

29 August 2016

# SCOPING STUDY CONFIRMS LAKE WELLS' POTENTIAL AS A MAJOR LOW COST SOP PROJECT

Salt Lake Potash Limited (Salt Lake, SO4 or the Company) is pleased to announce the results of a Scoping Study on the Company's Lake Wells Sulphate of Potash (SOP) Project (the Project) in Western Australia. The Project's economics are highly encouraging, highlighting its potential to produce low cost SOP by solar evaporation of lake brines for domestic and international fertiliser markets.

# Highlights:

The Scoping Study (accuracy  $\pm 30\%$ ) prepared by global engineering firm, Amec Foster Wheeler, and other international experts, demonstrates excellent project fundamentals based on well-established solar evaporation and salt processing techniques. Based on the positive results of the Scoping Study, the Company will now proceed to a Pre-Feasibility Study (PFS).

Lake Wells has the potential to be one of only five large scale salt lake SOP producers around the world and the Project's estimated cash production costs of A\$185 per tonne (Stage 2) would be amongst the lowest in the world.

The Scoping Study is based on a two stage development plan for Lake Wells:

- Stage 1 is based on shallow trenching and bore production with 100% of brine feed drawn from the near surface Measured Resource.
- Stage 2 also includes pumping additional brine from the deeper Inferred Resource, to increase production to 400,000 tpa of SOP.

Key Scoping Study results for Stage 1 and Stage 2 (refer to Sensitivity Analysis):

	Stage 1	Stage 2
Annual Production (tpa) – steady state	200,000	400,000
Capital Cost *	A\$191m	A\$39m
Operating Costs **	A\$241/t	A\$185/t

\* Capital Costs based on an accuracy of -10%/+30% before contingencies and growth allowance but including EPCM. \*\* Operating Costs based on an accuracy of ±30% including transportation & handling (FOB Esperance) but before royalties and depreciation.

### **Cautionary Statement**

As discussed below, the primary purpose of the Scoping Study is to establish whether or not to proceed to a Pre-Feasibility Study ("PFS") and has been prepared to an accuracy level of ±30%. The Scoping Study results should not be considered a profit forecast or production forecast.

In accordance with the ASX listing rules, the Company advises the Scoping Study referred to in this announcement is based on lower-level technical and preliminary economic assessments, 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 Scoping Study will be realised.

The Production Target referred to in this announcement is based on 100% Measured Mineral Resources for Stage 1 and 70% Measured Mineral Resources and 30% Inferred Mineral Resources for Stage 2. 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 Measured or Indicated Mineral Resources or that the production target or preliminary economic assessment will be realised.

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- The Scoping Study results highlight the benefits of Lake Wells' location in the Northern Goldfields, with excellent access to gas and transportation infrastructure.
- Opportunities have been identified to further optimise capital and operating costs through equipment lease financing, further operational refinements and partnerships. The Company will also continue to investigate potential additional revenue streams for the project.

**Commenting on the completion of the Scoping Study, CEO Matt Syme:** "We are very pleased with the Scoping Study results, which confirm Lake Wells' as a potential lowest cost quartile SOP producer. This Study highlights Lake Wells relative advantages based on a large consistent resource, potential for brine extraction by both surface trenching and pumping the deeper paleochannel aquifer, and of course the locational advantages of access to the gas pipeline and transportation infrastructure."

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#### Important Information for this Announcement

The Scoping Study has been prepared and reported in accordance with the requirements of the JORC Code (2012) and relevant ASX Listing Rules.

The primary purpose of the Scoping Study is to establish whether or not to proceed to a Pre-Feasibility Study ("PFS") and has been prepared to an accuracy level of ±30%, the Scoping Study results should not be considered a profit forecast or production forecast. As defined by the JORC Code, a "Scoping Study is an order of magnitude technical and economic study of the potential viability of Mineral Resources. It includes appropriate assessments of realistic assumed Modifying Factors together with any other relevant operational factors that are necessary to demonstrate at the time of reporting that progress to a Pre-Feasibility Study can be justified." (Emphasis added)

The Modifying Factors included in the JORC Code have been assessed as part of the Scoping Study, including mining (brine extraction), processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and government factors. The Company has received advice from appropriate experts when assessing each Modifying Factor.

Following an assessment of the results of the Scoping Study, the Company has formed the view that a PFS is justified for the Lake Wells project, which it will now commence. The PFS will provide the Company with a more comprehensive assessment of a range of options for the technical and economic viability of the Lake Wells project.

The Company has concluded it has a reasonable basis for providing any of the forward looking statements included in this announcement and believes that it has a reasonable basis to expect that the Company will be able to fund its stated objective of completing a PFS for the Lake Wells project. All material assumptions on which the forecast financial information is based are set out in this announcement.

This release contains 'forward-looking information' that is based on the Company's expectations, estimates and projections as of the date on which the statements were made. This forward-looking information includes, among other things, statements with respect to pre-feasibility and definitive feasibility studies, the Company's business strategy, plans, development, objectives, performance, outlook, growth, cash flow, projections, targets and expectations, mineral reserves and resources, results of exploration and related expenses. Generally, this forward-looking information can be identified by the use of forward-looking terminology such as 'outlook', 'anticipate', 'project', 'target', 'potential', 'likely', 'believe', 'estimate', 'expect', 'intend', 'may', 'would', 'could', 'should', 'scheduled', 'will', 'plan', 'forecast', 'evolve' and similar expressions. Persons reading this news release are cautioned that such statements are only predictions, and that the Company's actual future results or performance may be materially different. Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the Company's actual results, level of activity, performance or achievements to be materially different from those expressed or implied by such forward-looking information. Forward-looking information is developed based on assumptions about such risks, uncertainties and other factors set out herein, including but not limited to the risk factors set out in Schedule 2 of the Company's Notice of General Meeting and Explanatory Memorandum dated 8 May 2015.



### INTRODUCTION

The Lake Wells Project is located in the Northern Goldfields of Western Australia approximately 200 km north of Laverton. The area is well served by existing infrastructure, including the Great Central Road, the Goldfields Highway, the Goldfields Gas Pipeline and the railway sidings at Malcolm and Leonora.

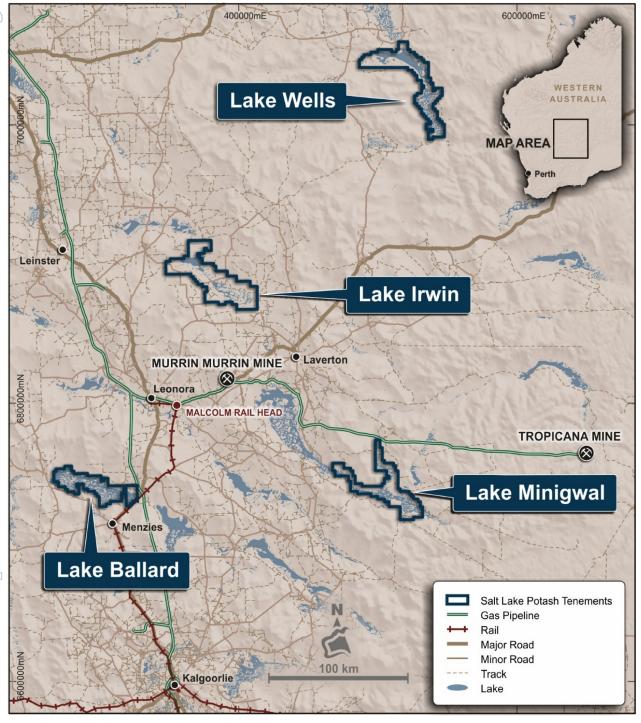


Figure 1: Location of Lake Wells

The Lake Wells Project comprises 1,126 km<sup>2</sup> of Exploration Licences covering the Lake Wells Playa, and the area immediately contiguous to Lake Wells.



Salt Lake has undertaken extensive drilling, sampling and geophysical surveys at Lake Wells since acquisition in mid-2015, to understand the geological setting and define brine resources within the Lake Wells Playa. A Scoping Study was initiated in early 2016 to investigate the technical and economic parameters of a SOP production operation at Lake Wells, exploiting the identified brine resources.

The Scoping Study is based on the Project's Mineral Resource Estimate of 80-85 Mt of SOP in 9,691 GL of brine at an average of 8.7 kg/m<sup>3</sup> of  $K_2SO_4$ . The Mineral Resource Estimate includes Measured and Indicated Resources of 26 Mt of SOP in the shallowest 20m of the Lake.

The Study has established the indicative costs of a two stage production operation, initially producing 200,000 tonnes per annum (tpa) and then 400,000 tpa of dried organic 99.9% pure SOP. Stage 1 produces 200,000 tpa but includes most of the capital works required for a 400,000 tpa operation. Stage 2 will commence after initial capex is repaid by cashflow generated from the shallow Measured and Indicated Resource.

The Project will produce SOP from hypersaline brine extracted from Lake Wells via trenches and a combination of shallow and deep production bores. The extracted brine will be transported to a series of solar evaporation ponds built on the Lake where selective evapo-concentration will precipitate potassium double salts in the final evaporation stage. These potassium-rich salts will be mechanically harvested and processed into SOP in a crystallisation plant. The final product will then be transported for sale to the domestic and international markets.

