

CAULDRON ENERGY

Victoria Gold Mining & Exploration Forum

EXTRACTIVE RESOURCES WITH POSITIVE COMMUNITY OUTCOMES

A MODEL FOR ALIGNING THE ENVIRONMENT WITH EXPLORATION AND MINING

24 February 2022



Acknowledgement to the Wurundjeri Woi
Wurrung People

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The information in this Presentation that relates to **Exploration Targets, Exploration Results, and Mineral Resources** is based on information compiled by Ms Asha Rao, Exploration Manager of Cauldron Energy Limited. Ms Rao is a Competent Person who is a Member of both the AusIMM and the Australasian Institute of Geoscientists (AIG). Ms Rao has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration, and to the activity being undertaken to qualify as a Competent Person, as defined in the JORC 2012 edition of the "Australasian Code for Reporting of Mineral Resources and Ore Reserves". Ms Rao consents to the inclusion in this report of the matters based on this information in the form and context in which they appear.

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Unique Commodity Spread: High Quality Assets

Unique Commodity mix in global market

- increasing demand
- limited supply
- no substitution

High quality assets in Uranium & Silica have price upside with limited supply and low-cost quartile potential

Gold price increases lock-in and stabilise as gold regains its safe-haven status overlain with Asian retail demand

- **Uranium** – landholding and proven exploration expertise to grow a portfolio with low-cost & global scale potential
 - Growth without Carbon Consideration - demand forecast at 2.5% pa with supply reducing at 2.5% pa – significant price rise
 - With Carbon Consideration – demand forecast at 7.1% pa leading to extreme prices over long term with no supply pipeline
 - Predictions of Long-Term **Supply shortage** compounded by Demand Growth
 - Without substitution, leads to excessive prices rises over extended periods
- **Gold** – cash injection from market and near-term access to modelled high-grade zones
 - Market recognition of Victorian gold with under-explored Victorian assets
 - Cauldron's overlooked Victorian assets in the high potential Bendigo zone
 - Stable cash generation potential with M&A interest in downstream capacity
- **River Sand (Silica)**
 - Global demand for silica increasing as quality resource scarcity grows
 - Licensed scarce sand assets with high silica potential close to bulk transport

VICTORIAN GOLD – Global Scale Resources

- Hosts the world's highest-grade gold mine at Fosterville
- Gold rush between 1860-1900s contributes 2-3% all gold mined in recorded history from Victoria alone
- Majority of Victorian gold hosted in thick sedimentary sequence
 - 2006 Central Victorian Deep 2D Seismic Survey
- Structural and geochemical similarities with Bendigo Zone suggest potential for common mineralization source at depth (GSV, NewGen Gold, 2021):
 - Linked to the same mineralization event (~440 Ma)
 - Same sediment host (Ordovician turbidites)
 - Steep to near-vertical, west-dipping faults
 - Regional-scale plumbing of mineralised fluids from deep crust
 - Part of same deformation phase (regional-scale compression/extension) as surrounding major goldfields
- Contrast between Blackwood and other major fields
 - Lack of tenement-wide holistic geology input
 - Lack of exploration below 100m
 - Great potential for undiscovered bonanza gold at depth

