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MEDCALF PROJECT

UPDATED PRE-FEASIBILITY STUDY RESULTS

ANNOUNCEMENT **26 JULY 2022**

HIGHLIGHTS

- **PFS supports the potential for a high-grade titanium lump ore (HTLO) product suitable protection for a blast furnace liner.**
- **PFS identifies several options to further enhance the economics of the project including upgrading the Inferred category for inclusion and possible sale of the fines.**
- **RtS document accepted by EPA.**

Audalia Resources Limited (ASX: **ACP**) (**Audalia, the Company** or **ACP**) is pleased to announce completion of the Updated Pre-Feasibility Study (**PFS**) on its 100%-owned Medcalf Project, undertaken by METS Engineering Group Pty Ltd (**METS**) with input from a group of consulting firms including Cube Consulting Pty Ltd (**Cube**), together with Audalia's technical team. The PFS updates the previous pre-feasibility study completed in March 2016.

The PFS includes an economic valuation and supports the potential for high grade titanium lump ore (**HTLO**) product Western Australia-based mining and processing operation suitable for the blast furnace steel mills in Asia as a hearth liner for protection of the furnace walls.

The study has been completed to a PFS-level of accuracy and all costings, unless specified otherwise, have been undertaken at an accuracy level of ± 25 %.

Cautionary Statement

The Company advises that the PFS referred to in this announcement has been undertaken for the purpose of initial valuation of a potential high grade titanium lump ore (**HTLO**) operation from several open cut pits at the Medcalf Project (the **Project**) in Western Australia. The PFS is based on lower-level technical and preliminary economic assessments. It is insufficient to support an estimation of Ore Reserves or to provide assurance of an economic development case at this stage, or to provide certainty that the conclusions of the PFS will be realised. Further exploration and evaluation work and appropriate studies are required before the Company will be in a position to estimate any Ore Reserves or to provide any assurance of an economic development case.

The PFS is based on the material assumptions outlined in this announcement. These include assumptions about the availability of funding. While the Company considers all of the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the PFS will be achieved.

The JORC-compliant Indicated Mineral Resource estimate forms the basis for the PFS that is the subject of this announcement. Over the payback period, 100% of the production target comes from Indicated Mineral Resources. No Inferred Mineral Resources were used for this study.

To achieve the range of outcomes indicated in the PFS, funding in the order of A$33 million will likely be required. Investors should note that there is no certainty that the Company will be able to raise that amount of funding when needed. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of Audalia's existing shares. It is also possible that Audalia could pursue other 'value realisation' strategies such as a sale, partial sale or joint venture of the Project. If it does, this could materially reduce Audalia's proportionate ownership of the Project.

The PFS results contained in this announcement relate solely to the Project and does not include Exploration Targets or Mineral Resources defined elsewhere. The Company has concluded it has a reasonable basis for providing the forward-looking statements included in this announcement. The detailed reasons for that conclusion are outlined throughout this announcement and in particular the sections entitled "Forward Looking Statements" and "Cautionary Statement".

Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the PFS.

Key PFS highlights

- The Medcalf Project scope has been revised to significantly reduce the upfront capital cost, simplify and de-risk the project;
- The Project produces high TiO_2 lump ore (HTLO) for refractory lining protection in blast furnace applications;
- Highly favourable economics, NPV (8%) AUD$178M and 146% IRR (using the projected long-term price from local market research); and
- A number of options have been identified to further improve the economic outcomes of the Project including extending the life-of-mine with inclusion of the inferred resource and possible value addition through sale of the fines product.

PFS Results

The PFS results indicate the potential to create value through a direct shipping operation producing a high-titanium lump ore for use in blast furnace liner protection. The PFS is based on an updated Mineral Resource estimate using a 6%TiO_2 cut-off grade that was completed in March 2022. The Mineral Resource estimate was prepared by Competent Person as defined in the JORC Code, Patrick Adams of Cube.

A summary of the economic assessment based only on the Indicated category of the Mineral Resource estimate is provided in Table 1. The project will initially comprise three open pits (Egmont, Vesuvius and Fuji), a processing plant, private haul road, road train transfer area and associated infrastructure such as laydown areas, gravel pits, groundwater bores, workshops and an accommodation village.

The project is contractor dominant, with contractors operating the crushing plant, haulage, mining, the accommodation village and communications.

A summary of the key financial results is presented in Table 1.

A summary of the primary assumptions is presented in

Table 2.

The base case economic assessment results are presented below. The results indicate positive cashflow, generating payback in 0.71 years and a positive NPV (8%) of AUD$177.9M with an IRR of 146.3%.

Table 1: Economic Assessment Results

Variable	Units	Base Case
Saleable Products		Lump Ore
Capital Cost	AUD million	32.76
Operating Cost	AUD/t ROM	62.62
	AUD/t Product	96.34
	AUD million/annum	93.93
Lump Product Pricing	USD/t (CFR)	110
Revenue (LoM)	AUD million	785.87
Cumulative Cashflow (LoM)	AUD million	236.17
Simple Payback	**Years**	**0.71**
NPV (8%)	**AUD million**	**177.91**
IRR	**%**	**146.29**

NPV is presented as pre-tax and inclusive of royalties.

Sensitivity of the project economics was also modelled against variable lump ore pricing, capital costs, operating costs and foreign exchange rates. Variations up to ± 35% were modelled.

The NPV and IRR are less sensitive to the capital cost, whilst the project economics are highly sensitive to the operating cost, revenue drivers and FX rate as expected from a low CAPEX contractor dominant project. Given the strong modelling results, the project has high tolerance for fluctuations in the FX rate and lump ore price. As a >30% decrease in the price, the project becomes uneconomic as the NPV becomes negative. However, the economics can tolerate a >35% increase in the OPEX and CAPEX. The upside is strong as 30% increases in price will boost revenue pushing the NPV towards $400M and IRR above 300%. Sensitivity results can be seen in Figures 1-4.