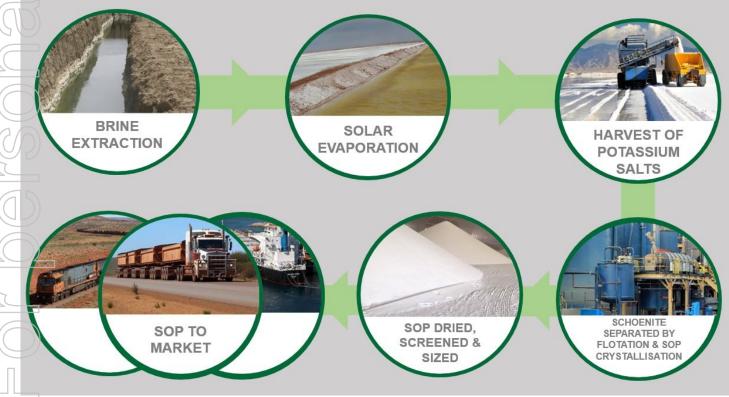


Figure 2: Examples of Production Process Cycle



### **MAJOR STUDY PARAMETERS**

Table 1: Key Assumptions and Inputs		
Maximum Study Accuracy Variation	+/- 30%	+/- 30%
Stage	Stage 1	Stage 2
Life of Mine (LOM)	20 years	
Annual Production (steady state)	200,000	400,000
Portion of Production Target – Measured & Indicated	100%	70%
Portion of Production Target – Inferred	0%	30%
Mining Method (Extraction)		
Trenches (km)	107	157
Shallow Bores (number)	4	2
Deep Bores (number)	-	34
Mining Method (Extraction (volume))		
Trenches (m³/h)	3,074	4,52
Shallow Bores (m³/h)	576	57
Deep Bores (m <sup>3</sup> /h)	-	2,20
Total Volume	3,650	7,30
Evaporation Ponds		
Area (ha)	2,990	3,17
Recovery of Potassium from feed brine	70%	70%
Recovery of Sulphate from feed brine	18%	18%
Plant		
Operating time (h/a)	7,600	7,600
Operating Costs * (±30%)		
Minegate (A\$/t)	\$165.74	\$110.0
Transport (A\$/t)	\$75.10	\$75.1
Total (A\$/t)	\$240.84	\$185.1
Capital Costs (-10%/+30%)		
Direct	A\$160.7	A\$32.0
Indirect	A\$30.5	A\$6.
Growth Allowance	A\$32.5	A\$5.
Total Capital	A\$223.7	A\$43.9

\* Before Royalties and Depreciation

### STUDY CONSULTANTS

The Scoping Study was managed by Amec Foster Wheeler. Amec Foster Wheeler is a recognised leader in potash mining and processing with capabilities extending to detailed engineering, procurement and construction management. Amec Foster Wheeler were able to leverage an international network, including access to its Centre of Potash Excellence located in Saskatoon, Canada.



In addition to Amec Foster Wheeler, the Company engaged international brine-processing experts Carlos Perucca Processing Consulting Ltd (**CPPC**) and AD Infinitum Ltd (**AD Infinitum**) and their principals Mr Perucca and Mr Bravo, who are highly regarded experts in the potash industry. Mr Bravo previously worked as Process Manager Engineer at SQM, the third largest salt lake SOP producer globally. He specialises in the front end of brine processing from feed brine through to the crystallisation of harvest salts. Mr Perucca has over 25 years of experience in mineral process engineering and provided high-level expertise with respect to plant operations for the processing of harvest salts through to final SOP product. AD Infinitum and CPPC were responsible for the brine evaporation and salt processing components in the Scoping Study.

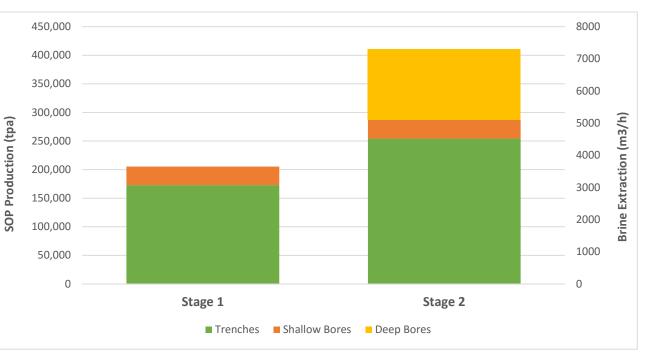
The Company also engaged Project Advisory Group (PAG) to provide an independent transport study on the logistic options for the exportation of SOP from Lake Wells. PAG is an Australian project and engineering consultancy group with extensive experience in transport cost engineering.

Independent expert potash market forecasts and assessments were provided by Integer Research Limited, Greenmarkets and Stratum Resources Limited.

### **PRODUCTION TIMELINE**

The Scoping Study considers a two-stage development which utilises the hydrogeological characteristics of the Lake:

- Stage 1 an initial 200,000 tonne per annum SOP operation utilising the surface aquifer (<20m below ground level) by extracting brine from a system of trenches and shallow bores from the identified Measured and Indicated Resource. Construction of brine extraction and evaporation infrastructure will begin two years before SOP production.</p>
- **Stage 2** expands to 400,000 tonne per annum SOP by extracting additional brine from the deeper inferred resource (>20m below ground level) from the paleochannel aquifer. Stage 2 will commence, after payback of initial capital expenditure from Stage 1.



**Table 2: Production Summary** 



### PROJECT GEOLOGY AND RESOURCE

### **Geological Setting**

Lake Wells is in the North Eastern Goldfields Province at the margin of the Archaean Yilgarn Craton. The province is characterised by granite–greenstone rocks that exhibit a prominent northwest tectonic trend and low to medium-grade metamorphism. The Archaean rocks are intruded by east–west dolerite dykes of Proterozoic age, and in the eastern area there are small, flat-lying outliers of Proterozoic and Permian sedimentary rocks. The basement rocks are generally poorly exposed owing to low relief, extensive superficial cover, and widespread deep weathering.

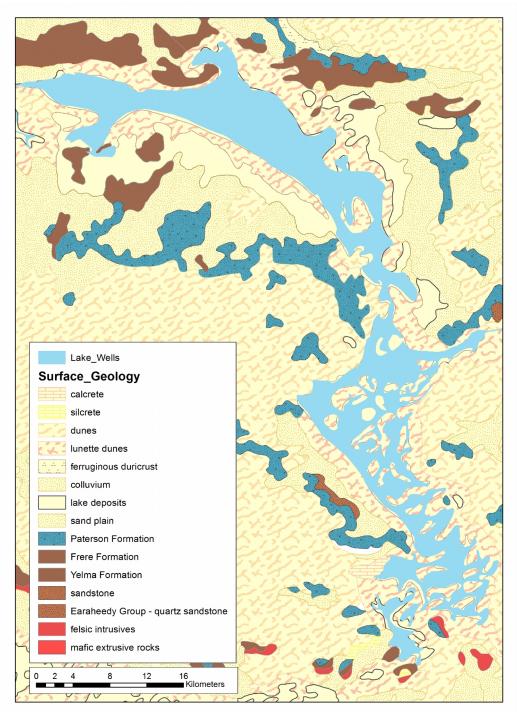


Figure 3: Lake Wells Project Geological Map



A paleovalley is incised into Proterozoic basement beneath Lake Wells. The lateral extent of the paleovalley appears well defined by basement outcrop mapped on the 250K geological mapsheet. The paleovalley appears to be entirely enclosed by basement outcrop, with outcropping basement providing separation from Lake Carnegie to the north, and a ring of outcropping basement providing closure to the south. The paleovalley is infilled with inferred Tertiary sediment to a maximum intersected depth of 126m in the northern arm, and exceeding 84 m in the southern arm. These sediments thin toward the lateral margins of the channel and also at the northern extent, southern extent and in the central "neck" area.

The brine resource is hosted within the sediments infilling the paleovalley, and within the underlying weathered Proterozoic basement.

The geological structure hosting the brine pool comprises the units described in the following sections:

### Playa Lake Sediment (PLS)

Recent (Cainozoic), unconsolidated silt, sand and clay sediment containing variable abundance of evaporite minerals, particularly gypsum. The unit is ubiquitous across the salt lake surface. The thickness of the unit ranges from approximately 10 to 20m. This unit hosts the Measured, Indicated and (initial) Inferred Resource, estimated on the basis of shallow Auger Core drilling (see ASX Announcement dated 11 November 2015).

The upper part of the unit comprises unconsolidated, gypsiferous sand and silt with a strong overprint of ferric oxides from 0.5 to around 3 - 8m depth. The unit is widespread, homogeneous and continuous with the thickest parts in the centres of the northern arm and southern arm respectively. This is underlain by well sorted, lacustrine silt and clay, from 5 to 20m depth. This zone is relatively homogeneous across the lake. Permeability is variable and is likely controlled by grainsize and sorting of the soft sediment.

