REWARD MINERALS LTD

PFS CONFIRMS LD PROJECT AS A GLOBALLY SIGNIFICANT SOP PROJECT

Highlights[1]

- **Pre-Feasibility Study confirms Reward's 100%-owned LD Project as the world's largest SOP brine project outside of China**
- **Compelling economics from a conservative, fully-costed 27-year mine life**
- **Key outcomes include:**
  - **Shallow, trench-only operation with 6% of current drainable resource extracted[2]**
  - **Annual production rate of 407,500 tonnes for total product sales of 9 Mt SOP over the life-of-mine ("LOM")**
  - **Economics based on US$500/tonne SOP sales price and a A$/US$ exchange rate of 0.75**
  - **Initial capital of A$345M including indirects and owners' costs**
  - **Total capital A$451M including A$60M contingency and A$46M in pre-production working capital**
  - **LOM All-in Sustaining Cost ("AISC") of A$394/tonne (US$295/tonne) SOP FOB Port Hedland using road trains to transport product from site**
  - **LOM revenue of A$6 billion and EBITDA of A$2.5 billion**
  - **Pre-tax NPV$_{8\%\ Real}$ of A$460M, IRR of 18%, average EBITDA margin of 42%**
  - **A$286M[3] in royalties to the State and the Martu people with over 200 direct jobs created, excluding product haulage and ship loading**
- **Independent review of flowsheet conducted by leading German potash processing consultants ERCOSPLAN**
- **Multiple value improvement opportunities identified to enhance economics**
- **Excellent potential to substantially increase production and extend mine life**

Sulphate of Potash ("SOP") exploration and development company Reward Minerals Ltd ("Reward" or "the Company"; ASX: RWD) is pleased to report the results of the Pre-Feasibility Study ("PFS") on its advanced stage 100%-owned LD SOP Project located 340 km east of Newman in north-western Western Australia.

The PFS, conducted to a high level of detail by respected Perth-based engineering consultants CPC Project Design, has demonstrated that the LD Project is both technically sound and financially robust and is forecast to generate attractive returns with a sustainable EBITDA margin of 42%.

Reward's CEO Greg Cochran welcomed the outstanding result, saying: "This comprehensive PFS, done to exacting standards, confirms LD's status among Australia's most attractive SOP projects. Although we have conservatively limited the Project life to the shallow resource accessible by trenching, the economics are compelling. Reward has always emphasized the strategic importance of its LD Project, the only Tier 1 SOP brine resource in Australia. Its size and consistently high in-situ average grade – the highest in Australia – as well as the depositional nature of the deposit – true playa-style mineralisation – implies less resource risk, whilst the Project's location provides the ideal operating environment with the highest evaporation rate and low average rainfall."

"It is also pleasing to note that after Reward's extensive research and development efforts including over 40 phases of metallurgical testwork to design the Project's flowsheet, we have had a positive outcome to the independent review by the highly respected German potash processing consultants *ERCOSPLAN Ingenieurbüro Anlagentechnik GmbH.* ERCOSPLAN concluded that the design is state of the art and that a high purity product of around 98% K_2SO_4 could be produced. The Company will progress its R&D efforts to explore ERCOSPLAN's optimisation recommendations, which could enhance recovery and improve efficiencies (and therefore economics) whilst still producing a high-quality product."

"We are also confident that LD can be upscaled and turned into a very long-life operation. After all, the PFS LOM production is exclusively drawn from trenches excavated in the existing shallow Indicated Resource[2] (as disclosed by Reward in February 2017 and reported in accordance with JORC (2012), CIMM and draft AMEC brine resource definition guidelines). That leaves over 90% of the resource, which is hosted in LD's basal sediments and weathered bedrock which can be exploited via pumping from installed bores."

"I believe that it is important to stress the high level of detail of this PFS. While it is a CPC-designated Class 4 estimate at +/-20% accuracy, we have gone to extraordinary lengths to accurately define capital and LOM operating costs, which are about six times that of the capital costs. Detailed company and contractor staffing levels, full FIFO costs and competitive quotes on product logistics, fully-costed royalties[3] and even closure costs have been taken into account."

"As this phase draws to a close, Reward is now well-positioned to progress the LD Project towards the financing, development and production phases. We have a fully transparent, executed and registered Indigenous Land Use Agreement in place over two thirds of the resource (i.e. approximately 99Mt of drainable SOP) and continue to make progress on the permitting front. In that regard, EPA and other Regulator representatives recently conducted a site visit to LD as a part of their ongoing assessment of the Environmental Impact Assessment we submitted at the end of last year. Whilst we acknowledge that LD is being assessed to the most stringent environmental standards compared to its peers, we are cautiously confident that the process will result in a favourable outcome."

"Whilst we have not created a detailed debt schedule, our costs and modelling have purposely been built on a quarterly basis both to understand capital and working capital drawdown in detail over the 3¼ year development period and ramp up to full production to get a feel for potential project financing options and debt capacity. The PFS economics show a project with a long resource tail, which generates

A$273/t SOP or A$111 million per annum of free cashflow before tax on an AISC of A$394/t SOP. While at an early stage, generic debt sculpting to date suggests that the project could well support typical project finance debt ratios."

"Also, in relation to project funding the question of offtake has on occasion been raised but, in this regard, Reward remains conservative. We believe it prudent to defer detailed discussions on the matter, possibly even until after the Definitive Feasibility Study ("DFS"), as non-binding offtake MOU's are notorious for often delivering illusory benefits to junior mining companies. If tied to tangible funding outcomes we would naturally consider such options and our door therefore remains open to such opportunities. In fact, even during my short tenure we have had some encouraging though early stage discussions on possible offtake and finance."

"In the coming months we'll continue to focus on the areas requiring greater definition to inform a DFS, including the specific value enhancement opportunities identified by CPC, ERCOSPLAN and our Project Team. These are in areas such as process optimisation, transport and logistics, process water heating, halite and crude potash harvesting as well as contractor consolidation and management. FIFO costs will also come under close scrutiny given that these costs alone are in excess of A$140 million over the initial LOM. With the PFS completed, now is also a good time to revisit the SOP resource parameters and take them to a higher level of definition. We'll also be co-operating with the Regulators to advance environmental approvals in parallel with all other Project activities."

"Earlier I mentioned the strategic importance of LD. For the global SOP market, the Project is ideally positioned to become the largest brine SOP producer outside of China and land-based logistics aside it is well located to supply the growing markets in South East Asia, India and arguably even the African East coast. With this in mind we will continue to engage with companies that we believe could be attractive strategic partners that could enhance the prospects of bringing the LD SOP Project to fruition – for our shareholders, the nearby indigenous community and our other stakeholders including the State which would all benefit enormously from the development of this long-life operation."

"On behalf our board I'd like to acknowledge and thank CPC, ERCOSPLAN, our own Project Team and the multitude of other consultants who have worked tirelessly to deliver this very thorough, detailed and professional PFS. We are all eagerly looking forward to taking the next steps to deliver this world-class project."

Key PFS Extracts

Approach

The LD SOP Project PFS was a team effort led by CPC Project Design ("CPC"), with cooperation from Reward's own Project team and numerous other leading consultants, specialists and equipment vendors. CPC classified the cost estimates in accordance with its own "CPC Guideline CPC-ES-W-001 Capital and Operating Cost Estimate" as a Class 4 estimate as defined with an accuracy of +/-20%. CPC followed a "Budget Priced" methodology to estimate the Project's costs which implies that the estimate is based on supplier and / or contractor developed cost estimates. Quotations and / or tenders support the estimates for major plant and mechanical equipment, civil engineering works on site and all other infrastructure, evaporation ponds, halite and crude potash harvesting, camp, provision of power and product logistics and any other material item. Factored material supply and construction costs have been used only where quotations or tenders have not been received.

Whilst a comprehensive list of the team of external consultants that have enabled Reward to progress the LD Project to this advanced stage is included on Page 3 of the PFS Executive Summary attached to this release, some of the leading consultants are presented in Table 1 in recognition of their efforts.

Table 1. Leading consultants

Consultant	Scope Area
CPC Project Design	Study management, process plant design, Project implementation, capital and operating cost estimates
ERCOSPLAN Ingenieurbüro Anlagentechnik GmbH	Independent process design and flowsheet review
Knight Piesold Australia	Brine collection and pond layout and design, hydrological assessment and drainage design
AEthos Consulting	Environmental Impact Assessment
Global Groundwater	Extractable resource estimation
Strategic Water Management	Hydrological investigation and process water bore field design and permitting
SBL Browne Pty Ltd	Metallurgical testwork, brine and sediment assay analysis
Northshore Capital Advisors Pty Ltd	Financial modelling

Detailed Physical Metrics

The detailed physical metrics and key assumptions made in the PFS are reported in Table 2.

Table 2. Detailed Physical Metrics and Assumptions

Area	Metric	Units and / or Details / Explanatory Comments	
Resource[2]	**Indicated**	Accessible Zone	7.48 Mt Drainable SOP at 13.4 kg/m^3 K_2SO_4
		Exclusion Zone	4.91 Mt Drainable SOP at 13.4 kg/m^3 K_2SO_4
		Subtotal	**12.39 Mt Drainable SOP** at **13.4 kg/m^3 K_2SO_4**
	Inferred	Accessible Zone	91.69 Mt Drainable SOP at 11.2 kg/m^3 K_2SO_4
		Exclusion Zone	48.93 Mt Drainable SOP at 11.2 kg/m^3 K_2SO_4
		Subtotal	**140.62 Mt Drainable SOP** at **11.2 kg/m^3 K_2SO_4**
		Total	**153 Mt Drainable SOP** at **11.35 kg/m^3 K_2SO_4**
	Cut-off grade	Not applicable/Not required	
Playa Operation	**Trench length**	km	133.4
	Trench brine flow rate	L/s per kilometre	15
	Operating hours	hours per year	8,760
	Brine pumped	GL per year	63
	Evaporation ponds	Hectares	4,772
	Construction methodology	Clay key-cut, with selective use of a liner in certain areas	
	Seepage	mm/day	0.25
	Commencement of Brine pumping	Project Quarter	10

Area	Metric	Units and / or Details / Explanatory Comments	
	First potash production	Project Quarter	14
	Full production	Project Quarter	18
	Evaporation rates (net)		
	Halite ponds	metres/year	1.2 - 1.9
	Backmix ponds	metres/year	0.6 - 0.9
	Crude potash pond	metres/year	0.6
	Production Life of Mine	LOM - years	22.75
	Project life	Years	27
	Halite Harvesting and Storage	Contractor operated	Harvested by conventional surface mining equipment, trucked to on-playa storage facility by quad side-tipping haul trucks, operated 10 months per year
	Crude potash salts harvesting	Contractor operated	Dry harvest by conventional surface mining equipment, trucked to plant ROM Stockpile by quad side-tipping haul trucks, operated 10 months per year
Plant Operation	**Crude potash ROM stockpile**	2 x 190kt stockpiles	Front end loaders discharging onto movable reclaim hopper/feeder feeds crude potash harvest onto feed conveyer at 10% moisture
	Annual plant feed	million tonnes per annum	3.86
	Operating hours	hours per year	7,200
	Plant throughput	tonnes per hour	536
	Overall potash recovery	Product output versus potash content of brine input	65%
	Plant water consumption	GL/annum (incl. all auxiliaries)	4.048 (of low salinity water produced via ion exchange)
		tonnes/tonne SOP	10.1
	Nameplate production	tonnes per annum	407,500
	Final product	98.2% K_2SO_4	
Camp and Other Infrastructure	**Accommodation village**	250 rooms consisting of 150 ensuite rooms and 100 rooms serviced by an external ablution block, built in early part of the construction program and used for the construction workforce before being handed over to the operations team	
	Airstrip	2,100 m long x 18 m wide and a 31 m wide strip on each side, designed as an unsealed strip suitable for use by turbo prop and BAE 164-100 jet aircraft (71 seat capacity) fitted with gravel kits, fenced with a stock and vermin proof fence	
	Potable and process water source	**Cory Borefield**, 16 km north of LD, 11 boreholes, including 5 spare, drilled to depths between 120-150 m and a diameter of approximately 310 mm. Cased with 200 mm internal diameter VC casing and gravel packed. **Northern Borefield**, a further 13 km north of the Corey Borefield, with 17 boreholes, 2 spare, drilled to depths between 120-150 m and a diameter of approximately 310 mm. Cased with 200 mm internal diameter PVC casing and gravel packed.	
	Potable water supply	0.3 GL reverse osmosis (RO) facility, sized to sufficiently supply potable water to the process plant, village, administration offices and workshops. 2 x 350 kl raw water tanks are included to meet higher flows of short duration	
	Installed power	14MW	

Area	Metric	Units and / or Details / Explanatory Comments	
Access Road and SOP Product Logistics	**Road access**	Route: LD to Port Hedland	Willjabu Track (site access road), Talawana Track, Balfour Downs Road, Jigalong Road, Marble Road then to Newman and Port Hedland
		Total distance	866 km
		Distance sealed	511 km
		Distance unsealed	355 km
	Product transport	Quad Trailer Road Trains	95 tonnes/load - product transported in bulk
		24 hour/day operation	15 truck deliveries per day
			Side tip into a bin and feeder onto a conveyor and then overhead conveyor stacker for storage within a 100m by 30m product storage shed
		Average Unit Trucking Cost	12.3 cents/tonne/kilometre
		Ship loading	Qube Rotabox containers filled by front end loader, delivered to wharf on flatbed trucks; rate of 14 Rotabox containers per hour - 21t to 25t SOP per container
		Average cargo size	20,000 tonnes per shipment
Staffing	**Contractors**	At Peak Project Development	116
	LD Operation	At Steady State Production	119
	Labour Exclusions	Product Hauling, Product Storage Shed, Container Loading, Transport and Ship Loading	
	Operating Rosters	Labour cost based on 12 hours shifts. 2:1 week roster for 24-hour roles, 5:2 back to back rosters for dayshift only roles and includes statutory burdens of 32% for Australian superannuation costs, leave and other statutory allowances.	
	Organisational Structure	Organisational structure consists of 9 job levels from General Manager down to Junior Skilled Employees	

Robust Economics

The assessment of the LD SOP Project demonstrated robust and attractive economics. LD was evaluated as a 27-year project, with the start date coinciding with an assumed project approval date of 30 June 2019. A 13-quarter (3¼ years) development and pre-production period is followed by a 1-year ramp-up and 87 quarters (21¾ years) at the full annual production rate of 407,500 t of SOP. The commencement of production is preceded by 4 quarters of brine pumping to the evaporation ponds and a period of 1 year has been assumed for closure, although a transition to brine extraction from bores at any time could extend the Project life for decades to come.

Over its assumed initial operating life, the Project is expected to produce 9.0 Mt of SOP and will generate before and after-tax real free cashflows of A$1.990 billion and A$1.362 billion respectively based on a forecast SOP price of US$500/tonne and a A$1.00/US$0.75 exchange rate. It has been conservatively assumed that a standard grade product will be produced and therefore no price premium has been included in the revenue forecast. Based on an All-in-Sustaining-Cost ("AISC") of A$394/tonne SOP, LD will deliver an estimated average annual EBITDA of A$110 million, average annual pre-tax cashflow of A$87 million and A$60 million after-tax. The Life-Of-Mine ("LOM") Revenue to Operating Cost ratio is 1.7:1, the Peak Project Cash Drawdown is estimated at A$452 million (Real) and the after-tax payback is just under 6 years from commencement of production.

For the Project valuation a real discount rate of 8% has been used, which is considered appropriate for an advanced project at this level of cost definition (+/-20%) in a stable jurisdiction such as Australia. It is estimated that the project will generate a pre-tax, real net present value ("NPV") A$460.2 million and post-tax NPV of A$252.6 million. The IRRs are respectively 17.8% and 14% pre- and post-tax.

The financial model for the LD Project PFS has been constructed on a nominal basis to ensure the correct treatment of depreciation, tax and tax losses and a quarterly periodicity is used to ensure that the build-up of pre-production drawdowns and working capital is properly reflected. The model includes the detailed build-up of all costs from their component parts and drivers and is structured according to financial modelling best practice.

The base currency of the model is Australian dollars (A$) and an inflation rate of 2% has been assumed. Given that SOP is sold on international markets in US dollars (US$) the model captures revenues in US$ and converts to A$. SOP is priced at US$500/t (A$667/t) on a real constant basis to which 2% US$ inflation is applied. The exchange rate used is A$1:US$0.75.

A summary of the economic assessment of the LD Project is presented in Table 3, with a more detailed description in the Financial Evaluation section of the PFS Executive Summary document accompanying this release.

