



# ASX Announcement

8 August 2018

## COMPANY DETAILS

**ABN:** 62 147 346 334

### **PRINCIPAL AND REGISTERED OFFICE**

Parkway Minerals NL  
Level 1, 675 Murray St.  
West Perth WA 6005

### **POSTAL ADDRESS**

PO Box 1088  
West Perth WA 6872

**W** [www.parkwayminerals.com.au](http://www.parkwayminerals.com.au)

**E** [info@parkwayminerals.com.au](mailto:info@parkwayminerals.com.au)

**P** +61 8 9479 5386

**F** +61 8 9475 0847

### **ASX CODE**

PWN

### **FRANKFURT CODE**

A1JH27

### **CORPORATE INFORMATION**

**8 August 2018**

595M Ordinary shares  
123M Partly paid shares  
18M Listed Options  
13M Unlisted options

### **BOARD OF DIRECTORS**

**Adrian Griffin**

(Non-Executive Chairman)

**Patrick McManus**

(Managing Director)

**Chew Wai Chuen**

(Non-Executive Director)

**Natalia Streltsova**

(Non-Executive Director)

## **PARKWAY MINERALS (ASX: PWN) ANNOUNCES COMPLETION OF DRILLING PROGRAMME ON LAKE BARLEE**

### **Highlights**

- Parkway Minerals NL (ASX: PWN) releases the results of proof of concept drill program on its Lake Barlee Project.
- Palaeochannels identified.
- Potassium levels were lower than the target level

The drill program was designed to test the geology and collect brine samples from palaeochannels identified by passive seismic surveys undertaken across the lake by the company. (*Refer ASX announcement 8 November 2017*).

Nine drillholes were completed for a total of 782 metres of drilling. Three of the seven passive seismic lines surveyed were tested (Figure 1). Drilling was completed using Ausdrill's Lake Walker rig, which is specially modified for drilling on salt lake surfaces. Due to deep horizons and running sands, a number of the holes failed to penetrate into the basement.

The drilling intersected two continuous sand aquifer units containing brine. An upper sand aquifer approximately 60 metres below the lake surface that averaged approximately 5 meters thick, and a basal sand aquifer sitting on the paleo surface which was up to 23 metres thick but the majority of the drillholes failed to penetrate through the horizon. The aquifers are confined by lake clays and sit on a weathered granite or acid volcanic basement. In addition, the drilling intersected a number of thinner sand units that are less continuous. In total 28 separate water samples were collected from the programme, composite samples of the drill spoil were also submitted for analysis.

The result of the geochemical sampling of the brine waters have been received. The results are universally low, averaging 1619 mg/l K. This concentration of potassium is significantly below results reported by similar salt lake potash projects and is unlikely, in the company's opinion, to form the basis of an economic project. The company is completing a review prior to making a decision on the project.