### **Paleovalley Sediment**

Clay silt and sand: Tertiary, unconsolidated clay with variable inter-beds of silt and sand. The thickness varies considerably, from negligible at the southern and northern margins of the lake, to greater than 60m thick in the central and northern parts of the lake. Recovery of brine samples from this unit is difficult due to the fine grained lithology. Intermittent samples have been obtained from more permeable silt and sand inter-beds. These samples exhibited high grade brine, consistent with overlying and underlying strata.

The upper part comprises grey, massive, firm to indurated, plastic, lacustrine clay, with rare fine quartz grains throughout. The topography of this unit essentially mirrors the morphology of the lake and these sediments are interpreted to drape the underlying sediments in the lake.

The grey clay is underlain by dark-coloured, firm to indurated, lacustrine, massive clays. These sediments are similar to the overlying plastic grey clays but contain organic material.



### Paleochannel Basal Sand

Tertiary, unconsolidated medium to coarse grained sand. This unit has been intersected in drill holes that have reached the deepest parts of the paleochannel in the northern part of the lake. The maximum intersected thickness to date was 15m (LWA006). The inferred permeability is high on the basis of coarse-grained lithology and relatively high brine flow rates observed during air core drilling and test pumping. This unit is expected to represent a productive aquifer. The extent of the unit is poorly defined since most drillholes in the deeper sections of the northern part of the lake failed to reach the basal units.

### Basement (Basal) Siltstone

Proterozoic age siltstone, representing the primary basement rocks, and interpreted as the equivalent of regional Proterozoic metasediments. These rocks are red to brown to green, well indurated, fine-grained, meta-siltstone and meta-sandstone. These rocks are composed of predominately quartz and lithic fragments with common presence of muscovite and chlorite and an interlocking texture suggesting metamorphism up to Lower Greenschist facies. Foliation is prevalent and occurs parallel to the original bedding suggesting burial, rather than dynamic, metamorphism, without significant large-scale folding

The upper part of the basement yielded water at variable rates for most drillholes which demonstrates elevated permeability. The permeability of this unit is likely to be associated with weathering and fracturing of the rock matrix. Where fractured, the rock is expected to act as a productive aquifer. The maximum thickness of fractured, brine yielding aquifer was 45m (LWA009).

Most drillholes ended in fractured brine yielding aquifer and were constrained by the capacity of the aircore drilling method. The siltstone aquifer and brine pool potentially continues some depth below the range of the current drilling program.

Basement structure is variable. Basement is shallow (<30m) at the southern and northern margins of the lake and also in the central "neck" portion of the lake (Refer North-South transect). Basement lows are observed in the central southern and northern parts of the lake. In both areas, a number of holes drilled to below 100m depth, failed to intersect the Basement siltstone.



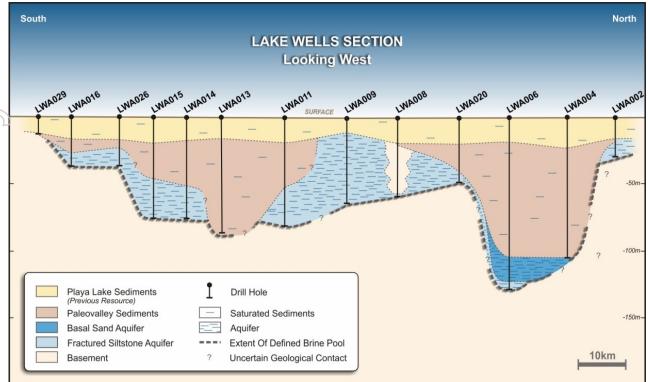


Figure 4: North South Transect at Lake Wells

### **Mineral Resource**

The Lake Wells Mineral Resource was estimated by Groundwater Science Pty Ltd, an independent hydrogeological consultant with substantial salt lake brine expertise, and is reported in accordance with the JORC Code 2012. The resource estimate is based on 32 shallow auger holes averaging 16m deep and 27 aircore holes averaging 63m deep.

### **Total Mineral Resource Estimate**

Classification	Geological Unit	Bulk Volume (Million m <sup>3</sup> )	Porosity	Brine Volume (Million m³)	Average SOP <sup>1</sup> (K <sub>2</sub> SO <sub>4</sub> ) Concentration (kg/m <sup>3</sup> )	K₂SO₄ Tonnage (Mt)
Measured	Playa Lake Sediments	5,427	0.464	2,518	8.94	23
Indicated	Playa Lake Sediments	775	0.464	359	8.49	3
Inferred	Playa Lake Sediments (Islands)	1,204	0.464	558	5.34	3
Inferred	Paleovalley Sediment	10,600	0.40	4,240	9.07	38
Inferred	Fractured Siltstone Aquifer	6,717	0.2230	1,478 - 2,015	8.79	13-18
Total		24,723		9,691	8.74	80-85

Note: 1) Conversion factor to K to SOP (K<sub>2</sub>SO<sub>4</sub> equivalent) is 2.23

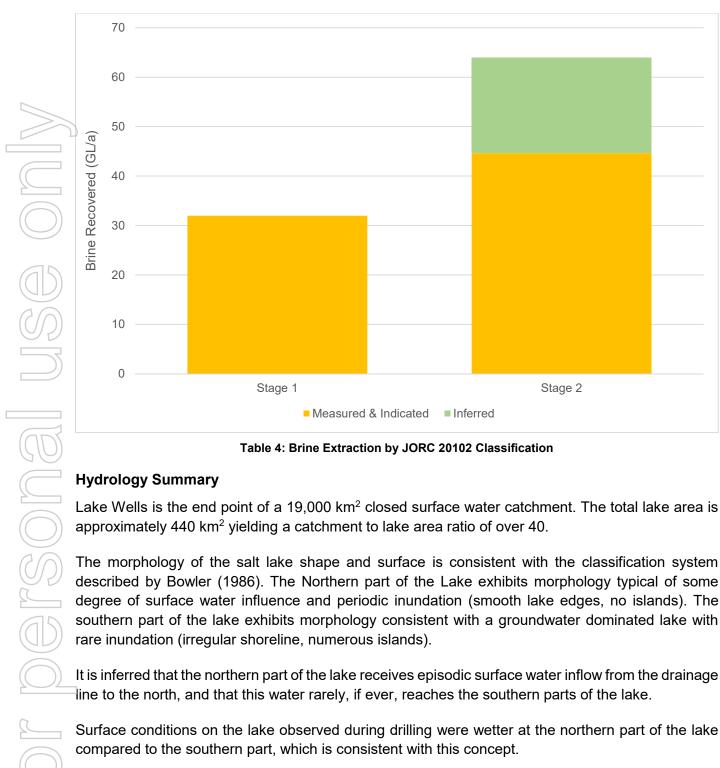
#### Table 3: Lake Wells Project – Mineral Resource Estimate (JORC 2012)

The Scoping Study production model is based on 100% Measured and Indicated Resources in Stage 1 and 70% in Stage 2.



Stage 2

Inferred



The Lake is a terminal feature in the surface water system, i.e. there are no drainage lines that exit the lake.

### Groundwater Summary

The lake is inferred to be a terminal groundwater sink on the basis of the large area of the lake and the shallow water table observed beneath the playa lake surface, which facilitates evaporative loss. Groundwater beneath the lake is hypersaline and comprises the brine potash resource.



Groundwater hosted in Tertiary paleochannels in the goldfields region was studied by Johnson et al (1999), though the study extent terminated immediately west of the Lake Wells paleochannel system. The study identified typical Tertiary Paleochannel morphology that has been identified in the Lake Wells system.

The drilling undertaken at Lake Wells has identified three aquifer units:

The shallow Playa Lake Sediments exhibit variable lithology comprising sand silt and clay. An upper zone of evaporate (gypsum and halite) rich sediment approximately 5m thick is likely to provide the most permeable zone. Some coarser grained sand horizons are logged in the deeper sediment which yield water in the transition to the Tertiary clays.

At the base of the Paleovalley Sediments, a basal sand and gravel unit has been identified by geophysics throughout the Lake and verified by drilling in the northern arm. This unit comprises fine to coarse grained, well to poorly sorted sand and gravels. It is considered to be a productive aquifer. Basal sands typically infill the "Thalweg" or deepest part, of a paleochannel which typically ranges from 60 m to 1500 m width (deBroekert and Sandiford (2005). The unit is important as a production zone for pumping brine to the surface via deep bores.

Underlying the Tertiary Paleovalley fill the Proterozoic siltstone exhibits some permeability due to fracturing and weathering. The permeability is likely controlled by structure (faulting) where faulted areas facilitate weathering and fracturing as secondary porosity.

### **Geophysical Survey**

An extensive ground based geophysical survey has been completed at Lake Wells, assessing the bedrock topography and generating paleochannel aquifer drill targets. The Company completed the gravity survey using industry leading high accuracy gravimeters and position systems to measure subsurface density. A total of 46 gravity lines comprising 2,147 stations spaced 50 – 200m apart were completed. In addition, a passive seismic (Tromino) system was used to correlate a secondary geophysical interpretation tool with the gravity and provide a more robust model. A total of 11 passive seismic lines spanning 30km was completed on priority lines identified by the gravity survey.