Table 3. LD SOP Project Economic Assessment

Project Financials (Ungeared): Real unless stated	A$ - Total		A$ - Annual	
	Unit	LOM	Amount	Unit
SOP spot price average (LOM)	US$ / t SOP	500		
Exchange rate (LOM)	A$/US$	0.75		
SOP spot price average	A$ / t SOP	667		
Revenue from sales of SOP	A$M	5,999.92	263.73	
Product logistics costs and royalties[3]	A$ M	(1,396.82)	(61.40)	A$ M
State Royalty[3]	%	3.75	25.00	A$ / t SOP
Martu Royalty	%	1.25	7.00	A$ / t SOP
Logistics - trucking bulk product to Port Hedland	A$ / t SOP		100.00	A$ M
Logistics - Product reclamation & ship loading	A$ / t SOP		22.94	A$ M
Site operating expenses (incl. closure cost estimate)	A$ M	(2,089.50)	(91.85)	A$ M
EBITDA	A$ M	2,513.60	110.49	A$ M
Initial capital	A$ M	(450.56)		
Sustaining capital	A$ M	(68.75)	(3.02)	A$ M
Total capital	A$ M	(519.31)		
Movement in working capital (Real)	A$ M	(4.34)		
Undiscounted cashflow pre-tax	A$ M	1,989.96	87.47	A$ M
Tax payable	A$ M	(628.20)	(27.61)	A$ M
Undiscounted cashflow after tax	A$ M	1,361.75	59.86	A$ M
C1 Cost (SOP t basis): Real	A$ / t SOP	362 / t SOP		
C2 Cost (SOP t basis): Real	A$ / t SOP	408 / t SOP		
C3 Cost (SOP t basis): Real	A$ / t SOP	433 / t SOP		
All-in-Sustaining Cost (AISC): SOP t basis: Real	A$ / t SOP	394 / t SOP		

Project Financials (Ungeared): Real unless stated	A$ - Total		A$ - Annual	
	Unit	LOM	Amount	Unit
C1 margin	%	45.6%		
C2 margin	%	38.8%		
C3 margin	%	35.0%		
AISC margin	%	40.9%		
EBITDA margin	%	41.9%		
Project NPV_8 (pre-tax)	A$ M	460.18		
Project NPV_8 (post tax)	A$ M	252.60		
Project IRR (pre-tax): Nominal	%	20.2%		
Project IRR (post tax): Nominal	%	16.3%		
Project IRR (pre-tax): Real	%	17.8%		
Project IRR (post tax): Real	%	14.0%		
Project Payback Period from production start (post tax)	Years	5.97 Yr(s)		
Maximum Project Drawdown (Real)	A$ M	452.03		
Maximum Project Drawdown (Nominal)	A$ M	470.52		
Discount rate	%	8.00%		

Project Sensitivity

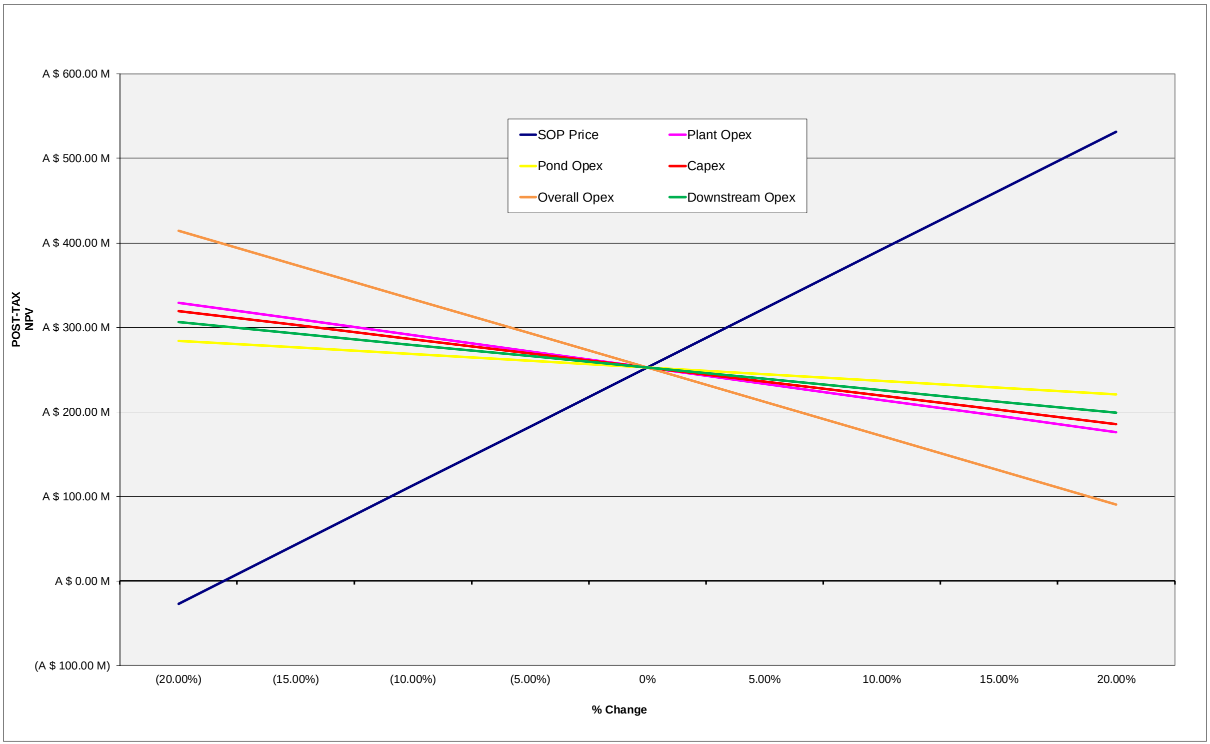
A typical sensitivity analysis was conducted on the LD Project (measured on the post-tax NPV result) against the following variables in turn:

- SOP price
- Initial and sustaining capital costs
- Overall operating costs
- Pond operating costs
- Plant, infrastructure and G&A operating costs
- Logistics operating costs (freight and handling).

The results show that the Project is (as one would generally expect) most sensitive to SOP price followed by overall operating costs and then capital cost. In fact, in general, the Project's NPV is about 60% as sensitive to changes in operating costs as it is to SOP price and about 30% as sensitive to changes in capex as to SOP price. The Project is also quite sensitive to plant, infrastructure and G&A operating costs, which validates the decision to accurately define these costs which include all FIFO flights, on-site accommodation and road maintenance. It was deemed crucial to adequately reflect the impact of the Project's remote location on the overall economics and this is an example of just one of the areas of particular focus.

A graph showing the results of the Sensitivity Analysis is shown below.

Graph 1. LD Project Sensitivity Analysis (Post-Tax NPV)



Path to Production

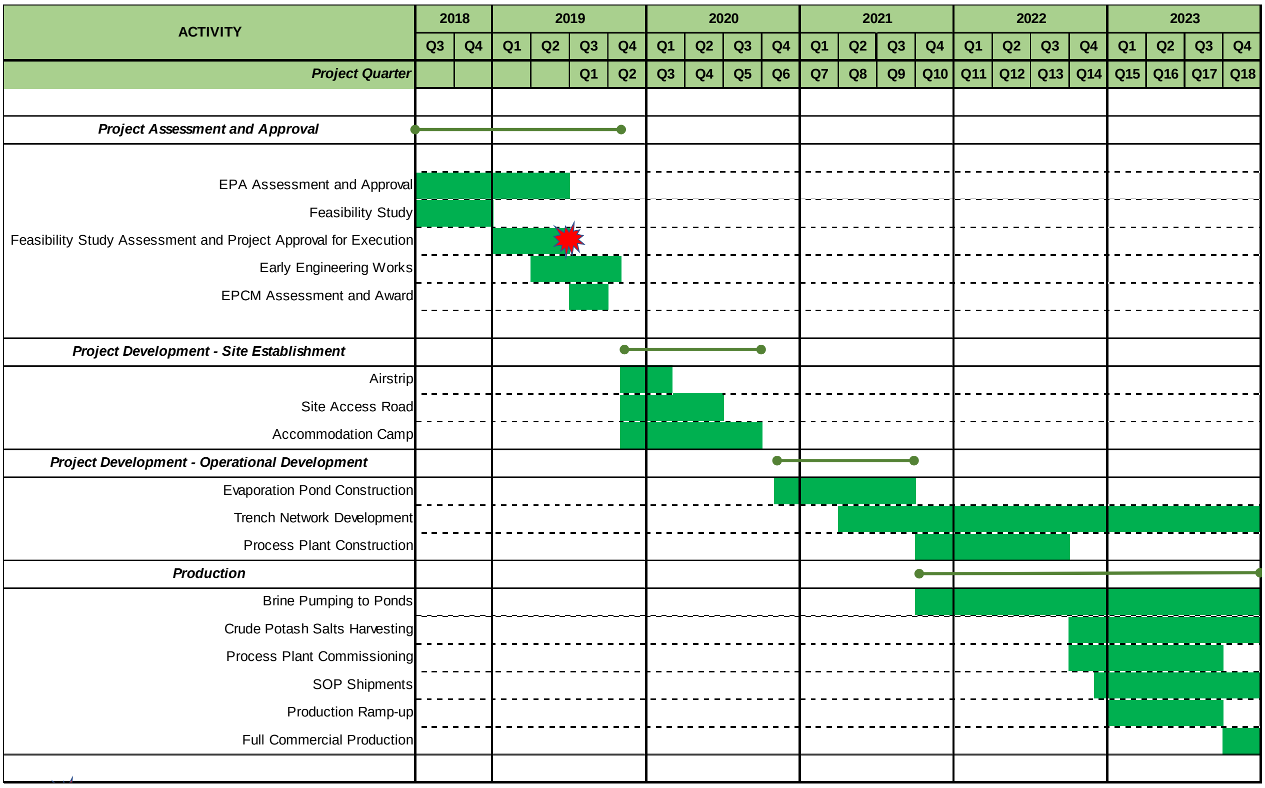
The results of the LD SOP Project PFS have shown that the Project is technically viable and that it is expected to have robust economics. This has given Reward the confidence to continue (subject to funding) unabated with increasing levels of project definition. To understand future requirements and establish a path to production a detailed Level 2 project implementation schedule has been developed covering all major activities from the completion of a Definitive Feasibility Study ("DFS"), to Project approval, development and commissioning and hand-over to Reward's operation's team. Key milestones for the Project are included in the schedule, as some have the potential to impose constraints on overall timing.

A selection of the key milestone dates for the development of the project are listed below and also presented in Schedule 1:

- July – December 2018 – DFS
- April 2019 – Commence early engineering works
- June 2019 – EPA approval and Project approval for execution
- September 2019 – EPCM awarded
- November 2019 – Commence site works
- February 2020 – Airstrip completed
- July 2020 – Site access road completed
- September 2020 – Accommodation camp completed
- November 2020 – Evaporation pond construction commences
- October 2021 – Commence process plant construction and brine pumping
- October 2022 – Crude potash salts harvesting commences
- October 2022 – Commence process plant commissioning
- December 2022 – Commence SOP shipments
- October 2023 – Full commercial production achieved

During the execution phase (i.e. once the Project final investment decision has been made) the schedule will be extended to the next level of detail (Level 3) with inputs from the appointed EPCM, other contractors and suppliers.

Schedule 1. Summary of Level 2 Project Implementation Schedule



Note: "✷" Signifies Official Project Commencement Date - i.e. 1 July 2019

Funding

As Australia's only Tier 1 SOP brine resource due to its size, consistently high in-situ average grade and ideal operating environment, LD is of significant strategic importance to a world facing severe challenges to feed its growing population due to decreasing availability of arable land and increasing soil salinity. For the major players in the fertiliser industry looking to expand LD presents an opportunity as it is a technically sound, economically robust SOP Project located in one of the world's most trusted mining jurisdictions. It is also slated to become the largest brine SOP producer outside of China.

It is with this in mind that Reward conducted the PFS to such a high level of detail to ensure that it is well-positioned to progress discussions about funding the development of this attractive Project. However, as explained elsewhere in this release various project financing options were also modelled to test the Project's debt capacity and whilst at an early stage, results suggest that the Project could well support typical project finance debt levels.

We also recognise that such a Project is important for the State because it will add a new commodity to Western Australia's large mineral portfolio, as well as support development in far northern Western Australia. After all, the Martu people and the other nearby communities would benefit substantially from the training and employment opportunities such a long-life operation can deliver.

Next Steps

The results of the LD SOP Project PFS have shown that the Project is technically viable and that it is expected to have robust economics. This has given Reward the confidence to continue (subject to funding) on the path to development, with a short-term focus on securing adequate funding for the next immediate phase, as well as a resource upgrade, on-playa tests and process optimisation. It will also continue its research and development activities to further improve the process flowsheet, possibly produce alternative by-products and also assess other value-add opportunities.

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Notes

1. Please refer to the assumptions, sensitivities, risk factors and cautionary statements disclosed respectively in Table 2 (pages 4-6), Table 3 (pages 7-8) and on pages 12 and 13 of this announcement, as well the details included in the PFS Executive Summary appended hereto, which may adversely impact upon the information and forecasts in this announcement.

2. 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.

3. At a very early stage in the assessment of the LD Project, Reward sought guidance from the then Department of Mines ("DMIRS" today) on the likely royalty rate for SOP produced from a brine operation (which is not defined in the Mining Act). On the basis that SOP is in a fully refined state, the Company motivated a State Royalty of 2.5% ad valorem. The Department advised an ad valorem rate of 3.75%, though a decision by Cabinet would be required closer to project commencement.

   Whilst still of the view that a 2.5% ad valorem rate is reasonable Reward has noted the use of the Specific Royalty Rate for salt of 73 cent per tonne by some of its industry peers. In the absence of greater clarity Reward has (arguably) been conservative and has adopted the 3.75% ad valorem rate to evaluate the LD Project.

   Using the Specific Royalty Rate of 73 cents per tonne improves the Project's pre-tax NPV by approximately A$77 million.

Cautionary Statements, Risk Factors and Disclaimer

Reward advises that the PFS is based exclusively on LD's Indicated Mineral Resource[2] and no reliance has been made on the Project's Inferred Resources. No Exploration Target material has been included in the economic valuation or production target. There is a lower level of geological confidence associated with Indicated Resources and there is no certainty that further exploration and engineering work will result in the determination of Measured Resources or in the conversion of Mineral Resources to Probable or Proved Ore Reserves. However, in preparation of the production target and associated NPV for the LD SOP Project PFS multiple technical and economic modifying factors were considered and it has therefore passed the economics test.

The contents of this announcement reflect various technical and economic conditions, assumptions and contingencies which are based on interpretations of current market conditions at the time of writing. Given the nature of the resources industry, these conditions can change significantly and without notice over relatively short periods of time. Consequently, actual results may vary from those detailed in this announcement.

Some statements in this announcement regarding estimates or future events are forward-looking statements. They include indications of, and guidance on, future earnings, cash flow, costs and financial performance. Such forward-looking statements are provided as a general guide only and should not be relied on as a guarantee of future performance. When used in this announcement, words such as, but are not limited to, "could", "planned", "estimated", "expect", "intend", "may", "potential", "should", "projected", "scheduled", "anticipates", "believes", "predict", "foresee", "proposed", "aim", "target", "opportunity", "nominal", "conceptual" and similar expressions are forward-looking statements. Although Reward believes that the expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties, and no assurance can be given that actual results will be consistent with these forward-looking statements.

Forward-looking statements are provided as a general guide only and should not be relied on as a guarantee of future performance as they may be affected by a range of variables that could cause actual results to differ from estimated results and may cause Reward's actual performance and financial results in future periods to materially differ from any projections of future performance or results expressed or implied by such forward-looking statements. There can be no assurance that actual outcomes will not materially differ from these forward-looking statements.

The contents of this release are also subject to significant risks and uncertainties that include but are not limited those inherent in mine development and production, geological, mining, metallurgical and processing technical problems, the inability to obtain and maintain mine licenses, permits and other regulatory approvals required in connection with mining and processing operations, competition for among other things, capital, acquisitions of reserves, undeveloped lands and skilled personnel, incorrect assessments of the value of projects and acquisitions, changes in commodity prices and exchange rate, currency and interest rate fluctuations and other adverse economic conditions, the potential inability to market and sell products, various events which could disrupt operations and/or the transportation of mineral products, including labour stoppages and severe weather conditions, the demand for and availability of transportation services, environmental, native title, heritage, taxation and other legal problems, the potential inability to secure adequate financing and management's potential inability to anticipate and manage the foregoing factors and risks. There can be no assurance that forward-looking statements will prove to be correct.

Where Reward expresses or implies an expectation or belief as to future events or results, such expectation or belief is expressed in good faith and on a reasonable basis. No representation or warranty, express or implied, is made by the Company that the matters stated in this announcement will in fact be achieved or prove to be correct.

