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This Presentation has been prepared by RWD for the purpose of providing an overview of its Potash recovery technology and development strategy.

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### Introduction

Reward Minerals has invented new SOP Potash processing technology that has the potential to disrupt the fertilizer industry by producing low cost, high-purity SOP Potash from seawater.

The Company's strategy is to partner with strategic investors, continue development of its technology and build multiple new SOP Potash projects around the world.

Reward's technology allows very low cost production of the highly sought after fertilizer in an "ESG friendly manner" to displace energy intensive and high-cost production.

# **Management Team**



Colin McCavana
Chairman



Dr. Michael Ruane PhD (Chemistry)

Executive Director



Rod Della Vedova BSc. (Chemistry)

Non-Executive

Director



Warren Hinchliffe BSc. (Chemistry)

Chief Chemist

# Corporate Snapshot (ASX: RWD)

Capital Structure	Current		
Ordinary Shares	227.8 M		
Listed Options (\$0.20)	18.2 M		
Share Price	\$0.04		
Market Cap.	\$9.1 M		
Debt	\$3.3 M		
Cash	\$2.0 M		

Major Shareholders	Shares	%	
Dr. Michael Ruane	92.3 M	40.5	
W.P. Brooks	12.5 M	5.5	
Top 20	141.4 M	62.0	

