extraction area of the process plant. The prevention strategy for this risk is to apply sound design practices including the application of hazardous areas design principals, elimination of sparks caused

by static build-up and the use of a dump pond to receive and contain transfers the flammable liquids in an area remote from the plant site; and

- Heat exchanger fouling - There is a technical risk associated with the use of indirect heat exchangers and single stage pressure letdown within the HPAL area of the process plant. To mitigate this risk some preliminary indirect heater testwork has been completed. Additional testwork prior to detailed engineering has been identified and planned. Further to this, specialist design consultants and vendors will be engaged to mitigate this risk and adequate space is allowed in the plant layout to retrofit inexpensive direct contact heaters should this be found necessary.

16.2 Opportunities Assessment

The PSP has significant development optionality and potential economic enhancement options, including:

- Stage 3 Expansion – Though not considered for the DFS, the site layout and mine plans include options for a duplicate processing train (another 40t/y of capacity) for an additional stage of expansion. This will be included for the project permitting; and
- Additional growth potential - Further definition of the higher-grade ore zones which may lead to improved project economics and a longer mine life or additional expansion;
- Accelerated development - Faster ramp-up of the project processing capacity in the event of stronger demand for scandium oxide than planned.
- Additional revenue products - An opportunity has been identified for enhancing project economics through the production and sale of by-products including nickel, cobalt and high purity alumina (HPA). A by-products concept study has been undertaken to evaluate these options.

17 Next Steps

The next steps for project development include:

- Progress permitting and land access by:
  - Submitting a Mining Lease Application (MLA) for the mine site (in progress);
  - Progressing land holder lease or land purchase negotiations for the mine site properties;
- Prepare separate EIS's for the mine site and the plant site, planned to be completed around mid 2019;
- Prepare separate Development Applications for the mine site and the plant site;
- Progress marketing activities and sign offtake agreements for scandium offtake production;
- Raise the debt and equity funding to execute the project;
- Establish the Owner's Team who will have the over-arching responsibility to deliver the project; and
- Commence EPCM activities.

<END>