

Developer of the largest high-grade brine SOP Deposit in Australia

Sydney Mining Club
CEO Presentation
4 July 2019



ASX | RWD www.rewardminerals.com

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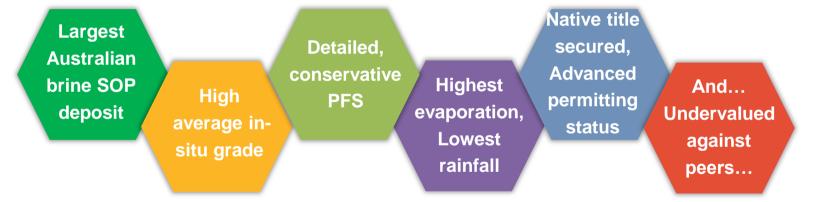
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### INVESTMENT RATIONALE



# Reward Minerals is the developer of the Lake Disappointment Brine Sulphate of Potash Project



An attractive project underpinned by a key global long-term investment theme: Feed the world!



### **REWARD CORPORATE SNAPSHOT**



#### Capital Structure 12 June 2019\* ASX:RWD

Ordinary Shares on Issue	162.6m
Rights and Options on Issue	17.6m
Share Price	\$0.095
Undiluted Market Capitalisation	\$15.5m
Cash & Equivalents	A\$2.1m
Undiluted Enterprise Value	A\$13.4m

<sup>\*:</sup> As per Quarterly Report released 30 April 2019

#### **Major Shareholders**

Name	Shares (m)	%
Michael Ruane	54.1	33.3
Intermin Resources	7.2	4.4
Top 20 Shareholders	98.2	60.4

## REWARD MINERALS LTD

#### Colin McCavana - Non-Executive Chairman

- 30+ years experience in mining and earthmoving industries
- Ops and development management of Australian and international projects
- Founder and Managing Director of Haddington Resources Ltd
- Also Chairman of Northern Minerals Ltd

#### Michael Ruane - Executive Director

- 40+ years experience in chemical and metallurgical fields
- Previously senior technical advisor and manager at Lake McLeod Potash, WA
- Manager of mining operations in WA and the Northern Territory
- PhD (Chemistry), MRACI

#### Rod Della Vedova - Non-Executive Director

- 30+ years in the Solar Salt industry with Dampier Salt Ltd (Rio Tinto)
- 11 years as Chief Chemist and 24 years as Process Superintendent
- BSc. Chemistry, Post Graduate Diploma Chemical Engineering

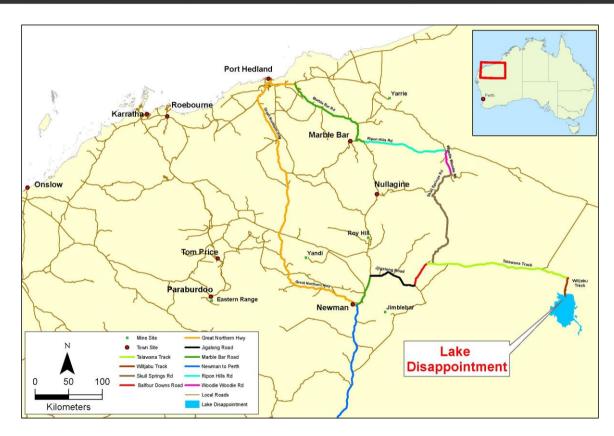
#### **Greg Cochran – Chief Executive Officer**

- Highly experienced, international C-suite mining executive
- Previously MD of Deep Yellow Ltd, CEO of Terramin, EVP Uranium One
- M Sc. Mining Eng. & Mineral Economics, MBA (Cranfield), FAusIMM, GAICD

## LD BRINE SOP PROJECT - LOCATION



- 866km to Port Hedland, class-leading bulk export terminal
- 511km sealed road –Great Northern Highway
- 355km of existing, frequently used dirt roads