Depressed valuation & tight capital structure

## Agenda

SOP Potash Market

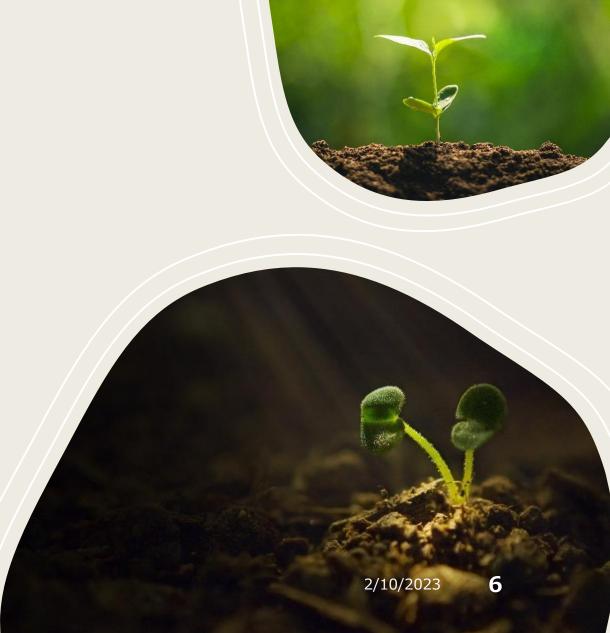
Australian SOP Potash Failures

Reward's Technology

**Engineering Scoping Study Results** 

World's Most ESG Friendly SOP

Potential & Next Steps





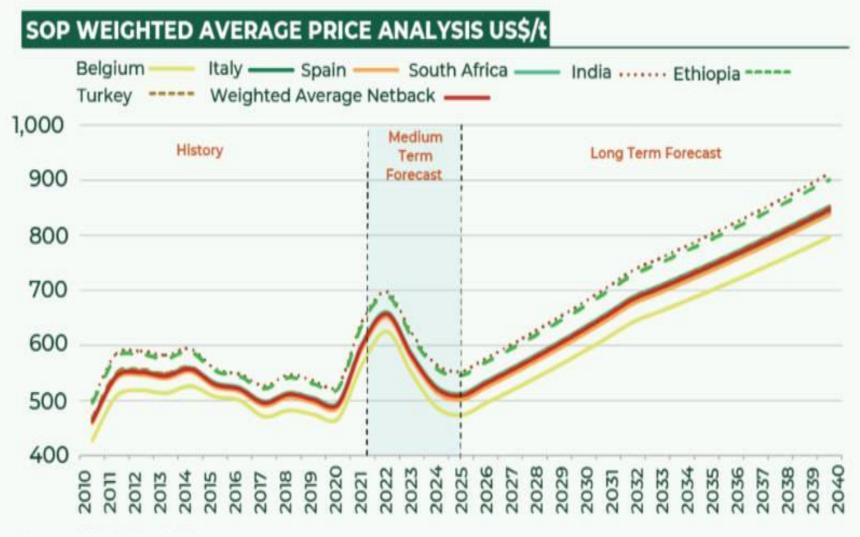
## SOP POTASH PRICES



# SOP Potash pricing is underpinned by

- Global transition to sophisticated farming methods
- Population growth & global scarcity
- Low-chloride fertilizer demand
- Increased usage for higher value crops

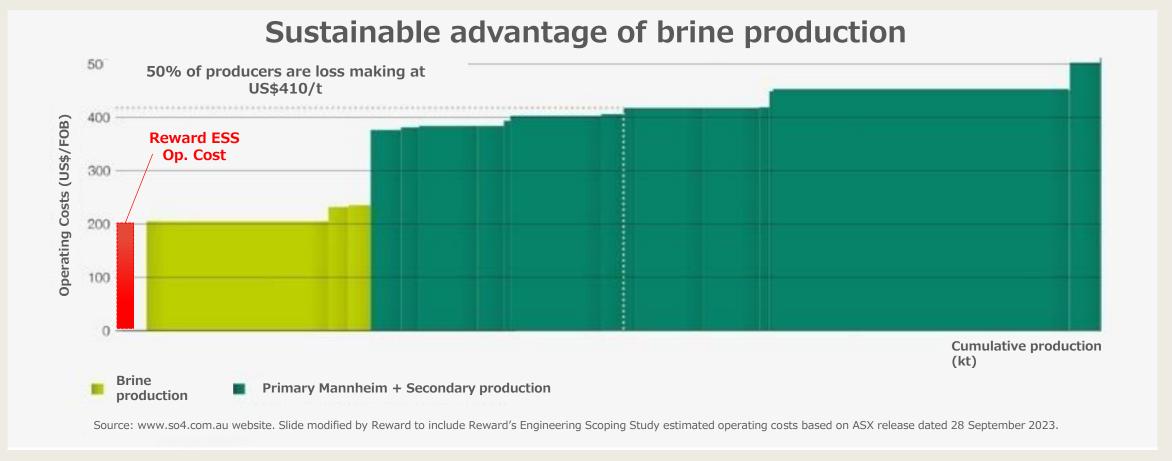




Source: Danakali Limited ASX Release dated 14 October 2021

# WORLD SOP POTASH PRODUCTION





~7Mt SOP produced globally each year (brine production is lowest cost)



# Australian SOP Potash Failures

Key Learnings







#### LAKE MACLEOD (TEXADA)

- > 1970's
- Langbenite Plant failed and project transitioned to a Salt only operation (Dampier Salt Ltd)
- Metallurgical/Pilot testwork inadequate
- Promising process thwarted by poor engineering design and metallurgical difficulties
- > ~\$200 M lost

#### LAKE WAY (SO4)

- > 2020
- Evaporation control inadequate
- Reverse NaCl Flotation recovery low, mechanical harvesting too expensive and cost structure not viable
- Couldn't sell salt by-product
- > ~\$400 M lost

#### KALIUM LAKES (KLL)

- > 2023
- Plant, brine supply and ponds were inadequate
- Flotation recovery too low, mechanical harvesting too expensive and cost structure not viable
- Couldn't sell salt by-product
- > ~\$400 M lost

Don't make the same mistakes as in the past!

