



# Lake Wells Potash (SOP) Project

*Best Positioned for Early Market Entry*

Scoping Study Presentation

March 2017

# Cautionary Statement & Disclaimer

## **Scoping study – cautionary statement**

The Study referred to in this announcement is a preliminary technical and economic investigation of the potential viability of the Lake Wells Potash Project. It is based on low accuracy technical and economic assessments, (+/- 35% accuracy) and is insufficient to support estimation of Ore Reserves or to provide assurance of an economic development case at this stage; or to provide certainty that the conclusions of the Study will be realised.

Approximately 86% of the existing Mineral Resource is in the Indicated category, with the remainder in the Inferred category. There is a low level of geological confidence associated with Inferred mineral resources and there is no certainty that further exploration work will result in the determination of Indicated or Measured Mineral Resources. Furthermore, there is no certainty that further exploration work will result in the conversion of Indicated and Measured Mineral Resources to Ore Reserves, or that the production target itself will be realised.

The Scoping Study is based on the material assumptions outlined below. These include assumptions about the availability of funding. While Australian Potash Limited considers all the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be accurate or that outcomes indicated by the Study will be achieved.

To achieve the outcomes indicated in this Study, initial funding in the order of A\$175m/US\$135m will likely be required. Investors should note that there is no certainty that Australian Potash Limited will be able to raise funding when needed. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of Australian Potash Limited's existing shares.

It is also possible that Australian Potash Limited could pursue other value realisation strategies such as sale, partial sale, or joint venture of the Project. If it does this could materially reduce Australian Potash Limited's proportionate ownership of the Project.

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

## **Forward looking statements disclaimer**

This announcement contains forward-looking statements that involve a number of risks and uncertainties. These forward-looking statements are expressed in good faith and believed to have a reasonable basis. These statements reflect current expectations, intentions or strategies regarding the future and assumptions based on currently available information. Should one or more of the risks or uncertainties materialise, or should underlying assumptions prove incorrect, actual results may vary from the expectations, intentions and strategies described in this announcement. No obligation is assumed to update forward looking statements if these beliefs, opinions and estimates should change or to reflect other future developments.



# Competent Persons Statements

The information in the announcement that relates to Exploration Targets and Mineral Resources is based on information that was compiled by Mr Jeffery Lennox Jolly. Mr Jolly is a principal hydrogeologist with AQ2, a firm that provides consulting services to the Company. Neither Mr Jolly nor AQ2 own either directly or indirectly any securities in the issued capital of the Company. Mr Jolly has over 30 years of international experience. He is a member of the Australian Institute of Geoscientists (AIG) and the International Association of Hydrogeologists (IAH). Mr Jolly has experience in the assessment and development of palaeochannel groundwater resources, including the development of water supplies in hypersaline palaeochannels in Western Australia. His experience and expertise is such that he qualifies 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 Jolly consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

The Hydrogeological information in this report has been prepared by Carsten Kraut, who is a member of the Australasian Institute of Geoscientists (AIG), and International Association of Hydrogeologists (IAH). Carsten Kraut is contracted to the Company through Flux Groundwater Pty Ltd. Carsten Kraut has experience in the assessment and development of palaeochannel groundwater resources, including the development of water supplies in hypersaline palaeochannels in Western Australia. His experience and expertise is such that he qualifies 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 Kraut consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