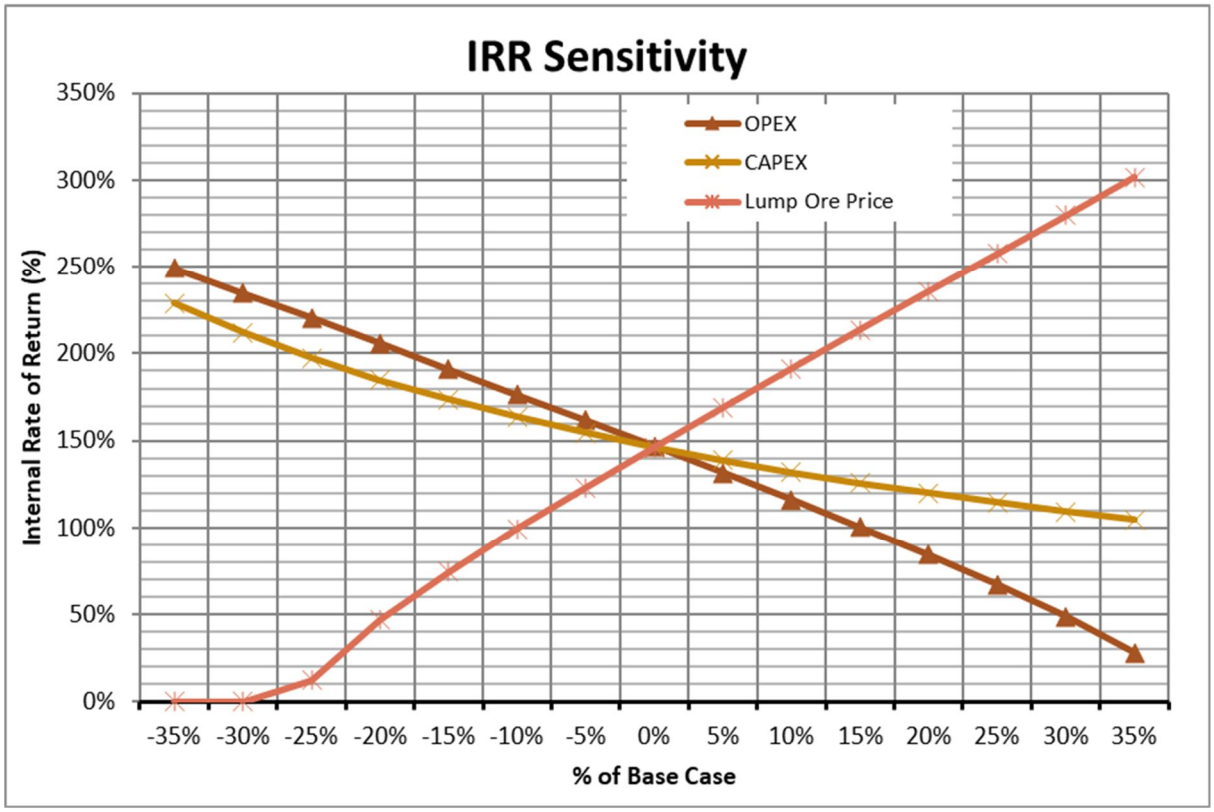

Figure 1: IRR sensitivity

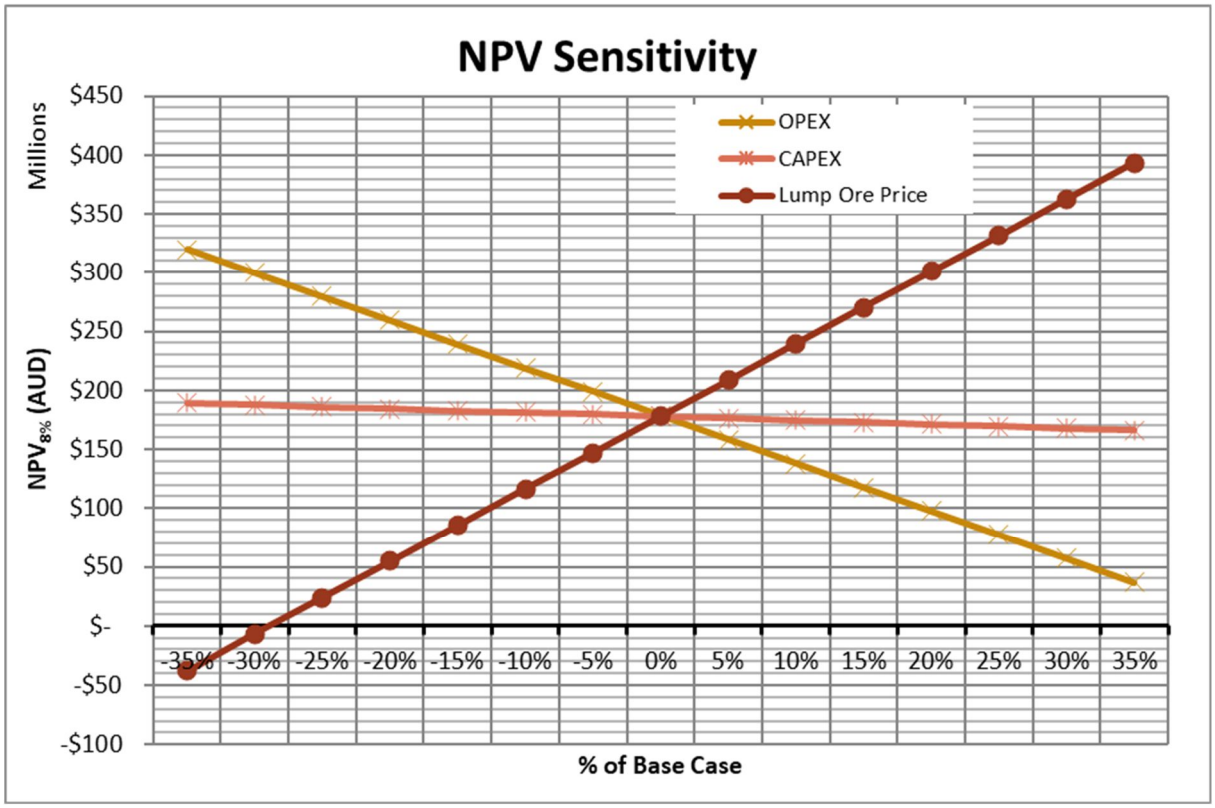

Figure 2: NPV sensitivity

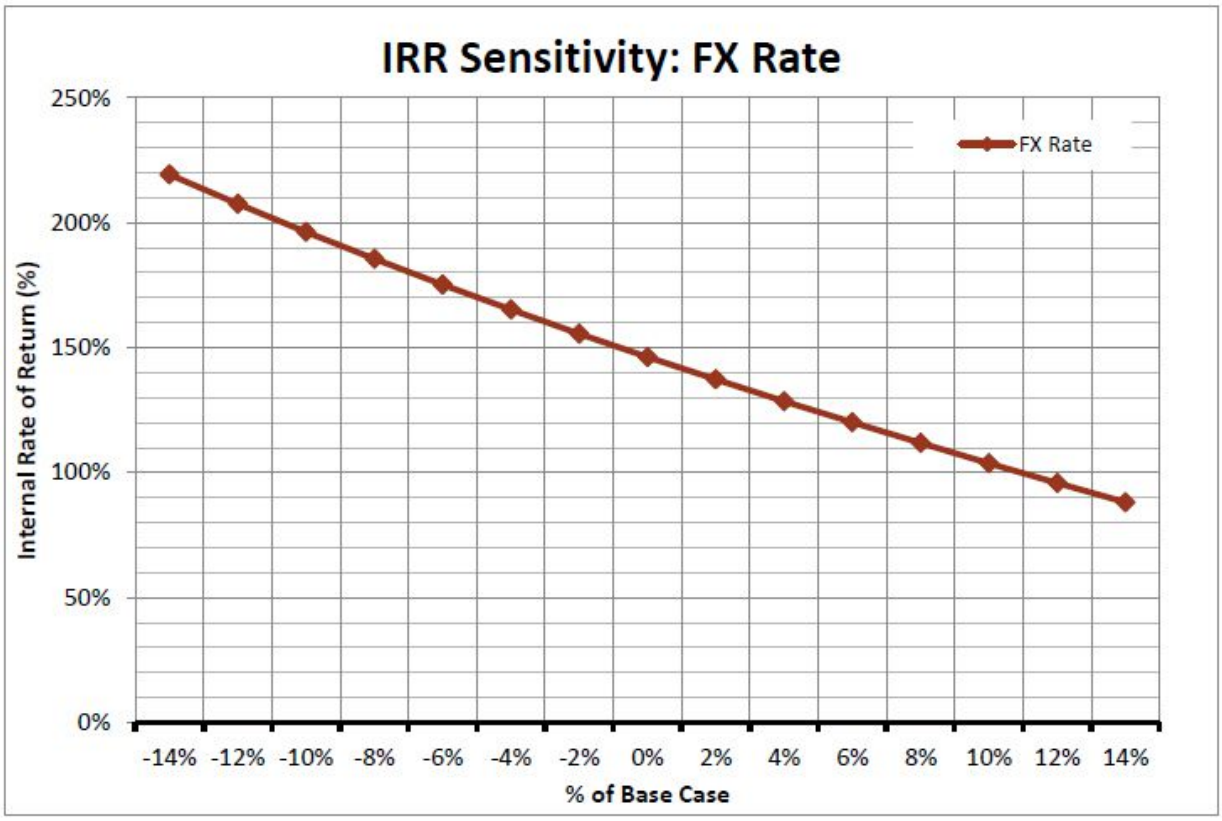

Figure 3: IRR sensitivity: FX rate

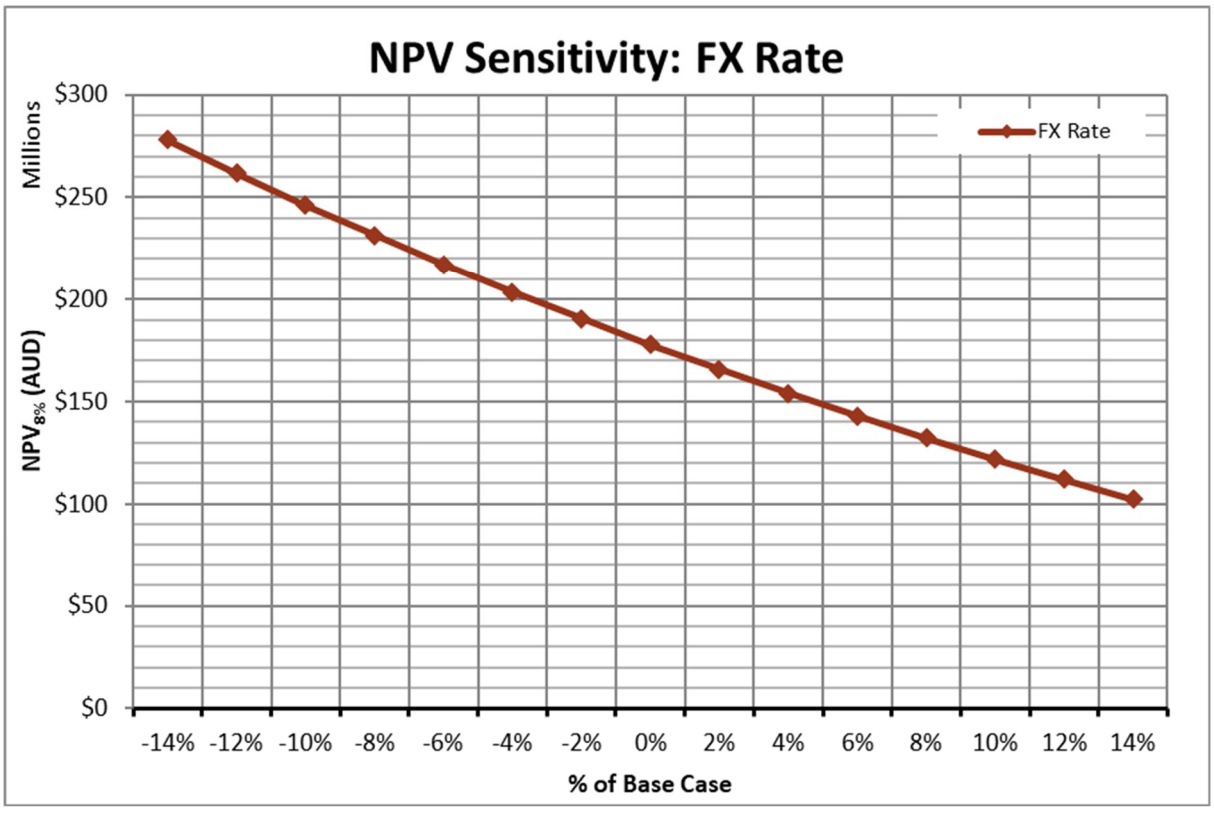

Figure 4: NPV sensitivity: FX rate

Inputs to the base case financial model are summarised below. They are based on the capital and operating costs which were developed during the PFS and benchmarked against equivalent projects where possible. The Base Case economic model incorporated the following key inputs:

Table 2: Key Study Assumptions

Input	Value
Throughput	1.5 Mtpa
Life of Mine (LoM)	6 years (ramping down in year 6)
Feed Grade	
TiO_2	12.22%
Fe_2O_3	63.52%
Overall recovery	65% wt. to lump product / 35% wt. to fines product
Total Capital Cost	AUD$32,760,237
Total Operating Cost	AUD$62.62/t ROM
Exchange Rate (LoM Average)	USD/AUD 0.75
Lump Ore Price	USD$110/t (CFR)
Production	975,000 tpa of Lump Ore
State Royalty	5%
Native title royalty	Included (Confidential)
Discount rate	8%

Excludes tax, depreciation, corporate overhead or financing costs.

Note the lump / fines split is an assumption based on the projected hardness of the ore downhole.

Medcalf Project

The Medcalf Project is a vanadium-titanium-iron project located some 470 kilometres south-east of Perth near Lake Johnston, Western Australia. The project location is shown in Figure 5.

The Medcalf Project comprises one mining lease (M63/656), two exploration licences (E63/1134 and E63/1855), one general purpose licence (G63/10), and two miscellaneous licences (L63/75 and L63/94). All tenure is owned 100% by Audalia.

In 2021, Audalia identified the possibility of producing high titanium lump ore (HTLO) product to be used for blast furnace refractory liner protection. The project scope was updated to reflect a low upfront capital expenditure direct shipping ore operation condensed from a hydrometallurgical facility previously aiming to produce refined titanium and vanadium products. METS were engaged by Audalia to update the PFS based on the revised project scope to produce HTLO product to be shipped from the Esperance port.

Metallurgical test work has been completed by Nagrom and the Mineral Resource estimate has been updated using a 6% TiO_2 cut-off grade by Cube providing a basis for the engineering design and economics. Key outcomes from the PFS are detailed below.

The project will initially comprise three open pits (Egmont, Vesuvius and Fuji), a processing plant, private haul road, road train transfer area and associated infrastructure such as laydown areas, gravel pits, groundwater bores, workshops and an accommodation village. The three pits will be developed to a maximum depth of around 50 m below surface with no expected dewatering requirements.

The basis ore production rate only on the Indicated Resource is expected to be 1.5 million tonnes per annum (Mtpa), over a 6-year life of mine (LoM) with scope to increase with inclusion of the existing Inferred Mineral Resource. Beneficiation will be undertaken on site, with the lump ore concentrate transported via haul trucks along a 74km haul road east of the project, to a transfer depot adjacent to the Coolgardie-Esperance Highway. The concentrate will then be transferred to smaller road trains and transported to the Esperance port for export.

Figure 5: Project Location

A project overview is detailed in Table 3.

Table 3: Project Overview

Project Area	Subsection	Description
Mining	Indicated Resource (Inferred not used – 10.6Mt)	15 Mt @ 0.60% V_2O_5, 11.01% TiO_2, 56.4% Fe_2O_3
	Pits	Vesuvius-Fuji and Egmont (Indicated Only)
	Mining Rate	0.8 Mt/quarter (strip & stockpiling)
	Strip Ratio	1.0 LoM Average
	Life of Mine	6 years
	Operations	Contractor Mining Year 1-6+ (LoM)
Processing	Flowsheet	Primary (Jaw) Crushing, Secondary (Cone) Crushing, Screening and Stockpiling Product
	Operation Life	6+ years from initial production
	Fe Grade	59.22%
	TiO_2 Grade	12.44%
	Recoveries	65% to the Lump Product (assumed)
	Concentrate Grade	
	Fe Grade	59.22%
	TiO_2 Grade	12.44%
	Fe Production	3,173,370 tonnes
	TiO_2 Production	666,557 tonnes
Infrastructure	Roads	Design and construction of an unsealed 74 km haul road to the Coolgardie-Esperance Highway
	Village and Airstrip	60-person accommodation village, airstrip located at Norseman Airport (aerodrome). Shuttle bus to transport contractors / staff.
	Water	Up to ~428 ML/a supplied primarily from fractured bedrock aquifers (MWH009 and MWH013)
	Power	Standalone diesel generators for the processing plant, mine site, haul road and accommodation village
	Logistics	Lump ore hauled 74 km by an off-road road train before being unloaded onto the on-road road trains and hauled 151 km to the Port of Esperance
	Customers	Target Market - Chinese Steel Producers as refractory liners for blast furnace protection

Geology & Exploration

The Medcalf Project lies in the Archaean aged Lake Johnston greenstone belt in the southern portion of the Youanmi Terrane, part of the Yilgarn Craton. This belt is a narrow north-northwest trending belt, approximately 110 km in length. It is located near the south margin of the Yilgarn Craton, midway between the southern ends of Norseman-Wiluna and the Forrestonia-Southern Cross greenstone belts.

The Medcalf Project lies within the Medcalf Layered Sill, which is a flat lying Igneous body which has intruded parallel to the enclosing volcanic strata basalt, prior to regional metamorphism.

It is a layered basic sill of the gravity differentiated type. The sill is comprised of an upper gabbroic zone, a middle pyroxenite zone, with a lower amphibolite zone (ultramafic) in the footwall, Figure 6.

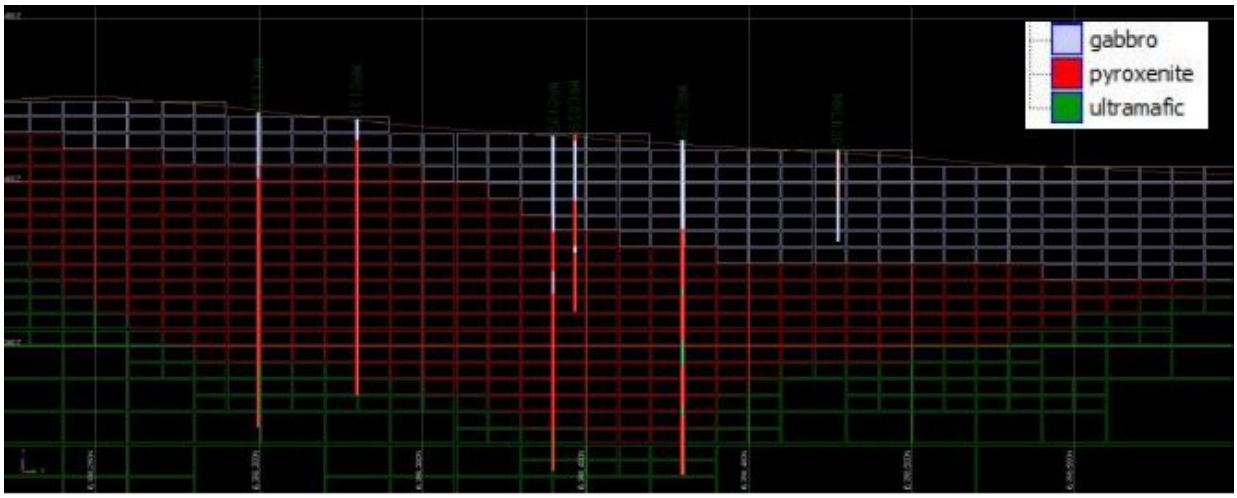

Figure 6: Geological cross section 293,500mE showing major lithologies and Block model

Five separate zones of vanadium-titanium-iron mineralisation have been identified within the project area and named the Vesuvius, Fuji, Pinatubo, Kilimanjaro and Egmont prospects. In the Medcalf deposit vanadium, titanium and iron have been concentrated in a pyroxenite unit, which has subsequently been enriched in these metals through weathering and regolith formation.