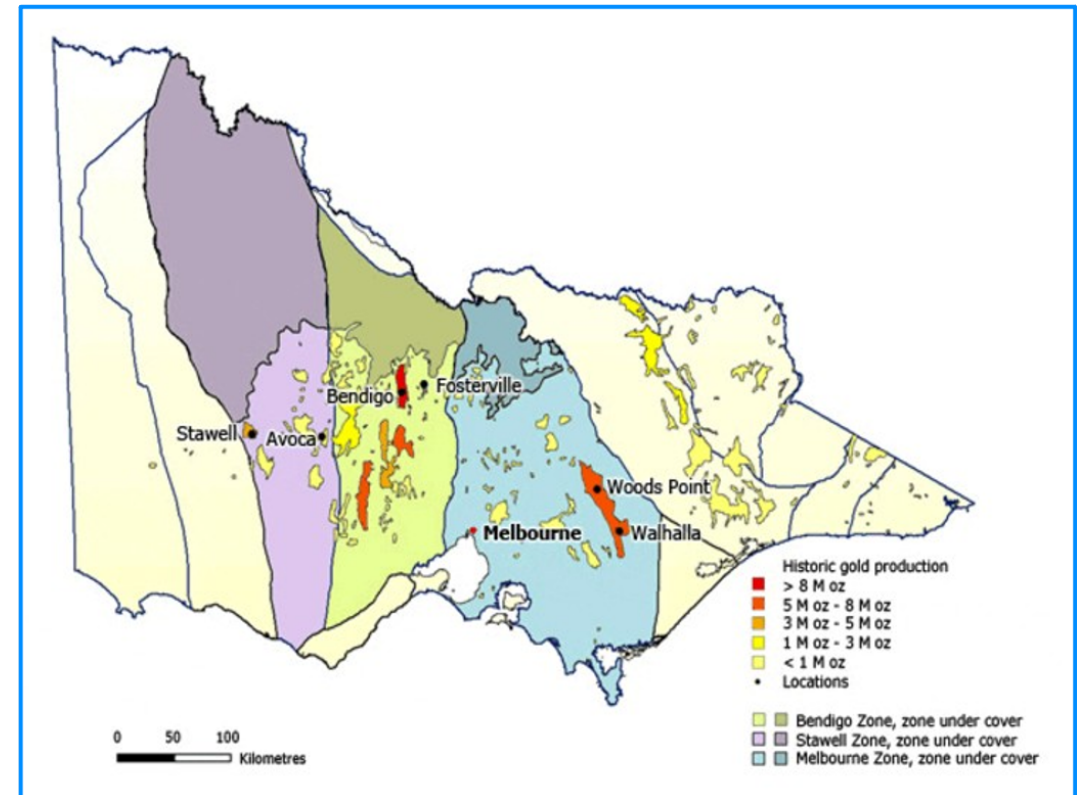
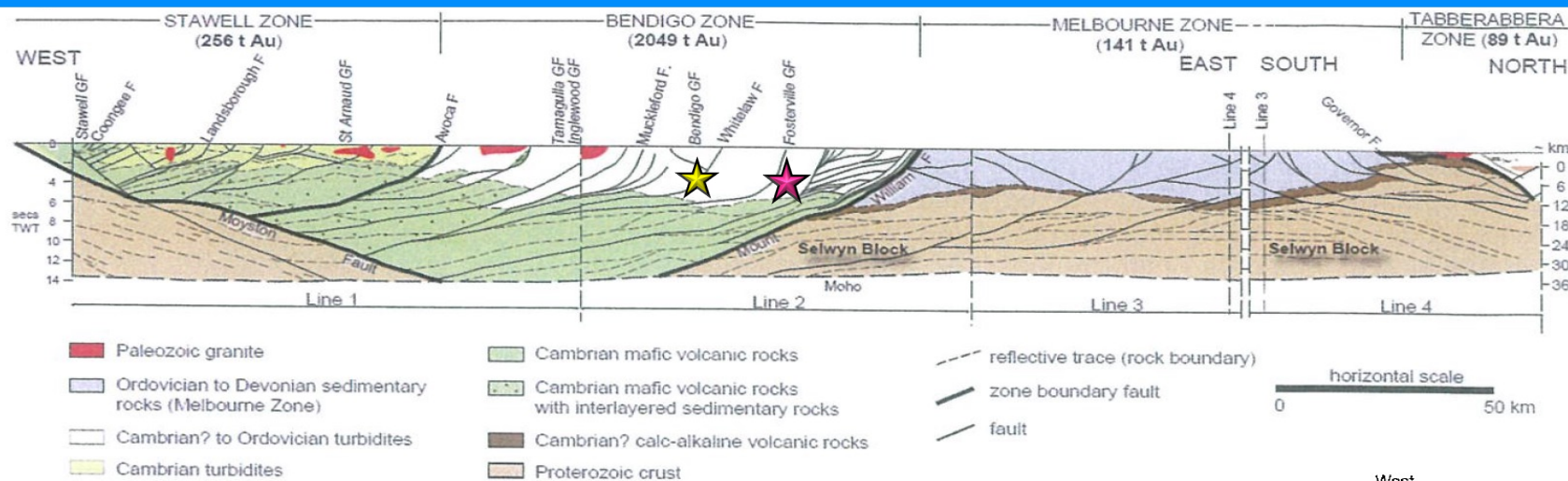


Image courtesy of Earth Resources, Victoria

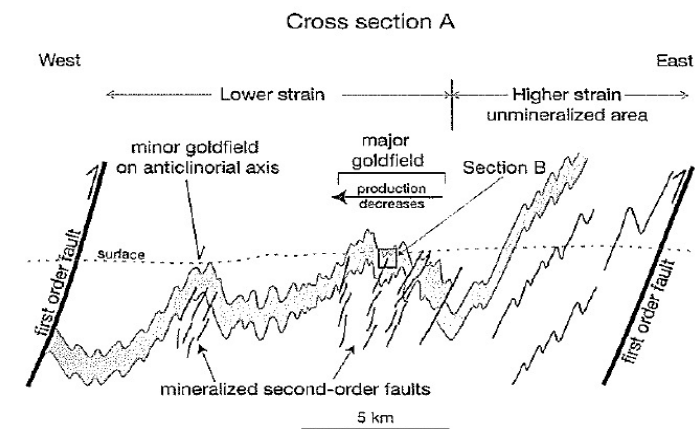
<https://earthresources.vic.gov.au/geology-exploration/minerals/metals/gold>