This announcement is provided on the basis that neither the Company nor its respective officers, employees, representatives, partners and advisers, and its related bodies corporate, make any representation or warranty (express or implied) as to the accuracy, reliability, relevance or completeness of the material contained in this announcement. Nothing contained in the announcement is, or may be relied upon, as a promise, representation or warranty, whether as to the past or the future. Except for statutory liability, the Company hereby excludes, to the full extent of the law, all liability whatsoever (including negligence) for any loss or damage which may be suffered by any person as a consequence of any information in this announcement or any error or omission there from.

Except as required by applicable law or as may be required under applicable securities laws, the Company does not undertake to release publicly any revisions to any forward-looking statement to reflect events, circumstances or the occurrence of unanticipated events, after the date of this announcement.

All persons should consider seeking appropriate professional legal, financial and taxation advice in reviewing this announcement and all other information with respect to the Company and evaluating the business, financial performance and operations of Reward. Neither the provision of this announcement nor any information contained in this announcement or subsequently communicated to any person in connection with this announcement is, or should be taken as, constituting the giving of investment or financial advice to any person. This announcement does not take into account the individual investment objectives, financial or tax situation or particular needs of any person.

Competent Persons Statement

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 Australasian 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 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'. 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 report that relates to Brine and Sediment Assays and Analyses is based on information compiled by Dr Geoff Browne, of SBL Browne Pty Ltd, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy. SBL Browne Pty Ltd provides consulting services to Reward Minerals. 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 report of the matters based on his information in the form and context in which it appears.

About Reward

Reward Minerals Ltd (Reward) is a potash-focussed exploration and development company listed on the Australian Securities Exchange (ASX Code: RWD) with a portfolio of advanced exploration projects in Australia hosting significant sulphate of potassium (SOP) resources. The Company's tenements cover approximately 10,000 km^2 containing a series of highly prospective playa-style lakes and palaeovalleys known to host substantial volumes of high density potassium rich brines.

Reward's flagship project is its **100% owned LD SOP Project,** located 340 km east of Newman in the Little Sandy Desert of north-western Western Australia. The LD Project consists of a tenement package that covers over 3,000 km^2 which hosts an Indicated and Inferred *extractable* Mineral Resource of 153 Mt of SOP grading approximately 11.3 kg/m^3 of SOP brine in sediments from surface to a depth of approximately 90 m. The Project has a registered Indigenous Land Use Agreement with the Martu people, traditional owners of the land, as well as a granted Mining Lease and associated Miscellaneous Licence. A Pre-Feasibility Study for the LD Project was completed at the end April 2018 and the Project's Environmental Impact Assessment is under adjudication by the EPA.

Board and Executive

Board	Senior Management
Chairman: Colin McCavana	**Chief Executive Officer**: Greg Cochran
Executive Director: Michael Ruane	**Projects Director**: Daniel Tenardi
Non-Executive Director: Rod Della Vedova	**Company Secretary:** Bianca Taveira

See website at: www.rewardminerals.com

LD Project

PFS Executive Summary

Introduction

The LD Project is located in the Little Sandy Desert, approximately 320 km east of Newman, in the Pilbara region of north-western Western Australia. Access to the LD project site is from Newman via the Jigalong Road, Balfour Downs Road, Talawana Track and a site access track known as the Willjabu Track (Figure 1). The 412 km access route from Newman currently consists of 57 km of sealed road and 355 km of unsealed road. An upgrade of the unsealed sections will be required to support the Project during construction and into operations.

The Project is made up of over 3,000 km^2 of granted tenements covering the LD playa and surrounding palaeovalleys and is the largest brine SOP resource in the world outside of China with the highest average in-situ SOP grade in Australia. LD itself is a large salt lake (playa) covering approximately 140,000 ha at an altitude of approximately 330 masl.

The whole Project area lies within the Martu Native Title Determination area and Reward has an executed Indigenous Land Use Agreement with the Martu covering two-thirds of the Project area.

Reward completed a scoping study for the LD Project early in 2015 and the encouraging result prompted the Company to proceed with further operational and metallurgical testwork and then to complete a PFS. In the latter part of the testwork phase, Reward's Project team also started to more accurately define the estimated capital and operating costs for the Project by obtaining competitive, detailed quotes on critical areas such as infrastructure, pond construction, halite and crude potash harvesting and product logistics.

CPC Project Design ("CPC") was appointed late in 2017 and it worked closely with the Company's Project team as well as Reward's other selected consultants to finalise the PFS. The results of the PFS have vindicated Reward's confidence in progressing the Project to this stage and it is now slated to be the largest SOP brine project in the world outside of China.

LD's Western Australian location is a key advantage as it is critical for long-life projects such as this to be located in stable mining jurisdictions. The choice of Port Hedland as export port is also important as that places its product within easy reach of the major SOP growth markets of South-East Asia and India.

This makes LD a highly desirable strategic asset for large players in the global fertiliser industry looking to position themselves to supply these markets (and others) for decades to come.

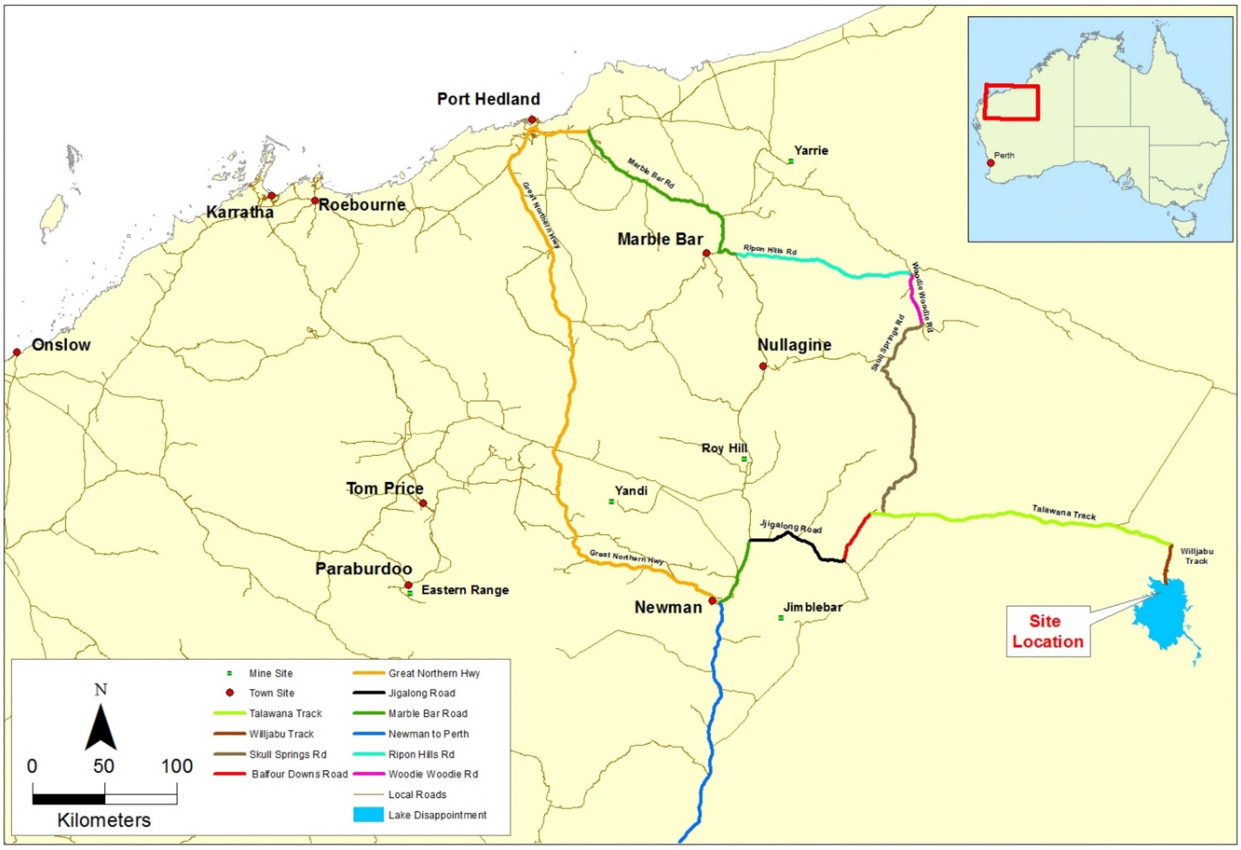

Figure 1. LD Project – Locality Map

Project Team

A large Project team consisting of in-house staff and external consultants worked together to progress the LD Project to this advanced stage. The key consultants that contributed are presented in the table below in recognition of their efforts.

Table 1. LD Project Consultants

Consultant	Scope Area
CPC Project Design	Study management, process plant design, Project implementation, capital and operating cost estimates
Survey Group/ADK Mining Services	Access road and airstrip design, plant site bulk earthworks design
ERCOSPLAN Ingenieurbüro Anlagentechnik GmbH	Independent review of process mass balance and flowsheet, design
Knight Piesold Australia	Brine collection and pond layout and design, hydrological assessment and drainage design
AEthos Consulting	Environmental Impact Assessment
Global Groundwater	Extractable resource estimation
Strategic Water Management	Hydrological investigation and process water bore field design and permitting
ATC Williams	Camp geotechnical investigation
Pendragon Environmental Solutions	LD Playa geotechnical investigations, acid sulphate soil assessment, trench pumping trials
ADK Mining Services	Mine closure cost estimate
SBL Browne Pty Ltd	Metallurgical testwork, brine and sediment assay analysis
ALS Laboratories	Analytical services
BGC, MACA, Watpac, Piacentini	Bulk earthworks and salts harvesting
Bennelongia	Subterranean fauna and lake ecology studies
Terrestrial Ecosystems	Terrestrial fauna
Botanica Consulting	Flora and fauna studies and Environmental submissions.
Hydrobiology	Aquatic toxicology, groundwater dependent vegetation
Northshore Capital Advisors Pty Ltd.	Financial modelling

Tenure

The entire Project Development Envelope is located within the Martu Determined Native Title claim area WAD 6110/1998 registered in 2002. Pastoral leasehold land occurs to a very limited extent on the western edge of the Determination Area.

Through its 100%-owned subsidiary Holocene Pty Ltd, Reward holds a package of thirteen granted Exploration Licences, one Mining Lease and one Miscellaneous Licence over land within the LD Project development envelope. Parts of the area currently under exploration tenure will be converted to Mining Leases or Miscellaneous Licences when required as part of the future permitting process. The list of tenements (with total area of approximately 3,000 km^2) is shown in Table 2 and in Figure 2.

. **Table 2. Reward Minerals tenements**

Tenement	Block Area (Hectares)	Expiry	Tenement	Block Area (Hectares)	Expiry
E45/4121	47 BL	15/09/2018	M45/1227	3,436.5 ha	8/10/2033
E45/4090	56 BL	15/09/2018	E69/2156	53 BL	5/10/2018
E45/3285	167 BL	28/10/2022	E69/2157	70 BL	5/10/2018
E45/3285	56 BL	28/10/2022	E69/2158	70 BL	5/10/2018
E45/2801	70 BL	5/10/2018	E69/2159	70 BL	5/10/2018
E45/2802	70 BL	5/10/2018	E69/3275	97 BL	3/11/2020
E45/2803	70 BL	5/10/2018	E69/3276	75 BL	3/11/2020
L45/302	3,258 ha	15/10/2033			

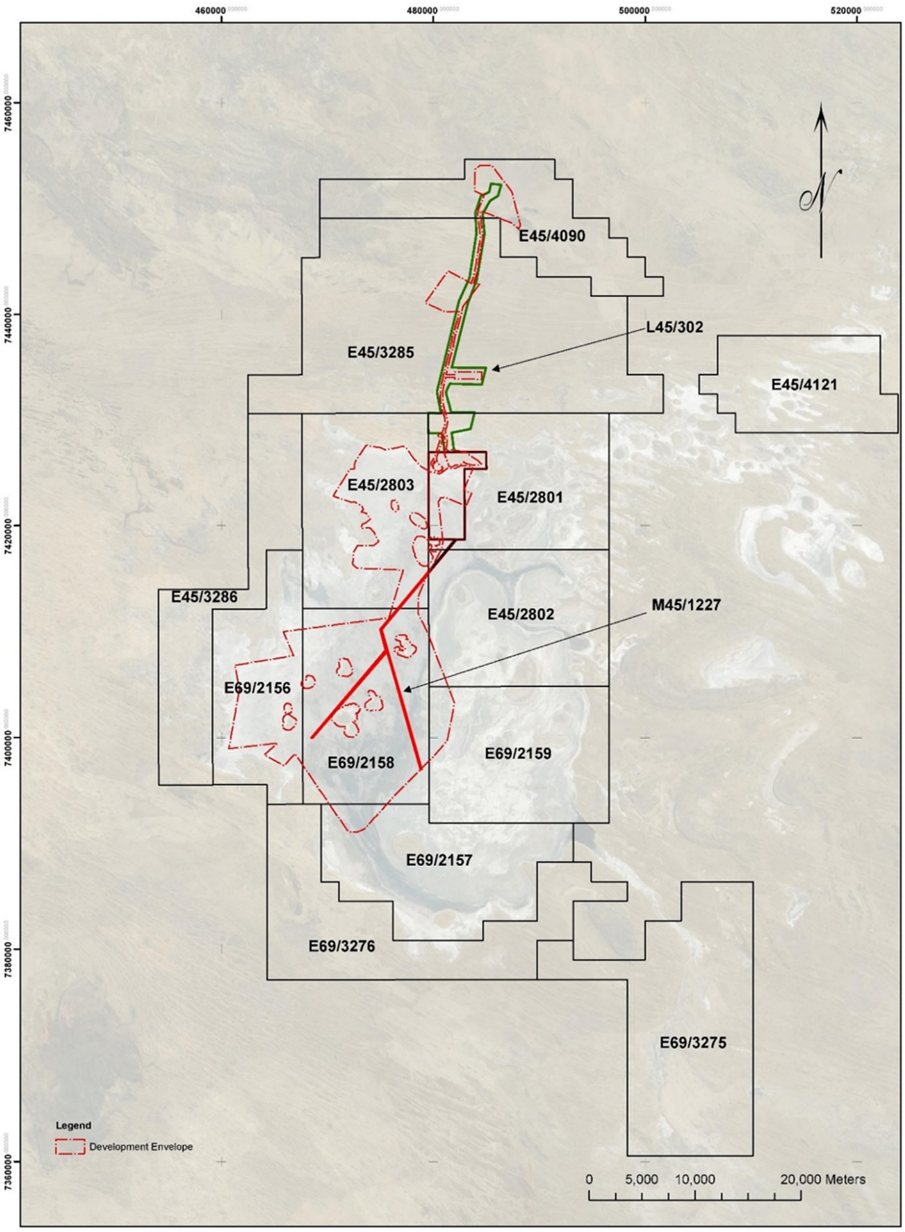

Figure 2. LD Project – tenure and current development envelope

Climate

The climate in the Project area is arid, with hot summers and mild winters. Average annual rainfall is typically less than 400 mm, with most rainfall occurring during the summer months (December through March).

The annual average evaporation rate is in excess of 4,000 mm (for fresh water) which significantly exceeds the annual rainfall in every month throughout the year. The evaporation rate of brine is considerably lower than fresh water and hence the net annual evaporation rates of 1.2 m – 1.9 m for the halite ponds and only 0.6 m in the crude potash ponds are the estimated values used in the PFS.

The region occasionally experiences intense cyclonic rainfall events: five cyclones passed within 100 km of Lake Disappointment during the 40 years from 1970 to 2010 and in 2013, Cyclone Rusty delivered in the order of 260 mm of rain during a 3-day period.

Environmental and Permitting

Reward assessed the potential environmental impacts of implementing the LD Project in accordance with requirements set out in an environmental scoping document ("ESD") prepared by the Office of the Environmental Protection Agency ("EPA") of Western Australia. The ESD outlined the preliminary key environmental factors and the work required to investigate potential impacts of the Project on those factors. The following "preliminary key environmental factors" were identified for the Project:

- Flora and Vegetation
- Terrestrial and Subterranean Fauna
- Hydrological Processes
- Inland Waters Environmental Quality
- Heritage
- Offsets
- Rehabilitation and Decommissioning

Guidelines released by the EPA in December 2016 slightly modified some of the key factors used by the EPA in its impact assessment framework. Accordingly, Reward adapted its Environmental Review Document ("ERD") to address these changes. The Company used a risk-based approach to identifying potential impacts, assessing the likelihood and potential consequences of those impacts, and proposed a series of mitigation measures to reduce potential impacts. The ERD will also serve as a tool for communicating Project information to a wide range of stakeholders.

