OFFICER BASIN POTASH PROJECT: UPDATE ON 2021 DRILLING CAMPAIGN

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HEAD OFFICE

Reward Minerals Ltd
159 Stirling Highway
Nedlands WA 6009

PO Box 1104
Nedlands WA 6909

T: 08 9386 4699
E: admin@rewardminerals.com
W: www.rewardminerals.com

Summary

- **Four additional drill holes (OB005 – OB008) and re-drill of OB004 completed during Q4 of 2021**
- **K-values in Groundwater recovered are generally lower in OB005 – OB008 than in OB001 – OB004 but drilling has provided significant enhancement of Palaeovalley System Concept**
- **Passive Seismic Geophysical Survey planned to further investigate the Officer Basin Palaeovalley System Concept**

Reward Minerals Ltd (Reward, or the Company) provides the following update on its 2021 drilling campaign in the Officer Basin in Western Australia.

Five drill holes were completed between August and December 2021. Two of these were drilled as part of the 2020 Phase 1 program, including a re-drill of OB004 (OB004B) and OB005, which also required a re-drill (OB005B) due to technical issues encountered during drilling.

OB006 – OB008 were subsequently drilled between November and December 2021 as part of the Phase 2 drill program, following receipt of Heritage Clearance in October 2021.

All holes were executed using mud rotary drilling techniques for a total of 1,147 metres.

The purpose of the drilling was to follow up on significant, Potash-rich brine flows encountered previously in holes OB001 – OB004 drilled during 2020 (see ASX Release 27 January 2021).

Locations of drill holes and chemical analyses of brines recovered by airlifting techniques are provided in Tables 1 and 2 respectively. A Location Plan is provided in Figure 1.

Drilling Program	Hole ID	Easting (MGA Zone 51)	Northing (MGA Zone 51)	Elevation (masl)	Hole Depth (m)	Dip (°)	Azimuth (°)
Phase 1 (2020 - 2021)	OB004B	578125	7399201	350	216	90	360
	OB005B	583907	7408866	363	276	90	360
Phase 2 (2021)	OB006 (MW2)	580001	7407389	342	231	90	360
	OB007 (MW4)	577900	7410454	337	222	90	360
	OB008 (MW8)	571443	7416392	346	202	90	360

Table 1. Drill Hole Collar information for 2021 drilling at Officer Basin

Drilling Program	Hole ID	Hole Depth (m)	Sample Depth (m)	Ca (mg/l)	K (mg/l)	Mg (mg/l)	Na (mg/l)	SO_4 (mg/l)	Cl (mg/l)	Specific Gravity	Total Dissolved Ions*
Phase 1 (2020 - 2021)	OB004B	216	40	1525	450	600	46275	8100	74230	1.085	**131180**
	OB005B	276	276	113	590	67	1937	1770	3337	1.000	**7814**
Phase 2 (2021)	OB006 (MW2)	231	32	325	430	292	3748	3870	5190	1.006	**13855**
			219	700	570	96	2374	3690	3320	1.003	**10750**
			225	785	500	96	2166	3810	3010	1.003	**10367**
	OB007 (MW4)	222	39	455	330	464	12690	4500	20650	1.023	**39089**
			222	640	460	658	18030	6030	29120	1.034	**54938**
			196	910	430	668	16570	5460	27610	1.028	**51648**
	OB008 (MW8)	202	202	900	1480	1526	58300	13470	92620	1.107	**168296**
			202	940	1500	1590	60560	14400	97940	1.114	**176930**

Table 2. Geochemical Assay Results for 2021 drilling at Officer Basin

**Total Dissolved Ions numbers quoted correspond to the sum of the ion concentrations of columns 5 – 10 in Table 2. This figure may differ somewhat from Total Dissolved Solid (TDS) figures. To convert K values to SOP multiply by 2.228.*

Results Summary

The 2021 drilling at Officer Basin confirms the presence of substantial groundwater occurrence in the area/s drilled.

However, generally the tenor of dissolved salts in the groundwater recovered from the drill holes was disappointing, particularly in view of the much higher Total Dissolved Ion (TDI) content of brines encountered in holes OB001 – OB004 during 2020.