In the mineralised areas the magnetite-rich sequence is deeply weathered, with +60m of saprolite showing vertical zonation of weathering minerals due to progressive weathering. The fully developed lateritic weathering profile is divisible into four zones. Starting from the top, they are lateritic residuum, mottled zone, saprolite and saprock. All the vanadium-titanium-iron mineralisation lies in the saprolitic zone.

The geological interpretation has divided the Medcalf Project into three broad, spatially unique areas (Figure 7):

- Egmont located to the west of the project area;
- Kilimanjaro located to the southeast and;
- Vesuvius in the central part of the project, which has been further sub-divided based on modelled fault boundaries
    - Vesuvius West
    - Vesuvius Central (including the Fuji prospect)
    - Vesuvius East (including the Pinatubo prospect).

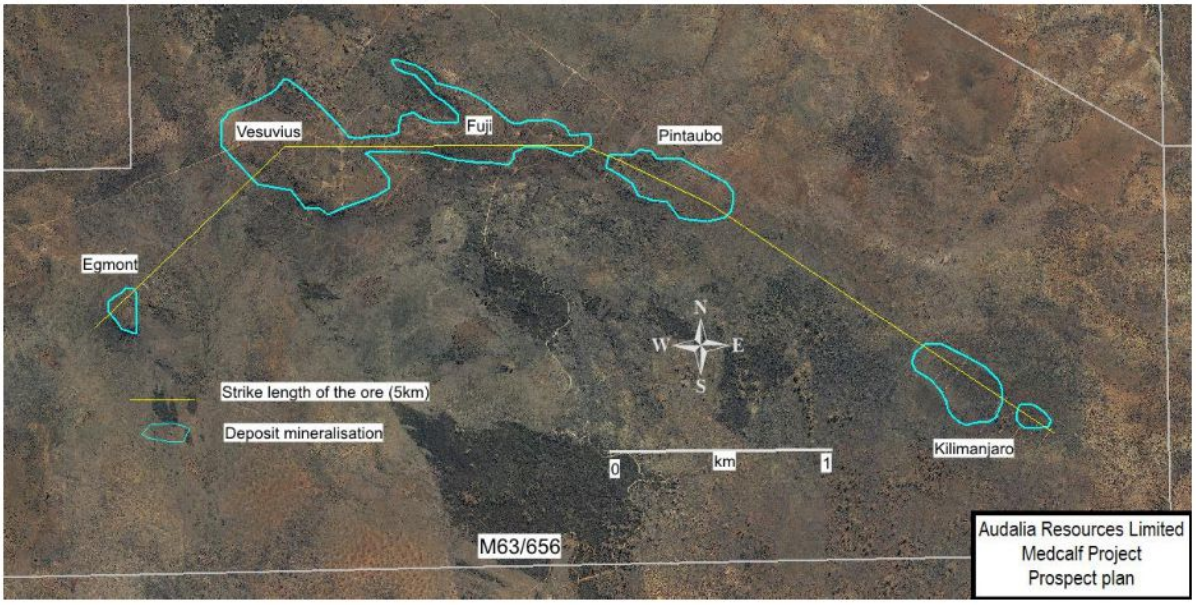

Figure 7: Medcalf Project Deposits

Mineral Resource Estimate

An independent Mineral Resource estimation on the Medcalf Deposit was completed by Cube Consulting Pty Ltd ("Cube"), the full details of which were released to ASX on 15 March 2022. Audalia is not aware of any new information or data that materially affects the information included in its ASX announcement of 15 March 2022 and confirms that all material assumptions and technical parameters underpinning the Indicated and Inferred mineral resource in that announcement continue to apply and have not materially changed. The Mineral Resource has been reported above a 6% TiO_2 cut-off. Mineralisation above this cut-off has demonstrated reasonable prospects for economic extraction via assessment against an optimisation shell. Input parameters utilised for the optimisation are based on a combination of previously reported test work, open market price assumptions, and factors applicable to comparable mineralisation styles. A JORC compliant (Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code, 2012 Edition)) Indicated and Inferred mineral resource of a total of 25.7 Mt @ 0.52% V_2O_5, 9.98% TiO_2, 50.9% Fe_2O_3, 9.0% Al_2O_3, and 20.2% SiO_2 was reported as shown below in Table 4.

Figure 8 provides an oblique view of the resource classification categories of the Vesuvius prospect area.

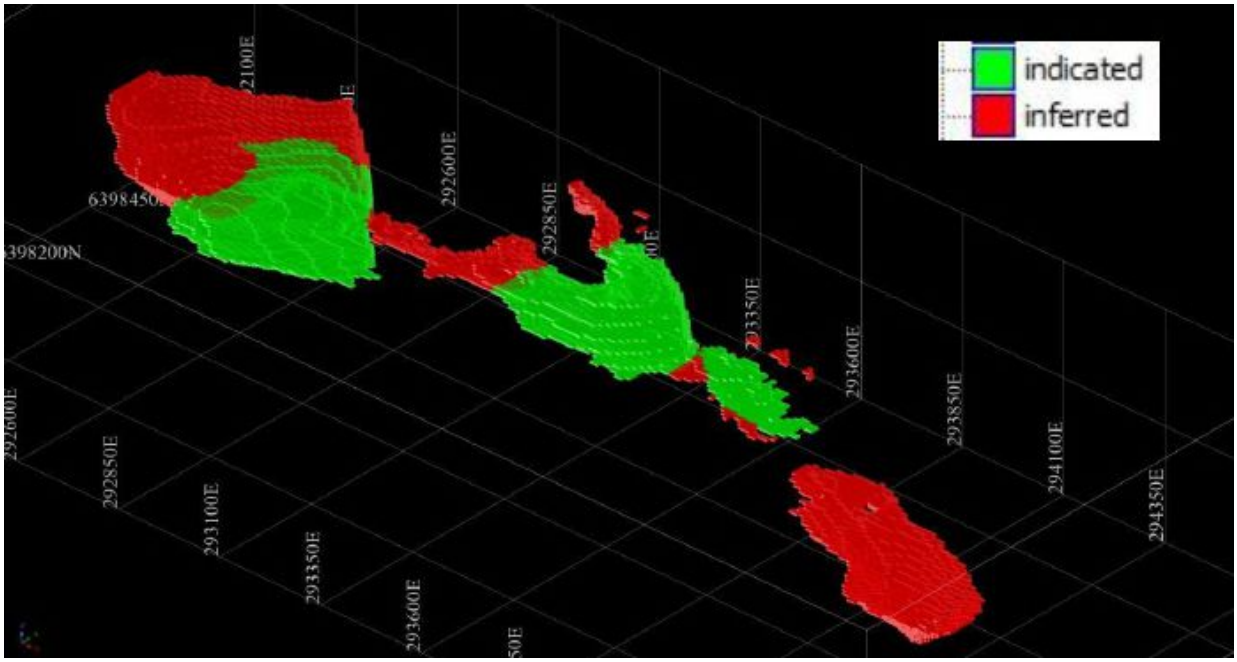

Figure 8: Oblique view looking northwest of Vesuvius resource classification

It should be noted Vesuvius East (including Pinatubo) and Kilimanjaro are not included in the indicated resource as they are inferred resources. Therefore, both prospects are not currently reflected in the pit design inventory. Further infill drilling is required to enable classification as part of the indicated resource.

Table 4: Medcalf Project Mineral Resource Statement - March 2022

Resource Classification	Prospect	Tonnes (Mt)	V_2O_5 %	TiO_2 %	Fe_2O_3 %	Al_2O_3 %	SiO_2 %
Indicated	*Vesuvius*	*14.2*	0.6	10.95	56.1	8.6	15.6
	Egmont	*0.8*	0.66	12.04	62.1	7.9	9.9
	Kilimanjaro		-	-	-	-	-
Sub-Total Indicated		**15**	**0.6**	**11.01**	**56.4**	**8.5**	**15.3**
Inferred	*Vesuvius*	*8.1*	0.4	8.78	42.2	9.7	27.3
	Egmont	-	-	-	-	-	-
	Kilimanjaro	*2.6*	0.4	7.76	45.6	9.1	27.1
Sub-Total Inferred		**10.6**	**0.4**	**8.54**	**43**	**9.6**	**27.3**
Total Resource		**25.7**	**0.52**	**9.98**	**50.9**	**9.0**	**20.2**

Mining

Audalia appointed Cube to undertake the preliminary mining study for the PFS. The resource model developed by Cube (2022) was used for the basis of the mining optimisation, pit design and scheduling for the preliminary mining study. Other key inputs included indicative mining cost assessments (Majesso, 2021), geotechnical desktop studies and stability assessments (Knight Piesold, 2019).

No Ore Reserves were estimated for the PFS. This was due to the requirement of substantiating the lump: fines ratio with physical testwork from representative drill core from all the deposits which was unavailable at the time of study.

Note that only the Indicated Resource was used for this study.

Following the completion of the pit optimisation and shell selections, detailed pit designs (Figure 9) were completed.

Design Parameter	Parameter Value
Bench Height	4.0 m
Berm width	4.0 m
Batter angle	85°
Crest to Crest	42.60°

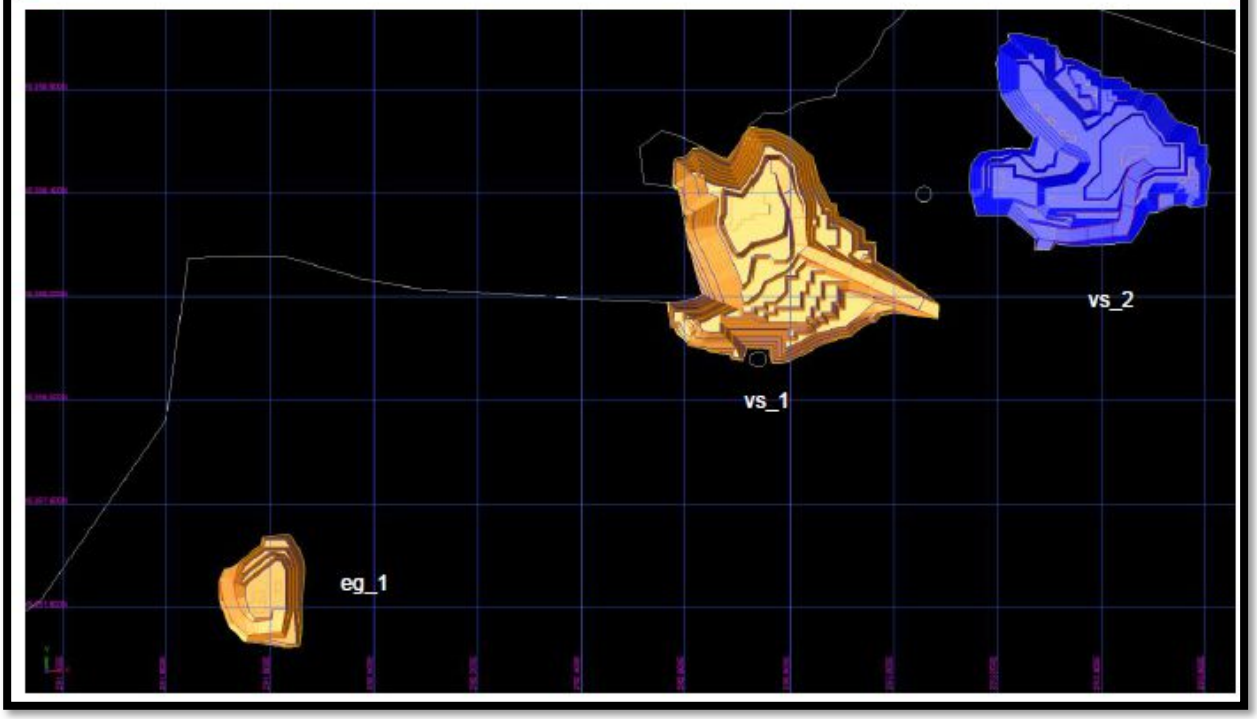

Figure 9: All pit layout design

The design for Vesuvius-Fuji 1 is shown in Figure 11. A ramp was designed running from east to west with the final lower stage of the ramp turning towards the north. The ramp utilised the flat dipping nature of the pit wall to minimise waste mining in accessing the targeted ore.