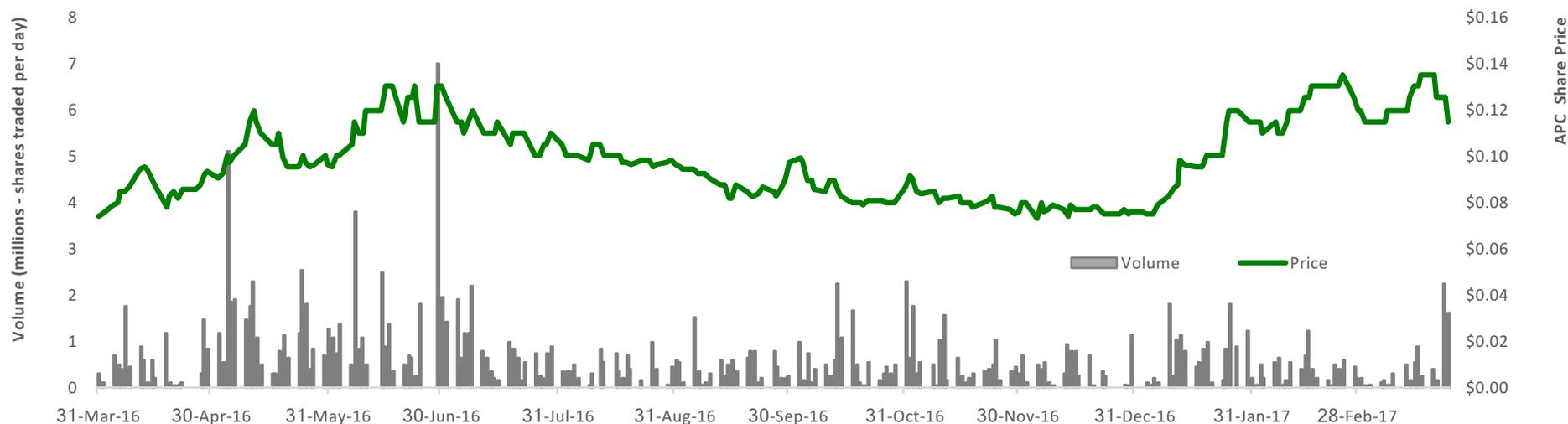
The information in this report that relates to Exploration Results is based on information compiled by Brenton Siggs who is a member of the Australasian Institute of Geoscientists (AIG). Mr Siggs is the principal geologist of Reefus Geology Services, a firm that provides geological consulting services to the Company. Mr Siggs is a director and shareholder of Goldphyre WA Pty Ltd, a company that holds ordinary shares and options in the capital of Australian Potash Limited (Australian Potash Limited (formerly Goldphyre Resources Limited), Annual Report 2016). Mr Siggs is a Non-Executive Director of Australian Potash Limited. Mr Siggs has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity currently 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 Siggs consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.



# Corporate Overview

Capital structure	
ASX Code	APC
Share price	11.5c
Shares on issue	221m
Options (unlisted, various)	30m
Market Cap.	\$25.4m
Cash (31 December 2016)	\$4.3m
Debt	NIL
Enterprise Value	\$22.7m

Shareholders	
Board & management	8%
Significant shareholders	19%
▪ Mark Creasy	13%
Top 20	49%



Australian Potash Limited (**ASX: APC**) has completed a Scoping Study into developing the Lake Wells Potash Project in Western Australia's Eastern Goldfields

- 100% owned Project located in one of the best mining jurisdictions in the world
- Adjustable production rates, low capital, high margin, long mine life
- Project development pathways simple & well understood





# Consultants

Process modelling and plant design



Brine resource and bore field design



Geotechnical investigations



Evaporation pond and infrastructure design



Environmental surveys and assessments



# Scoping Study team

## In-house

Alan Rubio B.Eng. (Mechanical)

Project Manager with +20 years experience in design, study management and project engineering

Shaun Triner B.Sc. (Mineral Science)

Process Manager with many years' experience including 21 years with Rio Tinto Dampier Salt finishing as Manager – Process Development and Technical Marketing

Carsten Kraut M.Sc. (Hydrogeology ..)

Principal Hydrogeologist with 20 years experience in groundwater resource evaluation and development

Brenton Siggs B.App.Sc. (Geology ..)

Exploration Manager with +20 years experience in the Australian exploration and mining industry



# Robust Financial Model

Scoping Study shows strong financial returns on a long mine life, low operating expenditure development

## Variable

Approximate pre-tax NPV10%*	A\$500m	US\$385
Approximate pre-tax IRR		33.0%
LOM average operating pre-tax cashflow <sup>#</sup>	A\$118m p.a.	US\$81m p.a.
Stage 1	A\$61m p.a.	US\$47m p.a.
Stage 2	A\$137m p.a.	US\$106m p.a.
LOM development capital intensity <sup>^</sup>	A\$1,126/t SOP	US\$868/t SOP

\*Based on Stage 2 being developed

<sup>#</sup>Operating cashflows include all revenue and operating expenditure, but exclude capital expenditure

<sup>^</sup>Exclusive of LOM sustaining capital and mine closure costs



## 2 Stage Development

APC will mitigate operational and commodity price risk through developing a staged development approach

Development	Years	Production	CAPEX (incl. contingency)	Payback
Stage 1	1 -5	150,000	A\$175m <sup>^</sup>	2.9 years
Stage 2	6 - 20	300,000	A\$163m <sup>#</sup>	1.7 years