GOLD – Recent Work connects Victorian Goldfields



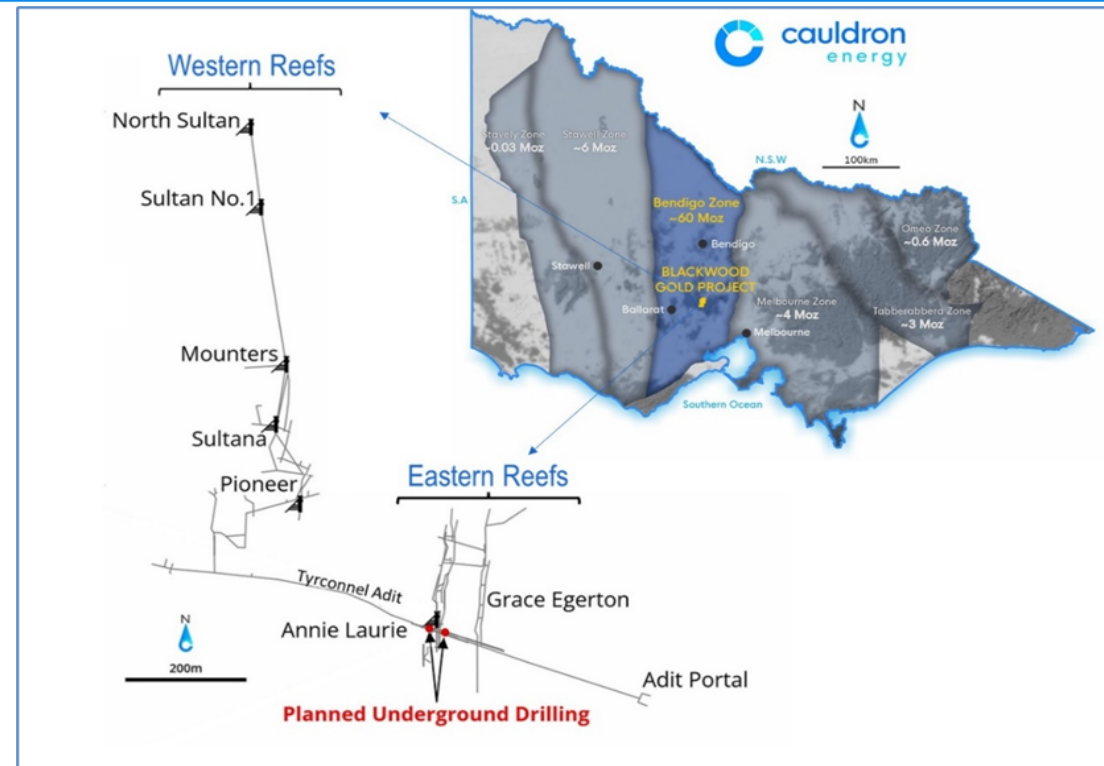
Stylised X Sections of Bendigo and Castlemaine goldfields adapted from Willman et. al., 2010; and Cayley & Cairns, 2021 (NewGen Gold Conference Proceedings 2021)

- Similar tectonic setting – low-angle, curved “listric”, 2nd Order Faults
 - Regional plumbing of high-grade gold from deep in the crust
- Bendigo Zone – faults in brittle hinges of tightly-folded turbidite sediment sequences
 - Accommodation space created for high-grade gold mineralisation
- Logical conclusion – potential for high-grade gold below 100m depth