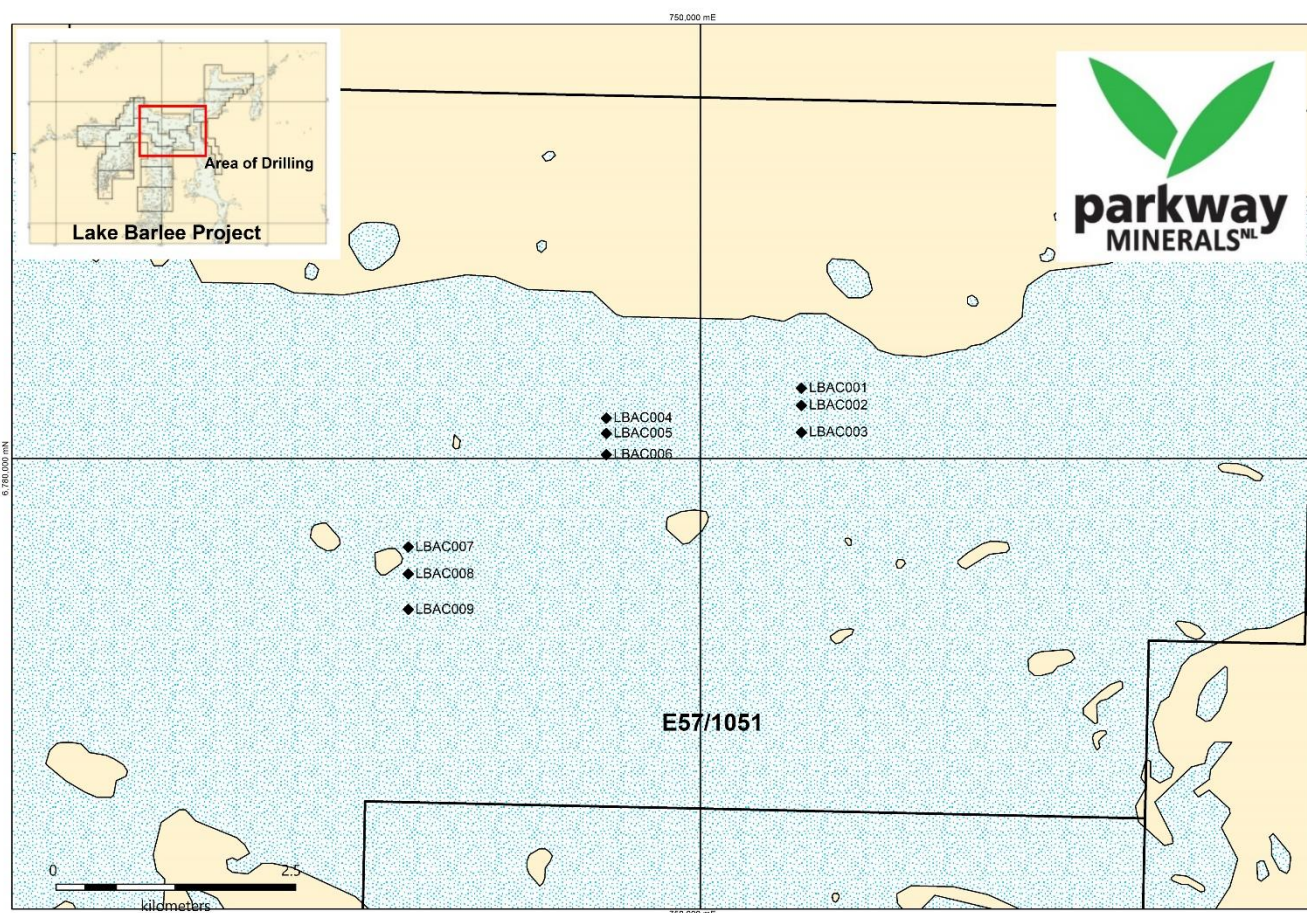


Figure 1 Lake Barlee Project Showing Drill Collars

Table 1 Drill Collar Table

Hole ID	Northing	Easting	RL	Azi	Dip	TD
LBAC001	6780730	751050	400	0	-90	99
LBAC002	6780550	751050	400	0	-90	125
LBAC003	6780270	751050	400	0	-90	111
LBAC004	6780420	749020	400	0	-90	110
LBAC005	6780260	749020	400	0	-90	102
LBAC006	6780040	749020	400	0	-90	84
LBAC007	6779080	746960	400	0	-90	99
LBAC008	6778800	746960	400	0	-90	123
LBAC009	6778430	746960	400	0	-90	119

**Table 2: Sand Aquifer Units**

Hole	Upper Sand, M			Basal Sand, M			Comment
	From	To	Thickness	From	To	Thickness	
LBAC001	67	72	5	95	99	4	Hole abandoned at 99 before hitting basement
LBAC002	73	81	8	95	106	11	
LBAC003	74	84	10	94	106	12	
LBAC004				94	110	14	Hole abandoned at 110 before hitting basement
LBAC005				79	102	23	Hole abandoned at 102 before hitting basement
LBAC006	68	81	13				Hole abandoned in swelling clays
LBAC007				95	98.5	3.5	
LBAC008	77	83	6	98	109	11	
LBAC009	75	79	4	97	111	14	Basement not intersected