Gravity measurements were processed and merged with available regional data. The final merged residual gravity data have been used as the basis for interpretation.

Image processing of the gravity data shows there is a semi-continuous distinct residual gravity low present along the eastern to central areas of the entire tenement area. The anomaly which is approximately 2km wide, traces a typically sinuous path, including several cut out meandering branches from the northern to southern tenement boundaries. The location and depth of the paleochannel has been interpreted by modelling gravity profiles across the structure. Modelling has been assisted and where applicable constrained by a number of aircore holes that have penetrated the Tertiary sequence to bedrock.

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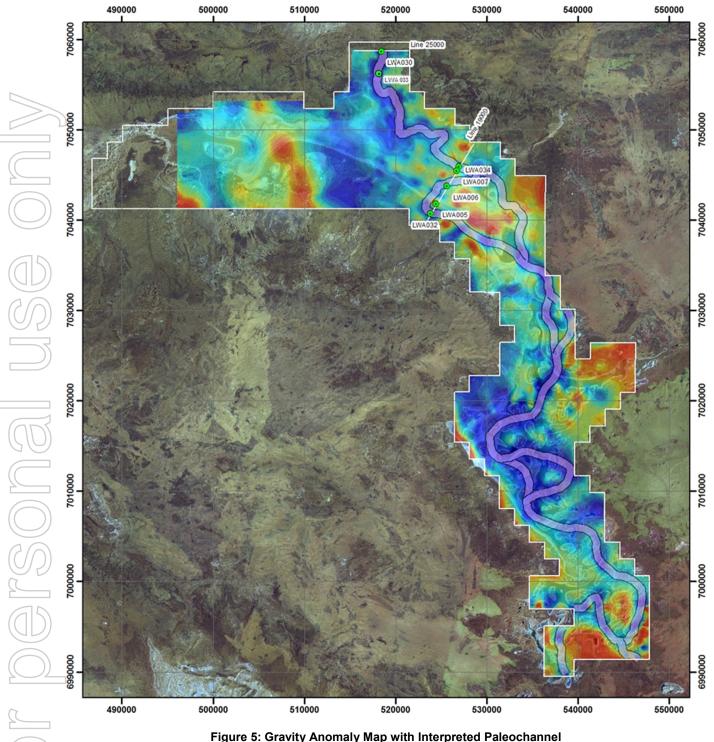


Figure 5: Gravity Anomaly Map with Interpreted Paleochannel



# MINING AND SCHEDULING

### **Brine Extraction**

On-lake drilling and test pumping completed in 2015 and 2016 has identified three productive zones for brine extraction from Lake Wells aquifers:

- 1. The near surface playa lake sediments with elevated permeability.
- 2. A shallow 'silcrete zone' where chemically deposited silcrete and calcrete have very enhanced permeability.
- 3. A deep paleochannel sand and gravel aquifer.

All aquifer zones are considered permeable enough to allow productive yields to be generated as initially demonstrated by test pumping and particle size distribution analysis.

The brine extraction system collects hypersaline Lake brine solution to be evaporated in the evaporation ponds. Brine will be extracted using two methods:

- Surface trenching provides access to the brine contained within the surficial playa lake sediments; and
- Vertical bores provide access to brine from a shallow silcrete zone (~20m depth) and from coarse sand zones at the base of the Lake Wells paleochannel (~120m depth).



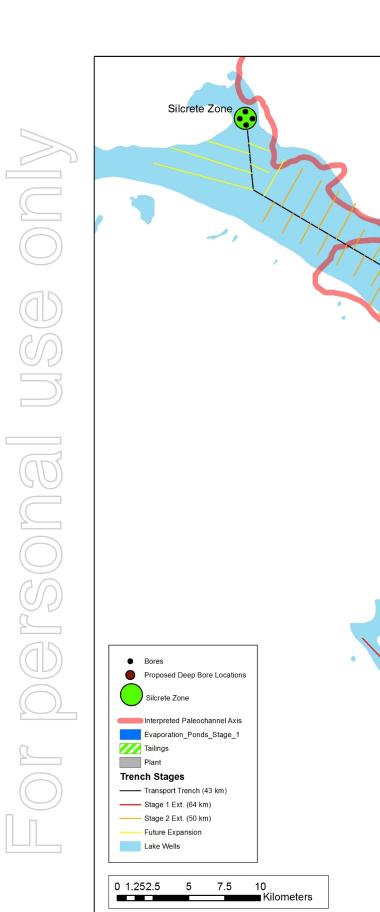


Figure 6: Schematic of the Lake Wells Brine Extraction System



# Trench System

To access brine contained within the surficial playa sediments two types of trenches are employed:

- **Extraction trenches**, which provide a low pressure zone for brine contained in the surrounding playa lake sediments to drain into; and
- **Transport trenches**, which act as channels into which brine from various sources are combined and transferred by gravity towards the evaporation ponds. A number of transfer pump stations are required to transfer the solution to subsequent trenches. It is assumed that surficial playa lake sediment brine extraction also occurs into the transport trenches.

The trenches are typically linked with dimensions nominally 7.5m wide at the surface, 1.5m wide at the invert with an average depth of 6m.

The transport trenches incorporate a slope of 1 in 10,000 with a maximum length of 15km per section.

### Bore System

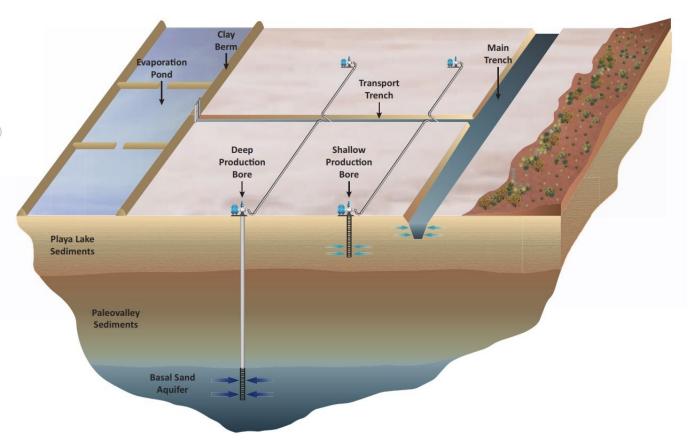
For Lake Wells, both shallow and deep bores are used for brine extraction:

- The shallow silcrete zone bores are on average 20m deep and are situated in a zone of silcrete and calcrete in the northern arm of the Lake which has been demonstrated in previous drilling and test pumping to have very high transmissivity due to secondary porosity.
- The deep bores are on average 120m deep, are situated along the paleo-channel and generate relatively lower extraction flows. Hole LWA033 (Figure 5) was test pumped and the conclusion from the test was that a production bore pumped from 90m BGL would produce up to 25 L/s in this part of the aquifer.

Bores are cased with pressure rated pipe and screened with 904 grade steel. Diesel powered, surface mounted, shaft driven pumps are proposed for the shallow bores for their high flow capacity and relatively low capital investment. Brine from deep bores will be extracted using stainless steel electrical submersible pumps.

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#### Figure 7: Schematic of the Lake Wells Brine Extraction System

	200,000t/a	400,000t/a
Trenches	Trench Le	ngth (km)
Extraction trenches	64	87
Transportation trenches	43	70
Total	107	157
Bores	Number	of Bores
Shallow bores	4	4
Deep bores	-	34
Total	4	38

Table 5: Brine Extraction by Source

	Brine Production (m <sup>3</sup> /h)						
	200,000t/a SOP Case 400,000t/a SOP Case						
Shallow bores	576	576					
Deep bores	-	2,203					
Trenches	3,074	4,521					
Total	3,650	7,300					

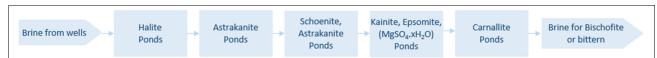
**Table 6: Brine Extraction: Production Summary** 



# Brine Evaporation

The extracted brine is concentrated in a series of solar ponds to induce the sequential precipitation of salts and eventually producing potassium double salts in the harvest ponds. Evaporation modelling, pond sizing and design was completed by international experts, Ad Infinitum and CPPC.

The general evaporation-concentration route is represented by the following block flow schematic:



As an initial concept, the halite ponds were envisaged to comprise two trains, each with ten ponds in series with a total pond area of 1,800ha. Considering the Lake Wells topography and the islands at the southern end of the lake, it was decided to rather make use of the natural "walls" provided by these islands to develop the halite ponds. The base of the halite ponds will make use of the natural clay lining in the existing lake sediment to seal the ponds. It is envisaged that some walls will be required to bridge the islands to ensure plug flow. The formed salt will be scraped to form internal barriers, ensuring plug flow with associated progressive concentration.

