ASX Announcement

22 May 2023

Lake Way Potash Seismic Survey Defines Major Paleochannel

Highlights

- **A passive seismic survey at Great Western's Lake Way Potash Project has defined a major paleochannel, traversing 60km through the entire length of Great Western's tenure.**
- **The palaeochannel has a major centralised inset palaeovalley, infilled with potentially high brine yielding sediment, that measures 2.5 kilometres in width with the deepest calibrated depth section of 162 metres.**
- **This paleochannel is a downstream draining continuation from SO4's immediately adjacent potash development project.**
- **Legacy drill results from 1990s drilled holes by WMC within Great Western tenure recorded high-grade potash brine levels (>5,000mg/l).**
- **The magnitude of the downstream continuation of the paleochannel defined by the seismic survey exceeded expectations and represents a significant opportunity for Great Western Exploration. These results allow the company to start the process of defining a brine resource to equivalent standards as the JORC Code 2012.**

Great Western Exploration Limited (ASX: GTE) ("Great Western" or "the Company") is pleased to announce that a passive seismic survey has defined a major paleochannel; a downstream continuation extending south-east downstream from SO4's Lake Way Potash development project and through the entire sixty-kilometre of Great Western's 100% owned tenure.

Lake Way Potash Project

GTE 100% (E53/1949, E53/2017, E53/2026, E53/2146)

Great Western's Lake Way Potash Project is located approximately 50km south-east from Wiluna and adjoins SO4's potash development project. The majority of SO4's potash resources are hosted within a single paleochannel which continues downstream into Great Western's tenure (Figure 1).

Previously completed test work indicates that the potash brine within the basalt sands of the paleochannel remains high grade (>5,000mg/l potash) as it enters Great Western's Lake Way Potash

Project area (ASX Announcements by SO4 on 28th March 2018[1] and Great Western on 6th February 2020[2] and 1 July 2021[3]).

Company data was reviewed by hydrogeologist KH Morgan of KH Morgan and Associates. In Mr Morgan's preliminary assessment of Great Western's Lake Way Project (GTE ASX Announcement 1 July 2021[3]), he advised Great Western that: *"A comprehensive test pumping programme by WMC defined the hydraulic properties of the aquifer providing useful data for any evaluation of brine abstraction from the Great Western land. The WMC report also provides a range of potassium values. The higher potassium values occur in both shallow and deep aquifers."*