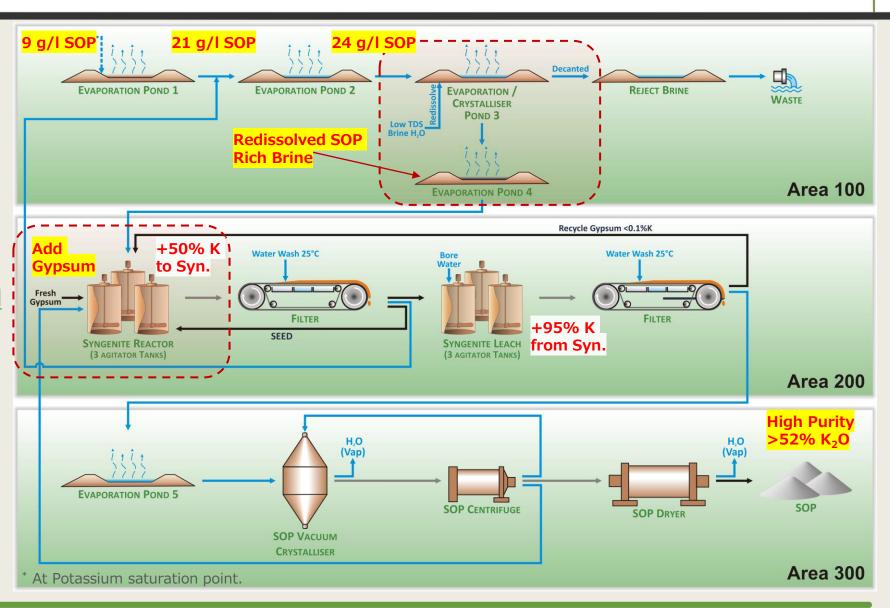


## THE REWARD SOP POTASH PROCESS



- ✓ No mechanical harvesting
- No flotation upgrade required
- Uses conventional fixed plant components
- ✓ <u>Significant cost</u> reduction potential
- ✓ Applicable for most high sulphate brine resources
- ✓ Seawater solar salt operation bitterns contain ~21 kg/m³
   \*\_SOP ideal feed brine









## **Highly Positive Results**

Current price ~\$1,000/t SOP 5.3% CAGR forecast to 2031<sup>1</sup>



- September 2023<sup>2</sup> Class 5 Engineering Scoping Study (+/-40%) completed by Reward with processing engineering inputs completed by Bechtel Australia Pty Ltd.
- Project designed to be "Bolted On" to existing seawater solar salt operations in North West Western Australia and using Bitterns (waste brine) as its primary SOP source.
- Utilises infrastructure that is already in place.



#### **METRICS**

- 100,000tpa Standard SOP (>52% K<sub>2</sub>O,
   0.3% Cl, 0.6% Mg, 54% SO<sub>4</sub>, 18% S, 0.2%
   H<sub>2</sub>O and 0-4% water insoluble)
- Operating Cost Estimate \$273/t<sup>3</sup> SOP excluding contingency of \$27.3t/t.
- Capital Cost Estimate \$198.2 million excluding contingency of \$69.4 million.

<sup>&</sup>lt;sup>1</sup> Refer to www.consegicbusinessintelligence.com website.

<sup>&</sup>lt;sup>2</sup> Refer to ASX release dated 28 September 2023.

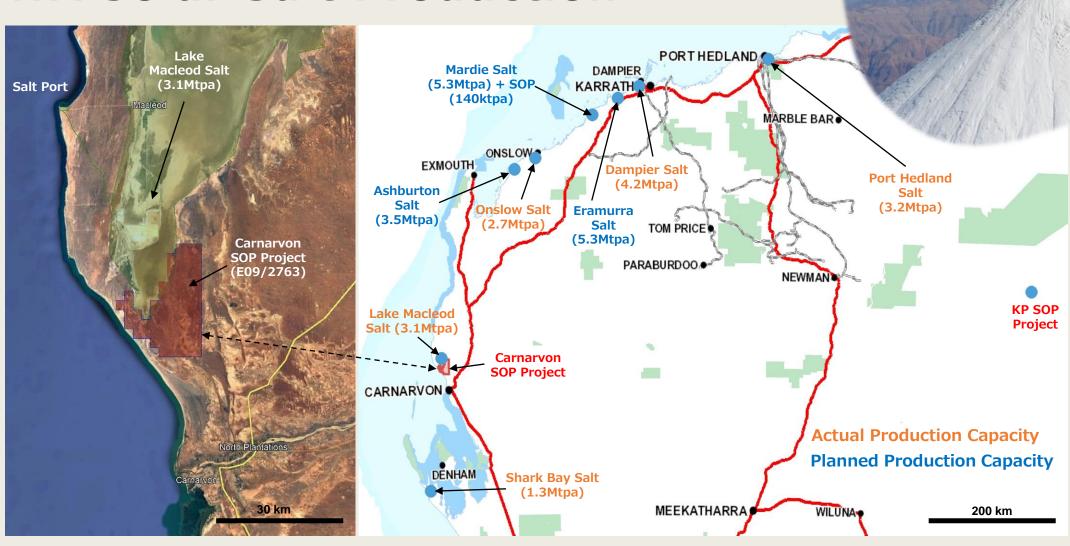
<sup>&</sup>lt;sup>3</sup> Includes \$50/t road freight to port.