There will be four production ponds, for the production of potassium double salts, in total, each with an area of 90 ha. Harvesting is envisaged to be conducted in two parallel operations or trains. Each train will have one production pond online under evaporation, while the other pond is off-line. Harvesting will take an estimated 70 days until the pond can be returned to production. Of these 70 days, 20 days are allowed for preparation (draining the pond and drying the associated salts). For the Scoping Study, it is assumed that these ponds will be located on the Lake between the halite pond area and the process plant. Potassium double salts are harvested using modified tractor-scrapers and trucks.



Figure 8: Examples of Evaporation Ponds and Harvesting



# **PROCESSING PLANT**

The potassium double salts harvested from the solar evaporation ponds are treated in a process plant to convert these salts into sulphate of potash (SOP), while minimising the chloride content of the final product. The conceptual process flow chart is presented in Figure 9, below.

After mechanical harvesting the salts are first crushed to break down larger lumps before proceeding to an attritioning and milling circuit to further reduce the particle size prior to thickening. A circulating load of intermediate brine is used to transport the slurry through the plant to minimise product salt dissolution.

The thickened salt slurry is then transferred to a two stage counter-current conversion reactor where control of temperature, dilution and residence time converts the mixture of potassium containing double salts, predominantly kainite, to schoenite (K<sub>2</sub>SO<sub>4</sub>.MgSO<sub>4</sub>.6H<sub>2</sub>O) prior to SOP production.

The converted schoenite slurry, which still contains a significant proportion of halite, is then thickened before proceeding to reverse rougher flotation where waste halite reports to the rougher concentrate. Rougher tails are then subjected to scavenging flotation to remove residual halite.

The concentrated schoenite is transferred to an SOP metastasis reactor where control of temperature and dilution dissolves the magnesium sulphate from the schoenite to leave SOP as a solid which is separated by centrifuge before being washed and dried to produce a final product.

To maximise recovery of potassium from the SOP concentrate, the liquor is cooled in a vacuum crystalliser to re-precipitate schoenite. The resulting slurry is filtered and the schoenite cake recycled to the SOP reactor feed tank. The filtrate is recycled to the front end of the plant as conversion liquor.

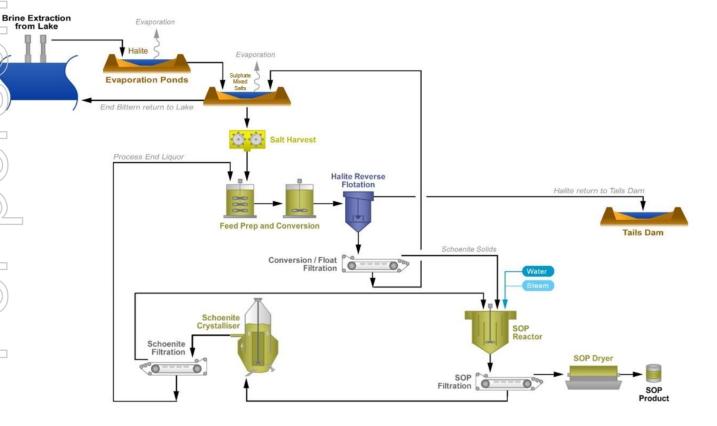


Figure 9: Conceptual Flowsheet

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Key design parameters for the process plant are presented in Table 7, below.

	200,000t/a and 400,000t/a SOP
Operating Time	
Brine extraction; evaporation ponds and harvesting	8,760 h/a
Process plant	7,600 h/a
Feed Brine Composition	
Potassium content	4 g/L
Sulphate content	19 g/L
Pond feed brine flow rate (for 400,000t/a case)	7,300m³/h @ 8,760 h/a
Overall potassium recovery	70%
Overall sulphate recovery	18%

 Table 7: Process Plant Parameters

Typical Lake Wells brine contains a significant excess of sulphate, which may be utilised in future scenarios by back loading of a low value high potassium content input (for example non-product grade KCl or Muriate of Potash) for reprocessing to SOP.

### TRANSPORT

The basis for bulk SOP product transport in the Scoping Study is a combination of road and rail transport to a storage depot at Esperance port, with periodic consignment transfer to bulk carriers. The cost build-up comprises the following components:

- Road transport from site to Malcolm siding near Leonora
- Storage of SOP at Malcolm and periodic loading into bulk train carriages
- Rail transport to Esperance port
- Storage and periodic reclaim onto bulk carriers.

Transport cost estimates were undertaken by Project Advisory Group (PAG) based on market data, industry databases, industry contacts and PAG's existing knowledge of the Western Australian infrastructure market.

PAG is a specialist engineering, commercial, cost engineering and project management business with substantial experience in the management of transport studies from mining operations through to port. PAG undertook direct interaction with informed industry participants including meetings with truck haulage service providers, rail leasing companies and bulk shipping consultants.



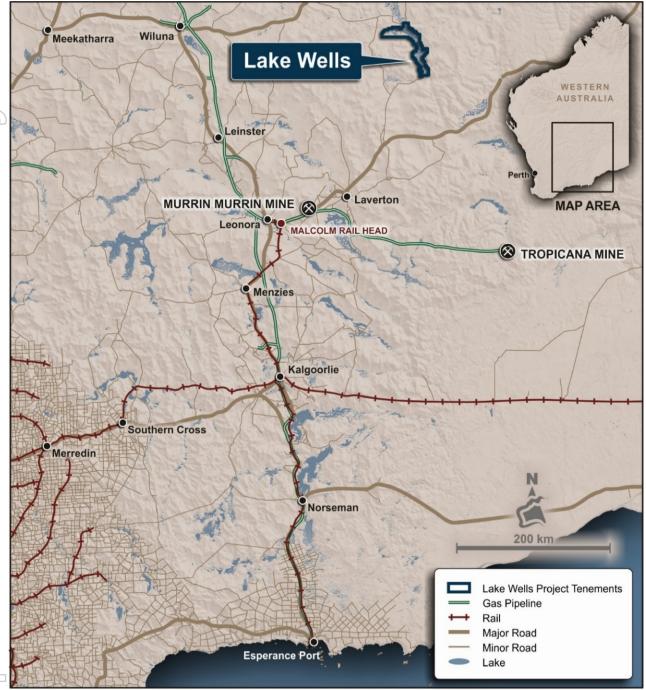


Figure 10: Transportation Map for Lake Wells

### Road and Rail

The most efficient route of transportation from site to the export markets is via Esperance port. The following table outlines the distance per method required to transport SOP to the market.

Method		Km
Road (unsealed)	Lake Wells – Laverton	220
Road (sealed)	Laverton – Malcolm Rail Head	100
Rail	Malcolm Rail Head – Esperance Port	648
Total	Lake Wells – Esperance	968

 Table 8: Road and Rail Distances



The basis for estimating road costs is a distance of 320km on sealed and unsealed roads utilising triple road trains, each with a payload capacity of 100 t. Rail costs are based on a distance of 648km from Malcolm siding to Esperance via Kalgoorlie. The Leonora to Kalgoorlie and West Kalgoorlie to Esperance lines are standard gauge (24 tonne capacity) lines operated as an open-access, multi-user network under a lease with the State Government of Western Australia. Rail cars will be loaded at Malcolm utilising a wet hire front end loader.

The total road and rail costs have been estimated at **\$75/t** SOP product.



Figure 11: Road train and Malcolm Siding

### Port

For the purposes of this study, costs associated with storage and re-handling of product within a covered storage facility are included in the total transport cost.

Esperance Port is capable of handling Cape size vessels up to 200,000 tonnes and fully loaded Panamax size vessels up to 75,000 tonnes, with the latter assumed to be utilised in this Scoping Study. The Port handles approximately 19mt per annum of trade per year with significant excess capacity available for handling and storage.



Figure 12: Esperance Port



## MINING INFRASTRUCTURE

The Lake Wells Project is located in the Northern Goldfields of Western Australia approximately 200 km north of Laverton. The area is well served by existing infrastructure, including the Great Central Road, the Goldfields Highway, the Goldfields Gas Pipeline and the railway sidings at Malcolm and Leonora.

With the Project's proximity to local West Australian goldfields infrastructure, relatively minor area infrastructure upgrades and modifications are required. The key infrastructure considerations are:

- Main access roads The Lake Wells site will be accessed from Laverton via the Cosmo Newbury and Lake Wells Station roads. Beyond Lake Wells Station, the gazetted Shire road that reaches the eastern side of Lake Wells will be upgraded for a distance of 60 km to a standard suitable for heavy haulage.
- Internal access roads Internal roads include those required to connect all of the facilities for operational, maintenance and personnel movements. The station road along the eastern boundary of the lake will be extended by 35 km to provide brine extraction borefield access
- Fuel supply Diesel will only be used as fuel for mobile equipment and remote borefields, therefore only minor fuel storage will be required.
- Power supply Power will be supplied by a contractor on a build-own-operate (BOO) basis. The
  proximity of the Goldfields Gas Pipeline is likely to provide a considerable cost advantage to the
  Project in the next stage of the feasibility study process.
- FIFO arrangement A fly in/fly out (FIFO) workforce of up to 89 personnel has been assumed for the Project due to the remote location of the site. It is anticipated that small charter planes from Perth will land at the existing Lake Wells Station airstrip.
- Accommodation village An accommodation village for 100 personnel has been included to provide housing for the Project.
- Communications Internet protocol (IP) communications will be provided via microwave datalink relayed from the nearest tower. UHF radio network is proposed for operations communications.
- Water Raw process water is sourced from existing aquifers within a 50km radius from the process plant and, due to the hardness of the waters in the area, may need to be softened prior to use in the plant. Fresh water requirement is estimated at 276m<sup>3</sup>/h (2GL/a @ 7,600h).