- Portion of SOP produced through the conversion of imported MOP to SOP using the natural excess sulphate in the brine
- Scoping Study assumes expansion to Stage 2 occurs in Year 5 and the majority of Stage 2 capital expenditure is funded from internal cash flow
- Life of Mine (LOM) is 20 years (inc. Stage 1 & Stage 2) –upside to LOM through continued exploration

<sup>^</sup>Including contingency of A\$24m

<sup>#</sup>Including contingency of A\$23m



# High Margin Operation

Scoping Study modelled SOP sales price and operating expenditure show high operating margin

	CRU	Green Markets	Fertecon	Australian distributors	Average
Australian landed price per tonne SOP	A\$844	A\$901	A\$801	A\$946	A\$873
SOP price per tonne used in Scoping Study modelling					A\$795

Operating expenditure	US\$/t SOP	A\$/t SOP
Stage 1	283	368
Stage 2	261	339
Life of mine (20 years)	264	343

^ CFR costs include ocean freight (US\$23) and port charges export (US\$23) and import (US\$23)

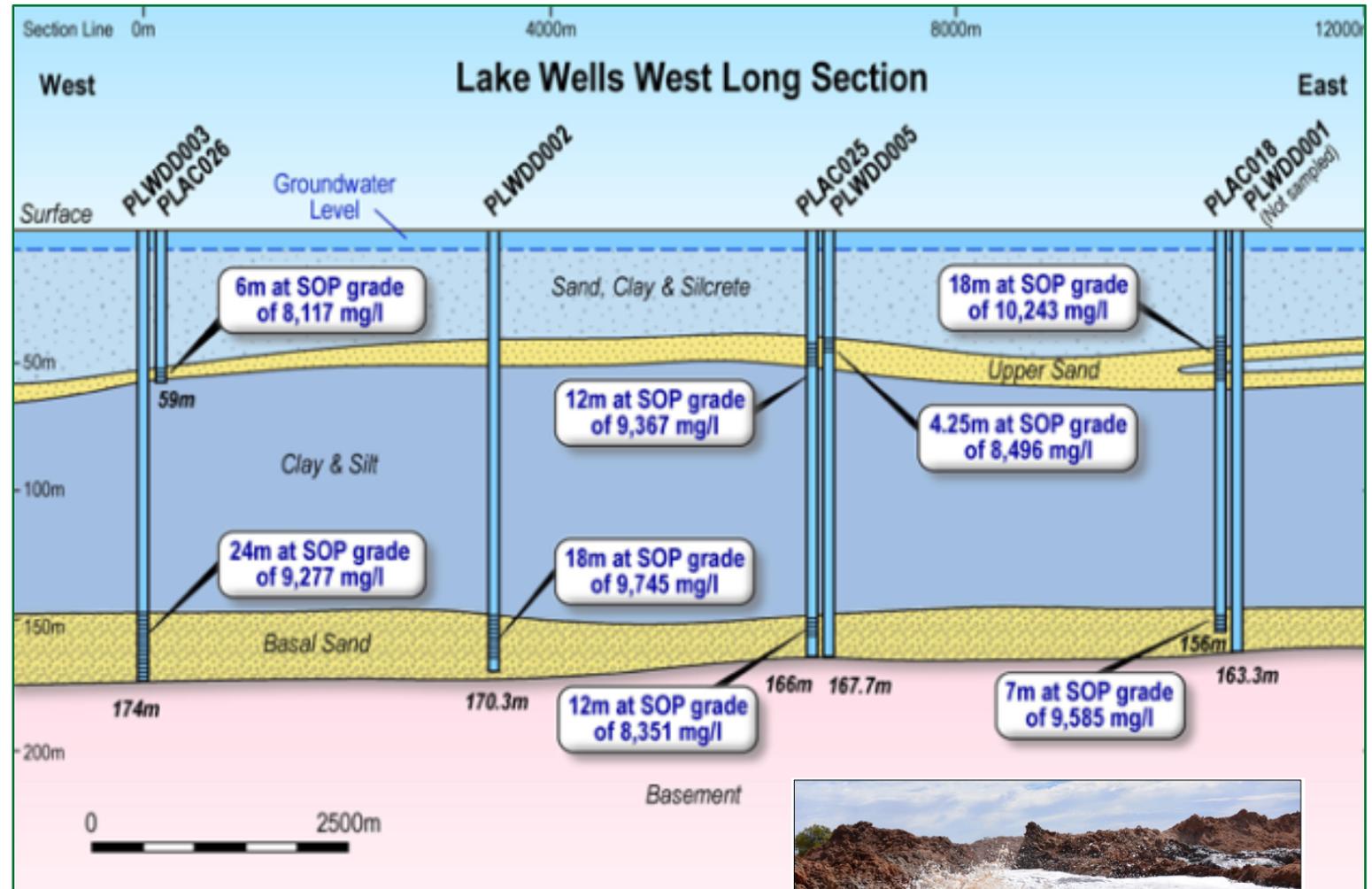
# Estimates of A\$ FOT SOP sales price using quoted overseas sources