While it appears that near-surface groundwater is relatively fresh and that TDI generally increases with depth, the drilling crew experienced great difficulty in isolating the upper, freshwater aquifers from deeper, brine-containing aquifers (of significantly higher salinity). Thus, it is difficult to quantify the dilution effect on deeper groundwater by shallower inflow during the process of pumping and subsequent airlift recovery.

Ground conditions including running sands underlain by dense clay formations made drilling difficult with frequent loss of mud circulation, and drilling equipment getting stuck or lost downhole on a regular basis.

Results of the Officer Basin drilling to-date provide the following indications:

1. Drilling of the deeper holes OB001 and OB002 (cored to 419.45m and 705.6m respectively) failed to return solid evaporites containing water-soluble potash salts. Core analysis of OB002 to include formation dating to confirm whether the targeted rock sequences were in fact reached, has yet to be finalised. These dating results may provide a guide as to whether deeper drilling to penetrate the Browne Formations sediments is warranted.
2. The shallower drilling executed in 2021 in holes OB005 – OB008 and limited groundwater recovery trials support Reward's view that a large palaeovalley system runs from (at least) OB001/OB002 in the east across the Warnturr and Timpirr Lakes corridor to the west, a distance of >40km. The low-density tenor of groundwater in recent holes OB005, OB006 and OB007 suggests that these holes are located on the margins of the postulated palaeovalley aquifer. OB008 demonstrated a significant Potash content in groundwater drawn from the bottom of hole at 202 metres. Potassium analysis of 1.49kg/m^3 and sulphate of 13.9kg/m^3 are regarded as encouraging (SOP equivalent of 3.3kg/m^3 of brine).

Next Steps

As indicated in note 2. above, Reward believes that a substantial water / brine-saturated palaeovalley exists in the area where holes OB001 – OB008 have been drilled to-date.

Based on that assumption, Reward proposes to conduct a geophysical survey involving Passive Seismic Surveying, both across and perpendicular to the postulated flow direction of the palaeovalley. Survey lines will effectively run parallel to Seismic Line N83-1 (see Figure 1).

Passive seismic is a relatively low-cost, non-ground disturbing technique used extensively in Western Australia to define depth of cover, shallow stratigraphy and direction and depth of palaeovalley water and brine resources for mining and other (Potash) operations. Follow-up drilling has confirmed the effectiveness of the method in other regions.

The implementation of the Passive Seismic Survey will require approval from WDLAC and the Martu Traditional Owners in order to gain access to the Warnturr and Timpirr Lake areas which are of Cultural Significance to the Martu and are Registered Sites under the Aboriginal Heritage Act 1972. Reward will seek to discuss access considerations prior to any further planning of geophysical survey activities.

Authorised for release by the Board of Reward Minerals Ltd

For further information please contact:

Michael Ruane
Director

About Reward

Reward is an ASX-listed advanced-stage sulphate of potash exploration and development company. Reward's flagship is its 100%-owned Kumpupintil Lake Potash Project, located east of Newman in north-western Western Australia. The Project hosts Australia's largest high-grade brine SOP deposit in a region with the highest evaporation rate. Key environmental approvals are in place and development can commence on completion of final feasibility studies, secondary regulatory approvals and achievement of funding.

Reward completed a detailed, conservative Pre-Feasibility Study which was updated with improved logistics in July 2018. An Indigenous Land Use Agreement is in place with the Martu people, traditional owners of the land upon which Kumpupintil Lake is situated.

Forward-Looking Statements

This document may contain certain "forward-looking statements". When used in this document, the words such as "could", "plan", "estimate", "expect", "intend", "may", "potential", "should", and similar expressions are forward-looking statements. Although Reward believes that the expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties, and no assurance can be given that actual results will be consistent with these forward-looking statements.

For a more detailed discussion of such risks and uncertainties, see Reward's other ASX Releases, Presentations and Annual Reports. Readers should not place undue reliance on forward-looking statements. Reward does not undertake any obligation to release publicly any revisions to any forward-looking statement to reflect events or circumstances after the date of this ASX Release, or to reflect the occurrence of unanticipated events, except as may be required under applicable securities laws.