# **Operating Cost Estimate<sup>1</sup>**

	Consumption / ton of Product	Annual Usage	Specific Units	Unit Rate \$	Cost / year (million \$)	Basis / Comments
Gypsum	0.03	3,384	tpa	\$150.0	\$0.51	High purity Gypsum including freight costs
Bore Water	33.1	3,312,000	m³ pa	\$0.5	\$1.66	Bore water pumping costs
Process Water	1.4	144,000	m³ pa	\$3.0	\$0.43	WA commercial water tariff
Gas	2.0	203,442	GJ pa	\$18.0	\$3.66	Annual average domestic gas price, Australia
Power	0.2	21,316	MWh pa	\$272.0	\$5.80	Electricity price provided by Reward
Diesel	14.9	1,492,200	L pa	\$2.0	\$2.98	Annual average diesel price, Australia
Product Transport Cost	1.0	100,000	tpa	\$50.0	\$5.00	\$AUD 0.1t/km. Transport from Carnarvon to Geraldton – 500km
Chemical Miscellaneous		2%			\$0.30	Typical 2% of feed materials, from Fertilizer manual
Maintenance (Plant)		2%		25,000,000	\$0.50	Typical 2% of plant equipment cost
Maintenance (Roads / Ponds)		2%		50,000,000	\$1.00	Typical 2% of pond cost
Site Operations Staff (Annual wage)		39	EA	141,000	\$5.50	Weighted average rate
Production Capacity		100,000	tpa	\$301	\$30.07	Annual Operating Cost
Operating Cost				\$301	Per ton of Product	

<sup>&</sup>lt;sup>1</sup> Refer to ASX release dated 28 September 2023.

# **WA Solar Salt Production**





# POSITIVE ESG CONTRIBUTION



- 1. Replace Mannheim process route for SOP substantially reducing CO<sub>2</sub> emissions.
- 2. Use a former waste product as feedstock.
- 3. Build resilient infrastructure, promote sustainable industrialisation, foster innovation.
- Environment

- 4. Reduce emissions from fertilizer production.
- 5. Increase availability of healthy organic produce.
- 6. Promote sustainable agriculture to meet global food demand and reverse land degradation.

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- 7. Respect Traditional Owner cultural values.
- 8. Create opportunities within remote and regional communities.
- 9. Ensure inclusive and quality education and lifelong learning opportunities.
- 10. Enhance economic livelihood and productive employment.







Multiple Opportunities to

Evaluate



#### **Activities**

#### **STRATEGIC**

- Engagement with solar salt, fertilizer and seawater desalination companies worldwide to discuss the application of Reward's technology within proposed SOP developments for possible joint ventures.
- Advancement of the Reward Process, international patent finalisation and licensing activities for third parties.



#### **TECHNICAL**

- Planning for a Pre-Feasibility Study to define capital and operational costs within accuracy of +20% to -15%.
- Pilot scale evaporation and process step testwork, pond design optimisation.
- SOP crystallisation technology selection with vendor testing to improve energy efficiency and final product quality.

## **Thank You**

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