\* FOB Florida



# Low Risk Brine Extraction

Brine extraction model is simple, low-risk & technically simple bore field development



This method of brine extraction is commonly used in Australia for mining operations' water supply



# Evaporation Ponds

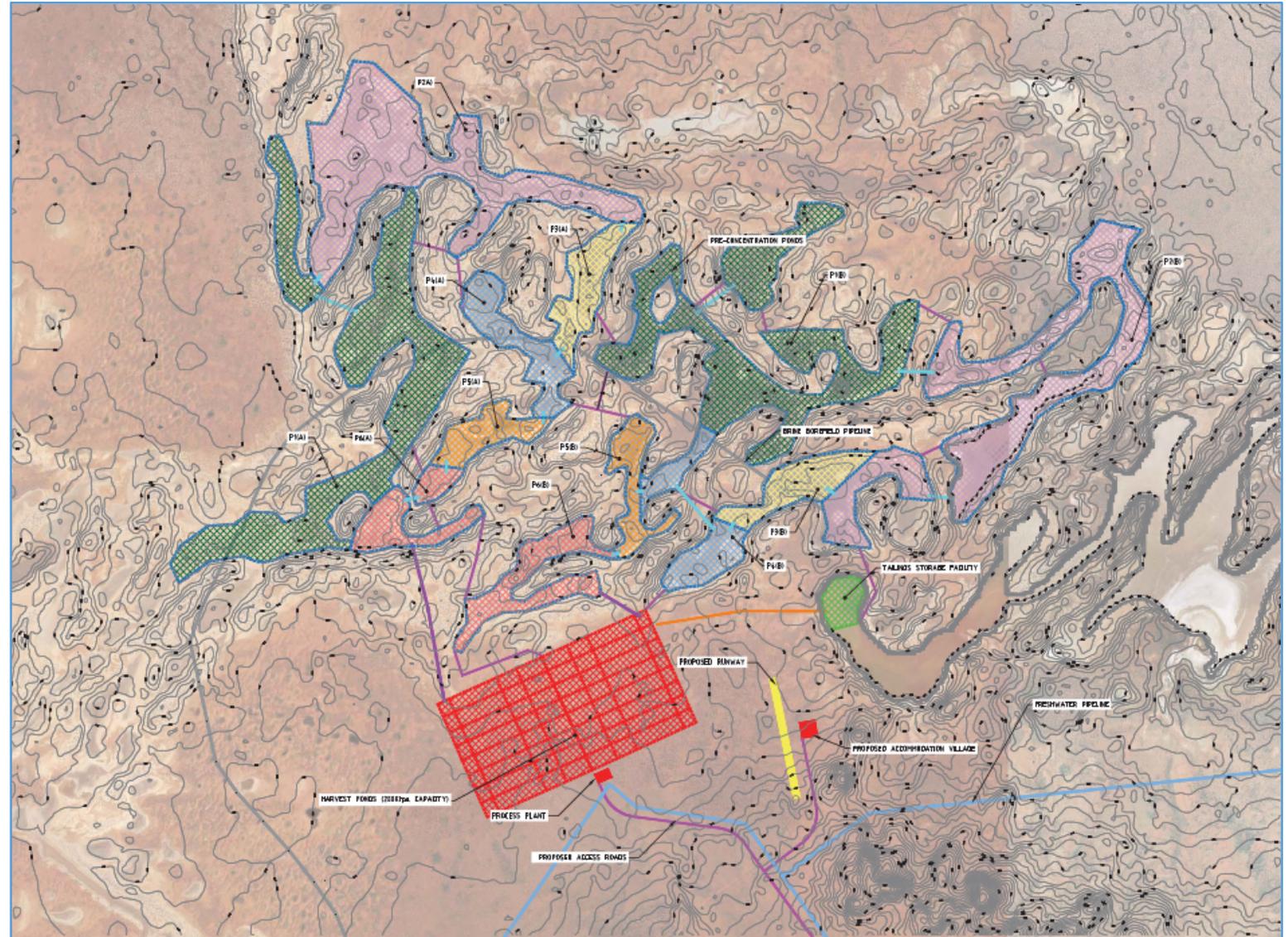


On-playa evaporation ponds will be built taking advantage of the natural topographic and lake surface structures