For Vesuvius Fuji 2 (Figure 12), the ramp design follows a west to east direction. All the ramps are 25m in width and have a 1 in 10 (10%) gradient.

Figure 13 shows the final pit designs for Vesuvius-Fuji.

Following completion of the pit designs, material was reported for use in the production schedule using an 8%TiO_2 cut-off grade to achieve a target 12% TiO_2 feed grade. A summary of the pit inventory is shown in Table 5.

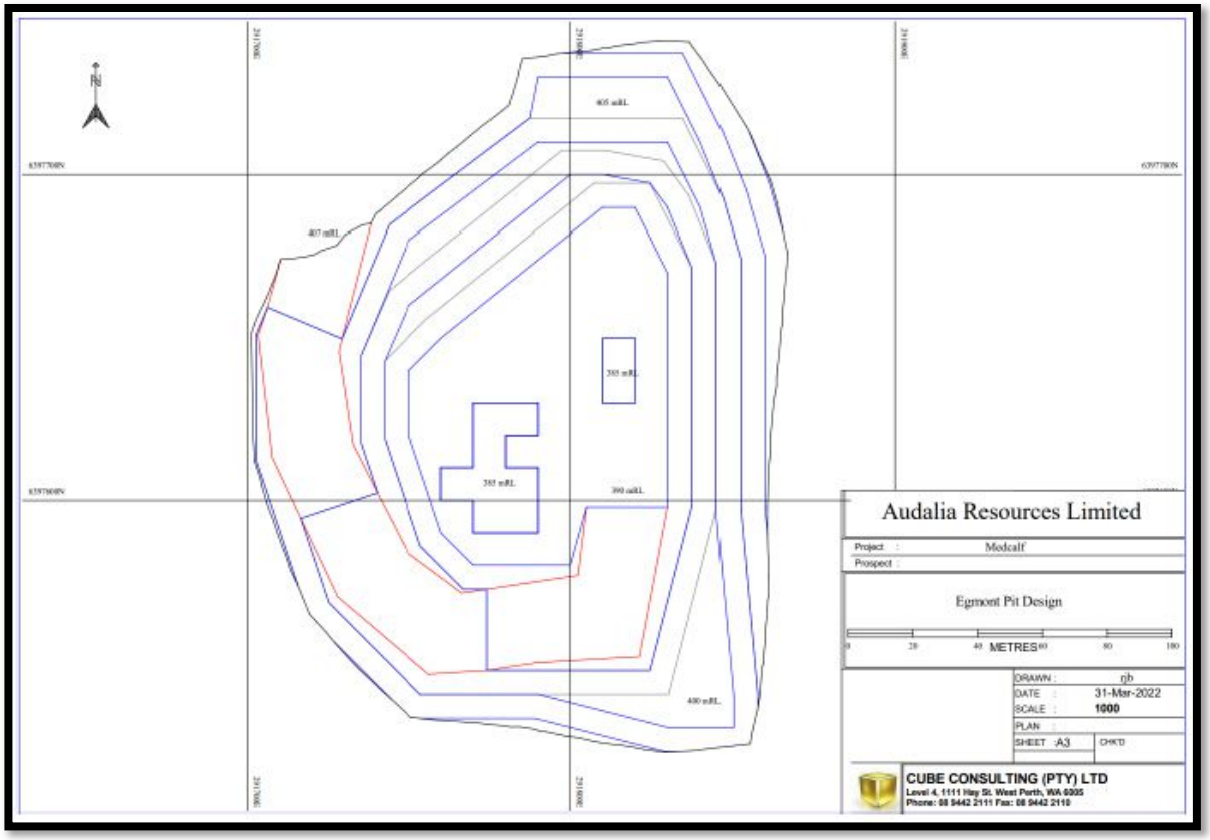

Figure 10: Egmont pit design

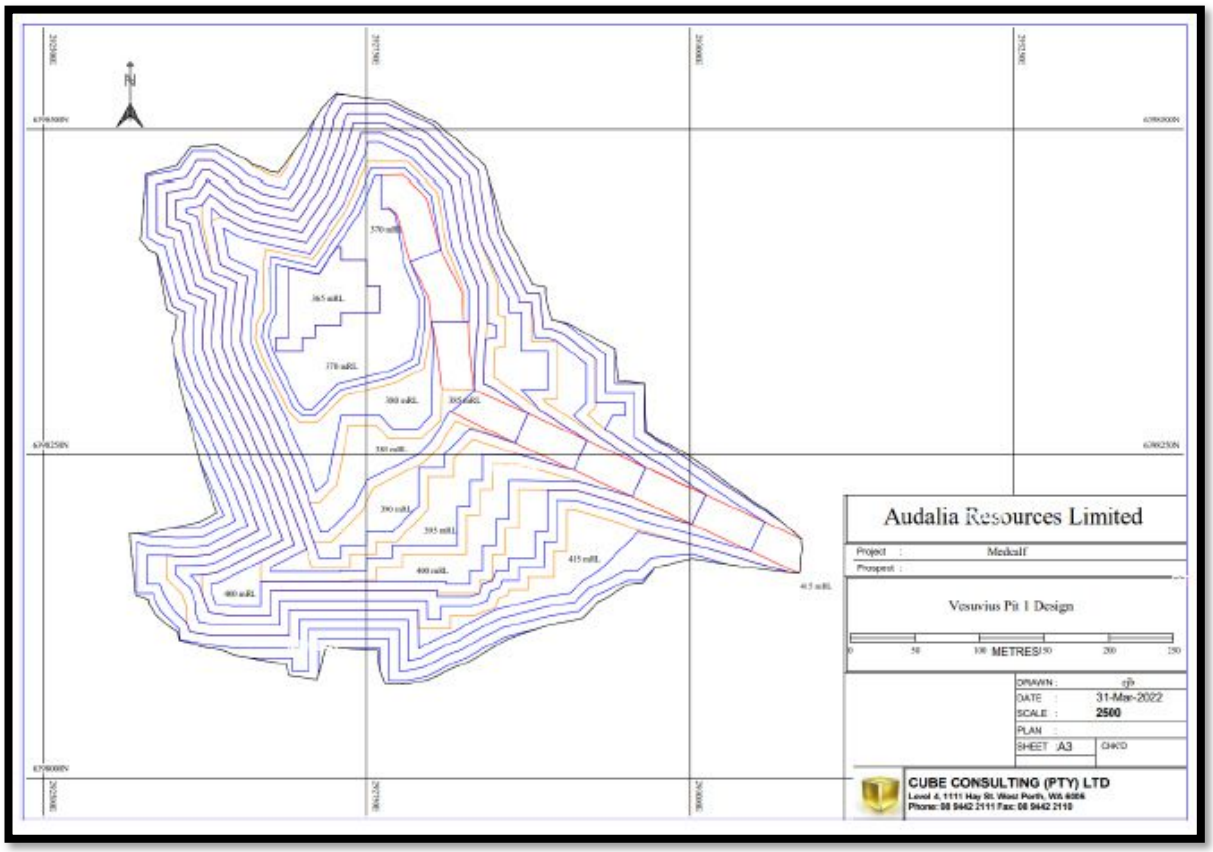

Figure 11: Vesuvius Fuji Stage One pit design

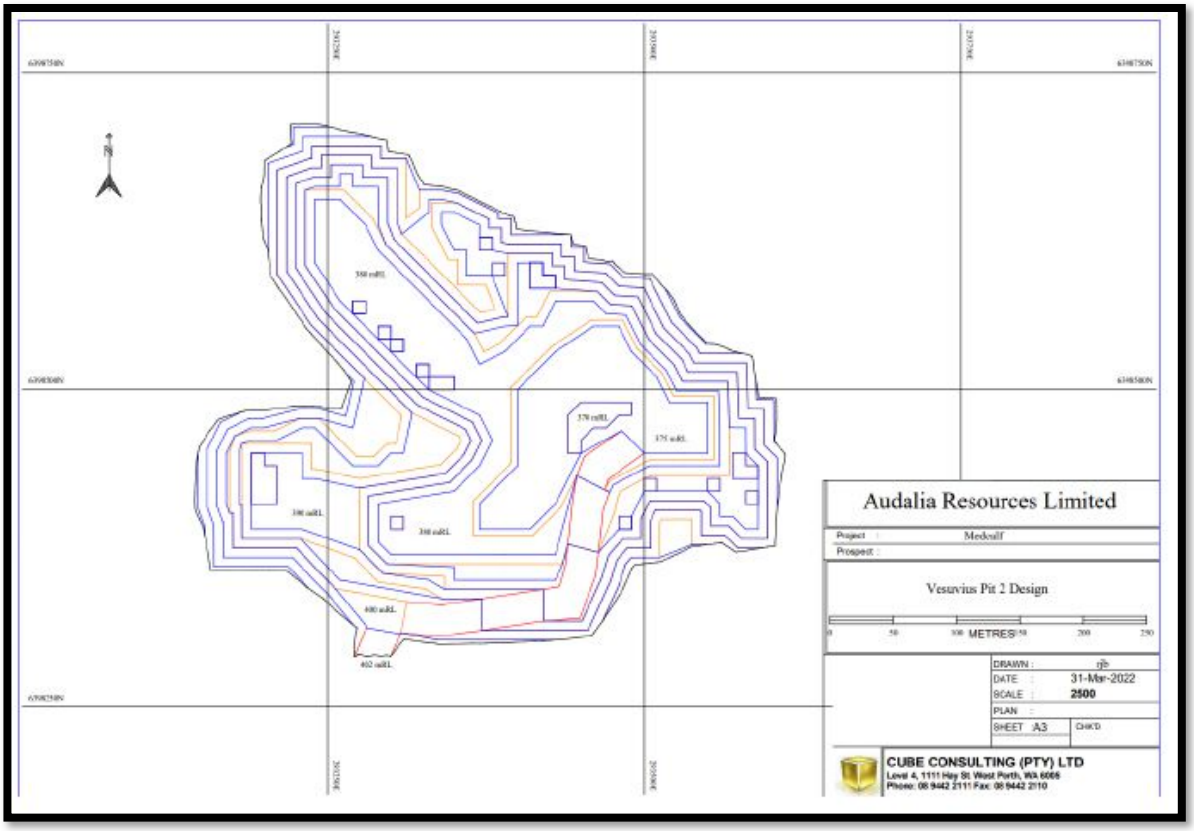

Figure 12: Vesuvius-Fuji Stage Two pit design

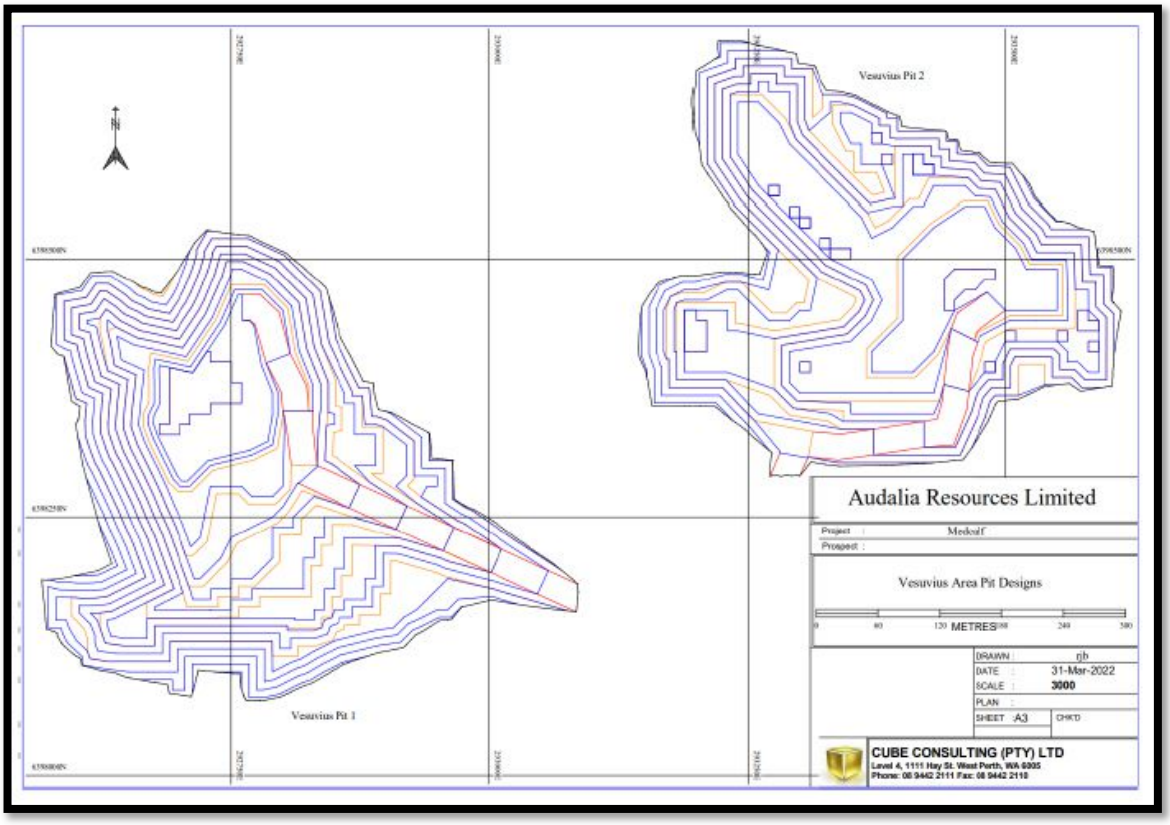

Figure 13: Vesuvius Fuji area pit designs

Table 5: Pit Design Inventory

Pit	Ore Tonnes (t)	TiO_2 Grade %	V_2O_5 Grade %	Contained TiO_2 (t)	Contained V_2O_5 (t)	Waste Tonnes (t)	Total Tonnes (t)	Strip Ratio
Vesuvius-Fuji-1[1]	6,202,000	13.04	0.73	808,480.68	45,579.36	2,752,400	8,954,400	0.44
Vesuvius-Fuji-2[1]	1,401,700	9.59	0.51	594,525.70	31,614.94	5,439,850	6,841,550	3.88
Egmont	715,500	12.60	0.69	781,712.48	42,975.01	167,400	882,900	0.23
Total	**8,319,200**	**12.42**	**0.69**	**2,184,718.86**	**120,169.30**	**8,359,650**	**16,678,850**	**1.00**

The schedule mines at a constant mining rate of 0.8Mt per quarter (3.2Mtpa) as shown in Figure 14. This mining rate is maintained throughout the mine life until the final two quarters in year 6. Feed tonnage and grade resulting from this schedule is shown in Figure 15.

The schedule commences with the lower strip ratio pits of Vesuvius-Fuji 1 and Egmont with mining commencing in Vesuvius-Fuji 2 in year 2.

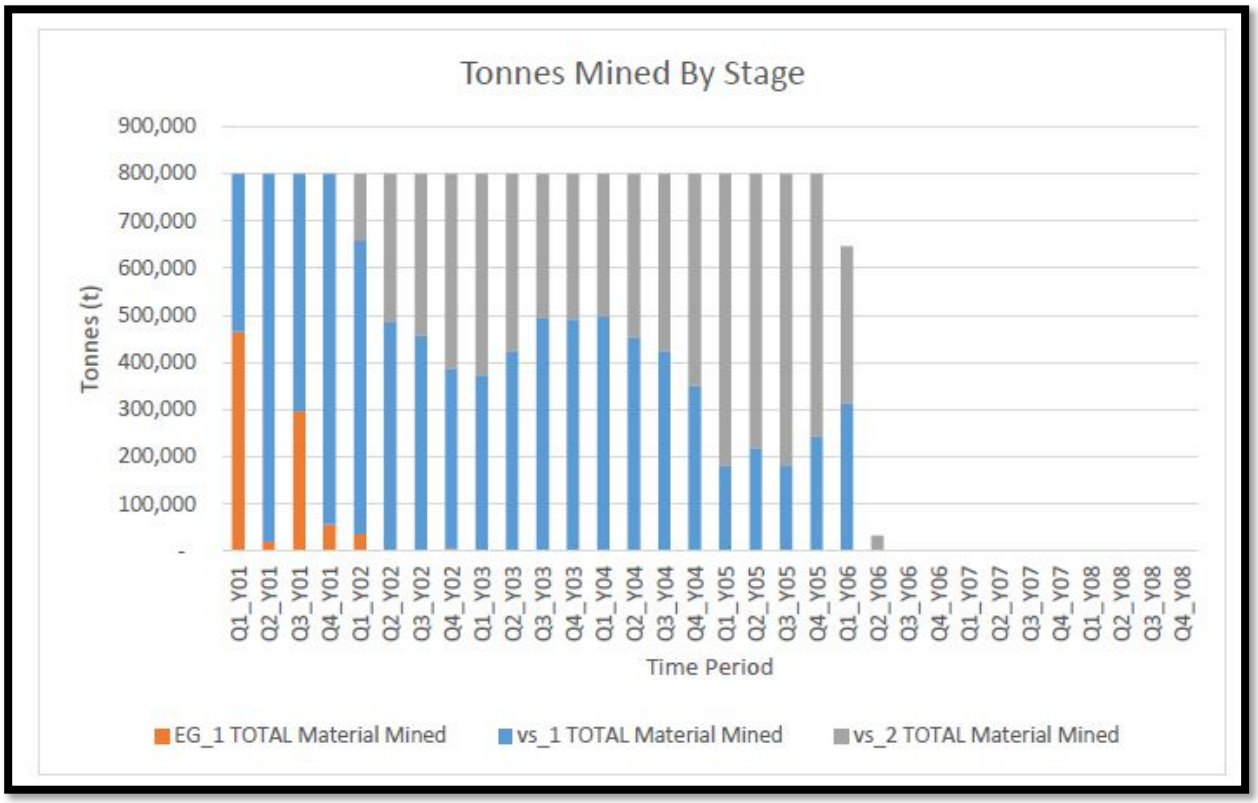

Figure 14: Total material movement by pit stage

[1] Vesuvius-Fuji 1 (Vesuvius West) and Vesuvius-Fuji 2 (Vesuvius Central). Vesuvius East (Pinatubo) and Kilimanjaro are excluded from pit inventory as they comprise the inferred component of the resource.

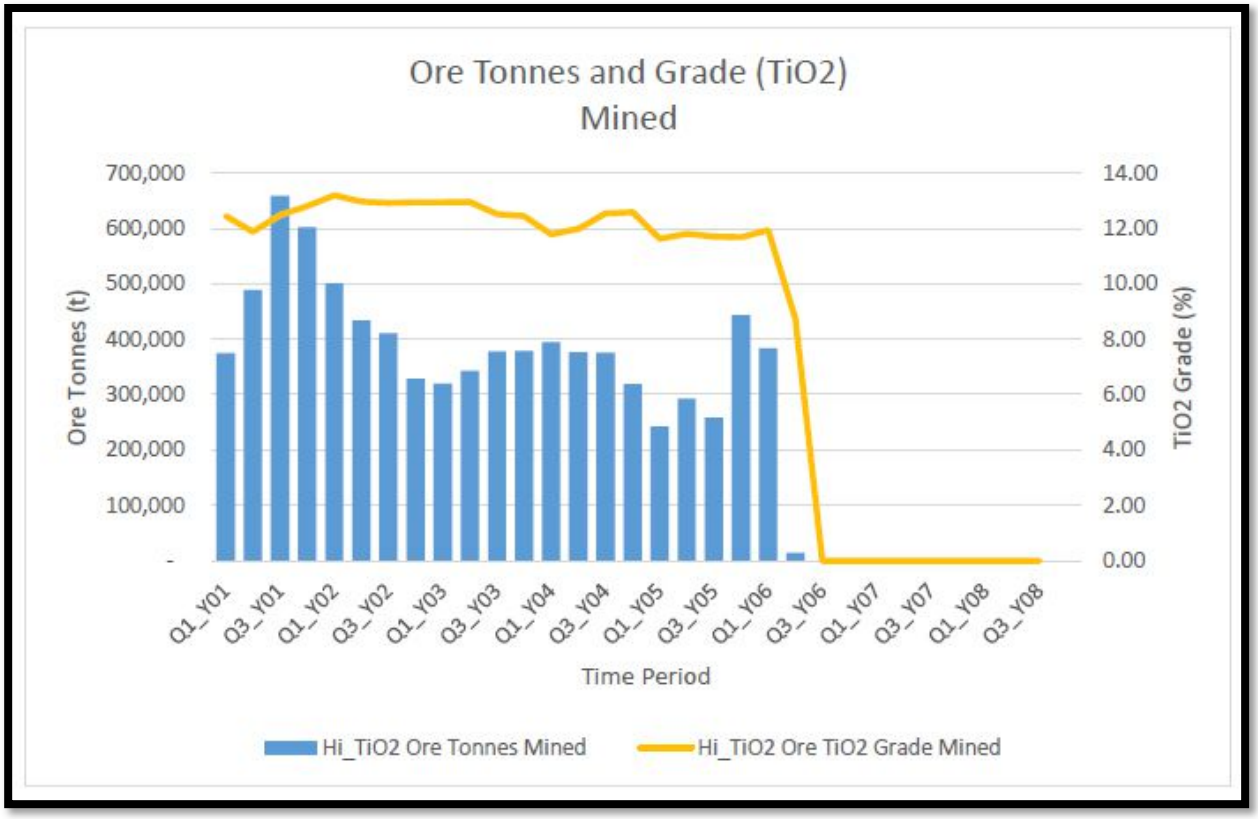

Figure 15: Ore feed tonnes and grade

From a project perspective, the technical and practical challenges and risks associated with the Medcalf open pit mining operations and delivery of ore at sufficient quantities to satisfy the planned throughput of the process facility, is regarded as minimal.

Metallurgical Testwork