# PRODUCT QUALITY AND MARKETING

Fertilisers consist of essential plant nutrients that are applied to farmed crops in order to achieve favourable quality and yield. They replace the nutrients that crops remove from the soil, thereby sustaining the quality of crops, and are considered the most effective means for growers to increase yields.

The key components of agricultural fertilisers are nitrogen (ammonia and urea), phosphates (ammonium phosphates), and potassium (muriate of potash and sulphate of potash). In addition, sulphate has gained increased attention over the past several years due to soils becoming deficient in sulphur (the 'fourth macronutrient').



Global fertiliser demand is expected to increase significantly in the coming years due to the world population growth accompanied by decreasing arable land per capita, changes in diet and growth in income. These increases will provide an incentive for farmers to increase fertiliser use for improved yields and quality.

The most widely available source of potassium used by growers is Muriate of Potash (MOP or KCI), with around 60 million tonnes consumed annually. SOP and Sulphate of Potash Magnesia (SOPM) are both speciality types of potassium fertilisers that are produced and consumed on a smaller scale.

MOP is widely used in all types of farming, however it can be detrimental to some plants, especially fruits and vegetables, due to its chloride content. SOP is primarily used as a source of potassium for crops intolerant of chloride. SOP is priced at a premium to MOP, due to supply constraints, high production costs and because of its ability to be used on chloride intolerant crops (such as fruits, vegetables, beans, nuts, potatoes, tea, tobacco and turf grass), which typically sell at sufficiently higher prices to absorb the premium cost.

SOP can be used in most applications where MOP is used and is preferred in many circumstances as it enhances yield and quality, shelf life and improves taste. SOP generally outperforms MOP in terms of crop quality and yield. SOP performs particularly well with crops that have a low tolerance to the chloride in MOP and in arid, saline and heavily cultivated soils. The low volume of SOP consumption relative to market demand is partly a result of the scarcity of reliable SOP supply.

SOP is traditionally priced at a premium to the MOP price, correlated to the conversion costs from MOP to SOP (Mannheim Process) where MOP is used as an input in the process. The premium has been around 60% for the past decade. In recent years, this premium has expanded significantly, as decreases in the MOP price have not translated to similar declines in the price of SOP, indicating that the SOP market is supply constrained.

SOP can be sold as a standard powder or as a premium granular or soluble grade product. Granular and coarse SOP is generally priced at a premium. Salt Lake Potash plans to sell at a premium to the market price as a certified organic producer, similar to Compass Minerals. The primary production of SOP from salt lakes allows for organic certification.

The current spot price for SOP is around US\$625 (FOB Northwest America) with Compass Minerals' June 2016 Quarterly Report reporting an average price of US\$651 for the premium, organic salt lake product.

The Company's main target market is the Asia-Pacific and East-Asia, a region forecasting significant increases in the demand for SOP. SOP production is not easily substitutable and is in supply deficit, therefore the Company is confident in the current and forecasted levels of demand.

Salt Lake will continue to focus on developing marketing relationships and discussions with potential off-take and trade partners.



# **ENVIRONMENTAL & SOCIAL IMPACT ASSESSMENT**

An opportunities and constraints assessment was completed for the Project by 360 Environmental. The key findings of the assessment were:

- Flora and Vegetation Vegetation associations occurring at the site are most likely widespread.
   The site may contain rare and priority flora and threatened or priority ecological communities but further work is required to determine the scale and extent of impacts to flora and vegetation;
- Landforms It is unlikely that landforms within the site, particularly the flat-topped hills to the north, which may be considered significant by the EPA, will be affected by the proposed project development.
- Subterranean Fauna No stygofauna or troglofauna have previously been recorded within the immediate Lake Wells area due to lack of survey work. Lake Wells does contain habitat that could host both stygofauna and troglofauna and will require further study.
- Terrestrial Environmental Quality Sediments and the saline groundwater has the potential to impact on terrestrial environmental quality if disturbed. A geochemical characterisation of sediments on the site is recommended to better understand potential impacts.
- Terrestrial Fauna Fauna records for the Site are sparse and a Fauna Survey will be required. The level of survey required will be determined based on the proposed development footprint.
- Hydrological Processes Broad-scale review of the Lake Wells catchment and surrounding areas show that drainage is generally poorly defined. Hydrological investigations of the Lake Wells area will assist in determining potential impacts from the Project (detailed definition on processing methods will further inform this).
- Inland Waters Environmental Quality The use of process water on site as well as the processing of extracted brine has the potential to affect surface and groundwater quality. Baseline characterisation of surface and groundwater is already being undertaken. A review aimed at assessing characteristics of process water and the required management is likely.
- Heritage No registered Aboriginal sites were found within the Project area. Continuing engagement with the Aboriginal community is required.

### PERMITTING AND FISCAL REGIME

The Lake Wells Project exploration rights are secured by six granted exploration licenses comprising a total of 368 blocks with an area of approximately 1,140km2. In order to progress to the mine development stage, the Lake Wells project will require one or more mining leases and an approved Mining Proposal and Mine Closure Plan.

As the project will involve alteration to a watercourse and the abstraction of groundwater, permits will be required from the Department of Water for 'Construction of a Bore' (26D) and 'Licence to Take Water' (5C).

The Lake Wells Project area does not have any registered Aboriginal heritage sites. The Company has conducted two annual heritage clearance surveys with Aboriginal Heritage Consultants reviewing and confirming exploration programs at the Lake Wells Project. There is no evidence to suggest the Project area includes any areas of such high Aboriginal heritage significance that may preclude granting of a Mining Lease.



The Project is currently not covered by any Native Title claims, however the Company understands a potential claim covering part of the Northern arm of the Lake is being considered. The Company is not presently aware of the basis of any potential claims.

### Royalties

Potash has not been produced in Western Australia since 1950. The current royalty legislation does not include any specific rate for potash produced in WA. The ad valorem or value-based rate of royalty, which applies under the Mining Regulations 1981, is applied to a commodity based on the extent to which the commodity has been processed. As the SOP is sold in its final form (not subject to any further refinement or processing before sale to consumers) a royalty rate of 2.5% is expected.

### **CAPITAL EXPENDITURE**

The initial capital cost to develop and commence production at Lake Wells has been estimated at A\$191 million (before growth allowance). Capital expenditure was estimated at an accuracy of -10% to +30%.

The incremental capital costs for increasing production to 400,000 tpa of A\$39 million are mostly invested "on-lake" for additional brine extraction and solar evaporation ponds.

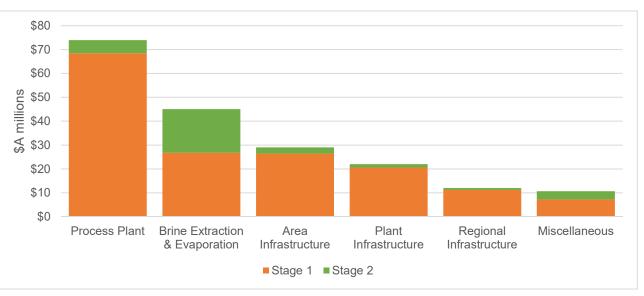


Table 9: CAPEX Breakdown (accuracy of -10/30%)



	200,000t/a	400,000t/a
	(A\$'000)	(A\$'000)
Brine Extraction and Evaporation	26,769	18,266
Process Plant	68,472	5,496
Plant Infrastructure	20,593	1,399
Area Infrastructure	26,412	2,626
Regional Infrastructure	11,188	790
Miscellaneous	7,240	3,433
Total Direct Cost	160,674	32,010
Temporary Facilities	8,034	2,718
EPCM	22,494	4,047
Total Indirect Cost	30,528	6,765
Total Initial Capital (before growth allowance)	191,202	38,775
Growth Allowance	32,504	5,112
Total Initial Capital	223,706	43,887

Table 10: CAPEX Breakdown

# **OPERATING EXPENDITURE**

Primary brine based SOP operations are historically among the world's lowest cost SOP producers. Salt Lake's forecast minegate cost of A\$110 per tonne would place it in the lowest cost quartile of global production. The operating cost estimates are based on an accuracy of ±30%.