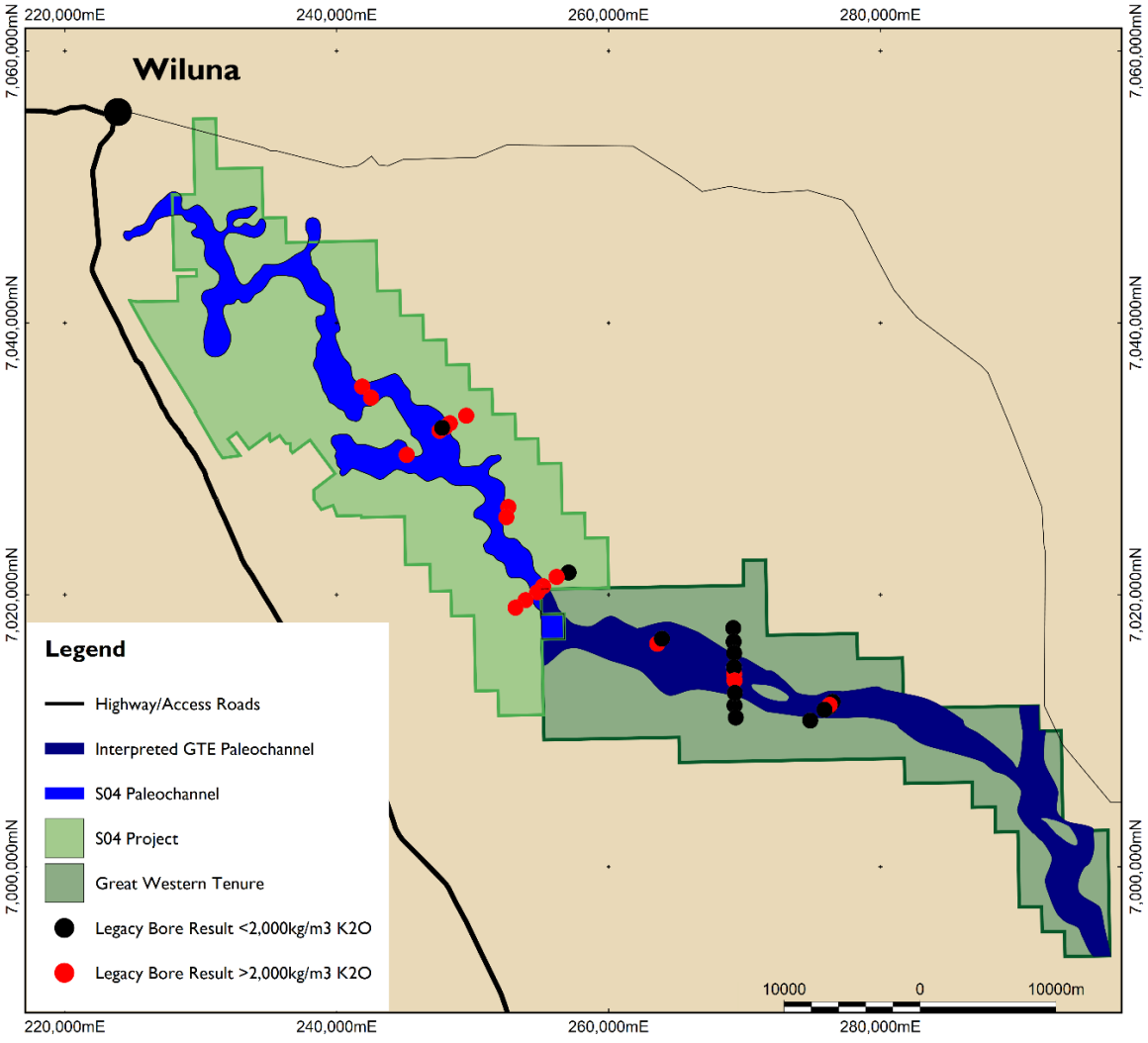

Figure 1: Interpreted continuation of SO4's Lake Way high grade potash paleochannel leading downstream into GTE's Lake Way Potash Project.

A passive seismic survey, a non-ground disturbing, low impact geophysical survey technique, was recently completed over the interpreted position of the paleochannel. Modelling of the horizontal to vertical (HVSR) survey data by Resource Potentials confirmed the paleochannel extends approximately 60km through the Company's held tenure, with central widths of up to 2.5km, with the deepest calibrated

depth section being 162 metres near the western side of the tenure (illustrated in Figure 2 and Figure 3).

In KH Morgan's assessment of the recently acquired survey data, he described the paleochannel as forming initially from a centralised inset valley, which would have filled with lateritic and boulder colluvium from the valley slopes. He interprets "*Many of these sediments have high hydraulic conductive properties providing ideal targets for high yield brine production bores"* (Morgan, 2023[4]). The inset channel is overlain by a thinner sequence of potential brine yielding sediment, in places more than 10 kilometres in width.

Mr Morgan advised *"The principal conclusion from combined passive seismic surveys is the potential presence of a major brine saturated palaeochannel system extending the full sixty-kilometre length through the Great Western tenements, clearly requiring ongoing evaluation for SOP resources"*.