A bulk test work programme was completed by Nagrom, the full details of which were released to ASX on 6th April 2022. The purpose of this test work was to validate the assumed lump: fines ratio and determine the product composition. Lump material will be considered as material with a particle size between -60 mm to +10 mm. Fines material is defined as material with a particle size of -10 mm. The Nagrom bulk sample was sourced from a bulk test pit. The test pit was dug to a depth of 3 m alongside PQ core hole MDD012.

The stage deportment of the bulka bag dry screen and crushed dry screen indicates a lump: fines ratio not representative of the current study assumption of 65%:35%. This is a result of the sampling not being representative (test pit excavated to 3 m). With increasing depth into the deposit, it is expected the lump: fines ratio will increase as hardness increases. This is corroborated by previous drill samples.

The calculated head assay from the size by assay results performed on the composite after crushing and screening is shown in Table 6. As expected, grades of valuable metals increased as the finer gangue material reports to the fines. Silica met the required threshold for use in blast furnace applications in the lump fraction.

Table 6: Size x Assay

Sample ID	TiO_2 %	Fe_2O_3 %	V_2O_5 %	SiO_2 %	Al_2O_3 %
60 mm	19.812	55.454	0.902	7.788	9.744
60 mm +10 mm	21.484	59.686	0.965	4.018	7.716
-10 mm	18.780	52.837	0.863	10.119	10.999

As grades still met the requirement for use in blast furnace applications in the +2 mm size fraction, it was noted the fines material could potentially be screened and retained as an additional revenue stream. This has been noted as an opportunity subject to further investigation.

Process

The processing philosophy has been considerably simplified as the project has been condensed to a direct shipping ore (DSO) operation. As such, the ore now undergoes a two-stage crushing and screening process to meet the lump size requirement. An overview of the process is presented below.

Ore from the proposed Medcalf mine (Figure 16) is transferred to the ROM pad. The ore is reclaimed for processing and divided into lump / fines fractions. The lump ore will be loaded in haulage vehicles which will transfer the material from the mine / processing site, to the Esperance port via a proposed 74 km private haul and the Coolgardie-Esperance highway.