**Table 3: Water Analysis**

Sample Number	Hole ID	Interval From	Interval To	K mg/l	Mg mg/l	Cl mg/l	TDS mg/l	SO4 mg/l
LBW001	LBAC001	71	72	1665	5120	163000	254000	11900
LBW002	LBAC002	47	48	1610	4790	151000	223000	11500
LBW003	LBAC002	80	81	1655	5020	148000	253000	10400
LBW004	LBAC002	95	96	1685	5230	157000	247000	11200
LBW005	LBAC003	74	75	1735	5070	162000	281000	11700
LBW006	LBAC003	83	84	1620	4940	122000	254000	8770
LBW007	LBAC003	97	98	1630	5000	150000	247000	10900
LBW008	LBAC003	110	111	1740	5210	165000	298000	11700
LBW009	LBAC004	92	93	1535	4700	142000	249000	10300
LBW010	LBAC004	95	96	1660	4950	148000	271000	11100
LBW011	LBAC004	107	108	1650	4910	163000	268000	12100
LBW012	LBAC005	83	84	1635	4880	149000	268000	11100
LBW013	LBAC007	53	54	1730	4840	153000	281000	11400
LBW014	LBAC007	77	78	1530	4690	150000	257000	11200
LBW015	LBAC007	92	93	1565	4850	150000	254000	11400
LBW016	LBAC007	98	99	1605	4920	157000	273000	11700
LBW017	LBAC008	53	54	1775	4760	156000	272000	11200
LBW018	LBAC008	68	69	1775	4900	153000	268000	10900
LBW019	LBAC008	77	78	1730	4910	159000	269000	11800
LBW020	LBAC008	80	81	1695	5160	164000	272000	12100
LBW021	LBAC008	98	99	1805	5160	136000	255000	10100
LBW022	LBAC008	101	102	1700	5120	165000	273000	12400
LBW023	LBAC008	107	108	1710	5210	166000	279000	12400
LBW024	LBAC009	71	72	1035	3320	97800	145000	6900
LBW025	LBAC009	77	78	1595	4710	154000	185000	11400
LBW026	LBAC009	86	87	937	2910	88500	135000	6170
LBW027	LBAC009	107	108	1605	4710	150000	270000	11000
LBW028	LBAC009	116	117	1725	4880	156000	266000	11400

For further information contact:

Parkway Minerals NL:

Patrick McManus

Managing Director

Tel: +61 (08) 9479 5386

Email: [info@parkwayminerals.com.au](mailto:info@parkwayminerals.com.au)

Web: [www.parkwayminerals.com.au](http://www.parkwayminerals.com.au)

Peter Nesveda

Investor Relations

+61 (0) 412 357 375

[peter.nesveda@parkwayminerals.com.au](mailto:peter.nesveda@parkwayminerals.com.au)

### **About Parkway Minerals**

*Parkway Minerals (ASX: PWN) is a company focused on developing fertiliser feedstock projects. The Company holds 1,900km<sup>2</sup> of exploration licenses and applications over Lake Barlee, where it is exploring a sulphate of potash project from the brines in the lake, north of Southern Cross in Western Australia.*

*The Company has a major land holding over one of the world's largest known glauconite deposits, with exploration licenses and applications covering an area of over 1,050km<sup>2</sup> in the greensand deposits of the Dandaragan Trough, in Western Australia's Perth Basin. The area is prospective for both phosphate and potash. Previous exploration indicates glauconite sediments are widespread for more than 150km along strike and 30km in width. The project is well situated in relation to infrastructure, with close access to rail, power and gas. A successful commercial outcome will allow the Company to become a major contributor to the potash and phosphate markets at a time of heightened regional demand.*