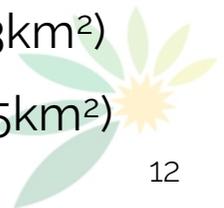
Geotechnical program indicates siting evaporation ponds on playa surface

Harvest ponds (red) to be built off-playa and sealed to ensure maximum recovery of potassium



Stage 1: total pond area c.12.7km<sup>2</sup> (incl. harvest ponds c.2.3km<sup>2</sup>)

Stage 2: total pond area c.25.4km<sup>2</sup> (incl. harvest ponds c.4.5km<sup>2</sup>)

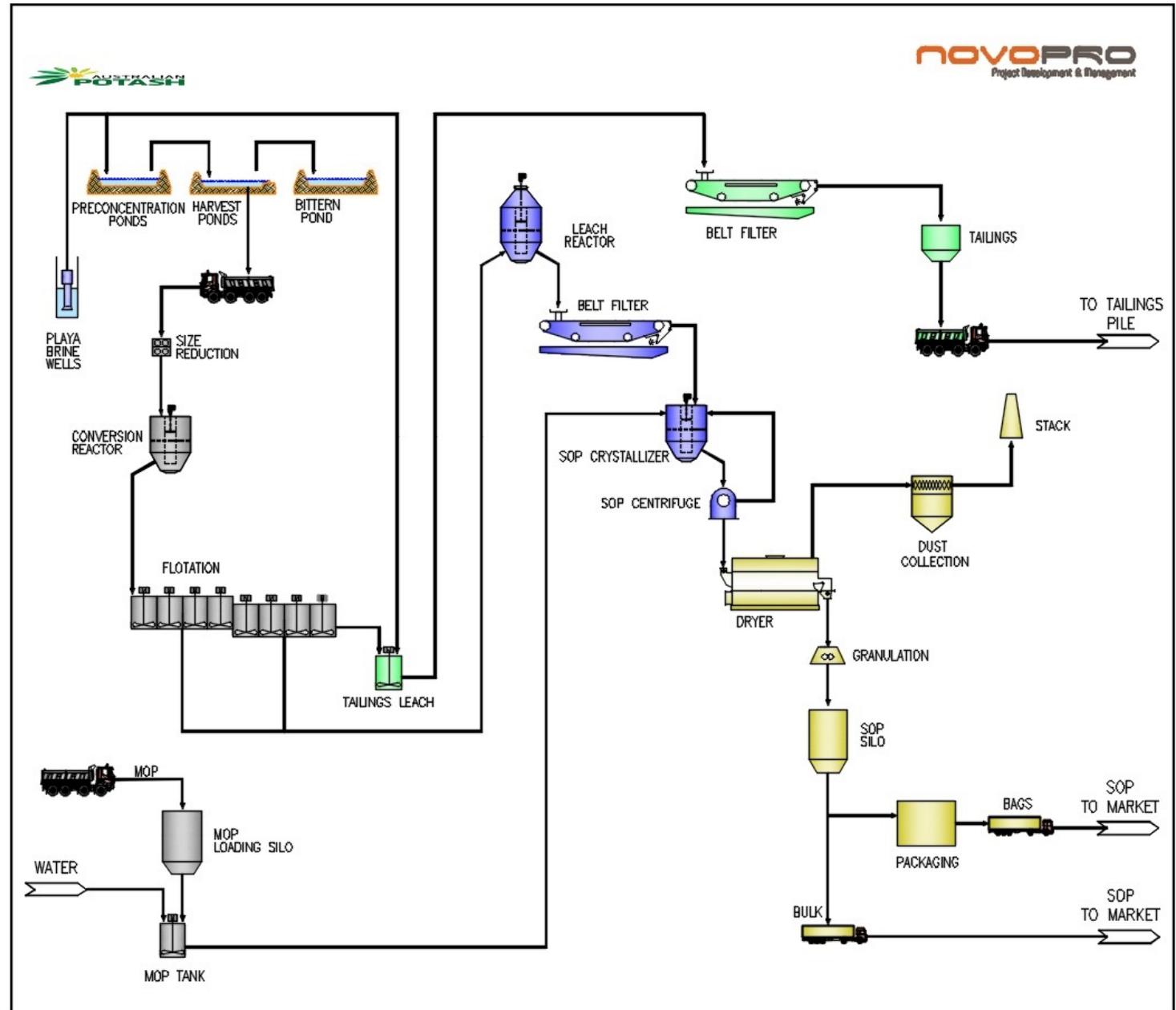




Process plant CAPEX estimated including:

An MOP to SOP conversion circuit

A Granulation plant: APC will produce 100% premium grade granulated SOP



An MOP to SOP conversion circuit has been modelled within the plant

- NOT a Mannheim conversion process but the simple addition of MOP + water to the existing crystalliser unit
- Takes advantage of the natural excess levels of sulphate in the brine (otherwise wasted)
- MOP to SOP conversion process accounts for significant amounts of SOP global production: Compass Minerals and SDIC – the 2 largest SOP producers in the world

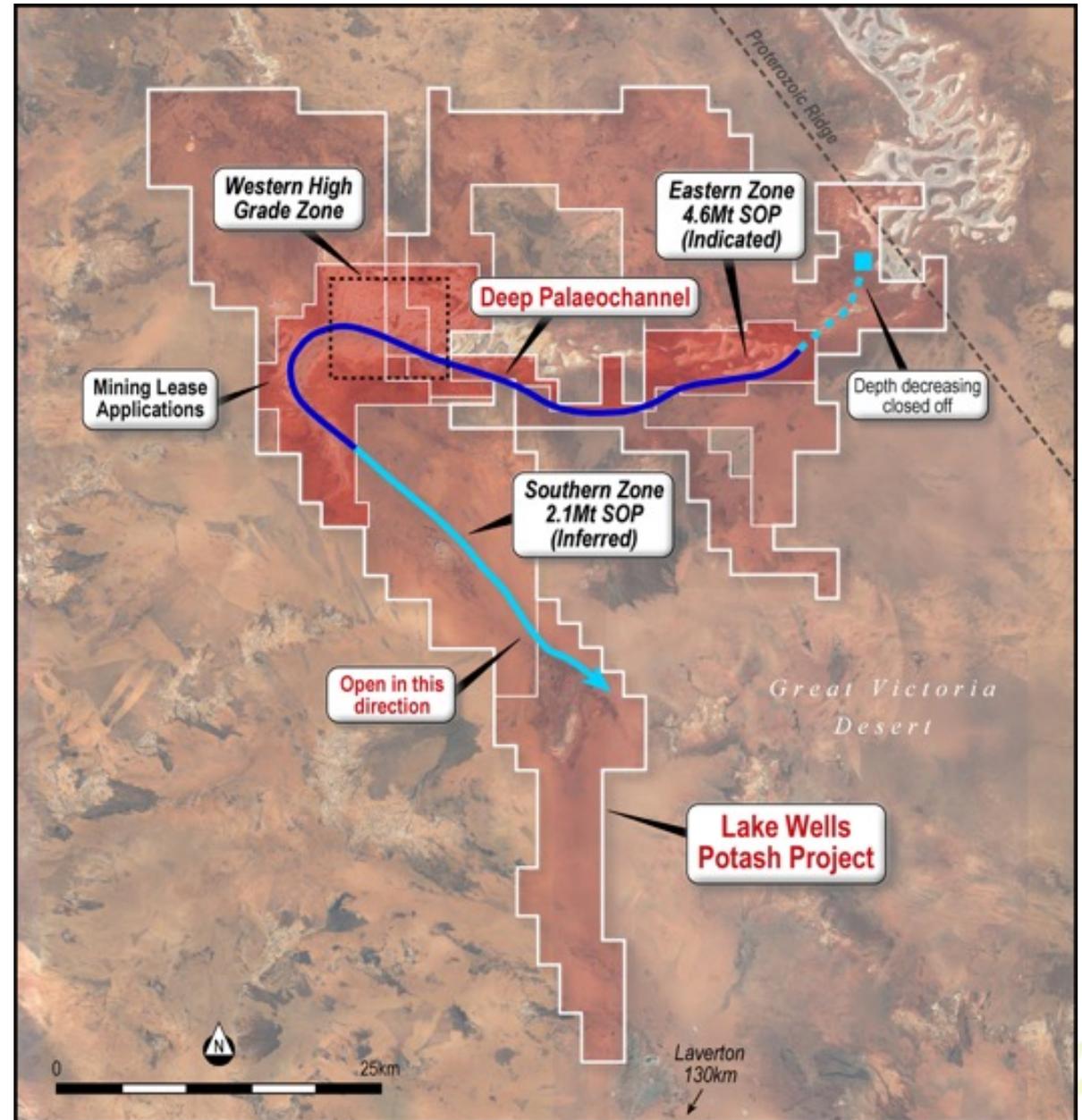
100% premium granular grade SOP has been modelled, with the process plant including a compaction/granulation circuit