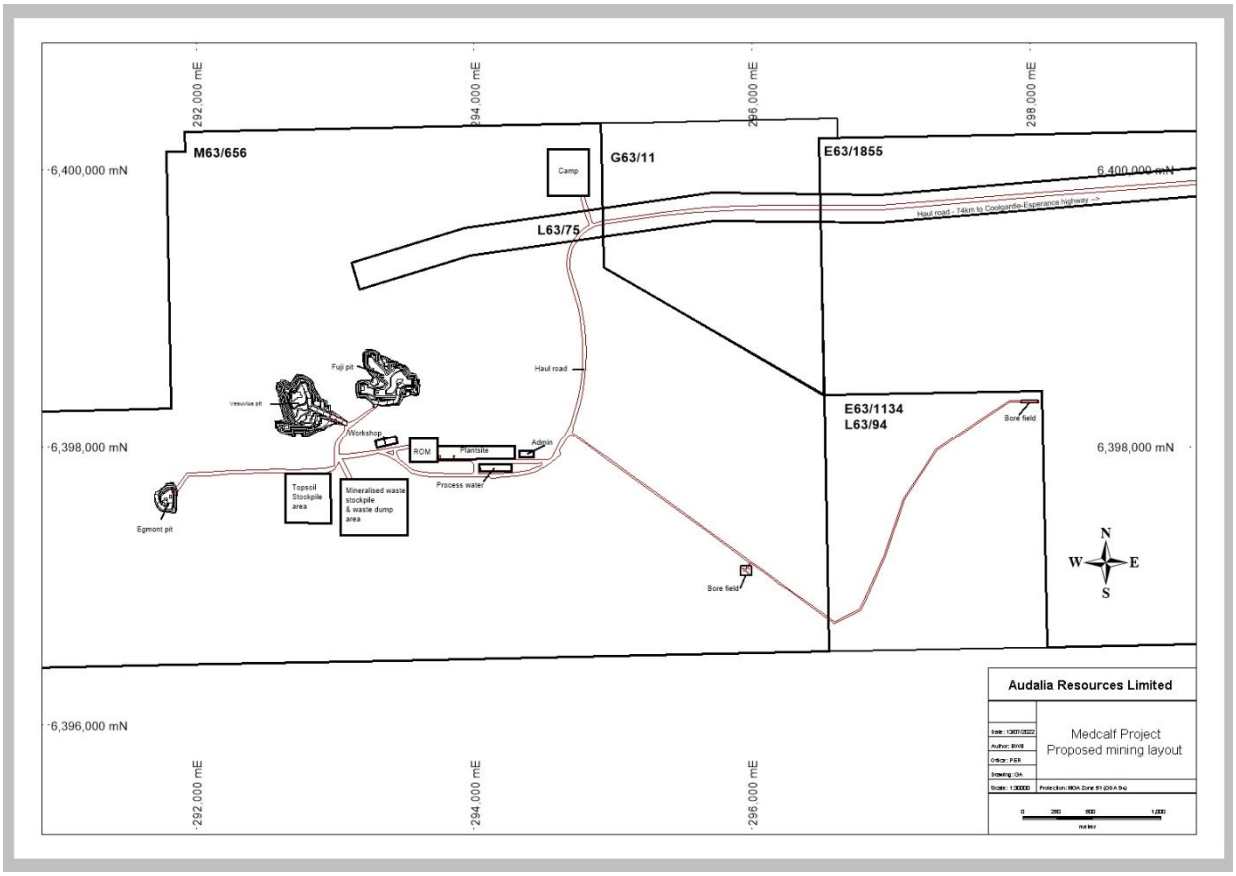

Figure 16: Medcalf Project general arrangement

The titanium deports to the coarse fraction resulting in a slight upgrade in the lump material suitable for blast furnace application – predominantly for refractory lining. It is intended that this lump ore product will be exported from the Esperance port.

The fines fraction will be stockpiled at the Medcalf site for potential future processing to produce a concentrate as a potential value addition to the project. A conventional crushing / screening process has been adopted.

ROM ore is reclaimed from the ROM pad with a front-end loader and fed into a ROM bin. A mobile rock breaker is used to reduce oversize material entering the ROM bin, nominally <1000 mm.

The ROM is discharged from the bin and reclaimed via an apron feeder. The apron feeder discharges material to the jaw crusher grizzly screen ensuring only oversize material is passed to the jaw crusher.

The material is crushed to a P_{80} of 177 mm. The grizzly undersize and jaw crusher will discharge directly onto the primary crusher discharge conveyor.

The material will be conveyed to a double deck vibrating screen. Material will be screened at 60 mm and 10 mm. Undersize material will be discharged onto a fines discharge conveyor which then transfers the material to a radial fines stacker. The stacker will stockpile the fines material.

The +10mm, -60 mm material, classified as lump ore is discharged onto the lump discharge conveyor which transfers the material to the lump stacker feed chute. The radial stacker stockpiles the lump ore in preparation for road train loadout.

The cone crushing circuit is operated as a closed circuit where the oversize material (+60 mm) is recycled to the cone crusher feed bin via the O/S discharge conveyor. A vibratory feeder reclaims the material from the feed bin into the cone crusher feed chute. The cone crusher will be set to produce product at P80 43 mm to reduce the oversize material for re-screening.

Dust is controlled via water spray outlets installed in proximity to stockpiles, ROM bin, feed bin, jaw crusher, cone crusher and the vibrating screen.

The key process design criteria for the project are provided below in Table 7.

Table 7: Key Process Design Criteria

Parameter	Unit	Value
Ore Type		Pyroxenitic vanadium-titanium-iron ore
Plant Operating Hours per Annum	h	7,446
Moisture Content	%w/w	8
Annual Plant Throughput (dry)	tpa	1,500,000
Lump:Fines Ratio		65:35
Annual Production Capacity (dry)	tpa	975,000
Plant Throughput (wet)	t/h	218.97
Plant Throughput (dry)	t/h	201.45
Plant Utilisation	%	100%
Plant Availability	%	85%
TiO_2 Production	kt/a	53.8
Fe_2O_3 Production	kt/a	7.9
Crushing Plant Capacity Contingency	%	20
Feed Grade		
TiO_2	%w/w	12.215
Fe_2O_3	%w/w	63.515
Product Grade		
TiO_2	%w/w	12.215
Fe_2O_3	%w/w	63.515

Hydrogeology & Water Supply

The total water requirement for the Medcalf Project is determined by the water demand for dust suppression of the mine site and haul road and potable water for human consumption. It is expected that water demand for the mine site can be fulfilled from local borefields.

Hydrogeological and borefield infrastructure studies have been undertaken for the Medcalf Project by GRM in 2015 and 2020. The 2015 study has investigated potential aquifers and current groundwater license holders in the surrounding areas and have proposed 6 groundwater supply options for the project, performing a risk assessment for each option. Further study performed in 2020 indicated two fractured rock bores and one palaeochannel bore with significant yield:

- Palaeo-tributary aquifers (bore MHW003) with a yield of 4 L/s (346 kL/day) of hypersaline (76,000 mg/L TDS) and acidic (pH 3.4) groundwater.
- Fractured bedrock aquifers (bore MWH009 and MWH013) indicates yields between 7 to 14 L/s (605 – 1210 kL/day) with highly variable salinity, ranging from 41,000 to 170,000 mg/L TDS and neutral pH.

Average daily water consumption of the Medcalf site is estimated to be 60 kL/day, comprising 30 kL/day for dust suppression at the mine and processing plant and 30 kL/day of potable water for human consumption for a 60 people camp. Expected total water demand for dust suppression of the haul road is significantly higher at 1097 kL/day.

A sea water reverse osmosis (SWRO) system is required to treat hypersaline water to potable water for consumption with an estimated cost of between $200,000 and $250,000. Alternatively, potable water can be transported from Norseman.

It is expected at least 3 bores will be drilled along the haul road to meet dust suppression requirements. Water will fill turkey nests from which water carts can be filled periodically for dust suppression along the haul road.

It is anticipated that potable water will use the lower salinity fractured rock bore MWH013 which will be treated in a SWRO system to supply 30 kL/day for potable requirements to a camp of 60 people. Concentrated water exiting the SWRO system will be utilised for dust suppression of the mine and processing site. It is also suggested that palaeochannel, fractured bedrock and surficial aquifers are to be investigated to identify suitable bores along the haul road corridor for haul road dust suppression.

Power & Diesel Supply

Power supply for the Project is provided at the process plant for the processing plant, mine site, haul road, and accommodation village by stand-alone diesel generators.

The process plant power system is expected to comprise the following features:

- Normal plant demand is 740 kW. Peak demand is 1,057 kW
- The total power generation is 3,245 kVA which is supplied from the following diesel gensets:
    - 4x500 kVA gensets for the processing plant
    - 2x320 kVA gensets for the mining area
    - 2x250 kVA gensets for the accommodation village
    - 3x15 kVA and 2x30 kVA for the haul road
- The diesel is transferred to the site by the fuel supplier and stored in a primary storage fuel tank with a capacity of 68,000 L. The fuel is then transferred to smaller fuel tanks of 12,000 L in the accommodation village, 12,000 L for feeding the dedicated mine site generators, and 5 x 2,500 L

tanks for supplying diesel to haul road generators. The fuel tank is expected to be filled twice a week.

Due to the lack of availability of gas and electricity, diesel is the primary fuel source for the Medcalf mine site. Audalia will be responsible for fuel supply to the haul trucks and light vehicles owned by both operator and contractor.

Diesel will be trucked to the plant from Kalgoorlie or Esperance and offloaded into bulk self-bunded storage tanks by the contractor. From there it will be distributed to the power station and firewater pump day tanks, vehicle bowsers and genset fuel storage tanks.

The logistics of diesel delivery to site will be handled by a contract with Ampol for delivery of diesel to site to provide fuel for mining, haulage and onsite power generation.

Infrastructure

The Medcalf Project is located within a 100 km radius of existing regional infrastructure and logistical access. A proposed 74 km long haul road will link the project site to the Coolgardie-Esperance highway 54 km south of Norseman.

Accommodation & Village

A 60-bed accommodation village will service the Medcalf Project. The accommodation village will be located ~2 km North-East from the mine site at the west end of the private haul road. The accommodation village will be constructed from units purchased on the second-hand market. The accommodation village will be owned by Audalia but managed and operated by a contractor. A plug and play construction camp will be hired during the early phase of the construction and is expected to supply 60 beds.

Building and Offices

The building and offices at the Medcalf Project will be provided by two sources, Audalia and by the Contract Mining company. The mine administration area, workshops and stores will be located on the west side of the ROM pad. The buildings and offices provided by Audalia will be fully equipped with furniture, office equipment and air conditioning units. Fully equipped boardroom facilities will be provided at the office complex as well as at the training facility. Computer network, communication equipment and power infrastructure will also be provided.

IT and Communications

The Project's IT and communications infrastructure requirements have been reviewed by Audalia and METS in consultation with MST, CipherTel and Westelec. IT and communications indicative solutions and indicative pricing were obtained for this stage of the project. The intent is to leverage existing regional communications infrastructure to reduce the capital expense whilst addressing the core business communications requirements.

Indicative pricing for these solutions were sourced from MST considering communication requirements for the Medcalf mine site, haul road, accommodation village and the links back to the Perth head office.

Airstrip

For the Medcalf Project the primary airstrip will be the Norseman Airport (Aerodrome), located 4 km southwest of the town given its proximity and capabilities to service the Medcalf Project mine site.

Haul Road

The proposed Medcalf project will rely on road transportation (haulage) of ore from the Medcalf mine site to the Port of Esperance. In collaboration with contractors, Audalia will design and construct an unsealed private haul road of 74 km running east from the mine to a junction with the Coolgardie-Esperance Highway. The construction of the haul road may potentially be incorporated into the mining and/or haulage contract. Conditional approval for Highway access to the Coolgardie-Esperance Highway has been received from Main Roads WA, Goldfields-Esperance Region. Audalia commissioned Roadmiles to complete a design for the construction of the intersection of the haul road with the highway.

A network of off-road and on-road road trains will be used to take advantage of hauling along a private haul road. A haulage contractor will be engaged to undertake this activity and to undertake road maintenance.

Additional infrastructure

There are also allowances in the PFS for the following:

- Sewage treatment, self-contained, modular systems to service the accommodation village and mine site.
- Site workshops including, fitting shop, boiler making and welding shop, electrical shop, motor shop and rigging shop.
- Analytical and metallurgical laboratory – supplied and operated by an external commercial laboratory.
- Mobile equipment allowances, where equipment is not included in the contractor scope.
- Borefield pumps in proximity to the mine / processing site and along the haul road for dust suppression requirements.

Project Execution

The project strategy has been developed based on contracting both mining and processing activities to minimise risk and upfront capital. Audalia will be responsible for the management of contractors and consultants.

A project implementation schedule has been developed.

Logistics

The Medcalf project will produce a single TiO_2 / Fe_2O_3 lump ore after crushing and separation. This will be used in blast furnace protection. Product sale will be via Port of Esperance and Audalia intends to enter an agreement to rent part of a port storage shed.

The road train transport option from the Medcalf mine site to Port of Esperance has been selected for the PFS base case. It was concluded that international or domestic shipping is viable from the Port of Esperance. Customer shipping destinations are at this stage not finalised however for this study three ports in China are being considered: the Tangshan Port, Rizhao Port and Fangchenggang Port (Figure 17).

Figure 17: Potential customer ports in China

The lump ore is hauled approximately 74 km on a private haul road (Figure 18) by an Off-Road Road Train from the Medcalf mine site where it is unloaded before being loaded on to On Road AMMS LV 3 PBS Road Trains and hauled 151 km south along the Coolgardie-Esperance Highway to the Port of Esperance.