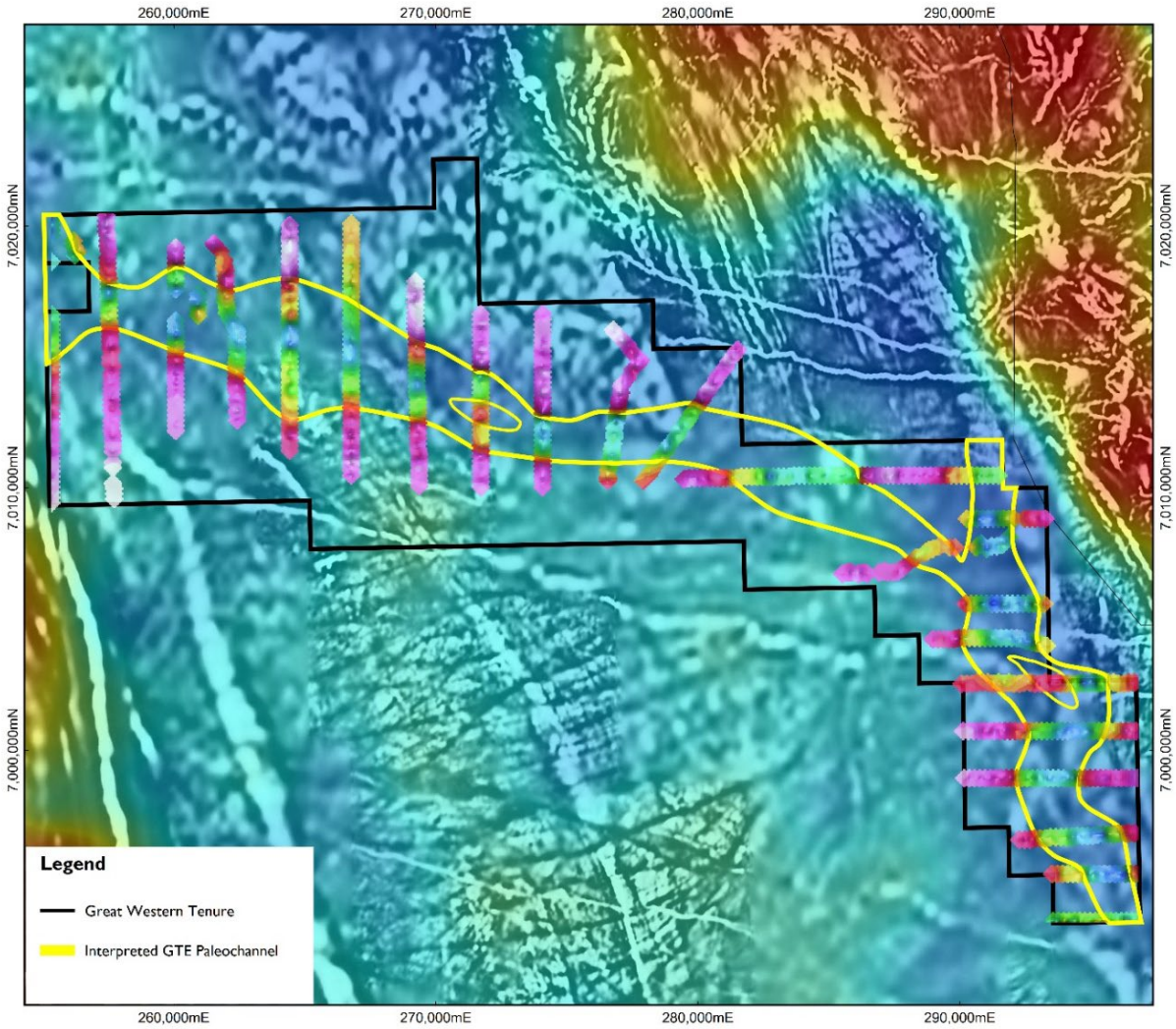

Figure 2: Coloured passive seismic sections overlain on state-wide pseudo-colour gravity and greyscale aeromagnetic imagery.