Exploration Results – Competent Persons Statement

The information in this report that relates to Exploration Results, Brine Assays and Analyses is based on information compiled by Dr Michael Ruane, a Competent Person who is a Member of The Royal Australian Chemical Institute. Dr Ruane is an Executive Director of Reward Minerals. Dr Ruane has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Dr Ruane consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

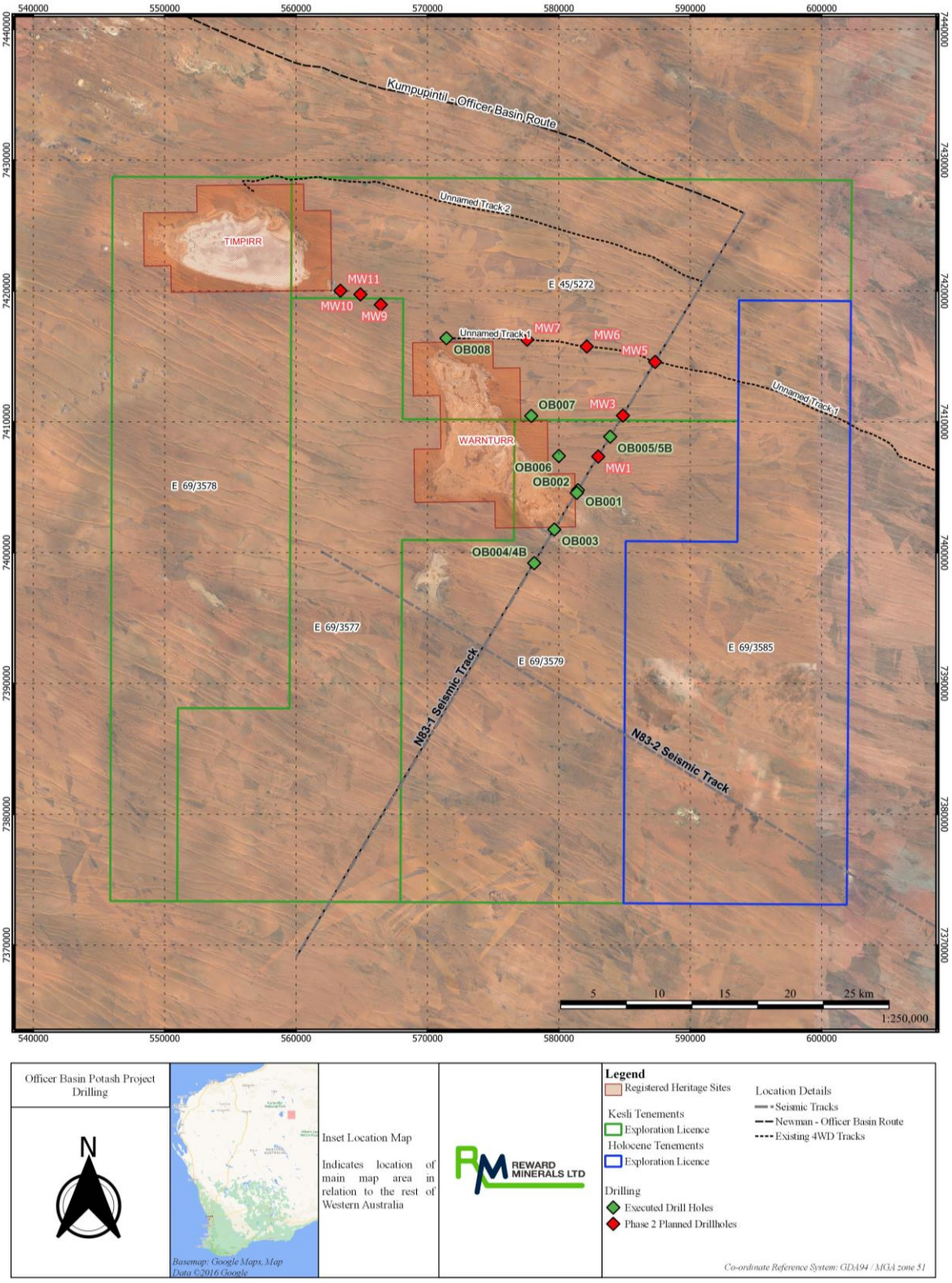

Figure 1. Officer Basin executed and planned drill holes as of January 2022, located just 100km east of Reward's JORC-defined SOP Resource of Kumpupintil Lake.