Blackwood's Golden History and Current Exploration Opportunity

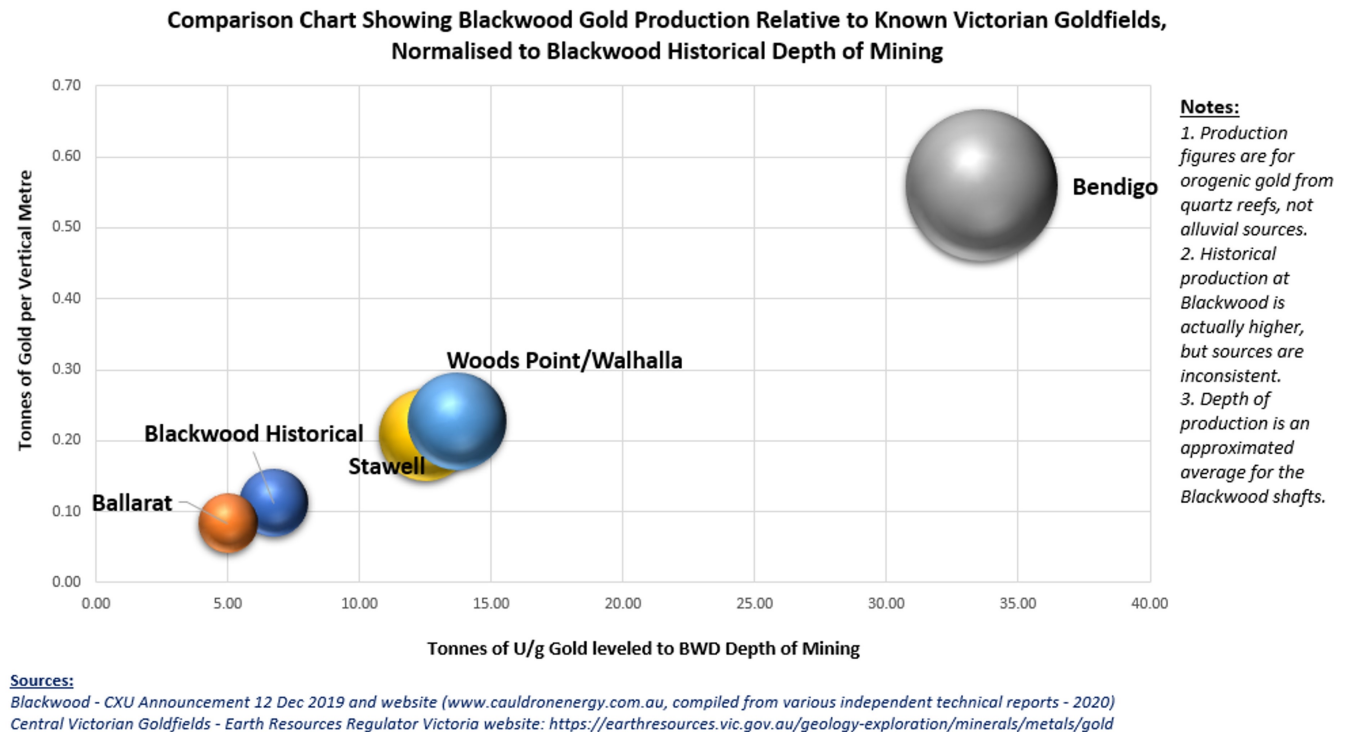
- Blackwood Goldfield:
 - 4 major reef systems:
 - Eastern (Annie Laurie / Grace Egerton),
 - Western (Sultan – Pioneer),
 - Southern (Rogers / Big Hill – Imperial), and
 - Far-Eastern (Yankee / Countess)
- Current exploration focused on Eastern Reefs
- Western Reefs – true target:
 - Approx. 400m west of Eastern Reef system
 - Strike length of ~400m
 - Produced more than 90,000oz gold
 - Shallow historical mining – average approx. 60 – 100m



Blackwood Goldfield is largely forgotten, with little to no exploration below 100m. Mining in surrounding, operational goldfields > 1000m depth below ground surface.

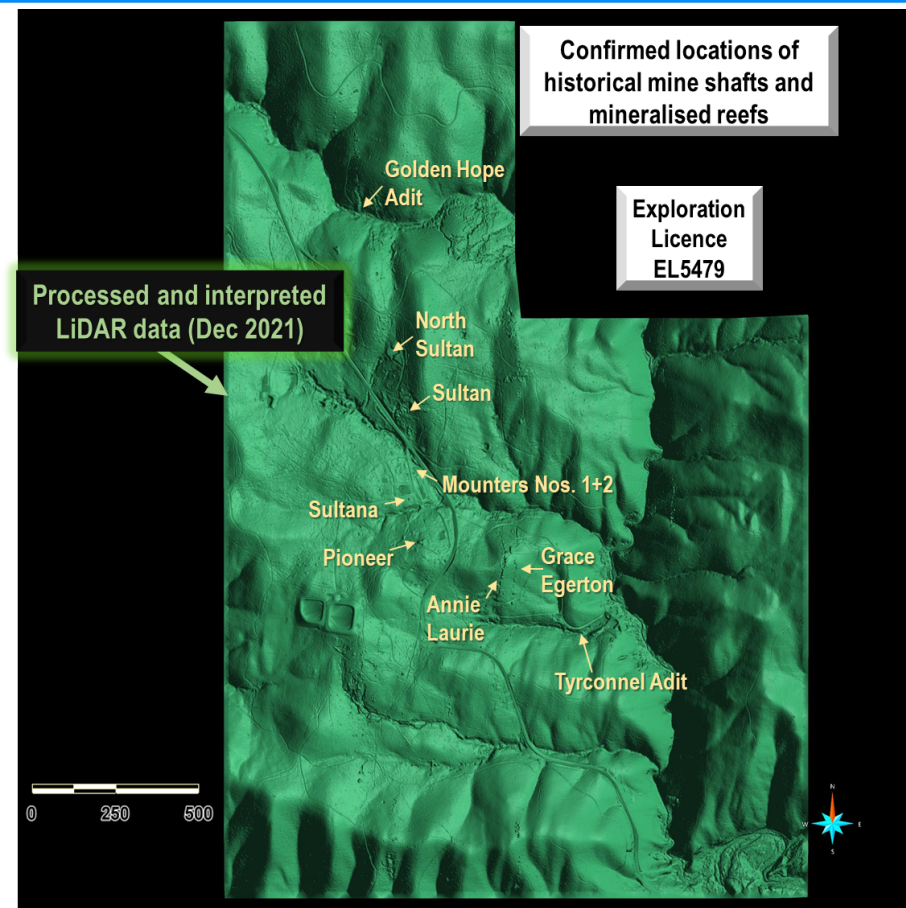
Blackwood's Golden History and Current Exploration Opportunity