- Granulated SOP is priced at a premium of c.US\$50/t to the more common standard grade SOP



# Focus of Operations

Modelled mine life extracts only 34% of the Indicated Resource in the Western High Grade Zone and 33% of the Inferred Resource in the Southern Zone, providing opportunities to extend LOM with inclusion of the Eastern Zone (4.6mt SOP Indicated)

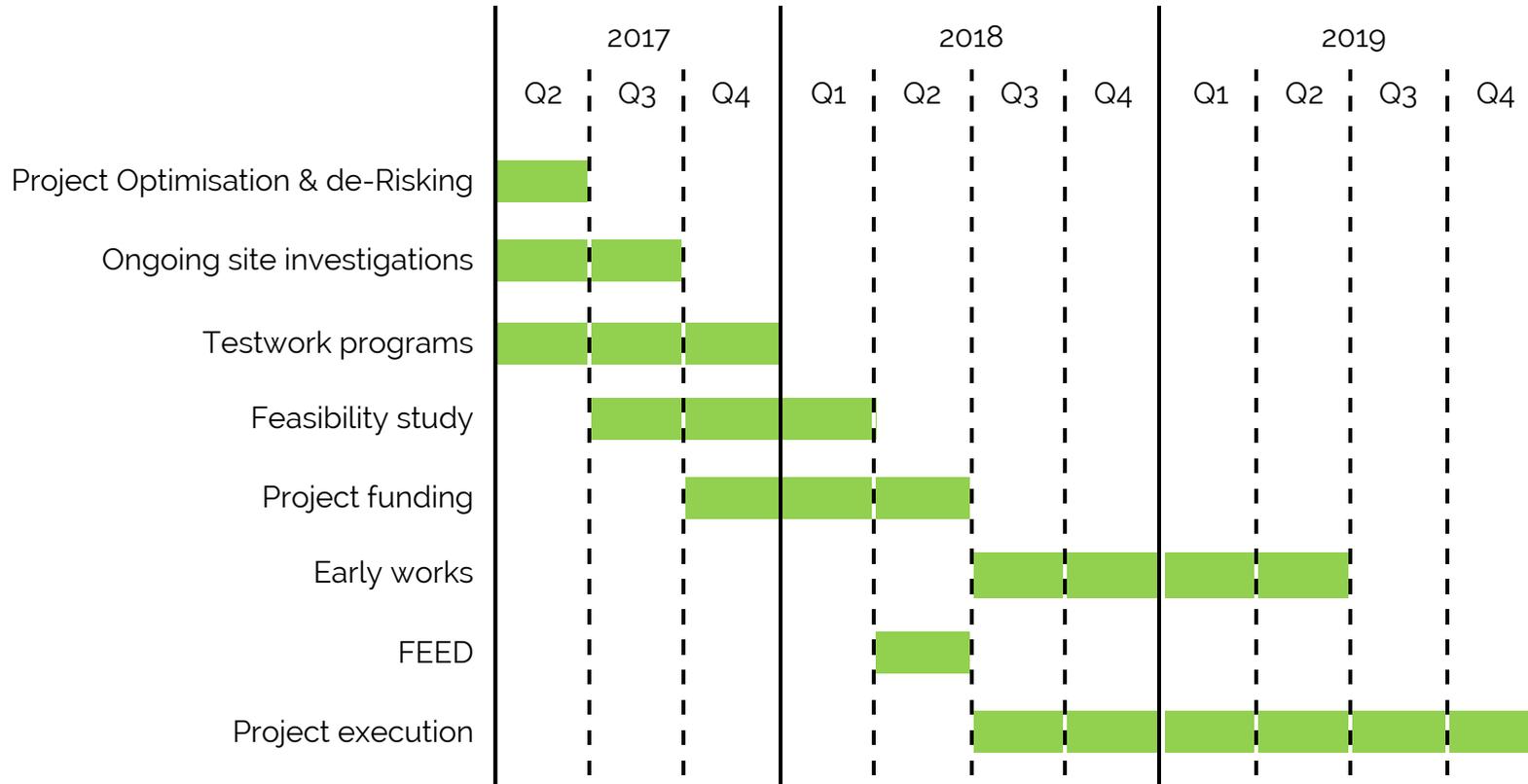


# Significant Opportunities for Upside

- Increase to LOM through continued exploration, and modelling the Eastern Zone (4.6Mt Indicated)
- Modularisation of the plant construction
- Alternative power sources reducing OPEX
- Bulk versus bulka-bag production – using the closer Esperance port for exports reducing OPEX
- Early works – construction of the evaporation ponds to keep development on the fast track
- Expand product suite to include ancillary products (SOPM and MgSO<sub>4</sub>) increasing revenue