Note: Officer Basin Tenements are Registered under Kesli Chemicals Pty Ltd, which holds 100% beneficial interest in its Tenements on behalf of Reward Minerals Ltd.

Appendix 1. JORC Criteria and Commentary

a) Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	*Nature and quality of sampling (e.g. 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.* *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* *Aspects of the determination of mineralisation that are Material to the Public Report.* *In cases where 'industry standard' work has been done this would be relatively simple (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.*	Groundwater sampling from OB005 – OB008 involved airlifting of water at various downhole depths by setting the air inlet hose at the selected test horizon down the cased section of hole or inside the drill rod stem. The samples were airlifted at regular intervals over a period of several hours with monitoring of the specific gravity (SG) of the water as delivered from the hole. Bulk samples were collected from the airlift discharge hose in a 20-litre bucket. Sub-samples of 250ml were taken from the bulk, labelled and delivered to the Perth Office. Samples of similar Specific Gravity were composited for analysis by an independent laboratory. Lithological samples were collected nominally at 1-metre downhole intervals. These have not been assayed as yet.
Drilling techniques	*Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. 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.).*	Vertical mud rotary drilling was conducted using a Hanjin D&B Multi 35 drilling rig employing tricone and PDC bits. No coring was undertaken. Drill hole completion details are provided in Table 1.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.* *Measures taken to maximise sample recovery and ensure representative nature of the samples.* *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.*	Lithological samples were collected nominally at 1-metre downhole intervals. Samples recovered are for geological logging and qualitative purposes only. All water samples were collected by airlifting. See Sampling Techniques for further information.
Geologic Logging	*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.* *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* *The total length and percentage of the relevant intersections logged.*	Geological logging is ongoing and is being completed by a qualified geologist. All lithological samples collected during drilling are qualitatively logged at nominal 1-metre intervals.
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.* *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.* *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* *Measures taken to ensure that the sampling is*	250ml sub-samples were taken from the airlifted water samples. Upon receipt of the samples at the Company's in-house laboratory, samples were sorted and reconciled against the record generated on-site. High Total Dissolved Solids (TDS) solutions were diluted by 50x prior to dispatch to an independent laboratory. Results are corrected at the laboratory to account for the advised dilution (if dilution has been carried out). See Sampling Techniques above for further information.

Criteria	JORC Code explanation	Commentary
	representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. *Whether sample sizes are appropriate to the grain size of the material being sampled.*	
Quality of assay data and laboratory tests	*The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* *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.* *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	Water samples were analysed for K, Na, Mg, Ca, S using ICP-OES, with chloride (Cl) determined by Mohr titration and undertaken by a qualified metallurgist in-house. Analyses conducted at an independent laboratory were done so with laboratory equipment calibrated using standard solutions. No preparation was performed by the laboratory other than removal of a separate aliquot from the "as received" diluted solution if required. The laboratory undertakes this further dilution depending on the ICP response.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.* *The use of twinned holes.* *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* *Discuss any adjustment to assay data.*	Assay results were verified by a qualified chemist and metallurgist. Water samples were prepared for external assay at the Company's in-house lab and hand delivered to the external laboratory for testing. Results were received in digital format. All geological and assay results are recorded and stored in a database managed by a qualified geologist. Results are corrected at the laboratory to account for the advised dilution (if any). Adjustment to assay also includes calculation of sulphate from the ICP-OES sulphur analysis (SO_4 = S x 3.00) and calculation of sulphate of potash from ICP-OES potassium analysis (SOP = K x 2.228).
Location of data points	*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.* *Specification of the grid system used.* *Quality and adequacy of topographic control.*	The location and surface elevation of drill hole collars was determined with a Garmin Etrex 20 handheld GPS. The accuracy achieved with a handheld GPS is appropriate for the reporting of Exploration Results (+/- 2m). No downhole surveying occurred. All co-ordinates are referenced to the Geodetic Datum of Australia (GDA94) and quoted in Universal Transverse Mercator (UTM) Eastings and Northings projected in Zone 51 Map Grid of Australia (MGA).
Data spacing and distribution	*Data spacing for reporting of Exploration Results.* *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.* *Whether sample compositing has been applied.*	The closest stratigraphic control drill holes are 2017 FMG mineral exploration diamond drill hole RUD0004 located 38km to the northwest and Petroleum Wells 1972 BMR Madley 1 and 1982 Dragoon 1 located 102km SSE and 103km SE respectively. Some drill holes are located on 1983 seismic reflection survey line N83-1. Seismic reflection (2D) was shot at nominal 35m horizontal spacing. The potash bearing brines intersected in drill holes have yet to demonstrate sufficient grade or continuity to support the definition of a Mineral Resource and the classifications applied under the 2012 JORC code. No sample compositing has been applied other than that described in Sampling Techniques above.
Orientation of data in relation to geological	*Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* *If the relationship between the drilling orientation and the orientation of key mineralised structures is*	Drill holes are vertical or near vertical which is appropriate given the generally flat-lying nature of the Officer Basin sedimentary sequence as interpreted from seismic reflection data. No orientation-based sampling bias is considered to exist. The aquifer/s from which water flowed is interpreted to be conformable with the overlying and underlying sedimentary