	200,000t/a (A\$/t)	400,000t/a (A\$/t)
Labour	69.34	41.25
Power	16.24	14.46
Maintenance	27.89	16.42
Reagents	5.05	5.07
Consumables	16.15	15.72
Miscellaneous, G&A	31.07	17.08
Total Mine Gate Operating Costs	165.74	110.00
Product haulage and port	75.10	75.10
Total	240.84	185.10

Table 11: Operating Costs Estimate (before royalties) (A\$/t SOP)





Table 12: Minegate Operating Costs (A\$/t SOP)

# INTEGRATION WITH LAKE IRWIN

Another of Salt Lake's SOP assets, Lake Irwin, is currently in the early stages of exploration. Lake Irwin is located approximately 180km southwest of Lake Wells. It is also located approximately 60 km from the Goldfields Gas Pipeline near Murrin Murrin nickel mine and is 80 km from the Malcolm siding on the Leonora-Kalgoorlie rail line. The site can be accessed by existing gravel roads to the paved Leonora-Laverton road for product transport to the Malcolm rail siding.

Salt Lake has recently been granted three exploration licences over Lake Irwin and exploration with the aim of generating a resource is currently underway. Brine quality in terms of potassium content is slightly lower and the sulphate/potassium ratio is slightly higher than Lake Wells but the two Lakes appear to be comparable and may offer synergies with processing and infrastructure.

# **OPPORTUNITIES**

Discussions with market experts Stratum Resources and other market participants highlighted the potential advantages that could be derived from product differentiation or offering a broader organic fertiliser product range. The Lake Wells Project brine contains dissolved salts other than potassium and sulphate that could potentially be economically extracted as co-products or by-products. For the production of SOP, Lake Wells brine has an excess of sulphate and magnesium which are both important micronutrients in compound fertilisers. The current processing pathway results in the removal of excess sulphate during brine evaporation. Magnesium is currently treated as an impurity and removed in the plant process. Potential opportunities identified include production of:



- Sulphate of Potash Magnesia (SOPM): SOPM is a premium potash product with a total market demand of around 2 million tonnes per annum. The largest producer globally is Intrepid potash which produces approximately 200,000 tonnes per annum which recorded an average selling price in the June 2016 quarter of US\$317 per tonne. Lake Wells brine contains sufficient magnesium to produce 2.3 tonnes of SOPM per ton of substituted SOP.

Magnesium Sulphate (MgSO4): MgSO4 is increasingly used as a standalone fertiliser or compound fertiliser input. MgSO4 sells for up to US\$150 per tonne. An alternative flowsheet considered may recover MgSO4 in the plant process for sale as a by-product, with no impact on SOP recovery.

- Increased SOP output via secondary potassium sourcing: The significant excess of sulphate to potassium in Lake Wells brine may be utilised in future scenarios by back loading of a low value high potassium content input (for example non-product grade KCI or Muriate of Potash) for reprocessing to SOP.
- Salt (NaCl): NaCl has an extremely large global market in which Australia is the largest exporter from both sea salt and salt lake operations. Food grade NaCl sells for approximately US\$70/t. Lake Wells brine could potentially produce 15 tonnes of NaCl per tonne of SOP. Due to the low value of NaCl it is currently considered unlikely to be economic, due to transportation costs.
- Further assessment of these opportunities will be undertaken via engagement with distributors and end-users in line with the Company's ongoing evaporation trial, test work and broader research and development work.

# NEXT STEPS

Based on the positive results of the Scoping Study, the Company will commence a Pre-Feasibility Study (PFS) immediately. During the PFS phase, the Company will undertake more detailed hydrological modelling, brine extraction optimisation and further infrastructure assessment aimed at identifying opportunities to enhance the Project economics through capital and operating cost reductions.

Exploration activities including drilling, test pumping and other testwork are already underway, to upgrade the resource classification and increase the overall resource base. The targeted outcomes include an improved hydrogeological understanding of the performance of basal sand (deep bores) bores including draw down rates, productivity rates and bore positions as well as improved understanding of the potential productivity of the fractured siltstone aquifer.

Greater understanding of the behaviour of the PLS through further exploration activity will allow optimisation of the design and definition of extraction system trenching from a flow, pumping and hydraulic perspective.

A comprehensive field evaporation trial is scheduled to commence with the objective to optimise the definition of evaporation ponds design from a flow, halite storage, and hydraulic perspective. The field trial will also produce large samples of product salts which can be used for marketing and testing purposes.



Continued testwork programs will define design criteria for the process plant and confirm the selected process route. Studies will also compare various methods of providing heat to the SOP crystalliser circuit and methods of cooling the SOP brine in the schoenite recovery circuit.

The Company will also continue to investigate potential additional revenue streams for the Project and other opportunities for enhancement, including the benefits of an integrated Lake Wells-Lake Irwin operation. The economic viability and benefits of importing potassium chloride to make use of the significant excess sulphate in the resource will also be evaluated.

Ongoing marketing studies will further define target customer markets, preferred product specifications, mode of transport to market and supply and demand forecasts.

Continued logistics studies will determine the optimum product transport format for the product.

### SENSITIVITY ANALYSIS

The Scoping Study was prepared at a  $\pm 30\%$  accuracy to investigate the technical and economic parameters of a SOP production operation at Lake Wells, exploiting the identified brine resources.

Key inputs into the economic assessment of the Project were based on the following sensitivities:

	Operating Cost Analysis Operating Cost (A\$/t)						
	-30% 20% -10% Base +10% +20%					+30%	
Stage 1	\$169	\$193	\$217	\$241	\$265	\$289	\$313
Stage 2	\$130	\$148	\$167	\$185	\$204	\$222	\$241

	Capital Cost (A\$m) *							
	-10% Base +10% +20% +30%							
Stage 1	\$201m	\$224m	\$246m	\$268m	\$291m			
Stage 2	\$39m <b>\$44m</b> \$48m \$53m \$57m							

\* Total initial capital costs include growth allowance.

Table 13: Sensitivity Analysis



### SUMMARY OF MODIFYING FACTORS

The Modifying Factors included in the JORC Code have been assessed as part of the Scoping Study, including mining (brine extraction), processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and government factors. The Company has received advice from appropriate experts when assessing each Modifying Factor.

A summary assessment of each relevant Modifying Factor is provided below.

Mining (Brine Extraction) – refer to section entitled 'Mining and Scheduling' in the Announcement.

The Company engaged an independent hydrogeological consultant with substantial salt lake brine expertise, Groundwater Science Pty Ltd, to complete the Mineral Resource Estimate for the Lake Wells project. The Principal Hydrogeologist of Groundwater Science, Mr Jeuken, has over 10 years of experience in groundwater resources assessment and management for mining. He has experience in salt lake brine potash evaluation, aquifer testing, wellfield planning and installation for mining, and the development of conceptual hydrogeological models

On-lake drilling and test pumping completed in 2015 and 2016 has identified productive sandy aquifers at the Lake surface, a shallow chemically deposited aquifer where silcrete and calcrete have formed which enhances permeability and a deep paleochannel sand and gravel aquifer. All aquifers are considered permeable enough to allow productive yields to be generated as initially demonstrated by test pumping and particle size distribution analysis.

The hydrological model was produced by the Company with consultation of independent experts. The two methods of extraction outlined in the Announcement are common practice for brine extraction. These extraction methods are used by the three main current operations which include Great Salt Lake in the US, Lop Nur Salt Lake (Luobupo) and SQM in Chile.

**Processing (including Metallurgical)** – refer to sections entitled 'Mining and Scheduling' and 'Processing Plant' in the Announcement.

The Company engaged brine-processing experts Carlos Perucca Processing Consulting Ltd (CPPC) and AD Infinitum Ltd (AD Infinitum) and their principals Mr Perucca and Mr Bravo, who are highly regarded international experts in the potash industry. Mr Bravo previously worked as Process Manager Engineer at SQM, the third largest salt lake SOP producer globally. He specialises in the front end of brine processing from feed brine through to the crystallisation of harvest salts. Mr Perucca has over 25 years of experience in mineral process engineering and will provide high-level expertise with respect to plant operations for the processing of harvest salts through to final SOP product. AD Infinitum and CPPC were responsible for the brine evaporation and salt processing components in the Scoping Study.

Lake Wells' process development relied heavily on experience applied by Amec Foster Wheeler and specialist consultants (CPPC and Ad Infinitum) who are well experienced from working on similar operations. Production of SOP from lake brines is well understood and a well-established process.



Infrastructure – refer to section entitled 'Mining Infrastructure' in the Announcement.

Lake Wells' proximity to the West Australian goldfields means relatively minor area infrastructure upgrades and modifications are required.

The Scoping Study was managed by Amec Foster Wheeler. Amec Foster Wheeler is a recognised global leader in potash mining and processing with capabilities extending to detailed engineering, procurement and construction management. Amec Foster Wheeler are able to leverage an international network, including access to its Centre of Potash Excellence located in Saskatoon, Canada. All capital and operating costs were estimated by Amec Foster Wheeler.

Transport cost estimates were undertaken by Project Advisory Group (PAG) based on market data, industry databases, industry contacts and PAG's existing knowledge of the Western Australian infrastructure market.

PAG is a specialist engineering, commercial, cost engineering and project management business with substantial experience in the management of transport studies from mining operations through to port in the region of Western Australia. PAG undertook direct interaction with informed industry participants including meetings with truck haulage service providers, rail leasing companies and bulk shipping consultants.