Reward submitted the LD ERD to the EPA at the end of 2017 and it is still currently under review by the Regulators. The EPA has subsequently provided feedback to the Company and raised a number of questions which are currently being addressed so that the document can be updated prior to being authorised for public release. A six-week public review period will follow.

Reward will be required to respond to comments lodged during the public review process and update the ERD where necessary prior to the submission of the final draft for assessment by the EPA. A further period of consultation will follow with the EPA over draft implementation conditions that may be required during the Project's life. The EPA will then report formally to the Minister for the Environment with its recommendations pertaining to the Project's implementation conditions. It is possible that the assessment and consultation process may continue throughout 2018 before culminating in a Ministerial decision.

Representatives from the EPA and other Regulatory bodies recently conducted a site visit to LD as a part of the ongoing assessment process.

In addition to EPA's assessment of the proposal, a range of other environmental (and related) assessments and authorisations will be required before the LD Project can be implemented. The authorisations that will be required are reflected either under State (primarily) and Federal (possibly) legislation, such as the Mining Act (1978), the Aboriginal Heritage Act (1972), the Rights in Water & Irrigation Act (1914) and the Environment Protection and Biodiversity Conservation Act 1999 (Cwlth).

The environmental impact assessment and permitting processes under the WA Environmental Protection Act 1986 are not generally constrained by statutory timelines. The EPA and Department of Water and Environment Regulation (DWER) have published guidelines describing their respective administrative processes and indicative timelines for completing various types of environmental assessment, however the timelines set out in the guidelines are aspirational and are not legally binding.

Geology and Resources

Geology

The Little Sandy Desert region, within which the LD Project is located, is underlain by the Savory Basin, a late Proterozoic sedimentary formation dating from about 900 to 600 million years ago, and by the sediments of the southwestern part of the Yeneena Basin, which experienced deformation and metamorphosis under the influence of the Paterson Orogeny approximately 550 million years ago. The region is bounded to the northeast by the Canning Basin and to the southeast by the Officer Basin.

The shallow sediments of the Savory and southwestern Yeneena Basins generally comprise gently east-dipping medium to coarse-grained sandstone and pebbly conglomerate. The underlying bedrock outcrops infrequently: more than 90% of the basin is covered by unconsolidated or semi-consolidated Cainozoic deposits, consisting largely of windblown sands in the form of dunes and sandplains (Williams, 1992). The sand is composed of medium to medium-coarse quartz grains, with occasional ferruginised grains or ironstone pebbles. The wide-spread longitudinal dunes that occur throughout the Savory Basin are thought to have formed during the intensely arid conditions that prevailed during the last glacial maximum (about 13,000 to 25,000 years ago). Colluvial deposits occur to a limited extent in the Basin and are mostly located adjacent to infrequent rocky outcrops. Alluvial deposits of unconsolidated silt, sand and gravel are also relatively uncommon and are restricted mostly to drainage lines and to the terminal Lake Disappointment playa.

The superficial sequences are underlain at variable depth by members of the Neoproterozoic Tarcunyah Group, which comprises an interbedded sequence of sandstone, siltstone and shale deposited around 800 Ma. These bedrock materials outcrop locally to the east and the south-west of LD (for example, Durba Hills and Diebal Hills, located approximately 25 km southwest of the LD playa).

The stratigraphy beneath and adjacent to LD reported in published literature has been generally confirmed by Reward's explorations programs. Subsurface conditions beneath the playa comprise windblown silty or clayey sands, interspersed with – and underlain by – clayey / silty lake sediment (lacustrine) deposits, with occasional sandy lenses. See Figures 3, 4 and 5 for further detail.

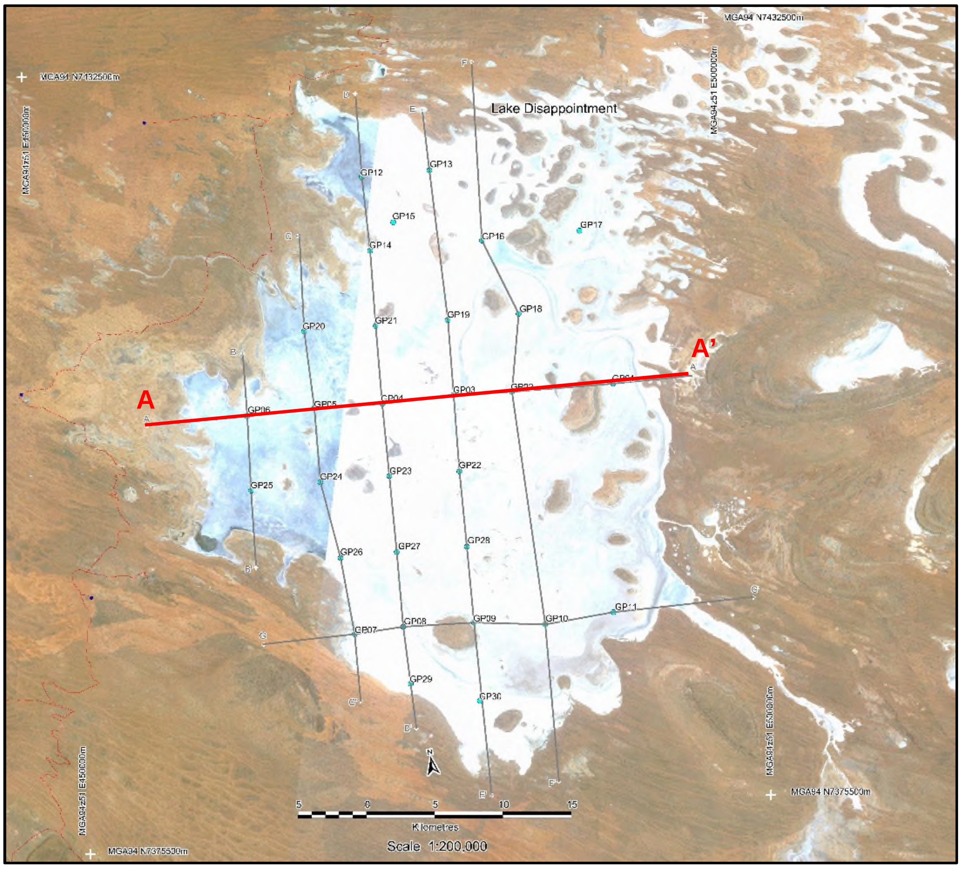

Figure 3. Geological section lines, showing LD bore locations

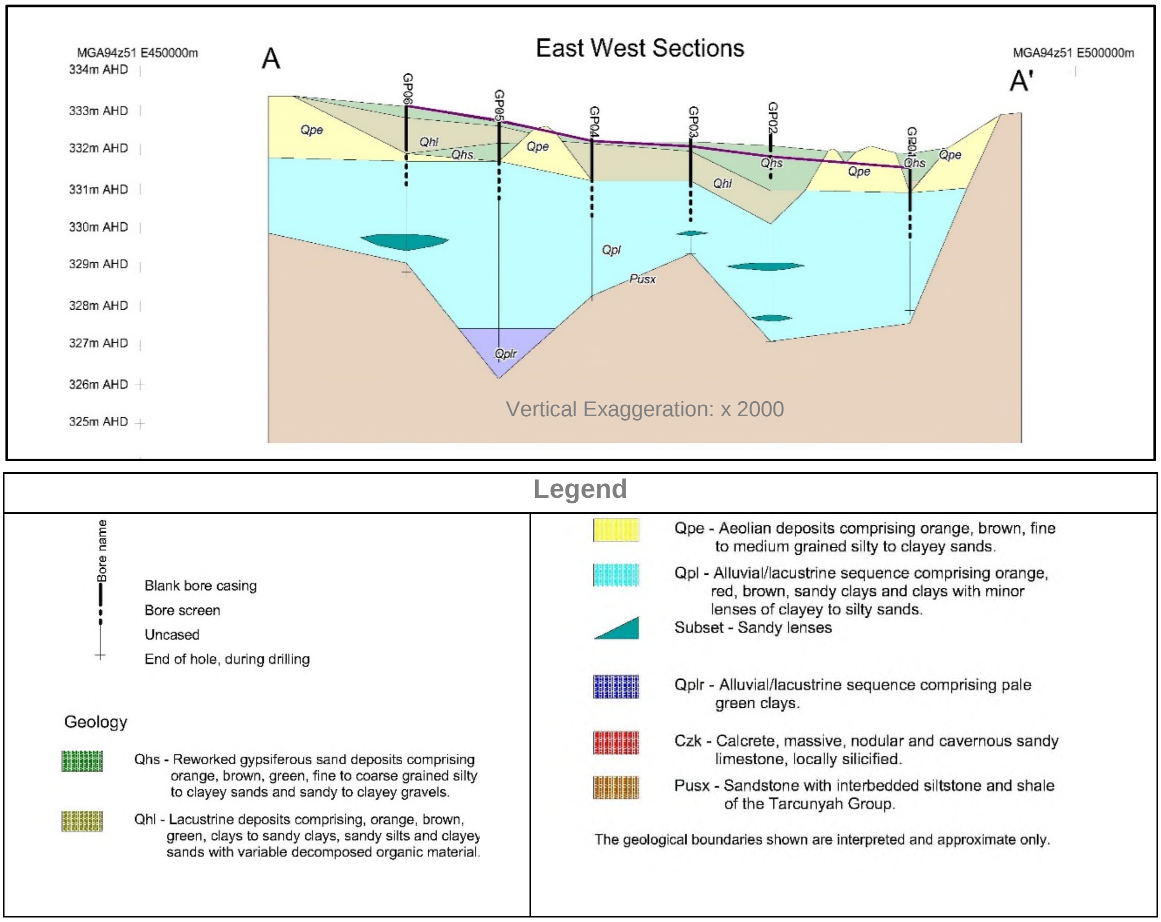

Figure 4. East-west cross section through playa, with geological legend

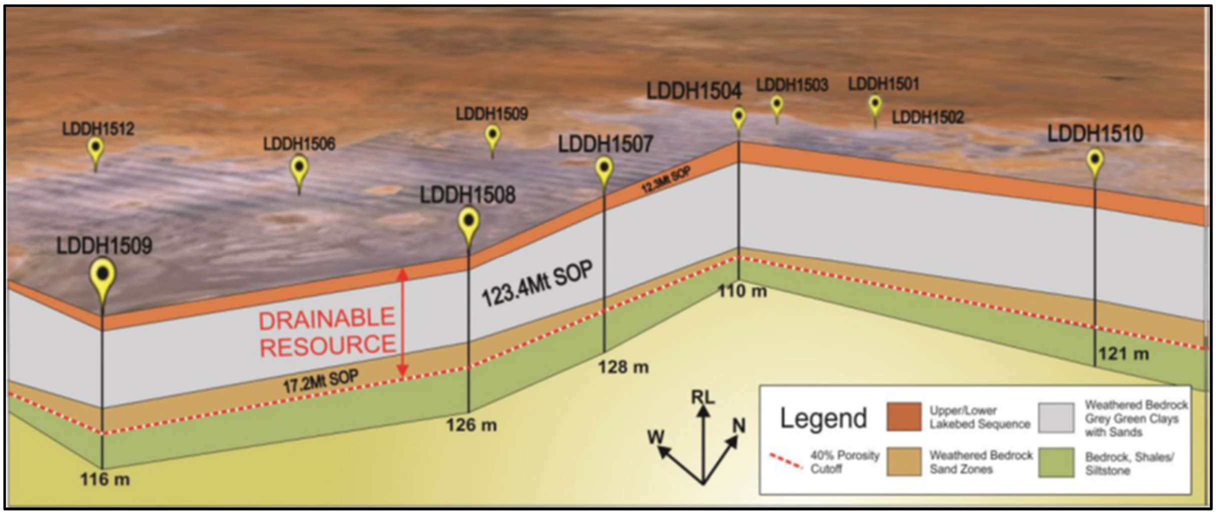

Figure 5. Cut-out cross section of the LD resource

Resources

Reward is planning to extract SOP through a process of solar evaporation of brine obtained from the playa sediments of LD. For the purposes of the PFS the brine will be abstracted from a series of shallow trenches located across the playa surface, which are the most prospective sequences on LD. To extend the life of the operation, which is beyond the scope of the PFS, it is likely that supply will be supplemented by brine pumped from bores, pumping into the existing network of brine supply trenches.

The Company commenced its work to assess the resource potential of LD as early as 2006 with push tube sampling undertaken to define the lake bed sequence and provide data for estimation of an in-situ resource. Hydrogeological consultants Global Groundwater conducted this initial work and the shallow lake bed sequence was interpreted to be about 9 m thick based on the assumption that push tube penetration refusal had occurred. An initial resource estimate was declared in March 2007, based on porosity assessments from laboratory analyses of the push tube samples, the estimated dimensions of the lake bed sequence and laboratory conducted brine grade analyses.

After a hiatus in Project activities due to protracted negotiations to formalise a Native Title agreement, Reward drilled a series of diamond drill core holes across the lake surface down to a maximum depth of 135 m to provide information for a resource update. Pendragon Environmental Services (PES) was engaged to conduct the work and it estimated an in-situ resource of 564 Mt with an average brine grade of 13.7 kg/m^3 of SOP (as per ASX Release dated 23 November 2015 titled “LD Sulphate of Potash Project Delivers Globally Significant Brine Resource”). PES created a numerical simulation model where the lateral extent of the lake was defined by the lake perimeter (1,241 km^2) and the vertical extent was confined by a porosity of less than 40%, which resulted in an average depth of the resource of 63 m.

A brine resource has the ability to flow through the host geology in response to extraction from trenches or pumping from wells but only a portion of a brine resource can be extracted. A credible brine resource estimate should be based on the extractable portion of the brine due to the fact that these deposits are fundamentally different to other Mineral Resources which are generally all specifically addressed in mineral reporting codes such as JORC. Consequently Houston et al. and the Ontario Securities Commission recognised this and proposed a series of guidelines (2011) to be adopted by Canadian companies for assessing (lithium) brine resources.

With increasing investor interest in the Western Australian SOP brine sector, the Association of Mining and Exploration Companies (AMEC) took the initiative to develop Australian-specific guidelines with the support of most of the sector's current participants. The so-called AMEC guidelines, based to a large degree on the Canadian guidelines, are still only available in draft form as they have not been formally approved by the JORC Committee or other regulatory authorities.

LD's in situ resource presented by PES in 2015 represented a total bulk resource and not drainable resource. Therefore, in order to align itself with current thinking Reward engaged consultants Global Groundwater to consolidate previous results and use all the available data from its sample laboratory analyses and testing, core sample geological logging and groundwater bore test pumping to provide an estimate of LD's *drainable* SOP brine resource.

Global Groundwater thus proceeded to utilise the approach set out in both sets of brine guidelines and the JORC Code (2012) to define LD's drainable resource. Its Mineral Resource estimate is therefore directly comparable to the other ASX-listed SOP exploration companies that adopted a similar strategy.

The specific yield of the strata below the lake is required to estimate the potential drainable resource and in order to quantify this samples from the diamond core drilling program were selected and sent to the laboratory where they were tested for porosity, permeability and specific yield. A groundwater extraction bore was also drilled on the playa, equipped and test pumped to further assess aquifer parameters (and to assist in the planning and design of the Project's future development). See Figure 3 for a map showing the location of bore holes drilled at LD.

On the basis of this and the historical work conducted by Reward at LD, Global Groundwater produced the current Mineral Resource estimate for the Project which is summarised in Table 3.

Table 3. LD Project Mineral Resource Estimate

Hydrostratigraphic Unit	Unit Symbol	Nominal Dimensions (m)			Volume	Area	Assigned Specific Yield Effective Porosity	SOP Brine Grade	Drainable SOP (Mt)	JORC Resource Status
		Top	Base	Thick.	($m^3 \times 10^6$)	($m2 \times 10^6$)	(%)	(kg/m^3) (1)		
Upper lake bed sequence	Qhs & Qhl	0.5	2	1.5	1,123.5	749.0	15	13.4	2.26	Indicated
Lower lake bed sequence	Qpl	2	6	4	2,996.0	749.0	13	13.4	5.22	Indicated
Weathered basement	PUw	6	80	74	55,426.0	749.0	12	11.2	74.49	Inferred
Weathered basement (sandy sections)	PUw	80	90	10	6,987.0	698.7	22	11.2	17.2	Inferred
Estimate - Accessible Zone					**66,532.5**			**11.34**	**99.2**	
Upper lake bed sequence (Exclusion zone)	Qhs & Qhl	0.5	2	1.5	738.0	492.0	15	13.4	1.48	Indicated
Lower lake bed sequence (Exclusion zone)	Qpl	2	6	4	1,968.0	492.0	13	13.4	3.43	Indicated
Weathered basement	PUw	6	80	74	36,408.0	492.0	12	11.2	48.93	Inferred
Estimate - Exclusion Zone					**39,114.0**			**11.37**	**53.8**	
Total Estimates					**105,646.5**			**11.35**	**153.0**	

Notes.