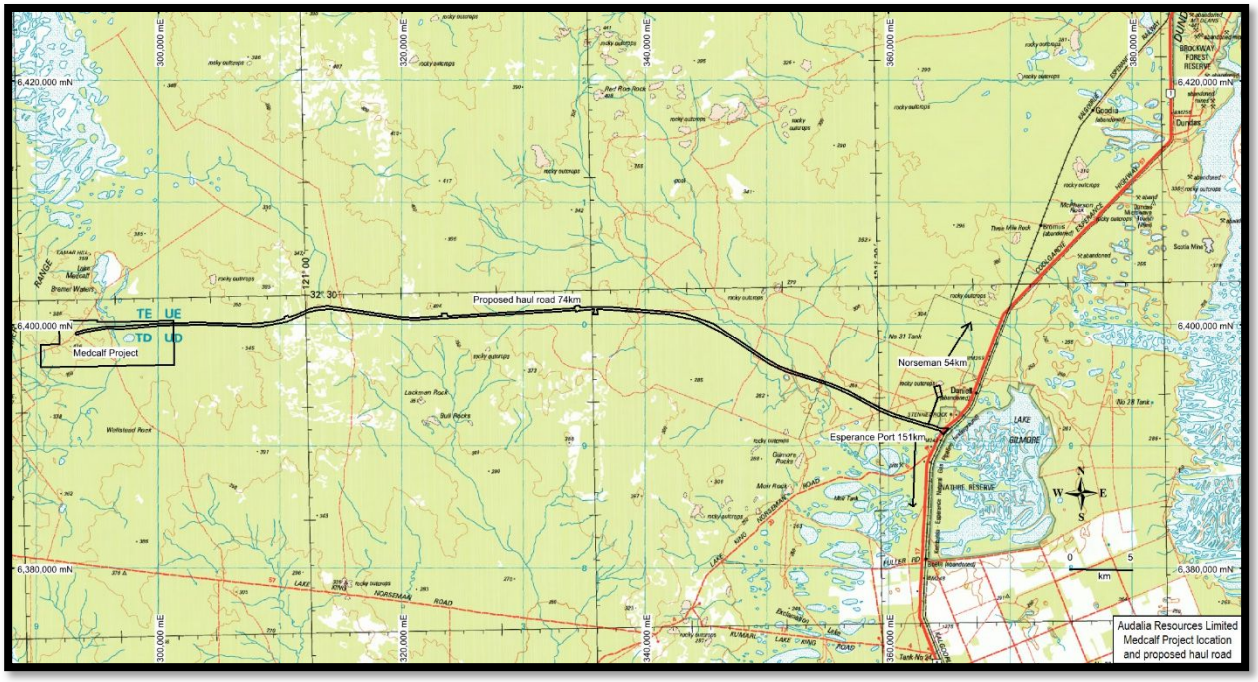

Figure 18: Location map showing location of proposed haul road

The Port of Esperance has the infrastructure, track record, berth capacity and port shed storage capacity to facilitate the operation and has confirmed interest in providing the required services. Rail and road freight options are available for inbound and outbound commodities to and from the Medcalf Mine site. Shipping providers are available to provide shipping. The lump ore, subject to approval from the Southern Ports Authority (SPA), may be loaded at a berth facility via the bulk ore loader at the Port of Esperance onto a Panamax Vessel once a month and sailed to a selected customer port in China.

Heritage and Native Title

The sole traditional owners of the land on which the Medcalf Project is situated is subject to a determination of native title in favour of the Ngadju native title claimant group (WC 99/02). In November 2015, Audalia signed an agreement with the Ngadju People in relation to heritage, the grant of project tenure, development of the Medcalf Project and conduct of the operations. The terms of the agreement ensure that the Ngadju People will share the benefits of the project through a suite of economic, educational, vocational, recreational, environmental and cultural initiatives proposed by the elders and representatives of the Ngadju People during the negotiation process.

The agreement was a condition precedent to the grant of mining lease application M63/656 by the Department of Mines, Industry, Regulation and Safety (DMIRS). The mining lease was subsequently granted on 13th of November 2015 and allowed Audalia to commence the process of seeking regulatory approvals and permits required to develop the Medcalf Project.

Archaeological and ethnographic heritage surveys conducted in 2015 cleared the Medcalf Project mining lease M63/656 for development. Anthropological heritage surveys conducted in 2017 and 2018 cleared the proposed private haul road on miscellaneous licence L63/75 for development.

Regulatory Approvals

Environmental impacts and assessments of the Medcalf Project were undertaken by Botanica Consulting on behalf of Audalia during access and tenure applications as well as exploration and drilling programmes.

The primary environmental approvals process commenced in 2017, with Audalia submitting a referral on the Medcalf Project to the Department of the Environment and Energy (**DotEE**) in November 2017 for consideration under the *Environment Protection and Biodiversity Conservation Act 1999* (**EPBC Act**). The

DotEE's decision was received in January 2018 and confirmed that the proposed action to clear native vegetation to develop the Medcalf Project is not a controlled action. This means the proposed development of the Medcalf Project does not require further assessment and approval under the EPBC Act before it can proceed.

The Company also submitted a Section 38 Referral to WA Environmental Protection Authority (**EPA**) in December 2017 under the Part IV of the *Environmental Protection Act 1986*. In March 2018, the Company received notification from EPA for the referral on the Medcalf Project. The EPA had advised that the level of assessment is a "Public Environmental Review, with a proponent prepared Environmental Scoping Document (ESD)". The draft Environmental Scoping Document (**ESD**) was submitted to EPA for assessment in June 2018 and following presentation of the ESD by Audalia to the EPA Board in February 2019, the ESD was subsequently approved in March 2019.

The ESD specified the scope and content of the Environmental Review Document (**ERD**) for the Medcalf Project and provided an acceptable basis for the presentation of the ERD. Following completion of additional studies required to support the ERD for the Medcalf Project, the ERD was submitted to the EPA in July 2020 and was approved by the EPA in February 2021. The ERD was released on the 8th of March 2021 for an eight-week public review period that ended on 3rd of May 2021.

The Response to Submission (**RtS**) document, which provides comprehensive responses to all submissions received during the public review period, was submitted to the EPA on the 8th of October 2021. Comments on the RtS document were received from the EPA on the 22nd of December 2021 and the comments were addressed by the Company's environmental consultants in an updated RtS document which was first submitted to the EPA on the 10th of February 2022 and then updated after further queries from the EPA and re-submitted on 9th of May 2022. The EPA confirmed the RtS document was accepted on the 1st of July 2022 and confirmed as being adequate to enable to the EPA to prepare its draft assessment report. The Company awaits advice from the EPA as to the meeting date at which the proposed development of the Medcalf Project will be considered by the EPA.

The Project is currently compliant with environmental, legal and permitting requirements.

Secondary environmental approvals including those for; environmental, onsite power generation, any mine dewatering and water supply will be required during the detailed design stage.

Human Resources

An organisational structure has been developed for the Medcalf Project in conjunction with Audalia. Operational staff will work on a 2 weeks / 1 week roster while administration and technical staff will work an 8 days / 6 days roster. The quarry manager is expected to be the most senior Audalia position onsite, being responsible for the Medcalf operation. The remaining site management group incorporates Administration, OHS&E, Geology, Mining, Processing and Engineering & Maintenance – although it is expected that most of these responsibilities will fall under the requirement of contractors. Overall headcount including contractors is estimated to be 78 people of which there is expected to be approximately half on site at any one time.

Environmental

A desktop assessment and field surveys were conducted over the Mine Development Envelope (DE) and Haul Road DE by Botanica Consulting to study various environmental aspects of the project. Preston Consulting prepared the environmental approval documents and compiled the environmental review submission.

Operation of the Medcalf mine site may affect flora and vegetation values by causing reduction and fragmentation of vegetation communities. Management and mitigations measures will be implemented to protect flora and vegetation within the project area, including avoiding, minimising, offsetting and rehabilitation.

The Medcalf Mine Site may also affect terrestrial fauna and subterranean fauna values including disturbance to fauna habitat, alteration of landforms and hydrology, dust, noise, and injury risks to the local fauna. Management and mitigations measures will be implemented to protect terrestrial fauna within the project area.

The water demands for the Medcalf Site and Haul Road are expected to be modest to meet dust suppression and potable demands. Modifying landform, erosion, contamination of water is identified as potential effects to surface water values. On the other hand, alteration of the water table, groundwater drawdown, contamination, leaking and spills are considered potential impacts on groundwater values. Mitigation measures may be required to address/minimise the potential impacts to surface and ground water.

The potential risk of contamination to the surrounding environment (vegetation, soils and hydrology) from release of hostile waste materials is low with none of the waste rock identified as containing Potentially Acid Forming (PAF) material.

Air quality is likely to be primarily of health and safety concern as dust could cause damage to vegetation and fauna habitat, as well as reduce visual amenity. However, air quality is unlikely to have significant impacts at a local or regional scale. Management strategies may be implemented to minimise the dust levels.

Market Assessment

Beijing Zhonglian Bona (China Market Research Net) was engaged by Audalia to review the market for high-titanium lump ore in furnace applications within China.

Since the 1980's, the titanium-containing material furnace protection technique has been used in China to protect the hearth and bottom for the purpose of improving the service life of blast furnace and has yielded good results in application.

Raw titanium-containing lump ore, titanium-containing sinter and titanium-containing pellet are all currently used for furnace lining by Chinese steelmakers. Among them, titanium-containing lump ore has low TFe and high TiO_2, making it relatively stable and generally offering a cost advantage.

From 2017 to 2021, China experienced rapid growth in the market scale of high titanium lump ore (HTLO) for furnace protection, scaling over 2.8 billion Yuan (USD$440 M) in 2020 (Figure 19). In 2021, affected by factors such as declining demand / steel prices, the market for China's high titanium lump ore corrected to 2.5 billion Yuan (USD$393 M).

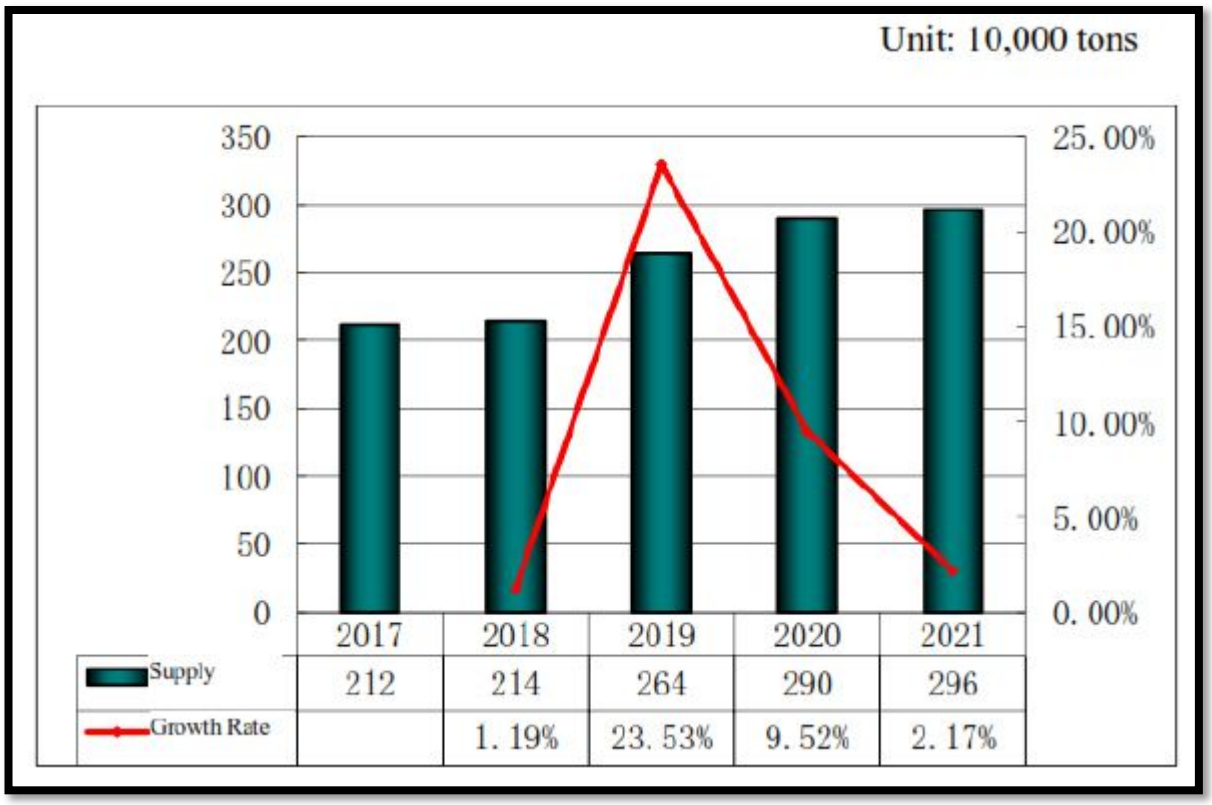

Figure 19: Supply of HTLO for blast furnace protection from 2017-21 (Source: China Mining Association)

Affected by macroeconomic conditions, supply and demand and other factors, the price of high-titanium lump ore for furnace protection is expected to follow the same trajectory as other bulk commodities. Due to the relatively inelastic mining cost, the price is expected to remain steady with marginal decline as domestic ilmenite supplies increase and steel output is partially reduced.