## WHAT'S IN A NAME?





Lake Disappointment



**Explorers Frank Hann & Talbot** 



### WHAT IS SOP? SULPHATE OF POTASH



#### The <u>Premium</u> source of potassium fertiliser – K<sub>2</sub>SO<sub>4</sub>

- A low-chloride source of potassium and sulphur
- Potassium is an essential plant macronutrient
- Sulphur is also an important nutrient
- Applied to speciality and/or chloride sensitive crops
- SOP supplies less than 10% of the potash market
- "MOP" (Muriate of Potash, KCI) is the world's major source of K
- ▶ MOP can contribute to increases in soil salinity
- SOP trades at a premium, currently ~US\$300/t > MOP



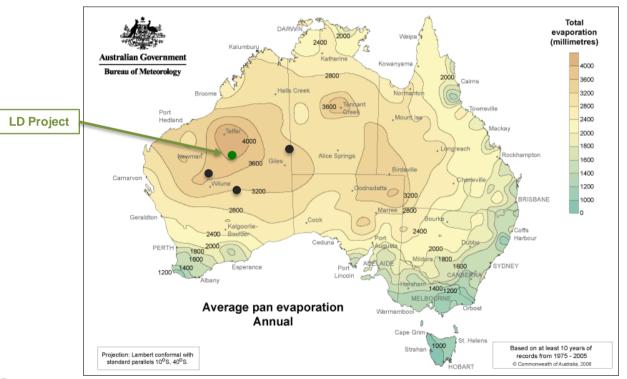
MOP is a <u>volume</u> business, SOP is a <u>value</u> business



## **HIGHEST EVAPORATION RATE**



#### No better location for a brine evaporation operation in Australia

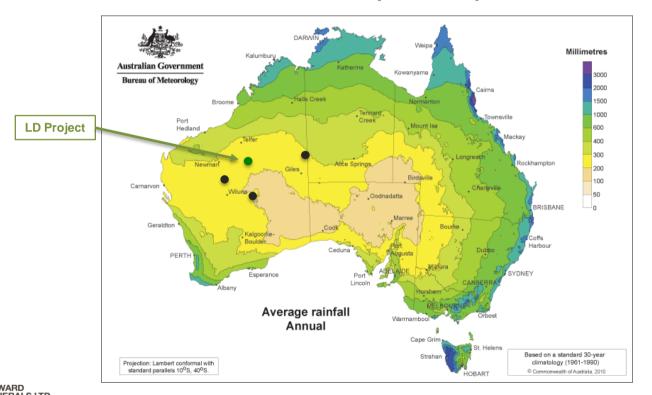




### **LOW RAINFALL**



#### No better location for a brine evaporation operation in Australia





## LD PROJECT METRICS - COSTS & PRODUCTION-



## Capital cost

- A\$345 M, includes indirects and owners costs (+/-20%)
- A\$451 M, includes contingency & pre-production costs

### **Production**

- At least 400,000 tpa
- ~9 Mt SOP produced over ~25 years
- Less than 10% of the resource

### **Operating cost**

- Cash cost A\$335/tonne (FOB Port Hedland)
- AISC A\$376/tonne (FOB Port Hedland)



## LD PROJECT METRICS - ECONOMICS



## **Assumptions**

Price: US\$500/tonne, FX: AUD/USD: 0.75

Discount Rate: 8% Real

• Royalty: State: 3.75%, Martu: 1.25%

### **Margins**

- Average EBITDA 45% (~\$118 M/year)
- Average Cash 48% (~\$122 M/year)

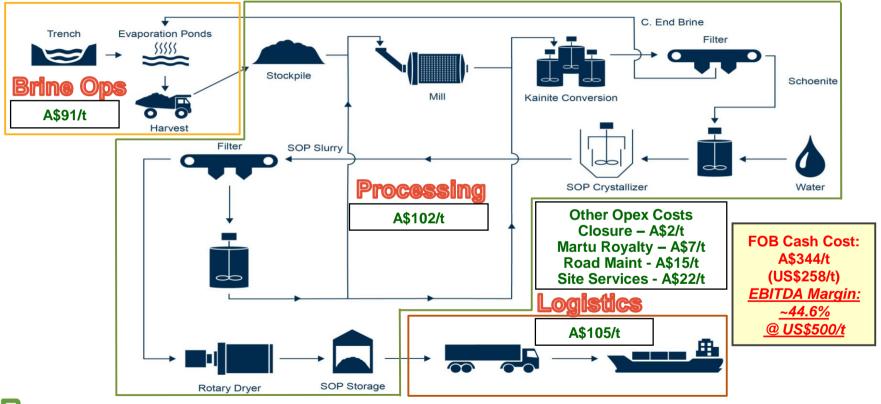
#### Returns

- Pre-tax: NPV8% \$518 M, IRR 19%
- Post-tax: NPV8% \$293 M, IRR 15%
- State & Martu Royalties: ~\$286 M