Marketing – refer to section entitled 'Product Quality and Marketing' in the Announcement.

Independent potash market forecasts and assessments were provided by experts Integer Research Limited, Greenmarkets and Stratum Resources Limited.

Stratum's scoping level assessment of local and regional markets indicates that various markets around the world and particularly in the Asia-Pacific region would absorb the planned production output of the Lake Wells Project either to fill new demand or to substitute lower quality or higher cost supply.

Salt Lake has undertaken initial market discussions with local and international fertiliser industry participants, which have indicated substantive interest in a new and stable supplier of high quality organic SOP from an Australian salt lake project. Stratum confirmed there is a reasonable expectation the Company will be able to execute off-take agreements with customers.

The current spot price for SOP is around US\$625 (FOB Northwest America) with Compass Minerals June 2016 Quarterly Report reporting an average price of US\$651 for the premium, organic salt lake product.

The Company's target market is the Asia-Pacific, a region forecasting significant increases in the demand for SOP. SOP production is not easily substitutable and is in supply deficit, therefore the Company is confident in the current and forecasted levels of demand.

Salt Lake will continue to focus on developing marketing relationships and discussions with potential off-take and trade partners.



Economic – refer to sections entitled 'Product Quality and Marketing' in the Announcement.

A detailed financial model and discounted cash flow (DCF) analysis has been prepared in order to demonstrate the economic viability of the Project. The financial model and DCF were modelled with conservative inputs to provide management with a baseline valuation of the Project. Sensitivity analysis was performed on all key assumptions used. Key inputs and assumptions are outlined in Table 1 to allow analysts and investors to calculate Project valuations based on their own revenue assumptions.

The Company engaged the services of a funding and debt advisory firm, Argonaut. Argonaut is a financial advisory and investment banking firm which specialises in the metals, oil & gas and agribusiness sectors. Argonaut is well regarded as a specialist capital markets service provider and have raised project development funding (including debt, equity, hybrid instruments and strategic capital/partners) for companies across a range of commodities including substantial experience in the industrial and speciality minerals sector. Following the assessment of a number of key criteria, Argonaut has confirmed in writing that, provided a definitive feasibility study arrives at a result not materially worse than the Scoping Study, the Company should be able to raise sufficient funding to develop the Project.

An assessment of various funding alternatives available to Salt Lake has been made based on precedent transactions that have occurred in the mining industry, including an assessment of alternatives available to companies that operate in industrial and specialty minerals sector. The assessment and advice from Argonaut (referred to above) indicates that financing for industrial mineral companies often involves a broader mix of funding sources than just traditional debt and equity, and the potential funding alternatives available to the Company including, but not limited to: royalty financing; mezzanine finance; prepaid off-take agreements; equity; joint venture participates; strategic partners/investors at project or company; senior secured debt/project finance; secondary secured debt; and equipment leasing. It is important to note that no funding arrangements have yet been put in place, as these discussions will usually commence upon completion of a PFS with results not worse than this Scoping Study. The composition of the funding arrangements ultimately put in place may also vary, so it is not possible at this stage to provide any further information about the composition of potential funding arrangement.

Since the acquisition of the Project in June 2015, the Company has completed extensive drilling, sampling and geophysical surveys at Lake Wells to understand the geological setting and define brine resources within the Lake Wells Playa. Over this period, with these key milestones being reach and the project de-risked, the Company's market captialisation has increased from A\$15m to over A\$65m. As advised by Argonaut, as the Project continues to achieve key develop milestones, which can also be significant de-risking events, the Company's share price is likely to increase.

In April 2016, Salt Lake undertook a capital raising of A\$8.9m via a placement to domestic and overseas strategic and institutional investors. The Company is debt free and is in a strong financial position, with approximately A\$7.5m cash on hand (30 June 2016). The current strong financial position means the Company is soundly funded to continue the drilling, test pumping, evaporation and other testwork including the completion of the PFS to further develop the Project to a stage at which funding arrangements may be executed.



Salt Lake has a high quality Board and management team comprising highly respected resource executives with extensive finance, commercial and capital markets experience. The Company's Chairman has previously raised more than A\$600m from capital markets for a number of exploration and development companies.

**Environmental** – refer to section entitled 'Environmental & Social Impact Assessment' in the Announcement.

An opportunities and constraints assessment was completed for the Project by 360 Environmental, a leading Western Australian environmental management consultancy. Based on the Project's stage of development, 360 Environmental confirmed there are no current impediments on the Project.

To date, SO4 has only undertaken preliminary desktop studies for the purposes of identifying potential environmental opportunities and constraints. This is typical at this stage of a project. The further development of the Project will require undertaking a number of detailed flora, fauna and other studies, including for the purposes of identifying any stygofauna or troglofauna habitat with the area of the Project.

**Social, Legal and Governmental** – refer to section entitled 'Permitting and Fiscal Regime' in the Announcement.

The Company has taken legal advice in relation to relevant Modifying Factors.

Based on the legal advice received the Company considers there is presently no reason to believe that one or more mining leases will not ultimately be capable of grant.

As mentioned above, the Lake Wells Project area does not have any registered Aboriginal heritage sites. The Company has conducted two annual heritage clearance surveys with Aboriginal Heritage Consultants reviewing and confirming exploration programs at the Lake Wells Project

The Company has not conducted a comprehensive stakeholder identification exercise, however the relative remoteness of the Project is such it is unlikely that there are relevant stakeholders other than the pastoral lessees, Aboriginal parties (including, but not limited to, any native title claimants) and relevant government agencies.

Salt Lake confirms at this stage they see no obstruction to gaining a social licence to operate.

# FORWARD LOOKING STATEMENTS

This announcement may include forward-looking statements. These forward-looking statements are based on Salt Lake's expectations and beliefs concerning future events. Forward looking statements are necessarily subject to risks, uncertainties and other factors, many of which are outside the control of Salt Lake, which could cause actual results to differ materially from such statements. Salt Lake makes no undertaking to subsequently update or revise the forward-looking statements made in this announcement, to reflect the circumstances or events after the date of that announcement.



### **COMPETENT PERSONS STATEMENTS**

The information in this Announcement that relates to Mineral Resources is extracted from the reports entitled Lake Wells Resource Increased by 193% to 85Mt of SOP' dated 22 February 2016 and 'Significant Maiden' SOP Resource of 29Mt at Lake Wells' dated 11 November 2015. The announcement is available to view on www.saltlakepotash.com.au. The information in the original ASX Announcement that related to Mineral Resources was based on, and fairly represents, information compiled by Mr Ben Jeuken, who is a member Australian Institute of Mining and Metallurgy and a member of the International Association of Hydrogeologists. Mr Jeuken is employed by Groundwater Science Pty Ltd, an independent consulting company. Mr Jeuken has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity, which he is undertaking 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'. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

The information in this Announcement that relates to Exploration Results, not including geophysical and test pumping results for Lake Wells, is extracted from the reports entitled 'Aircore Drilling Confirms Deeper Potential At Lake Wells' dated 23 November 2015, 'Successful Shallow Core Drilling Completed at Lake Wells' dated 22 September 2015 and 'Wildhorse Acquires Two Large Scale High Grade Sulphate Of Potash Brine Projects' dated 9 April 2015 and is available to view on the Company's website www.saltlakepotash.com.au. The information in the original ASX Announcement that related to Exploration Results, not including geophysical and test pumping results for Lake Wells based on information compiled by Mr Ben Jeuken, who is a member Australian Institute of Mining and Metallurgy. Mr Jeuken is employed by Groundwater Science Pty Ltd, an independent consulting company. Mr Jeuken has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity, which he is undertaking 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 Jeuken consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

The information in this Announcement that relates to Exploration Results on geophysical and test pumping results for Lake Wells, is extracted from the reports entitled Geophysics and Test Pumping Reinforce Lake Wells Potential ' dated 10 August 2016 and 'Excellent Initial Pump Test Results at Lake Wells ' dated 12 May 2016 and is available to view on the Company's website www.saltlakepotash.com.au. The information in the original ASX Announcement that related to Exploration Results on geophysical and test pumping results for Lake Wells based on information compiled by Mr Adam Lloyd, who is a member of the Australian Institute of Geoscientists and International Association of Hydrogeology. Mr Lloyd was an employee of Salt Lake Potash Limited. Mr Lloyd has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity, which he is undertaking 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 Lloyd consents to the inclusion in the report of the matters based on his information or data that materially affects the information included in the original market announcement. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

The information in this report/announcement that relates to processing, infrastructure and cost estimation are based on and fairly represents information compiled or reviewed by Mr Zeyad El-Ansary, who is a Competent Person as a member of the Australasian Institute of Mining and Metallurgy. Mr Zeyad El-Ansary has 9 years' experience relevant to the activities undertaken for preparation of these report sections and is employed by Amec Foster Wheeler. Mr Zeyad El-Ansary consents to the inclusion in the report/press release of the matters based on their information in the form and context in which it appears.