Forecasted price action suggests USD$110/dmt (CFR) is a reasonable estimate to 2026 and has therefore been used in the economic modelling (Figure 20).

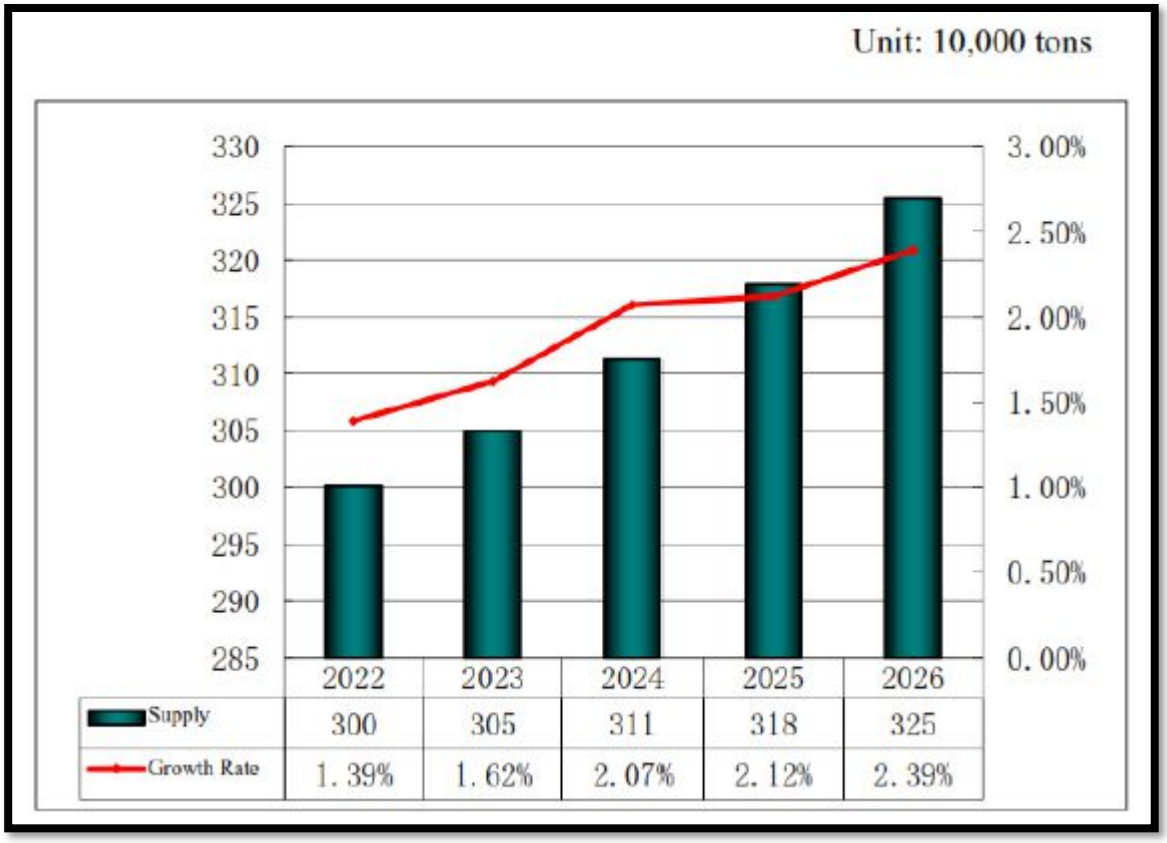

Figure 20: Forecasted supply of HTLO for blast furnace protection from 2022-26 (Source China Mining Association)

Capital Cost Estimate

The Medcalf Project overall capital cost is estimated at circa AUD$33M assuming the mining and processing are undertaken by contractors. This includes a 10% contingency. This estimate has been calculated with a degree of accuracy of ± 25 %. The capital expenditure estimate is based on an in-house database and historical equipment pricing and then factoring the materials and installation costs using suitable scaling factors. Vendors were contacted for major equipment such as diesel gensets and water treatment systems to obtain budgetary estimates. All monetary figures are reported in Australian dollars (AUD). A summary of the overall capital cost estimate summary is presented below in **Error! Reference source not found.**. The shift to a contracting philosophy has reduced the capital expenditure substantially, with the primary cost now associated with construction of the haul road.

Table 8: Medcalf Project Capital Cost Summary

Description	Capital Cost (AUD)
Direct Costs	
Air & Water Services	$2,423,750
Gensets	$973,000
Fuel Farm	$257,250
Camp Site	$4,532,500
Misc. Buildings	$175,440
Mobile Equipment	$1,055,000
Power Station / Infrastructure	$795,000
System Communications	$1,388,684
Haul Road Construction	$11,772,930
Water Supply	$761,779
Subtotal – Direct Costs	**$24,135,333**
Indirect Costs	
Working Capital	$2,413,533
Insurance	$251,334
EPCM	$2,413,533
Contingency	$2,413,533
Commissioning	$482,706
Workforce accommodation & meals, temp services	$482,706
Spares and tools	$167,556
Subtotal – Indirect Cost	**$8,624,904**
Total Capital Cost	**$32,760,237**

Operating Cost Estimate

The Medcalf Project total operating cost is AUD$62.62/t of feed ore or AUD$96.34/t of product. A breakdown into key areas is provided below in Table 9. All costs are reported in terms of ROM ore tonnes. No additional contingency is factored in. Details and the basis of the costs are provided below.

Table 9: Medcalf Project Operating Cost Summary

Summary			
	AUD/a	**AUD/t ROM**	**AUD/t Product**
Mining & Transport	$64,681,545	$43.12	$66.34
Reagents	$7,721,630	$5.15	$7.92
Labour	$1,546,425	$1.03	$1.59
Contractors	$14,082,213	$9.39	$14.44
Maintenance	$349,456	$0.23	$0.36
Miscellaneous	$5,550,997	$3.70	$5.69
Total	**$93,932,266**	**$62.62**	**$96.34**

The overall operating cost is dominated by the mining and transport costs typically associated with long road haulage, freight and mining. It comprises 70% of the overall project operating costs. The per tonne rate has been used in the financial model to accommodate for the declining production rate in year 6.

Project Funding

Financing for the Medcalf Project has not yet been secured, however based on the positive PFS and upon receipt of all requisite approvals, there is reasonable basis to assume that the necessary funding for the Project is achievable.

Financing the detailed design, procurement, construction and implementation capital requirement for the Medcalf Project will likely require securing off-taker/s or trader/s as strategic partners as well as having off-take agreements in place. Forward sales/hedging is generally recommended due to fluctuations in the HTLO prices. Product off-take agreements are likely to inform finance options available to Audalia. Overall project risk as well as local and international market conditions will also influence investment appetite.

Audalia will consider a range of funding sources, with the objective of securing the most cost competitive and value maximising option for the Company. Audalia plans to pursue a range of debt options for project finance and equity or debt funding for working capital costs.

Audalia has commenced discussions with potential offtake partners with respect to securing offtake for the Project. Discussions are also underway with local and international banks for project financing of up to AUD$50 million.

Given the above, Audalia has concluded that it has a reasonable basis to expect that the upfront Project capital cost could be funded once the Company has obtained the necessary project approvals.

Audalia will begin discussion with financiers to progress the development of the project to production.

Next Steps

Audalia's intention is to further develop the project following the PFS study. A detailed financing strategy will be developed during the next phase of work. During this phase options for local and offshore procurement will be investigated further. The Company will also consider options to further improve the economic outcomes of the Project identified during the PFS, including extending the life-of-mine with inclusion of the inferred resource and possible value addition through sale of the fines product.

Audalia will progress negotiations with potential offtake partners with the view of using any offtake arrangement to secure company or project level financing. Completion of the primary environmental approval process remains the immediate priority of the Company.

Authorised by:

Brent Butler
CEO and Executive Director

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Forward Looking Statements

This document includes forward looking statements and forward-looking information within the meaning of securities laws of applicable jurisdictions. Forward looking statements can generally be identified by the use of words such as “may”, “will”, “expect”, “intend”, “plan”, “estimate”, “anticipate”, “believe”, “continue”, “objectives”, “targets”, “outlook” and “guidance”, or other similar words and may include, without limitation, statements regarding estimated reserves and resources, certain plans, strategies, aspirations and objectives of management, anticipated production, study or construction dates, expected costs, cash flow or production outputs and anticipated productive lives of projects and mines. Audalia continues to distinguish between outlook and guidance. Guidance statements relate to the current financial year. Outlook statements relate to years subsequent to the current financial year.

These forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause Audalia’s actual results, performance and achievements or industry results to differ materially from any future results, performance or achievements, or industry results, expressed or implied by these forward-looking statements. Relevant factors may include, but are not limited to, changes in commodity prices, foreign exchange fluctuations and general economic conditions, increased costs and demand for production inputs, the speculative nature of exploration and project development, including the risks of obtaining necessary licences and permits and diminishing quantities or grades of reserves, political and social risks, changes to the regulatory framework within which Audalia operates or may in the future operate, environmental conditions.

Forward looking statements are based on Audalia’s good faith assumptions as to the financial, market, regulatory and other relevant environments that will exist and affect Audalia’s business and operations in the future. Audalia does not give any assurance that the assumptions will prove to be correct. There may be other factors that could cause actual results or events not to be as anticipated, and many events are beyond the reasonable control of Audalia. Readers are cautioned not to place undue reliance on forward looking statements, particularly in the current economic climate with the significant volatility, uncertainty and disruption caused by the COVID-19 pandemic. Forward looking statements in this document speak only at the date of issue. Except as required by applicable laws or regulations, Audalia does not undertake any obligation to publicly update or revise any of the forward-looking statements or to advise of any change in assumptions on which any such statement is based.

Cautionary Statement

The prefeasibility study referred to in this ASX release has been undertaken for the purpose of initial valuation of a potential high grade titanium lump ore (HTLO) operation from several open cut pits with mining and processing undertaken by contractors. It is a preliminary technical and economic study of the potential viable of the Medcalf HTLO project as conclusions are partly drawn from assumptions regarding the predicted downhole lump-fines ratio.

The prefeasibility study has been completed to a level of accuracy of +/-25% in line with a prefeasibility level study accuracy. No Ore Reserve has been declared from the Medcalf HTLO Project. Further exploration for upgrading the Inferred category and appropriate testwork on lump-fines ore ratios are required before the Company will be in a position to estimate any Ore Reserve related to the open cut operations or to provide any assurance of an economic development case. Given the uncertainties should not make any investment decisions based solely on the results of the prefeasibility study.

Disclaimer

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contained in or derive from, or any omissions from its material expect liability under statue that cannot be excluded.

Statements contained in this material, particularly those regarding possible or assumed future performance, costs, dividends, production levels or rates, prices resources, reserves or potential growth of ACP, or industry growth or other project trend projections are, or maybe, forward looking statements. Such statements relate to future events and expectations and, as such, involve known and unknown risks and uncertainties. Actual results and developments may differ materially from those expressed or implied by these forward-looking statements depending on a variety of factors.

Competent Persons Statements

The information in this announcement that relates to results from the METS PFS (July 2022) is based on information compiled by Mr Brent Butler, who is a Fellow of The Australasian Institute of Mining and Metallurgy. Mr Butler has 37 years' experience as a geologist and is CEO and Executive Director of Audalia. Mr Butler has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (JORC Code). Mr Butler has provided his consent to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

The information in the PFS that relates to the Medcalf pit optimisation, pit design and production scheduling is based on, and fairly represents, information compiled by Mr Quinton de Klerk, who is an employee of Cube Consulting. Mr de Klerk is a Fellow of The Australasian Institute of Mining and Metallurgy and has over 25 years' experience as a mining engineer. Mr de Klerk has sufficient experience relevant to the type of deposit under consideration and to the activity which he is undertaking 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'. Mr de Klerk consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.

The information in this announcement that relates to the summary of the PFS results is based on information compiled by Mr Damian Connelly who is an employee of METS Engineering Group Pty Ltd. Mr Connelly is a Fellow Member of AusIMM and has over 30 years' experience as a metallurgist. Mr Connelly was a consultant to Audalia during the PFS. Mr Connelly has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity, which he is undertaking to qualify as a Competent Person as defined in the JORC Code. Mr Connelly consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.