## LD PROJECT – OPERATIONAL OVERVIEW







Ex-Works Cost: A\$239/t (US\$180/t)

## UPDATED WA EPA PERMITTING SCHEDULE



	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20
Public exhibition of ERD														
DWER provided final comments to Reward														
Reward submits response to submissions														
DWER reviews responses to submissions and publishes the responses														
DWER/EPA Board site visit														
DWER final review of ERD and prepares briefing notes for EPA Board Meeting														
Reward presentation to EPA Board														
DWER consults with Decision Making Authorities and Reward about draft conditions														
DWER prepares & publishes report to Minister														
Public appeals can be lodged														
Resolution of appeals														
Minister issues Statement														

A thorough, extraordinarily long process......



## **CURRENT/UPCOMING ACTIVITIES\***



- Environmental Permitting:
  - Final stages at state level
- Resource Conversion:
  - Infill drilling program completed
  - Grade upside
- Flowsheet Improvements:
  - Ongoing R&D
  - Targeting cost reductions & operational efficiencies
- Pond Trials:
  - Crystallisation: Crude potash harvested for next phase







### CONCLUSION



### The LD Brine SOP Project:

#### Is technically robust

- Conservative PFS conducted to exacting standards
- Independently reviewed Flowsheet

#### ... and economically attractive, with

Scope to improve economics on multiple fronts

#### ... and at 407,500 tonnes SOP/annum

- One of the world's largest, longest-life brine SOP Projects
- In the best operating environment & a leading mining jurisdiction
- With great prospects for increased scale and longer life



## Anything <u>but</u> disappointing



### **APPENDICES**





## **GLOBALLY SIGNIFICANT TIER 1 RESOURCE**



#### 153 Mt Indicated & Inferred *Drainable* SOP Resource – Australia's largest

		Unit Symbol	Nomin	al Dimensio	ns (m)	Volume	Volume Area		SOP Brine	
	Hydrostratigraphic Unit		Тор	Base	Thick.	(m <sup>3</sup> x 10 <sup>6</sup> )	(m <sup>2</sup> x 10 <sup>6</sup> )	Yield Effective Porosity (%)	Grade (kg/m³)	SOP (Mt)
Accessible	Upper lake bed sequence	Qhs & Qhl	0.5	2	1.5	1,123.5	749.0	15	13.4	2.26
Zone	Lower lake bed sequence	Qpl	2	6	4	2,996.0	749.0	13	13.4	5.22
(Indicated)			Subtotal						13.4	7.48
Exclusion	Upper lake bed sequence	Qhs & Qhl	0.5	2	1.5	738.0	492.0	15	13.4	1.48
Zone	Lower lake bed sequence	Qpl	2	6	4	1,968.0	492.0	13	13.4	3.43
(Indicated)	Subtotal						13.4	4.91		
Total - Shallow Resource (Indicated)								13.4	12.39	
Accessible	Weathered basement	PUw	6	80	74	55,426.0	749.0	12	11.2	74.49
Zone	Weathered basement (sandy sections)	PUw	80	90	10	6,987.0	698.7	22	11.2	17.20
(Inferred)	Subtotal								11.2	91.69
Exclusion	Weathered basement	PUw	6	80	74	36,408.0	492.0	12	11.2	48.93
Zone (Inferred)								11.2	48.93	
Total - Deep Resource (Inferred)								11.2	140.62	
Total Resource (Indicated & Inferred)							11.35	153.01		

Notes:

- 1. Total area of the lake:1,241km2
- 2. Total area of the accessible zone: 749km2
  - 3. Total area of the exclusion zone: 492km<sup>2</sup>
  - 4. Figures have been rounded to 2 significant numbers
  - 5. Resource compliant with JORC, CIMM and draft AMEC guidelines