# Timeline & Next Steps



- Optimisation studies, site investigations and continued test work
- Building pilot harvest ponds
- Mining licence applications and permitting and approvals
- Cash balance at 31 December 2016 A\$4.3m – APC well funded for next phase of work



# Peer Comparison

			AMN	KLL	RWD	SO4
Share Price		\$0.125	\$0.60	\$0.40	\$0.39	\$0.54
Market Cap.	A\$m	\$27	\$75	\$56	\$55	\$86
Production	p.a.	150kt > 300kt	370kt	n/s	400kt	200kt > 400kt
Method		Bore Pumps	Trenching	n/s	Trenching	Trenching & Bore Pumps
Stated pre-tax NPV	A\$m	\$500	n/s	n/s	\$534	n/s
Initial Capex (excl. contingency)	A\$m	\$151	\$276	n/s	\$320	\$224
LOM Operating Cost	A\$/t	\$343	\$369	n/s	\$328	\$241 - \$185
Mine Life		20+	20	n/s	13	20



# JORC Mineral Resource Estimate

Hydrogeological Unit	Volume of Aquifer	Specific Yield	Drainable Brine Volume	K Concentration (mg/L)	SOP Grade (mg/L)	SOP Resource
	MCM	Mean	MCM	Weighted Mean Value	Weighted Mean Value	MT
<b>Indicated Resources</b>						
<b>Western High Grade Zone</b>						
Surficial Aquifer	5,496	10%	549	3,738	8,336	4.6
Upper Sand	37	25%	9	4,017	8,958	0.1
Clay Aquitard	4,758	6%	308	4,068	9,071	2.8
Basal Sand Aquifer	214	29%	63	4,520	10,080	0.6
<b>Sub Total (MCM / MT)</b>	<b>10,505</b>		<b>919</b>	<b>3,904</b>	<b>8,706</b>	<b>8.1</b>
<b>Eastern Zone</b>						
Surficial Aquifer	3,596	10%	359	3,416	7,617	2.7
Upper Sand	22	25%	5	3,345	7,459	0.04
Clay Aquitard	2,689	6%	174	3,362	7,497	1.3
Basal Sand Aquifer	237	29%	69	3,352	7,475	0.5
<b>Sub Total (MCM / MT)</b>	<b>6,545</b>		<b>602</b>	<b>3,391</b>	<b>7,563</b>	<b>4.6</b>
<b>Total Indicated</b>						
Surficial Aquifer	9,092	10%	907	3,610	8,051	7.3
Upper Sand	59	25%	15	3,769	8,404	0.1
Clay Aquitard	7,447	6%	482	3,813	8,503	4.1
Basal Sand Aquifer	452	29%	132	3,906	8,711	1.1
<b>Indicated Resource (MCM / MT)</b>	<b>17,050</b>		<b>1,521</b>	<b>3,707</b>	<b>8,267</b>	<b>12.7</b>
<b>Inferred Resources</b>						
<b>Southern Zone</b>						
Surficial Aquifer	1,296	16%	207	2,742	6,115	1.3
Clay Aquitard	1,901	6%	114	2,620	5,842	0.7
Basal Sand Aquifer	82	23%	19	2,871	6,401	0.1
<b>Inferred Resources (MCM / MT)</b>	<b>3,279</b>		<b>340</b>	<b>2,674</b>	<b>5,963</b>	<b>2.1</b>
<b>Summary</b>						
Indicated Resources	17,050		1,521	3,707	8,267	12.7
Inferred Resources	3,279		340	2,674	5,963	2.1
<b>Total Resources</b>	<b>20,329</b>		<b>1,861</b>	<b>3,541</b>	<b>7,896</b>	<b>14.7</b>

*Indicated Resource based modelled aquifer volume, mean specific yield and weighted mean K concentrations (derived from modelling)*

*Resources do not include exploration target at Lake Wells South (tenement areas south of Southern Zone)*





Thankyou