1. Total area of the accessible zone: 749km^2

2. Total area of the exclusion zone: 492km^2

3. Total area of the LD Playa: 1,241km^2

4. Figures have been rounded to 2 significant numbers

Production Overview

As shown in Figure 6, the project will extract brine from the surface of the playa via infiltration trenches and then be moved from the infiltration trenches to the main feed channel and then into a series of evaporation ponds. The evaporation ponds will initially crystallise raw salt and ultimately crude potash salts (predominantly kainite). The crystallised crude potash salts will be dry-harvested and trucked to the process plant for further treatment.

The ponds form an integral part of the brine processing system. The primary components of the production ponds are as follows:

- Infiltration trenches – extract brine from the playa.
- Plant feed channel – transfers brine from the infiltration trenches to the evaporation ponds.
- Halite ponds – used to concentrate brine and crystallise primarily halite.
- Back-mix ponds – crystallise halite and various additional salts prior to potassium crystallisation.
- Crystallisation ponds – designed to produce crude potash salts for harvest, prior to transport to the plant for SOP recovery.
- Halite salt stacks – will store halite generated in the halite and back-mix ponds.
- Plant bleed pond – after about 10 years a bleed stream from the crystallisation ponds will be generated. This bleed will consist primarily of bischoffite. This can potentially be discharged on the lake surface or used as dust suppressant for the project activities. However, for the current design it was assumed that a storage ponds would be used to store the bischoffite.

All the ponds are designed to allow a portion of the pond area to be temporarily decommissioned and dried out for dry-harvesting of crystallised salts.

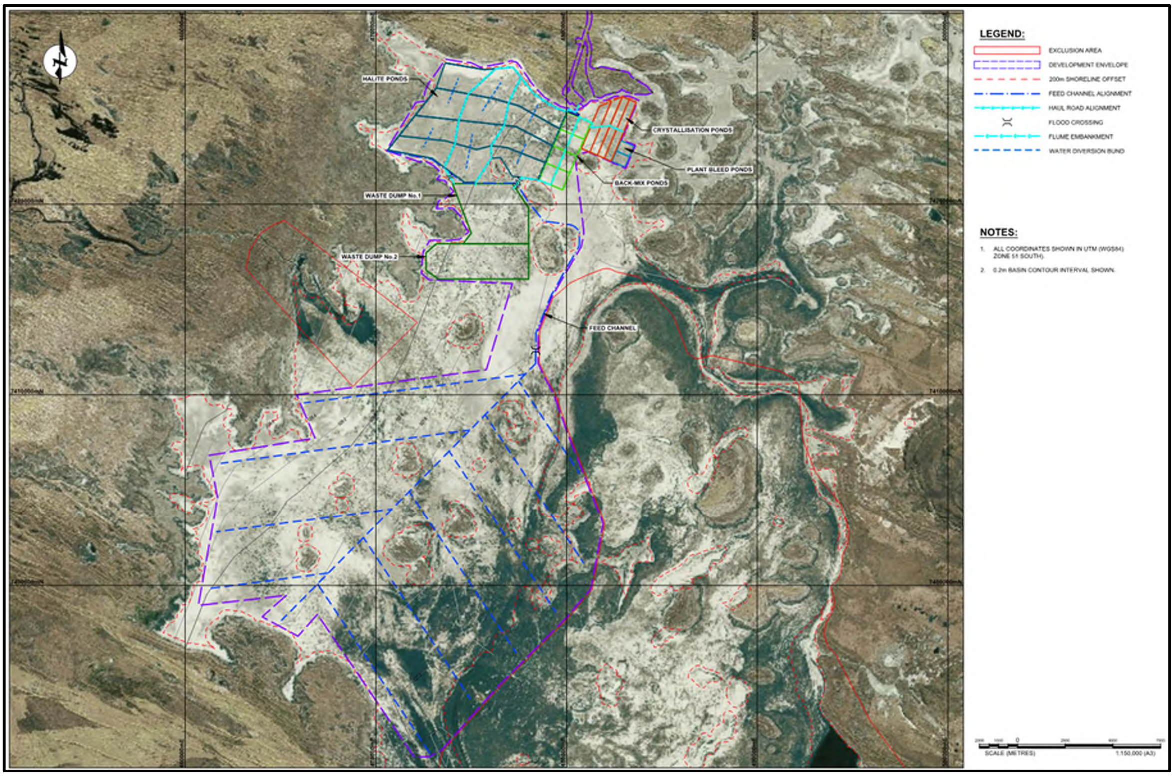

Figure 6. The overall trench network and pond layout

The total length of the initial trench system will be approximately 133 km including 116 km of infiltration trenches. These will be relatively shallow at around 1.8 m which is 0.5 m below the nominal base of the gypsum sand layer, although further tests are being conducted on deeper trenches. The nominal trench profile is shown in illustrations below.

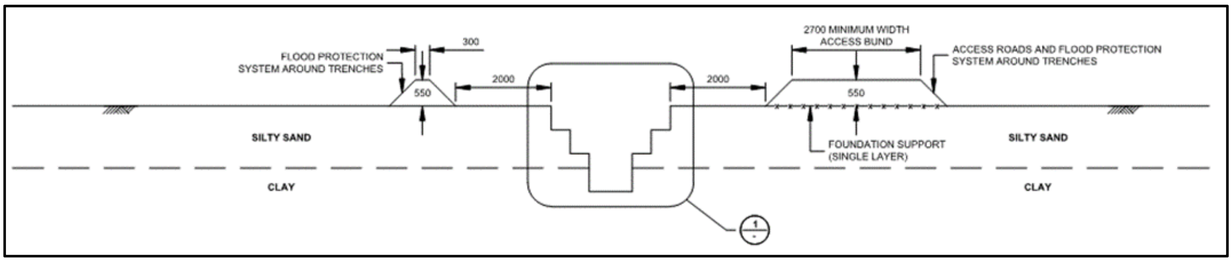

Figure 7a. Infiltration trench layout

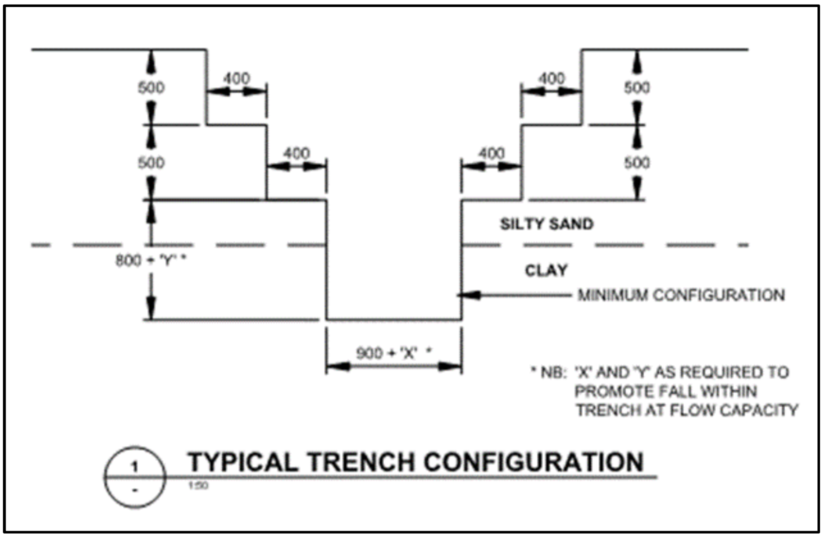

Figure 7b. Infiltration trench profile

Excavators (30 t machines with 15 m reach and amphibious tracks) will operate on a permanent basis for ongoing trench maintenance to ensure that they remain in an open, free flowing condition. The material from trench excavation will be used to construct road bunds and flood protection bunds alongside the trenches.

The brine from the infiltration trenches will flow into the plant feed channel and then onto the halite ponds at the start of the brine evaporation system. The feed channel will be 6 m wide and 2.5 m deep at the start in the infiltration area and gradually increase in depth along the 16.3 km distance from the trenches to the corner of the halite pond area.

The pond evaporation and salt precipitation system, which is shown in Figures 8 and 9 and described in more detail in the Processing section, consist of the following:

- 18 halite ponds
- 8 back-mix ponds
- 8 crystallisation ponds
- 2 plant bleed ponds
- 1 pre-mix pond
- Halite salt stockpiles

Brine flows from pond to pond via flume channels or pumped if required to achieve the required brine concentration and crude potash salts crystallisation.

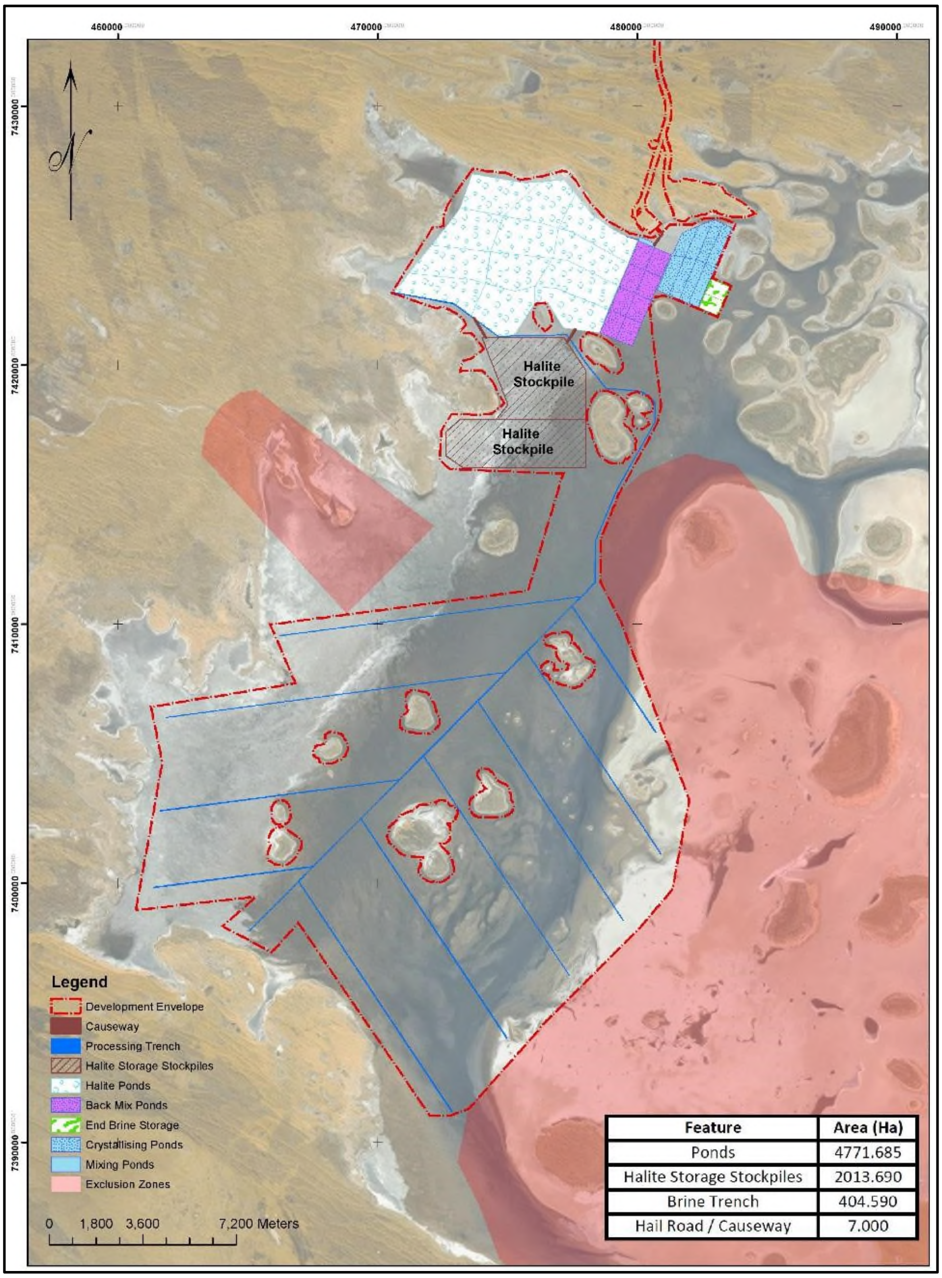

Figure 8. Pond layout

Brine Processing

The natural near-surface brines at LD have a total dissolved salt (TDS) concentration of around 300 g/L (300,000 mg/L), which is approximately ten times the salinity of seawater and close to the salt saturation limit. The potassium sulphate (SOP) concentration in the LD feed brine is approximately 13 g/L.

The ponds are designed to operate for 8,760 hours per year (h/y) with harvesting occurring during 10 months of the year.

The various steps in the evaporation process are described below for ease of understanding.

Evaporation (Halite) Ponds

As the brine moves through the first series of evaporation ponds it becomes increasingly concentrated. Sodium chloride (NaCl) is the dominant salt in the brine at this stage and is the first salt to crystallise out of solution as the mineral halite, hence the naming of these ponds as 'Halite Ponds'. Minor amounts of gypsum ($CaSO_4$) also crystallise out of the brine.

The halite ponds are configured in series in banks of three. The target potassium and magnesium salts are more soluble and will remain in solution, continuing to concentrate as evaporation continues and further halite is crystallised.

Approximately 85% of the water in the starting brine has been evaporated by the time the brine leaves the halite ponds and a large proportion of the NaCl has also been removed through crystallisation. It is estimated that the will be a 15% loss of the potassium and magnesium values to seepage and entrainment in the halite ponds.

When the halite and gypsum crystals reach a set height within the pond, the pond is shut down, drained and the solids mechanically harvested and stockpiled outside of the ponds to allow continued use of the halite pond evaporation area. Alternatively, the containment levies could potentially be heightened for ongoing use.

Back-mix Ponds

Brines from the halite ponds, the plant and the evaporation end brine (EEB) are transferred to the Back-mix Ponds where further halite and magnesium sulphate crystallise and the brine reaches a concentration of over 30 g/L of potassium, whereupon it is transferred to the Crystallisation Ponds for the final stage of the evaporation process.

When the salts in the back-mix ponds reach a set height, the pond is shut down, drained and the solids mechanically harvested and stockpiled outside of the ponds.

Crystallisation Ponds

Evaporation continues in the crystallisers and the target potassium salts crystallise out of solution as a number of different potassium and magnesium salts, together with a minor amount of halite. These crude potash salts are expected to contain potash mainly in the form of kainite ($KClMgSO_4 \cdot 3H_2O$).

Evaporation and crystallisation in the crystallisers continues until the potassium concentration of the remaining brine is so low that potassium salt crystallisation ceases. By this time, the magnesium concentration of the brine has increased substantially and the brine is pumped to a separate storage/ holding pond to be recycled and/or bled from the system.

Once the crystallisation pond has been drained of the magnesium rich brine, the crude potash salts are collected by a dedicated harvester (surface miner) and trucked to the process plant stockpile. The stockpiled crude potash salts are the feed into the process plant.

Stockpiling and Reclaim

The harvested crude potash salts from the crystallisation pond will be discharged from side tipping haul trucks into a stockpile feed bin and feeder which through a series of standard fixed conveyors and one mobile stacker conveyor will feed onto one of two stockpiles, each with a capacity of 190,000 t.

Having two stockpiles allows for the crude potash salts to be reclaimed from one while the other is being fed. Additionally, the availabilities of harvesting (75% utilisation) and processing (82% utilisation) differ and the stockpile acts as a buffer during these periods allowing the process plant to continue operating. Front end loaders will be used to reclaim the crude potash salts from the stockpile and then discharge into a movable reclaim hopper/ feeder that transfers the kainite feed onto a conveyor and into the plant.

Harvested crude potash salts will contain entrained brine, most of which will run off in the stockpile. The run-off solution will be collected and pumped back to the pond system. The reclaimed crude potash salts feeding the process plant will have a moisture content of about 10%.