LD's large resource offers lower resource risk, long life and scalability



## PFS RESULTS – CAPITAL COSTS



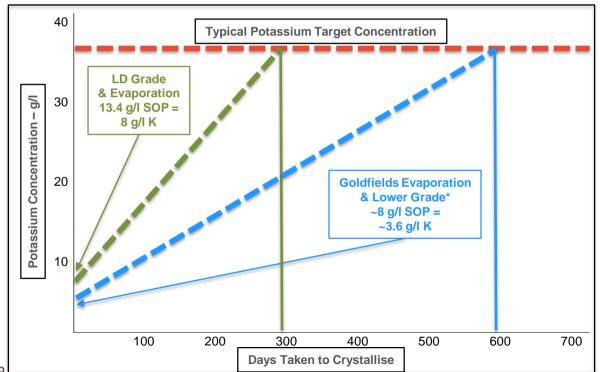
Initial and Sustaining Capital Costs (LOM Real)	AUD M
Production - Trenches and Ponds	57.6
Process Plant	73.2
Infrastructure	108.8
Site Support Temporary Services	2.9
Construction Costs	59.2
Subtotal	301.7
Indirect Costs (EPC, Consultants, Commissioning)	20.0
Owners Costs	23.4
Subtotal	43.4
Total Capital Costs before Contingency	345.1
Contingency	59.9
Total Initial Capital Cost	405.0
Working Capital (Pre-Production Operating Expenses)	45.6
Total Development Capital Cost	450.6



## LD – SUPERIOR GRADE AND EVAPORATION



## Grade and evaporation have a direct impact on production





## **OPERATIONAL AND COST IMPLICATIONS**



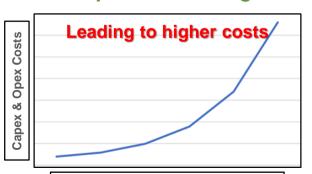
#### To match output, lower grade operations need to:





#### Bigger ponds, more seepage, with lower evaporation making it worse:







Decreasing grade/Lower Evaporation

### **COMPLIANCE STATEMENTS**



#### Competent person statements:

This information in this report that relates to Resource Estimation and hydrogeology is based on information compiled by Mr Robert Kinnell, a hydrogeologist and Competent Person who is a Member of The Australian Institute of Mining and Metallurgy and a Fellow of the Geological Society of London. Mr Kinnell is employed by Strategic Water Management and is a consultant to Reward Minerals and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the acutivity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Kinnell consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this presentation that relates to Brine and Sediment Assays and Analyses is based on information compiled by Dr Geoff Browne, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy. Dr Browne is a consultant to Reward Minerals Ltd. Dr Browne 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 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Dr Browne consents to the inclusion in the presentation of the matters based on his information in the form and context in which it appears.

#### Notes

- 1. Refer to ASX announcement dated 7 February 2017 titled "Lake Disappointment (LD) Project Confirmed as a Globally Significant Tier 1 Sulphate of Potash Deposit" for full details of the Mineral Resource. The Company confirms that it is not aware of any new information or data that materially affects the information included in the 2017 announcement and that all material assumptions and technical parameters underpinning the resource estimate continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings were presented in the original ASX announcement have not been materially modified.
- Refer to the assumptions, sensitivities, risk factors and cautionary statements contained in ASX Announcement dated 1 May 2018, titled "PFS Confirms LD Project as a Globally Significant SOP Project" for details disclosed respectively in Table 2 (pages 4-6), Table 3 (pages 7-8) and on pages 12 and 13 of that announcement, as well the details included in the PFS Executive Summary appended thereto, which may adversely impact upon the information and forecasts in this announcement.
- 3. Refer to ASX announcement dated 13 July 2018 titled "LD SOP Project PFS Enhancements" for full details of the improvement in product logistics costs for the LD Project and the associated improvement in the Project's economics. Apart from the improvement in trucking cost presented in that release all other material assumptions and technical parameters underoinning the PFS continue to apply and have not materially changed.
- 4. Additional information in relation to trench pumping trials, including volumes abstracted, flow rates and grades have been reported in the Company's most recent quarterly reports.





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