- Comparison of historic gold production (Blackwood) against current production from operational goldfields (e.g., Bendigo / Ballarat)
- Average depth of historic mining at Blackwood approx. 60m at Western Reefs
- Figure used to normalize known, recent production figures (surrounding goldfields) to same depth of mining
- Resulting chart – using available information only – strongly suggests potential scale of as-yet undiscovered gold resources > 100 – 150m depth



GOLD – Blackwood Exploration Progress

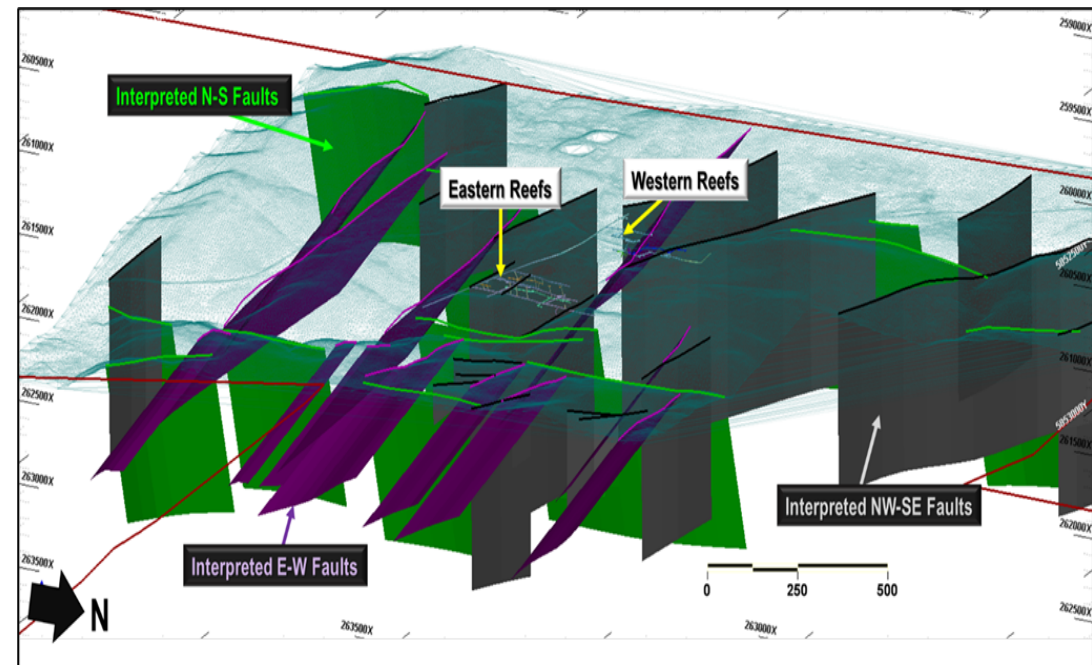
- Desktop studies – ongoing structural / geochemical 3D modelling
- Recent LiDAR survey data:
 - Confirm location of historical workings
 - Confirm N-S strike and general westerly dips of gold reefs
 - Reveal surface expressions of faults
- Established Underground Access in Tyrconnel Adit:
 - Transects historical high-grade reef systems
 - Improves targeting of deep ‘bonanza’ style mineralisation typical of the region
 - Allows initiation of systematic geochemical sampling
 - Validation of historical structural mapping
 - Recent drill results start to validate current exploration model and targeting strategy



GOLD – Combining Drilling LiDAR, Structural and Historical Reports

- Recent drilling/channel samples begin to confirm geochemical similarity with Bendigo/Ballarat Goldfield
- Gold in channel samples support target area chosen for drilling (Western Leader Reef):
 - BTCH025: 2m @ 1.27g/t Au, 187ppm As, 51ppm Cu, 23ppm Pb, 4.5ppm Sb, 78ppm Zn**
- Systematic channel sampling:
 - Confirms alteration halo of As / Sb / Ag and potentially Zn association with structures
- Phase 2 drill design utilising new 3D structure / geochemical modelling:
 - Improved targeting of high-grade mineralised zones
 - Intersecting fault structures + brittle folded sediments => accommodation spaces for high-grade gold mineralisation

Figure: Isometric view – Fault Planes interpreted from recent LiDAR and mapping. Tyrconnel Adit accessing East & West Reefs Systems (centre). North-south faults (green), East-West faults (purple), Northwest/Southeast faults (grey).