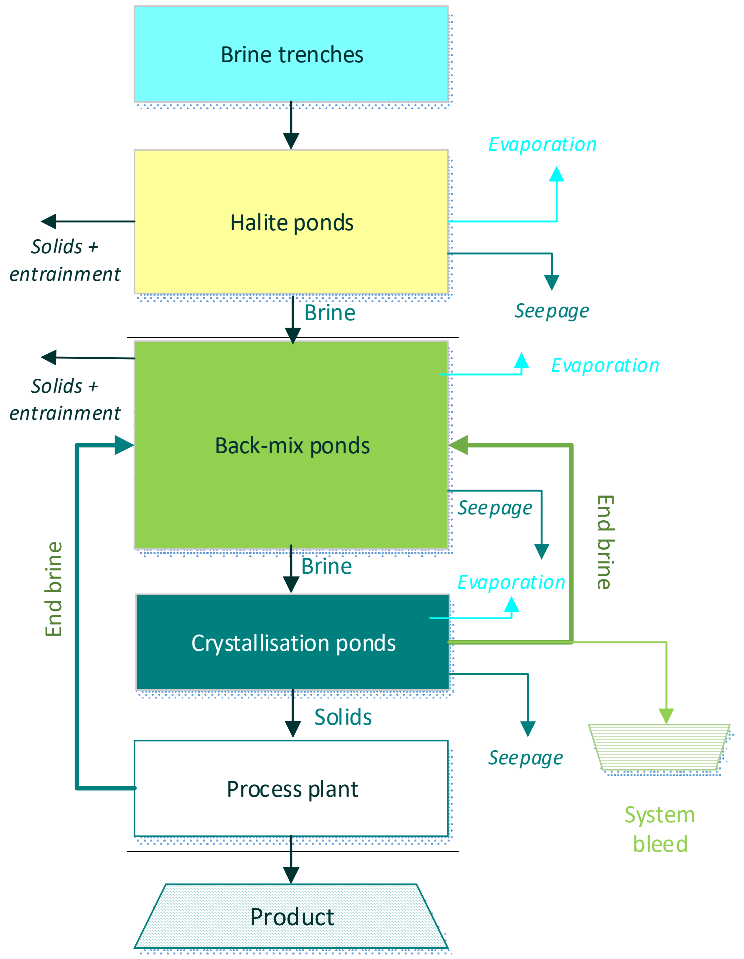

Figure 9. Schematic layout of solar evaporation ponds process

Plant Processing

Considerable testwork has been completed by Reward over the years to determine the best possible evaporation and processing routes to achieve the cost-effective production of high quality SOP from LD brine. In fact, over 40 phases of in-house bench scale tests were conducted to develop the current flowsheet (which is shown in the schematic in Figure 10).

As a part of the PFS, Reward engaged a leading German potash processing consultant *ERCOSPLAN Ingenieurbüro Anlagentechnik GmbH* to conduct an independent review of the Project's flowsheet.

ERCOSPLAN concluded that the flowsheet was state of the art and also suggested some possible process improvements/optimisations. Reward will thus proceed with further research and development on the LD process with the objective of increasing efficiencies, enhancing recovery and thereby improving the overall economics of the LD Project.

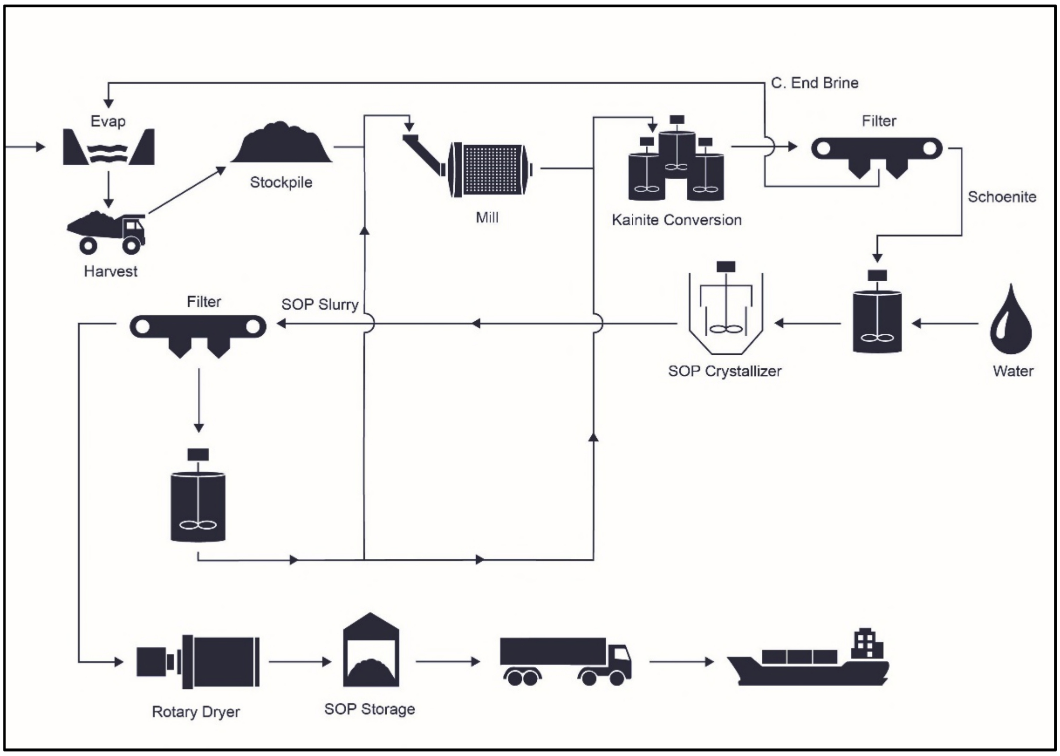

Figure 10. Schematic layout of the LD process plant

Kainite Crushing and Milling

Kainite solids reclaimed to the process plant will discharge into a kainite feed bin to allow for steady flow into the plant. The kainite feeder discharges into a sizer which reduces the feed size to a P95 of 50mm. The solids are then further reduced in size in a conventional ball mill in closed circuit.

The ball mill will be operated with 100 mm media and a coarse grate aperture of approximately 80-90 mm to minimise over grinding.

Conversion and Dewatering

Screen underflow from the milling circuit is fed into the first of three conversion tanks which operate at approximately 25% solids. The conversion process converts kainite to schoenite and/or leonite (potassium magnesium salts) and dissolves some of the remaining halite from the kainite harvest. The conversion tanks operate at a temperature of approximately 40°C.

The third conversion tank discharges into a conversion filter feed tank which feeds two vacuum belt filters operating in parallel.

SOP Crystallisation and Dewatering

The schoenite and/or leonite solids from the conversion belt filter are repulped with hot water to a specific solids ratio and then fed into the crystalliser. SOP slurry is extracted at a controlled rate from the crystalliser to maintain the required slurry density in the unit. The crystalliser discharges the slurry into the agitated SOP leach tank where it combines with a flow of hot water that dissolves any residual magnesium. The diluted slurry is fed through a pre-thickening phase before being transferred to the final drying stage.

SOP Drying and Cooling

A rotary dryer is used to remove the remaining moisture contained in the SOP product. The exhaust gas from the dryer will be passed through a cyclone and wet scrubber to recover entrained dust and particles and to meet local environmental discharge requirements prior to being released into the atmosphere.

The hot, dry SOP product is then cooled before being conveyed into the product storage bin prior to transportation off site.

The final, high quality SOP product is approximately 98.2% K_2SO_4.

Product Logistics

The SOP product will be stored in the product storage bin which will discharge directly into quad side tipper trucks that will haul the product to Port Hedland. The trucks will have a capacity of 95 tonnes and will operate 24 hours a day which equates to approximately 15 trucks leaving site per day at full production. The average one-way trip will take a day and therefore a fleet of approximately 30 trucks will be required.

At Port Hedland, the trucks will side tip into a bin and feeder which will drop onto a conveyor and overhead conveyor stacker for storage within a 100 m by 30 m storage shed.

SOP product will be reclaimed into Qube Rotabox containers by a front end loader and delivered to the wharf on flatbed trucks at the rate of 14 Rotabox containers per hour with 21 t to 25 t of SOP per container. At the wharf the containers are picked up and tipped into the shipping vessel. Rotabox containers are then returned to the storage shed for refilling (Figures 11a and 11b).

Figure 11a. Movement and stacking of Qube Rotabox containers at the berth

Figure 11b. Qube Rotabox Container being tipped into a shipping vessel

Water Supply

A water balance has been developed for the Project which indicates a yearly consumption of approximately 4.5 gigalitres of raw, low-salinity water. The supply of low-salinity water for LD will be sourced from two new borefields (the Corey and the Northern borefields) that will be developed during the construction phase of the project. A total of six production bores and five spare boreholes will be installed at the Cory Borefield approximately 16 km to the north of the proposed plant site. The Northern Borefield, which will also be equipped in time for production ramp-up, is roughly a further 13 km to the north and will consist of 17 boreholes, including two spares.

Raw water will be transferred from the borefield to a raw water pond located in the plant site through a 335 mm diameter polyethylene pipeline.

Fire water and industrial water (dust suppression, wash water, truckshop, etc.) will be used directly from the raw water pond while process water and potable water will be treated in separate systems prior to use.

Based on the raw water composition, calcium must be removed prior to feeding water into the process plant to prevent buildup of calcium sulphate ($CaSO_4$) fines in the SOP crystalliser circuit. Water softening using ion exchange (IX) resins was selected as the preferred method of treatment based on lower capital and operating costs as salt (or salt brine) produced on site can be used for backwashing the IX resins. The water treatment plant will consist of pre-filtration followed by IX contactors.

A suitably-sized reverse osmosis (RO) facility will supply potable water to the village, administration offices, workshops and process plant. The potable water storage tank has sufficient capacity for the short periods of time that higher flows are required, filling up slowly in-between the larger demands.

Allowances have also been made for industrial water consumption, used for dust suppression, plant hose up allowance, gland water, at the ponds and pumps and in the workshop.

Infrastructure

Road

The Project site is accessed from Newman via the Marble Bar Road, Jigalong Road, Balfour Downs Road, Talawana Track and the site access road (Willjabu Track). The 412 km access route consists of 57 km of sealed road along the Marble Bar Road and 355 km of unsealed roads (Figure 12). The following sections describe the upgrade requirements (where applicable) for the access roads.

The Jigalong and Balfour Downs Roads are unsealed public roads that only require upgrade at the Fortescue and Jigalong Creek Crossings on the Jigalong Road and minor drainage works along the Balfour Downs Road.

The current Talawana Track is a low use remote rural road which becomes inaccessible with rain events and is considered unsuitable for Project-generated traffic flows. It will thus be upgraded from its intersection with the Balfour Downs Road and extended to its intersection with the Willjabu Track, to a level of construction that will provide haulage and vehicular access to the project site with minimal interruption due to rain events. This will include the installation of drainage structures along the road alignment as well as the construction of the roads formation.

The current Willjabu Track was constructed during the early exploration phase of the Project to provide access for exploration personnel and equipment. The track traverses approximately fifty dunes of varying size and shape along the alignment. It will be upgraded from its intersection with the Talawana Track to the LD process plant, to a level of construction similar to that of the Talawana Track.

As the proposed access road traverses sand dunes, allowance has been made to batter the excavated slopes down and install slope stabilisation and erosion prevention structures in the form of Geofabric matting.

The road formation will be constructed using local materials with the embankment being constructed from material recovered from the alignment and associated drainage structures.

Based on the initial surveys, investigations and inspection there is sufficient availability of calcrete adjacent to the tracks to provide the material for use as basecourse.

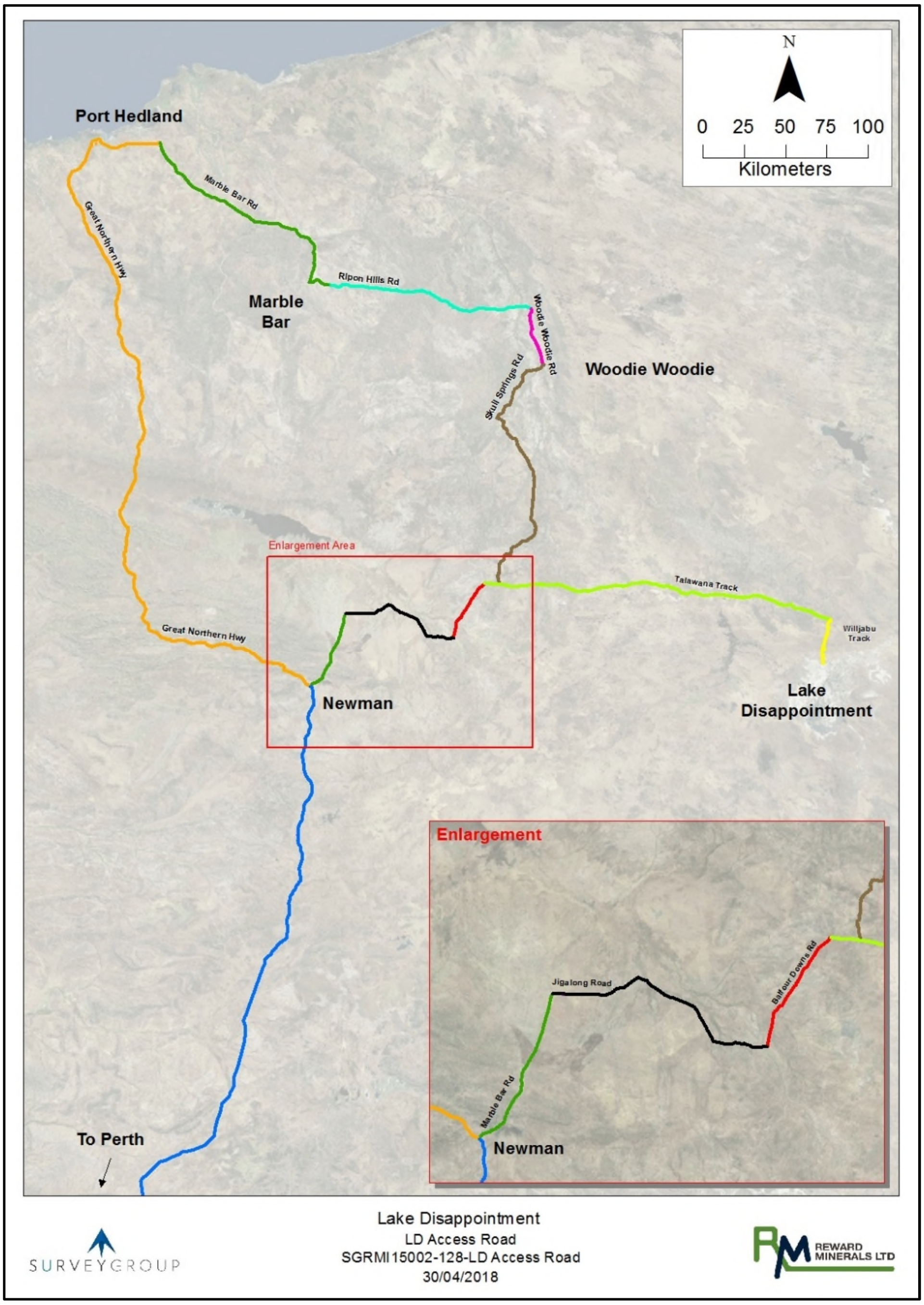

Figure 12. Access roads to LD

Airstrip

The location for the Project airstrip has been selected to provide an adequate line of sight for aircraft operation. The runway strip will be 2,100 m long and 18 m wide with a 31 m wide strip on each side. The airstrip will be designed as an unsealed strip suitable for use by turbo prop and BAE 164-100 jet aircraft (71 seat capacity) fitted with gravel kits. Allowance has been made for the additional clearing of vegetation on approach paths to comply with all relevant legislation and codes.

The airstrip will be fenced with a stock and vermin proof fence, with gates suitable to allow access to the aircraft parking area for vehicles to deliver fuel to the location and will also include:

- hard stand area for use as an aircraft parking area

- aircraft refueling facilities
- light vehicle and bus parking areas
- all weather shade structure
- associated approach and transitional surfaces
- associated drainage works
- an unsealed airstrip access road approximately 1,300 m long.

Fuel Storage and Distribution

A fuel farm will be installed with a capacity of approximately 2,000 m^3 of diesel fuel, which will provide approximately two weeks storage of fuel for the operation. The fuel farm will store two products, fuel for power generation and mainstream diesel for all other equipment and vehicles. Aviation refueling facilities will be provided separately.

Dedicated power station storage tanks will be provided located within the fuel storage compound. To minimise firefighting requirements under AS1940 the fuel farm will consist of 2 separate fuel farms of 1,000 m^3 each. Additionally, the separation allows for additional storage to be added in the future (if required) without upgrading firefighting requirements.

Fuel will be delivered to site via triple road trains from Port Hedland.

Buildings

The accommodation village will be constructed during the early stage of Project development and will be used for the construction workforce before being handed over to the operations team. The accommodation village will have 250 rooms consisting of 150 ensuite rooms and 100 rooms serviced by an external ablution block.