Criteria	JORC Code explanation	Commentary
structure	*considered to have introduced a sampling bias, this should be assessed and reported if material.*	strata.
Sample security	*The measures taken to ensure sample security.*	Laboratory chain-of-custody procedures have been used for all brine samples.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	No third-party audits or review have been undertaken.

b) Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	*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.* *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	Drill holes are located within live Exploration Licences E69/3579 and E45/5272. Both tenements are registered under Kesli Chemicals Pty Ltd (Kesli). Tenements are located in the Little Sandy Desert in Western Australia within Shires of Wiluna and East Pilbara. Reward Minerals Ltd through its wholly owned subsidiary Holocene Pty Ltd, holds exclusive right to acquire 100% interest in the Kesli Tenements listed subject to agreed terms. Tenements are fully Granted (live) and are in their third year of grant (of a five year term). Kesli executed a Land Access and Mineral Exploration Agreement with the Western Desert Lands Aboriginal Corporation who act on behalf of the Martu Traditional Owners of the lands made by the Federal Court of Australia on 27 September 2002 (FCA 1208 WAG 6110 of 1998).
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	Previous exploration completed within the area is limited to two seismic reflection lines (2D) and a single exploration drill hole. The seismic reflection was shot by Eagle Corporation Ltd/ News Corporation Ltd in 1983. PNC Exploration (Australia) Pty Ltd completed a single vertical exploration hole (CA-19) to a depth of 33m within E69/3579 as part of a 19-hole regional program to assess the sandstone-uranium potential over the southwest margin of the Canning Basin. No potash was intersected in this drill hole.
Geology	*Deposit type, geological setting and style of mineralisation.*	The deposit is a Sulphate-of-Potash (SOP), mineral-in-brine deposit where potassium-rich brines are contained within saturated sedimentary units (aquifers). These brines are associated with ancient palaeovalley systems that have been buried by cover over geological time. Solid potash deposits (as source rocks) may exist in the area but so far have not been intercepted.
Drill hole Information	*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:* • *easting and northing of the drill hole collar* • *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* • *dip and azimuth of the hole* • *down hole length and interception depth* • *hole length.* *If the exclusion of this information is justified on the*	All drill hole data is provided in Table 1 of this Report.

Criteria	JORC Code explanation	Commentary
	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.	
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* *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 aggregations should be shown in detail.* *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	No minimum or maximum grade cut-offs have been applied. No data aggregation other than that indicated has been used to report the brine sample assay results presented in Table 2 of this report. No metal equivalents have been reported.
Relationship between mineralisation widths and intercept lengths	*These relationships are particularly important in the reporting of Exploration Results.* *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	The drill holes are vertical or near vertical and approximately orthogonal to the intersected flat-lying sedimentary sequence Vertical drill hole intercepts are interpreted to approximate the true thickness of the sedimentary units. Water samples were collected from downhole depths ranging between of between 32 and 272mgbl.
Diagrams	*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.*	Refer to Figures 1 of this report.
Balanced reporting	*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.*	All pertinent results have been reported.
Other substantive exploration data	*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.*	All material exploration data reported.
Further work	*The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	Geological Analysis of drill cuttings taken from OB005, OB006, OB007 and OB008 is currently in progress. Further drilling remains planned but will depend on full analysis of results from drill results obtained to-date and future geophysical survey results.