*The Company owns 44M shares (32%) of Davenport Resources, which owns a potash exploration project in the South Harz region of Thuringia, in Central Germany. The region has been a potash producing area for over 100 years.*

### **Competent Person Statement**

*The information in this report that relates to interpretation of geological and geophysical data to define target areas was compiled by Mr Trevor Haig. Mr. Haig is a consultant of Groundwater Development Services (GDS) Pty Ltd. GDS is employed as a consultant to Parkway Minerals Limited. Mr Haig has sufficient experience which is relevant to the types of aquifers under consideration 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 ("JORC2012"). Mr Haig consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

### **Attachments**

*Appendix 1 JORC Tables*

## Appendix 1 JORC Tables

### Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li><i>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i></li> <li><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li><i>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</i></li> </ul>	Brine and mineral sampling was completed via Air core (AC) drilling technique
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li><i>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</i></li> </ul>	<ul style="list-style-type: none"> <li>Air Core drilling was completed by Ausdrill using a specialized Lakewalker drill rig. Holes were drilled to blade refusal, hole diameter was 85mm</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li><i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li><i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i></li> </ul>	<ul style="list-style-type: none"> <li>Mineral samples were collected on a metre basis via a cyclone fitted on the rig. Intervals where no samples were recovered due to ground conditions were recorded. Water samples were collected in a 9 litre bucket from intervals within the hole where sand aquifers were intersected. Brine samples were collected by air lifting the water sample using the rig compressor. Drilling was completed with care, the cyclone was cleaned regularly. The majority of the solid samples were wet clays, Due to the unconsolidated nature of the sand, sample recovery in these units was variable. The containers collecting water samples were cleaned regularly. Due to intermittent flow it was not possible to purge the lines before taking water samples.</li> </ul>



Criteria	JORC Code explanation	Commentary
		Brine samples were only collected through sand aquifer intervals. For this preliminary work the relationship between the recovery of the solid sample from the hole and brine sample is not considered relevant
<b>Logging</b>	<ul style="list-style-type: none"> <li>• <i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Qualitative lithological logging- using a standard logging- code was completed with major and minor lithological units described. Representative sample for each metre drilled was collected in a plastic chip tray for later reference.</li> <li>• An estimate of the flow rate for each aquifer bed base made by recording the time taken to fill a 9 litre bucket</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No core drilling.</li> <li>• 4 metre composite samples of drill spoil were collected. Due to the wet and sticky nature of the clay material, standard sampling protocols could not be followed. As the chemistry of the solid samples was considered secondary to the brine sampling, the sample quality was considered adequate.</li> <li>• Brine water samples were collected with a clean 9 litre bucket from the rig cyclone. The sample was placed in a 250ml and 50 ml sterile plastic contained provided by the analytical laboratory.</li> <li>• The collected samples was stored in an chilled esky on the rig and transported daily to a refrigerator at the camp. Due to the remote location, the samples were collected over the course of the program and submitted to the laboratory at the end of the programme.</li> <li>• A TPS-WP-88 portable conductivity and Eh meter was used to record electrical conductivity, Ph and temperature of each water sample at the drill site.</li> <li>• No blank or duplicate samples were collected on site</li> <li>• The size of the water sample collected is considered sufficient for a representative sample.</li> <li>•</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i></li> <li>• <i>Nature of quality control procedures adopted (eg standards, blanks,</i></li> </ul>	<ul style="list-style-type: none"> <li>• All samples were submitted to ALS Laboratories for analysis</li> <li>• Brine waters were analysed for major cations ( K, Ca,Mg Na) and anions Cl,sulphate an alkalinity ) as well as Total dissolved salts (TDS) and PH. As well as a multi-element suite (dissolved metals) using technique MSI 4-REE and MSI14-ANPH</li> <li>• Solids were analysed for a multi-element suit of elements using method ME-MS41L and MS41L-REE</li> <li>• Standard laboratory QA/QC protocols were used by ALS for the</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i>	analysis
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Due to the preliminary nature of the program the company has not sought independent verification of the results</li> <li>• No twinned holes were drilled</li> <li>• Sample data was collected in the field and recorded by hand in standard company format. The site geologist transferred the hard copy data to a spreadsheet on site and it was emailed to the company offices.</li> <li>• The sample data and laboratory results were loaded into a Access data base and validated against the hard copy data.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>• <i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i></li> <li>• <i>Specification of the grid system used.</i></li> <li>• <i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The collar coordinates for each drillhole were recorded by hand held GPS</li> <li>• The datum was GDA 94 zone 50.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>• <i>Data spacing for reporting of Exploration Results.</i></li> <li>• <i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i></li> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The drill lines were spaced approximately 2000m apart along line previously surveyed as part of the passive seismic survey.</li> <li>• Holes were spaced approximately 400m apart along the lines</li> <li>• It was not anticipated that any samples collected from the program would be used to calculate geological resources.</li> <li>• By the nature of the sample, the water samples collected were composite samples. 4 metre composite samples were collected from the drill spoil as well.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>• <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li>• <i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The drill lines were orientated perpendicular to the long axis of the palaeochannels, as defined by the passive seismic survey.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>• <i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All samples were collected and stored on site. At the completion of the program all the samples were transported to the laboratory sample receival centre in Perth by company contracted personnel.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No audits or data reviews were completed.</li> </ul>

## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>Drilling was completed on granted tenement E77/1051</li> <li>The tenements is held 100% by Parkway Minerals NL</li> <li>The Wutha People are the traditional owners over the north-eastern part of the project area (approximately 10% of the project area). The remainder of the project area is currently not under native title claim.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Limited work has been completed on the project area for potash in the past.</li> <li>Jervios Mining Limited and Soraway Development Pty Ltd have both in recent times held tenure over parts of the Lake Barlee Project. Work completed by both companies was restricted to processing government geophysical data sets, shallow auger drilling and chemical analysis and taking hand held scintillator readings</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The principal commodity being explored for is potassium within arid salt lakes. The principal deposit tested by this program are aquipotassium rich brines within sand aquifers that were developed on the palaeosurface and within the lake profile.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>The location of all drill collars are reported in table 1 in the body of this report</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such</li> </ul>	<p>Brine water results for K, Mg, Na, Cl, SO4 are reported in Table 3 in the body for the text. The remaining elements reported by the laboratory are not regarded as significant to the principal commodity being explored for and have not been released. The analytical results of the lake sediment samples have not been reported as they are not considered relevant.</p>



Criteria	JORC Code explanation	Commentary
	<p><i>aggregations should be shown in detail.</i></p> <ul style="list-style-type: none"> <li><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	The brine samples collected through intervals where the rig geologist or driller observed water flows or sand intervals were recorded. No metal equivalent results are reported
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li><i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li><i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</i></li> </ul>	<ul style="list-style-type: none"> <li>Brine deposits are located within tabular sand bodies that are in part controlled by the topography of the basin floor.</li> <li>Vertical drillholes are considered the most appropriate method to determine the thickness of the aquifer sands</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li><i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i></li> </ul>	<ul style="list-style-type: none"> <li>Appropriate plans and maps are provided in the body of the report</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li><i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i></li> </ul>	<ul style="list-style-type: none"> <li>The geochemistry of the principal elements of SOP including K, Mg, Cl, Na, SO<sub>4</sub> have been reported.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li><i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i></li> </ul>	<ul style="list-style-type: none"> <li>No other exploration data is currently being collected by the company</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>The drill program was a proof of concept drill program to confirm the presence of palaeochannel sands and determine the concentration of potassium in the brine waters. The results of the drill program confirmed the presence of aquifer sands but the concentration of K was considered low and unlikely to develop into an economic deposit. The company intend to review its options on the overall project.</li> </ul>