GOLD – Community and Environmental Licence –

‘3 Zero’ Target - Carbon, Community and Environment impacts

- Waste Rock to Food Secure Melbourne (FSM) Project:
 - Geochem sampling reveals suitable zones for soil remediation program,
- Wombat State Forest – example of direct on-the-ground environmental benefit
 - Wombat Population decline due to mange
 - Increasing road fatalities as wombats seek relief from itching outside den in daylight hours
 - Blackwood Gold progression to cashflow generation can assist protection program implementation
- Environmental Commitment:
 - Biofuel – used in power generation for underground exploration
 - Carbon Reduction Certification
- Fauna Sanctuary:
 - Excess water from Tyrconnel Adit to be used to create river sanctuary for native river fauna
 - Repurpose the water to create trout hatchery into upper Lerderderg River
 - Will assist with risk mitigation against increasing climate related weather changes
- Underground Approach – Narrow-vein style mining:
 - Climate-friendly, low-energy/low-cost alternative to assist with unbalanced environmental/community-based opinions
 - Current exploration activities already being undertaken without any surface impacts to sensitive environment / community residences.



Example of Carbon Credit Certificate from Biofuels used by Operations at Cauldron's Blackwood Project in line with zero-carbon approach

Cauldron's '3-Zero, Carbon, Community, Environmental - Zero Impact' underground approach can result in economic, environmental & community benefits beginning with the Food Secure Melbourne Project

GOLD –Food Secure Melbourne (FSM) Project

- Food Secure Melbourne project (FSM) aligns perfectly with the Company's approach to Mining, ensuring that the downstream impacts can improve the environment and community
- FSM – innovative, technology-based, utilizes waste streams and converts them into outstanding environmental and economic outcomes under the University of Melbourne's "Food, Soils, Water and Indigenous Innovation program"
- Proven technology - equivalent to an existing South Australian project which is further advanced as a result of the prompt recognition of its value from the South Australian government
- FSM Project will deliver a number of outstanding, state and nationwide economic outcomes through creating a food bowl from waste streams in an 50,000 Hectares area on Melbourne's doorstep. Considerable value will be generated within this rural area.
- Utilizes key local market gardening knowledge with sewerage waste streams combined with world-class soil remediation expertise at Melbourne Universities.
- Cauldron - underground waste rock generation from current exploration and potentially future mining operations. Extensively analyzed as part of the general resource exploration processes - ideal for use as a base to redesign the soil and drainage for an extensive area.
- Completion of recent geochem sampling reveals suitable zones for soil re-engineering critical to the Food Secure Melbourne project

FOODSECURE
MELBOURNE



Food Secure Melbourne Project – Oct 2019

Outstanding project for the State of Victoria. Fits perfectly with Cauldron's Ethos of Negative Harm - i.e., mining improving the environment and community in which it operates

GOLD – Planned Environmental Gains from Gold Mining

- **Water Management**

- Pilot Trout Farm – Proof of Concept in North Blackwood
- Maintain and improve current clean water supply to Melbourne Water
- Provide treated water from underground flows to augment Central Highlands Water supplies
- Larger Scale Trout Farm – North Blackwood trout farm & repurpose water for upper Lerderderg Fauna preservation project



Zero Impact Extractive Industries - the Circular Economy as applied to Underground Gold Mining

- **Wombat Forest preservation**

- Wombat Mange is impacting wombat population
- Cauldron aims target Wombat Mange with established Wombat Forest conservation groups willing to work with the Company
- Possibly interested groups can assist the company direct resources to improve the Forest care activities

- **No Waste Dumps – stabilizing historical voids under community**

- The Food Secure Melbourne Project (FSM) requires waste rock for effective soil re-engineering;
- Cauldron's current geochem work will help understand waste rock composition for application to FSM
- Historical mining voids of concern to local community could be filled and stabilized with waste rock unsuitable for FSM project