The preliminary village layout will consist of the following:

- transportable type permanent accommodation building units with ensuite and 4 single rooms per building
- transportable type permanent accommodation building units, 4 single rooms per building without ensuite
- recreation room and gymnasium
- wet mess facilities
- kitchen and dining room
- common fully equipped laundry and ablution facilities
- training/first aid room
- potable water treatment plant (reverse osmosis)
- sewage treatment plant
- equipped garden/tool shed
- communication services
- reticulated power and water

Administration Facility

The administration offices will be located at the entry to the process plant and include a medical treatment facility adjacent to the complex. It will include offices, meeting rooms, training facility, lunch rooms and toilets and be a transportable style building.

Workshop, Stores and Laboratory

The workshop and stores facilities will be located at the process plant site and consist of a series of containers and domes. The following facilities will be provided:

- boilermakers workshop, tooling area and store
- heavy mobile equipment workshop, tooling and store
- road train maintenance bay, oil storage and filter store
- light vehicle maintenance bay, tyre fitting area and light vehicle stores
- pump maintenance bay
- workshop office, crib room and ablution facilities
- store area and store office
- mobile equipment wash down facility

The workshops will be equipped with tooling to allow efficient operation of the maintenance facility.

The wash down facility has been designed to include a dirty water settling area and oil separation equipment.

A laboratory will be constructed to provide analyses of harvest salts, process brines and plant samples. The building will be air-conditioned and comprise a dry lab, offices, storage areas and semi-enclosed wet and dry areas and will be equipped with standard laboratory testing equipment, sample preparation equipment and consumables.

Power Supply and Distribution

The project requires an identified 14 MW maximum demand of electricity. The electricity is required to satisfy the estimated electrical energy requirement of the processing plant of 10 MW. The balance of the 14 MW maximum demand is required for supplying non-process infrastructure such as the:

- camp and administration buildings
- workshop
- water softening and RO plant
- airfield, etc.

The electrical energy at the site is to be supplied via an independently owned power station selling energy over the fence. Enquiries placed during the study to parties interested in supplying the site energy requirement revealed opportunities for further investigation, identified as follows:

- Supplying electrical energy over the fence and also processing plant heat energy requirements.
- Utilising the readily available solar energy at the site with proprietary technology to meet both the electrical and heat energy requirements of the processing plant.

The power station 11 kV switchboard shall be equipped with eight identified feeders to feed the following site loads:

- stockpile substation
- 3 processing plant substations
- processing plant mill transformer
- administration Ring Main Unit (RMU)
- water softening plant
- mobile plant workshop and wash bay.

Communications

The Project site is in an area devoid of any form of telecommunications service apart from satellite and enquiries to provide a fibre optic or microwave connection to the mine site proved prohibitive in cost. As a result, enquiries were made as to the practicality of a satellite link.

A satellite links (with limited bandwidth but sufficient for voice and internet services) has been identified and costed utilising a 2.4 m diameter dish antenna linked to an onsite mobile network, servicing mobile phones out to an approximate radius of 30 km.

The satellite and mobile tower facilities will be integrated into the site wide telecommunications network consisting of optical fibre cabling connected in a self-healing ring running between key site locations.

The camp and airfield shall be connected as a star connection to the administration communications hub.

The onsite telephone system will be a Voice Over Internet Protocol (VOIP) system utilising the site internet services and router to the site satellite and mobile tower service.

Capital Cost Estimate

The capital cost estimate covers the design and construction of the LD process plant and all associated infrastructure, equipment and ancillaries. The estimate has a base date of the fourth quarter 2017 and is reported in Australian dollars (A$). No allowances for escalation of costs between this date and forecast date of incurred costs were made by CPC.

The LD cost estimate (both capital and operating costs) has been classified by CPC in accordance with its own “CPC Guideline CPC-ES-W-001 Capital and Operating Cost Estimate” as a Class 4 estimate as defined with an accuracy of +/-20%. CPC followed a “Budget Priced” methodology to estimate the Project’s costs which implies that the estimate is predominantly based on supplier and / or contractor developed cost estimates.

Quotations and / or tenders support the capital cost estimates for all major plant and mechanical equipment, civil engineering works on site and all other infrastructure, evaporation ponds, halite and crude potash harvesting, camp, provision of power and product logistics and any other material item. Factored material supply and construction costs have been used only where quotations or tenders have not been received.

CPC compiled the capital cost estimate for the process plant, related equipment and services that will be provided by vendors. Reward also provided inputs to the estimate, mostly based on competitive tenders, which were reviewed by CPC:

- access road and airstrip
- operations center and village bulk earthworks
- pond construction
- borefield
- bulk fuel facility

The capital cost required to develop the Project is estimated at A$302 million before Indirects and Owners Costs which add a further A$43 million to the total (Table 4). Adding a contingency of A$60 million takes the total initial capital cost to develop LD to A$405 million and A$451 million when pre-production operating expenses are included.

Table 4. LD SOP Project Capital Estimate

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**

Direct costs are those expenditures that include supply of the equipment and materials, freight to site and project site labour to construct plant and assembled equipment, supporting facilities and services.

Indirect costs are those expenditures covering temporary construction facilities plus engineering, procurement and project management services, and consultants (e.g. geotech), contractors and EPCM indirect costs and vendor support during commissioning. EPCM costs have been factored based on a percentage of the direct costs in a range between 5% and 15%.

Owner's costs have been factored based on 5% of the project direct costs and cover costs associated with the owner's team and related expenses, insurances, and site works. These include:

- flights, accommodation and fuel (costs excluded by the contractors for fuel, flights and accommodation have been estimated by CPC and included in the owner’s costs)

- owner's team costs – factored based on 5% of the project direct costs to make provision for owner's project management team labour and expenses, commissioning labour and expenses, approvals and licenses and training of personnel
- spares – the cost for initial commissioning, operating and capital spares stock was factored using a percentage established from industry experience of 5% of equipment supply costs
- first fill reagents and consumables – included in the estimate, developed from the quantities and costs in the operating cost estimate and process design criteria. Nominally based on 30 days storage, however in this instance they are based on one full charge for the ball mill and first fill of the fuel farm (which is two weeks supply of diesel). In most cases, equipment suppliers will supply required first-fill lubricants with the supplied equipment. However, a provisional cost for first-fill lubricants was included in the estimate to allow for any potential omission.

The Contingency allowance is to cover unforeseen risk items and contingent events over which the Project team and/or Reward have no control but which could affect the financial outcomes of the Project. It does not cover scope changes nor design growth. The Contingency is over and above the capital cost estimate to make up the total project development capital cost estimate for the Project. It has been applied to the estimate by assessing the level of confidence in the estimate inputs including engineering, estimate basis and vendor or contractor information. A Contingency is not a function of the estimate accuracy.

The Contingency rates applied to the capital cost estimate by major area and are shown in Table 5.

Table 5. Contingency per Cost Area

Cost Area	Contingency Applied %
Roads, Airstrip and Bulk Earthworks	15
Evaporation Ponds	20
Concrete, Structural Steel and Platework	20
Mechanical Equipment and Piping	10
Electrical & Instrumentation	20
Accommodation Village and Mobile Fleet	20
Borefields	15
EPCM	20
Owners Costs	20

The estimate includes certain equipment and materials sourced from outside Australia. The exchange rates used in the estimate of A$/US$ of 0.75 is as agreed with Reward and no allowance for any variation from the above rates has been included in the estimate. Only 3.1% of the capital cost relates to quotations for equipment directly quoted in foreign currency, although it is acknowledged that a large portion of other costs reported in A$ may have inputs affected by foreign currency fluctuations within supplier quotations. This can include equipment and components (steel, electrical cable, etc.) however, there is no way to precisely determine the actual amount and therefore currency fluctuation impacts are not quantified.

Sustaining capital of some A$59 million post commissioning will be required for ongoing development of the ponds and halite storage which is phased over the life of the operation. These costs are not included in the capital cost estimate but are reflected in the financial evaluation.

The construction methodology is based on an Engineering, Procurement and Construction Management (EPCM) model and it is envisaged that a series of horizontal packages will be awarded for the process plant and associated infrastructure. The estimated capital costs therefore reflect a single construction phase.

Operating Cost Estimate

The operating cost estimate for the LD Project was developed in Australian dollars using prices obtained in, or escalated to, the fourth calendar quarter of 2017. The estimate has an accuracy of ±20% and was developed by CPC, using inputs from contractors, suppliers and Reward where appropriate. The estimates include operating costs for:

- Harvesting:
    - contractor yearly management, administration and insurance fees
    - contractor harvesting of both crude potash salts and halite (year 3 onwards)
    - brine trench maintenance
    - fuel supplied to the contractor
    - flights and accommodation for the contractor's workforce
- Processing:
    - labour
    - power
    - diesel consumption
    - maintenance
    - vehicles
    - flights and accommodation
    - other direct general costs (e.g. laboratory sample analysis)
- Road maintenance:
    - contractor yearly management, administration, insurance and documentation fees
    - contractor road maintenance costs
    - fuel supplied to the contractor
    - flights and accommodation for the contractor's workforce.
- Hauling and shipping:
    - costs associated with the transport of SOP from site to Port Hedland
    - accommodation costs for haul truck operators at site
    - costs associated with storage of the SOP in Port Hedland
    - loading and transport of SOP from the storage shed to the port and loading onto ships

The estimate is based on new processing facilities to produce approximately 400,000 tonnes of SOP (98.2% K_2SO_4) and all direct costs associated with these facilities have been included.

Labour

Labour costs have been estimated based on 12 hour shifts with 2/1-week rosters for 24-hour operational roles, 5/2 back to back rosters for dayshift only (administrative and management) roles. This covers the 24 hour a day operation of the processing plant with support personnel allocated to day shifts.

The labour costs include statutory burdens of 32% to account for Australian superannuation costs, leave and other statutory allowances.

Additional maintenance and shutdown labour will be sourced from external contractors as required and is accounted for as a separate line item within the Project's general & administration costs.

Labour rates have been built up based on 9 different job levels from that of a Junior Skilled employee to the General Manager.

Power

Power consumption is based on the load list developed from the mechanical equipment lists for each process area, accounting for load and motor efficiency factors, and equipment utilisation. A 5% system loss factor is included to account for the losses incurred in transferring power through the system process inputs. Power for operating the processing plant has been scaled for the first year of operation as production ramps up. Power operating costs become constant from year three of the operation which is when steady state (nameplate) production levels are reached.

Power costs for the project are based on local diesel generators providing necessary power for the project supplied via an independently owned power station selling energy over the fence. The cost to provide power was based on a competitive vendor quotation for this arrangement.

The power cost includes construction and operation of the power station and all associated fuel and other consumables. The power cost excluded accommodation at the camp as well as flights to and from site for the power station personnel. These have been calculated separately and included under accommodation and flight costs.

The vendor quotation also excluded fuel costs which have been added to the power costs at a vendor specified consumption rate of 0.25 L/kWh. The variable power cost used in the operating cost estimate (excluding fuel, flights and accommodation) is A$0.025/kWh. There is an additional monthly fixed cost for operating of the power station.

Power required for the operation of the brine and borefields pumps will be by local generator supplied as a packaged unit with each pump and all operating costs are based purely on fuel consumption.

Maintenance

Maintenance costs have been applied as a percentage of capital costs of installed equipment except for maintenance labour which has been captured as a separate line item for the contracting teams required for scheduled maintenance shutdowns. This enables the accurate capture of overhead costs, specifically flights and accommodation, involved in bringing the contracting teams to site.

General and Administration (G&A) Costs

Costs associated with operating the Project site have been included under a general and administrative category of operating costs (Table 6). These costs include allowances for:

- testwork and analysis
- general maintenance contractors
- technical consultants

- minor consumables
- vehicles
- security
- insurance
- office consumables, cleaning, IT and communications
- training

Vehicles have been costed for the use of the key operational personnel. Purchase costs are included in the capital cost estimate while fuel and servicing costs are included in the operating cost estimate.

Table 6. Annual G&A Expenses

Category	Annual cost (A$/year)
Administration	1,189,833
Insurances	1,057,500
Labour & Services	318,680
Site Vehicles	926,095
Supply	112,000
HR, Training & IT Services	359,000
Occupational Health & Safety	265,000
Environment	180,000
Laboratory	300,000
Contingency (20%)	408,811
Total G&A Costs	**5,116,919**

Product Transport and Logistics

The operating cost estimate for the road transport of the final SOP product from site to Port Hedland, a distance of 866km, was based on competitive quotes with the accepted quote being a figure of A$100/t. Costs were also developed for product storage and reclamation at the port and loading onto ships. Reward developed a reclaim cost based on the time required to load a full shipment of material, including machine and operator utilisation whilst fuel consumption for the operation of the front end loader involved in the operation of filling the Qube Rotabox containers was calculated separately.

A quotation by Qube Bulk (Qube) to perform all tasks related to picking up the containers from the product storage shed, transporting them to the wharf and then loading the product into the shipping vessel was the preferred option and includes:

- Provision of a sufficient number of Qube Rotabox containers for ship loading cycles
- Transport of the full containers from the storage shed to the wharf (from anywhere within a 20 km radius of the port)
- Mobile harbour crane, Reachstacker, Mafi and Rotator usage to load the product into the shipping vessel
- Stevedoring labour

In addition to the Qube costs, other costs were added to estimate the total logistics cost to transport SOP from the product storage shed to being loaded into the shipping vessel of A$23.40/tonne:

- Port Hedland wharfage costs
- marine navigation and oil pollution levies
- quarantine practique and inspections
- pilotage, towage and mooring/unmooring
- lines launch, berthage and tonnage dues
- security and ISPS charges
- port infrastructure/improvement fees
- demurrage allowance

A bagging option at Port Hedland was also considered as an alternative but found to be prohibitively expensive compared to the selected bulk alternative.

Closure Costs and Rehabilitation

A detailed mine closure estimate has been developed for the project which would be incurred over a one-year period at the end of the operating life of the project. In addition to the closure cost of A$16.03M, a 1% per annum non-refundable contribution to the WA Mining Rehabilitation Fund (MRF) has been included in the operating cost forecast based on the mine closure plan estimate and on discussions with Regulatory authorities.

Market Overview

Potassium, commonly known as potash, is one of the three essential macro-nutrients for plant growth along with nitrogen and phosphorus. It facilitates sugar movement in plants and boosts resistance to drought and disease. It helps to improve crop yield and quality. Potash minerals are the main sources of potassium.

There are no substitutes for potassium as an essential plant nutrient; manure and glauconite (greensand) are low-potassium-content sources but can only be transported profitably over short distances. Around 85% of potash is used as fertilisers; other applications are as drilling muds and water softener in the industrial sector and as a food supplement in the animal feed sector.

Potash is applied to crops in the form of various potash salts: potassium chloride, commonly known as muriate of potash (MOP), sulphate of potash (SOP), potassium-magnesium sulphate, also known as sulphate of potash magnesia (SOP-M) or nitrate of potash (NOP, KNO_3). MOP is the most commonly used potash fertiliser with around 90% share of potash market with the balance being dominated by SOP (7-8%). NOP and other sources account for a very small market share of 2-3%.

Sulphur is increasingly recognised as an essential plant nutrition because it is a component of amino acids, proteins, fats and other compounds found in plants. High usage of manufactured chemical fertilisers that contain little or no sulphur and the decrease in atmospheric sulphur deposition are contributing to sulphur deficiencies in soil. Sulphur can be applied direct in elemental form or as sulphates. Combined application of potash and sulphur in the form of sulphate of potash in crops that are sensitive to chloride can be advantageous.

SOP is used as a preferred fertiliser product for the application of potassium and sulphur in high-value, chloride-sensitive crops such as vegetables, fruits, potatoes, nuts and turf grass as it has both nutrients in an optimal form readily available to plants. SOP is virtually chloride-free, has the lowest salt index of all the common K-fertilisers (Figure 13) and is recommended for use in areas at risk from increased soil salinity. For these reasons, it is considered a niche, specialised fertiliser product attracting a premium price over MOP. SOP is marketed in powder, granular and soluble grades.