- **Remote processing – no tailings dam**

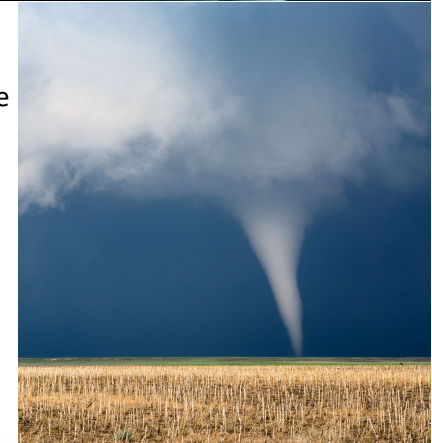
- Low Impact extraction from narrow reefs, transported by rail underground to maximize the gold production
- High value gold ores (8 – 12g/t Au) make it economical to transport material to treatment plants outside of the Blackwood area
- Victorian gold orebodies typically are suitable for this type of minimal dilution extraction
- Cauldron expects that with exploration success Blackwood will be no different.

- **Narrow Underground Rail mining – minimal carbon footprint**

- Minimal rock breakage, maximizing gold grade mined & treated, reducing carbon footprint
- Use of biofuels for power
- Use of Rail with battery power, no hydrocarbons, clean mine water
- Waste rock is minimized / repurposed for use in soil re-engineering and other commercial uses – **No waste dumps**

URANIUM – Power for Climate Change

- Cauldron discovered and progressed the globally significant uranium resource at Bennet Well¹ within it's significant Yanrey Project landholding in northern Western Australia
- Bennet Well considered amenable to mining extraction by In Situ Recovery (ISR)
 - ISR – lowest cost / environmental impact mining method for sandstone-hosted uranium, fuel for Nuclear Power
- Significant potential exploration upside in wider Yanrey Project
 - Based on existing known uranium resources amenable for ISR extraction
- Zero Carbon economy requires Nuclear Power generation as part of energy “mix”
 - Reliable, safe, low-cost baseload generation source
 - Replace fossil fuels, and
 - Supplement highly variable nature of renewable energy sources (e.g., wind and solar)
- Electric Vehicles (EV) – energy demand predicted to double by 2040
 - Require Nuclear Power for power generation in manufacturing
 - Batteries currently produced only allow power for changeover between generation sources (analogous with vehicle clutch to change gears)
- Uranium supply predicted to be in deficit by 2023/24 based on demand from massive Nuclear power expansion in Asia
 - China – 55 nuclear power plants under construction
 - India and Russia – 440 total in use
- Exploration / development of new uranium supply takes decades due to regulation and lack of funding over 15 years
- Low-cost Uranium will be at a premium when supply goes into deficit and Uranium price exponentially increases with no new supply/substitution – CXU Uranium Resources / significant exploration upside then at premium



SAND – Global Silica Shortage

- **Global Sand market moving to Deficit**

- Demand for river sand includes island building, concrete, glass and electronics
- Low cost and low environmental impact sources in high demand

- **Operational Readiness**

- ML licensed for sand and aggregate production in short term
- Concrete Plant under lease with Traditional Owner group
- MOU agreements in place with Port operators and transshipment group
- NW Western Australia's high project density with requirement for sand, aggregate and concrete

- **Sand Resources**

- Close to Bulk Transport and permitted
- Quality suitable for construction and land reclamation
- Desktop studies outline pathway for high value electronic silica potential

- **Opportunities for Sales/Cashflow**

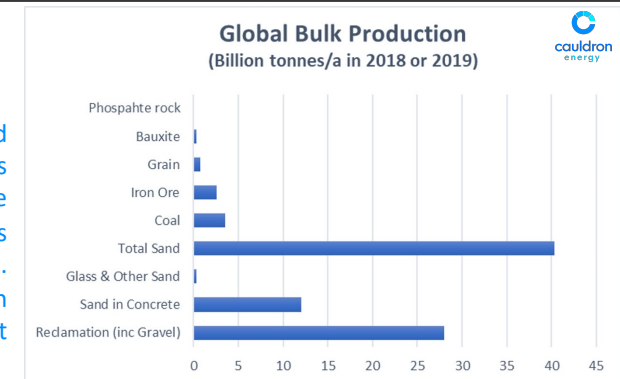
- **Domestic**
 - Sand and Aggregate suitable for concrete on permitted Onslow Mining Lease
 - Lease of mobile concrete plant currently permitted in Onslow township
- **International**
 - HK & Singapore land reclamation and concrete construction sand
 - high value silica for glass making & electronics

The river catchment areas replenishing the quality sand in Cauldron's 3 river mouth leases close to sea-borne bulk transport



The global market for sand dwarfs coal and iron ore

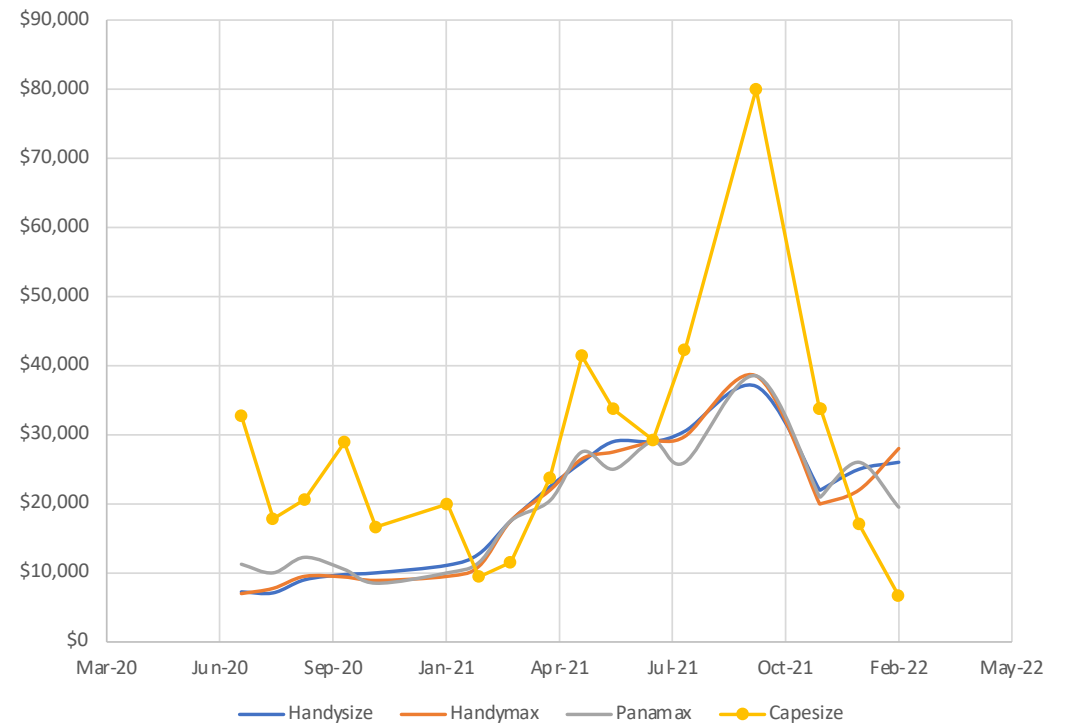
High value sand can be as high as USD1500/t for the electronic glass and chip market. This market is in deficit



SAND – Global Shortage in Silica

- Global shortage in silica impacting vehicle availability in Australia
- CXU well positioned in 3 major river systems close to sea-borne transport
- Current shipping costs prevent access to Asian land reclamation and construction markets
- Additional cash generating options in domestic construction
 - granted Mining Licences,
 - environmental approvals to supply leased mobile concrete manufacturing plant

Bulk Carrier Monthly Shipping Cost
(USD) (Source; Braemar)



Corporate Overview

Capital Structure

376.3m

ORDINARY SHARES

\$13.2m

MARKET CAPITILISATION

\$0.3m

CASH AT BANK

\$0.7m

INVESTMENT IN OTHER
ASX-LISTED COMPANIES

Board & Management

Simon Youds

EXECUTIVE CHAIR

Jess Oram

NON-EXECUTIVE DIRECTOR

Michael Fry

CFO & COMPANY SECRETARY

Judy Li

NON-EXECUTIVE DIRECTOR

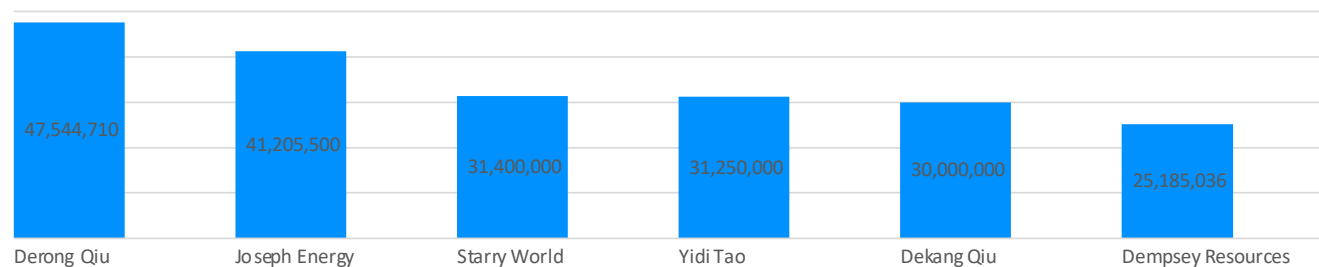
Chenchong Zhou

NON-EXECUTIVE DIRECTOR

Derong Qiu

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