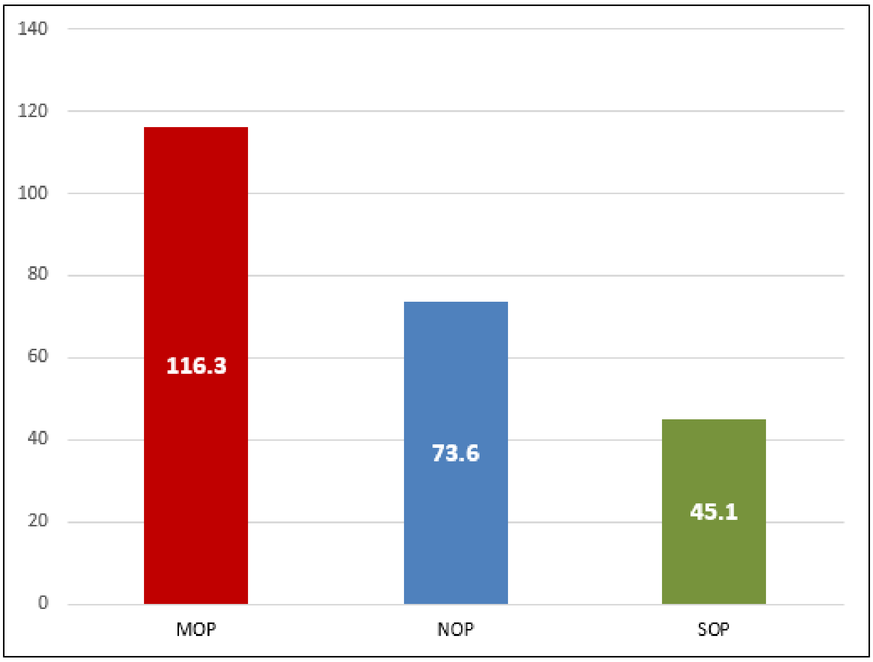

Figure 13. Salt Index of the main potash fertilisers (Base Index: 100 = Sodium Nitrate)

Demand

Demand for potash is driven primarily by its use as a fertiliser. An expanding global population, changing dietary patterns (higher meat consumption, fruit and vegetables) and decreasing arable land per capita are the main contributing factors driving increasing demand for manufactured fertilisers including potash. Historically, potash application has been below optimal levels, particularly in developing countries, however this is expected to change over time and result in rising potash demand in these countries.

Future overall demand for potash fertilisers is forecast to increase on average by 2.5%-3% per year by the International Fertiliser Association and other leading industry participants and sector analysts. The SOP growth forecasts are generally forecast to be higher than this average.

Supply

Evaporite-hosted potash deposits are the largest source of salts that contain potassium in water-soluble form, including potassium chloride, potassium-magnesium chloride, potassium sulphate, and potassium nitrate.

Global SOP production capacity is estimated at around 8.7 Mt/y: 6.9 Mt/y in China (more than 20 producers), 1.1 Mt/y in Europe (Tessenderlo 0.7 Mt/y, Kemira 0.2 Mt/y and Eurochem 0.2 Mt/y), 0.3 Mt/y in Chile (SQM), 0.3 Mt/y in the USA (Compass Minerals) and 0.1 Mt/y in India (Archean). (1.2 Mt/y of SOP-M from K+S is not included here as it represents a different market segment that includes magnesium sulphate.)

A considerable amount of China's SOP production is now from brine sources although Migao produces via the Mannheim process in the south-central part of China and Ching Shiang Chemical in the east. SDIC's Luobupo is the world's largest brine SOP producer, located in the north-western part of China. Out of the 6.9 Mt/y production capacity, China's current production is estimated at around 3.7M t/y, implying a capacity utilisation rate of a mere 53%.

The underutilisation may be attributable to several factors such as high operating costs and logistics constraints, increasing levels of environmental regulation as well as deteriorating grades. While some of these factors are reasonably well-known, others are not. A common (alternative) view is that the high export tariff (until recently 600 Chinese Yuan or US$95 or A$127) discourages Chinese SOP exports and is thus the main cause of low capacity utilisation.

European production is through the Mannheim process whilst US and Chilean production is brine-based. The Mannheim process is high cost as it converts MOP into SOP by adding sulphuric acid under pressure and at high temperature. The process yields hydrochloric acid as a 'by-product', however if the hydrochloric acid cannot be sold then its disposal is environmentally challenging and thus is a limiting factor to production. Brine-based processes are relatively cheaper and are more environmental friendly.

Price

SOP is premium product that is essential for increasing the yield of chloride-sensitive high-value, long-lasting produce, improving product quality and for soil salinity control. It therefore attracts a premium price over MOP. Historically, at least until the end of 2012, the SOP premium over MOP was in the US$100 to US$150/t range (or 30% to 50% higher) as can be seen in Figure 14.

However, since early 2013 the SOP premium over MOP has widened to the US$250/t to US$300/t range (around 100%+ increase) when the SOP price remained flat whilst the MOP price declined significantly (perhaps prompted by the dissolution of the Uralkali-Belaruskali joint marketing arrangement). It may be argued that SOP's value in use over MOP contributed to its stable pricing over this period while demand held up.

Generally, the price of bulk commodities can vary significantly from one region to another as factors such as unit logistics costs, distance between supply source and delivery destination, tariffs and other regulatory factors can come into play. In the case of fertilisers, soil conditions, crop patterns and weather are all additional contributing factors. Such variations tend to have a high impact in a relatively thinly traded niche product market when compared to widely-traded, large volume bulk commodities.

To generate a SOP price forecast one could use the underlying MOP price plus a suitable conversion cost. This could be expected to provide the lower limit for the SOP price in an economically rational market. Conversion costs are estimated to be in the range of US$100/t to US$150/t (A$133/t to A$200/t) and as SOP comes with sulphur as an additional nutrient, one can expect a nutrient credit of up to US$20/t (A$27/t) based on a sulphur price of around US$120/t (A$160/t).

However, a margin assessment of existing (and long term) players also provides further price insight and guidance. In these cases, typical earnings before interest, taxes, depreciation and amortisation (EBITDA) percentage margins have been consistently in the high teens to mid-20's over the past 20 years for certain Mannheim producers and higher (even in the high 30s) for certain brine producers during the same period.

Figure 14. Recent historical NW Europe midpoint SOP prices
Source: Integer Research

Using these factors, the long-term SOP price for the PFS has been forecast to be in the range of US$450/t to US$515/t (A$600/t to A$687/t) for a typical standard grade product as a central case estimate and US$500/t (A$667/t) has been used as the base case price for LD's product.

Financial Evaluation

The LD Project PFS financial model includes a detailed build-up of costs from their component parts and drivers and is structured according to best practice to include the following features:

- Modular layout including formal inputs, calculations, outputs and scenario sheet structure.
- Clear and consistent model-wide cell colour coding and collapsible sectioning within model sheets.
- Sensitivity analysis according to single or multiple criteria.
- Left to right formula consistency for easier auditing.
- No hard-coded variables and use of range names for key constants.

The model has been constructed on a nominal basis to ensure the correct treatment of depreciation, tax and tax losses and a quarterly periodicity is used to ensure that the build-up of pre-production drawdowns and working capital is properly reflected.

The base currency of the model is Australian dollars (A$) and an interest / inflation rate of 2% is assumed. Given that SOP is sold on international markets in US dollars (US$) the model captures revenues in US$ and converts to A$. SOP is priced at US$500/t (A$667/t) on a real constant basis to which 2% US$ inflation is applied. The exchange rate used is A$1:US$0.75.

LD was evaluated as a 27-year project, with a start date coinciding with the commencement of a Definitive Feasibility Study ("DFS") on 1 July 2019 and comprising a 13 quarter (3¼ years) development and pre-production period is followed by a 1-year ramp-up and then 87 quarters (21¾ years) of SOP production at a full annual production rate of 407,500 t of SOP. A fully costed 1 year closure period was included, although a transition to brine extraction from bores at LD could extend the Project life for decades to come.

Over its assumed initial operating life, the Project is expected to produce 9.0 Mt of SOP and will generate before and after-tax real free cashflows of A$1.990 billion and A$1.362 billion respectively based on a forecast SOP price of US$500/tonne and a A$1.00/US$0.75 exchange rate. It has been conservatively assumed that a standard grade product will be produced and therefore no price premium has been included in the estimate of future revenues. Based on an All-in Sustaining Cost ("AISC") of A$394/tonne SOP, LD will deliver an estimated average annual EBITDA of A$110 million, average annual pre-tax cashflow of A$87 million and A$60 million after-tax. The Life-Of-Mine ("LOM") Revenue to Operating Cost ratio is 1.7:1, the Peak Project Cash Drawdown is estimated at A$452 million (Real) and the after-tax payback is just under 6 years from commencement of production.

For the Project valuation a real discount rate of 8% has been used, which is considered appropriate for an advanced project at this level of cost definition (+/-20%) in a stable jurisdiction such as Australia. It is estimated that the project will generate a pre-tax net present value ("NPV") of A$460.2 million and post-tax NPV of A$252.6 million. The IRRs are respectively 17.8% and 14% pre- and post-tax.

Royalties

In Western Australia, mineral royalty rates are prescribed under either the Mining Regulations 1981 or various State Agreement Acts and there are effectively two systems used to collect royalties:

- **Specific rate**: Generally applied to low value construction and industrial minerals, the royalty is calculated as a flat rate per tonne produced. The current gazetted rates, which will remain in force until mid-2020, are 73 cents per tonne for salt and 117 cents per tonne for other minerals in this category where no state agreement is in place; and
- **Ad valorem**: Applied to most other minerals (iron ore, diamonds, gold and base metals etc), calculated on a proportion of the 'royalty value' of the mineral. The royalty value is broadly defined as the quantity of the mineral in the form in which it is first sold, multiplied by the price in that form, less allowable deductions. The actual ad valorem rate applied is determined by the level of processing to ensure a commensurate return to the state whilst maintain the state's competitiveness as an investment destination. The level of processing gives rise to a three-tiered rate as follows:
    - bulk material (subject to limited treatment) – 7.5 per cent of the royalty value;
    - concentrate material (subject to substantial enrichment through a concentration plant) – 5.0 per cent of the royalty value; and
    - metal – 2.5 per cent of the royalty value.

At a very early stage in the assessment of the LD project, Reward took a proactive approach and engaged with the then Department of Mines ("DMIRS" today) to obtain guidance on the likely royalty rate on SOP from a brine operation (which is not defined in the Mining Act). On the basis that Reward's SOP product would be in a fully refined state, the Company sought a ruling that the State Royalty would be 2.5% ad valorem.

After a period of consultation, the Department advised that it would seek a determination from the Department of Premier and Cabinet on the SOP Royalty payable by Reward with a recommended 3.75% ceiling to apply with a decision by Cabinet to be made closer to the project commencement date.

Whilst still of the view that a 2.5% ad valorem rate is defensible and also having noted the use of a 73 cent per tonne Specific Royalty Rate by some of its industry peers, Reward has (arguably) been conservative in adopting the 3.75% ad valorem rate to evaluate the LD Project. This approach was taken not only as a result of the historical guidance received by the Company but also on the back of a recent high-level discussions with DMIRS representatives.

As a result, a total royalty of slightly less than 5% has been used in the LD Project financial model. This is made up of the 3.75% state royalty calculated on the FOB value of the product and the Martu Royalty of 1.25% of the ex-works value of the product.

Applying the Specific Royalty Rate of 73 cents per tonne (together with the Martu Royalty) improves the pre-tax NPV by approximately A$77 million.

Project Implementation

Project Execution Model

The recommended development methodology for the implementation of the project is engineering, procurement and construction management (EPCM) where Reward appoints an engineer to design and manage the implementation of the project. This approach allows Reward to monitor and control the budget, schedule and quality through all stages of project development and execution.

It is intended that the procurement of all equipment and bulk materials will be done by the EPCM engineer and will be free-issued to the construction contractors for installation. This will ensure control over the critical procurement activities to achieve the desired completion schedule and ensure control of quality to meet Reward's requirements.

The project capital cost estimate has been developed on the basis that a single organisation will provide the EPCM services necessary for the process plant and associated infrastructure and services, with the assistance of specialist sub-consultants as required.

EPCM Scope of Services

The EPCM engineer will provide services associated with the development of the process plant and associated infrastructure and services including the following:

- process engineering
- design engineering and drafting for earthworks, concrete, structural, mechanical, piping, electrical and instrumentation
- project services including cost control, scheduling, reporting, and claims processing
- procurement including purchasing, inspection of materials and equipment and expediting
- contract administration including tendering, awarding and management of major contracts
- logistics (transportation) coordination
- construction management including site management, control and inspection of all construction activities, quality and safety management
- commissioning

Specialist consultants will be engaged by Reward to provide the following services:

- EPCM services associated with the site access roads, airstrip and evaporation ponds
- geotechnical investigation

Project Implementation Stages

The project implementation strategy provides the overall methods of managing the project from detail design, procurement and construction through to commissioning. To meet the proposed schedule, the project implementation has been structured into five stages:

- definition phase – a feasibility study to estimate the capital cost for the implementation phase of the project to a ±10% accuracy level, used to form the budget for the project and as a basis to obtain project funding and make the project implementation decision
- early engineering phase – critical early engineering packages such as infrastructure and evaporation pond detail design
- detail design phase – EPCM Engineer awards the critical early works packages, completes detailed engineering, procurement evaluate and award the site infrastructure packages
- construction – commences following receipt of regulatory approval
- commissioning and handover – EPCM engineer will manage and coordinate commissioning of the process plant and support infrastructure

Implementation Schedule

A Level 2 project schedule has been developed covering all major activities from project approval through to commissioning and hand-over to operations. It also includes key milestones for the project, some of which will impose constraints. The key milestone dates for the development of the project are:

- July – December 2018 – DFS
- April 2019 – Commence early engineering works
- June 2019 – EPA approval and Project approval for execution
- September 2019 – EPCM awarded
- November 2019 – Commence site works
- February 2020 – Airstrip completed
- July 2020 – Site access road completed
- September 2020 – Accommodation camp completed
- November 2020 – Evaporation pond construction commences
- October 2021 – Commence process plant construction and brine pumping
- October 2022 – Crude potash salts harvesting commences
- October 2022 – Commence process plant commissioning
- December 2022 – Commence SOP shipments
- October 2023 – Full commercial production achieved

During the execution phase (i.e. once the project final investment decision has been made) the schedule will be extended to the next level of detail (Level 3) with inputs from the appointed EPCM, other contractors and suppliers.

Critical Activities

Following the necessary approvals, critical or near critical activities include the following:

- Design and construction of access roads and airstrip
- Design and construction of accommodation village
- Construction of evaporation ponds

- First year operation of evaporation ponds to build up initial bed
- Crude potash salts harvesting and commissioning of the process plant

The process plant is not on the critical path however there are some key equipment packages that have long lead durations as outlined in the table below.

Table 7. Key Equipment Packages

Equipment Package	Lead Time (weeks)	Ex Works Location
Crystalliser Package	48	Europe
Potash Centrifuge	48	England
Kainite Feed Sizer	38-40	Western Australia
Kainite Mill	32-33	China
Belt Filter	30	Western Australia
Product Dryer	26	USA
Kainite Feed Conveyors & Stackers	18-22	Western Australia
Product Bucket Elevator	22	Western Australia

Opportunities

Given the detailed level of study and analysis conducted around the project the sections below outline specific opportunities for potential economic improvement.

Transport and Logistics

The cost of road freight to Port Hedland followed by handling and ship loading is currently A$123.42/t SOP. There is significant scope to warrant both more advanced competitive tenders and strategic discussions with others operating in the region to improve the transport and logistics costs. Every A$10/t SOP of reduction in freight and logistics costs will produce an approximate A$21.8 million improvement in real after-tax NPV.

Plant Water Heating

The current study assumes that water for the plant will be heated using 9.5 million litres diesel in each full operating year at a yearly cost of A$6.3 million. Over the LOM this equates to 209 million litres of diesel at a cost of A$139 million. Reward is investigating the use of direct solar water heating to remove or drastically reduce the cost associated with this diesel consumption which, if successful, would increase NPV.

Crude Potash and Halite Harvesting

At present the harvesting of crude potash and halite has been costed based on utilising conventional equipment. Reward is aware of specific, bespoke machinery, which is used for the harvesting of salt and of the potential to explore dredging. The LOM overall cost of crude potash and halite harvesting is A$306.4 million and A$148.2 million respectively. Clearly, even a modest reduction of 10% in the overall cost of harvesting would deliver a substantial NPV improvement.

Contractor Consolidation

To date project quotations have been received from a range of contractors both for the construction and operations phases of the project. In terms of project implementation, it is envisaged that the number of contractors will be reduced to simplify both management and site operations and to consolidate and reduce overhead charges. As an example, harvesting and road contractor overheads alone for the operations phase are A$197.4 million LOM.

Flights and Accommodation

Manning levels on a FIFO basis have been considered in detail both for Reward employees and contractors during both construction/pre-production and production phases. The study estimates A$73 million for flights (132,725 return flights) and A$71.8 million for accommodation costs over the LOM. It is anticipated that, through competitive tendering and consideration of other alternatives, flight costs could be reduced. A 10% reduction in flight and accommodation costs would generate an improvement in the NPV of A$4.2 million.

Local Workforce Participation

The potential for training and employment for people from the local community is apparent. Aside from the long-term benefits for the local community there is the added corporate incentive to potentially capture flight and accommodation cost savings. There are additional opportunities to set up schemes for the local supply of machinery, plant and labour, which will also benefit the project and the local community and Reward is exploring the practicalities and potential benefits of such initiatives.