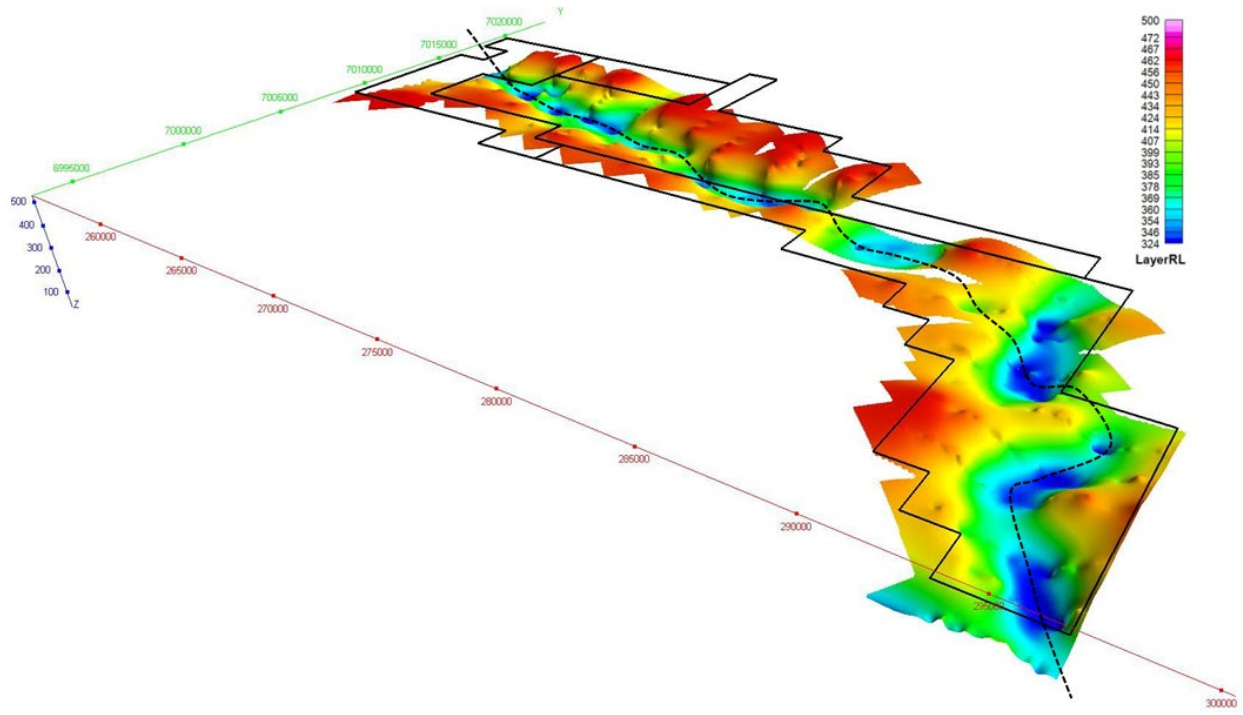

Figure 3: Three-dimensional view of the interpreted paleochannel pathway (thalweg) (after Resource Potential, March 2023[5]).

Great Western believes that the magnitude of the paleochannel, which significantly exceeds expectations, presents an opportunity for Great Western to unlock a project of significant shareholder value. The services of Mr Morgan have been retained on a Consultancy basis to continue working with the Company to advance the Project to report a brine resource to equivalent standards as the JORC Code 2012 Code, which would allow progress to a prefeasibility study.

The Company is also pleased to report that the 26D Water Licences that were to expire in June 23 have been renewed for a further two years to May 2025 held over the Company's Lake Way Tenements. This licence allows up to 50 exploration bores to be drilled and to undertake sampling and test pumping of bore capability.

About Great Western Exploration

Great Western Exploration (GTE.ASX) is a nickel, copper, and gold explorer with a world class, large land holding in prolific mineralised regions of Western Australia. Great Western's tenements have been underexplored or virtually unexplored (Figure 4).

Numerous field work programmes across multiple projects are currently underway at different stages of the Company's exploration pipeline, providing diverse opportunities for a significant discovery.

Figure 4: Location of Great Western's Exploration Tenure.

Authorised for release by the board of directors of Great Western Exploration Limited.

Tony Walsh

Company Secretary

Great Western Exploration Limited

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References

1. 28 March 2018 *Exploration Targets Reveal World Class Scale Potential*, Salt Lake Potash (S04:ASX), ASX Announcement.
2. 6 February 2020 *Lake Way Potash Updated*, Great Western Exploration (GTE:ASX), ASX Announcement.
3. 1 July 2021 *Lake Way Potash Project – Work Programme to Commence*, Great Western Exploration (GTE:ASX), ASX Announcement.
4. 9 May 2023 *Review of Phase II Paleochannel Survey*, KH Morgan and Associates, Internal Company Consultant Review.
5. March 2023 *Phase II Passive Seismic HVSR Surveying, Data QA/QC, Editing, Processing, Velocity Analysis, and Preliminary results, for Lake Way Potash Project, Western Australia*, Internal Company Consultant Review.

Competent Person Statement

The information in this report that relates to Exploration Results and Mineral Resources or Ore Reserves is based on information compiled by KH Morgan who is a Fellow of the Australasian Institute of Mining and Metallurgy. Mr. Morgan a consultant through KH Morgan and Associates 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. Morgan consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to the Company's Exploration Results is a compilation of Results previously released to ASX by Great Western Exploration (6 February 2020, 1 July 2021) and Salt Lake Potash (29 March 2018). KH Morgan consents to the inclusion of these Results in this report. Mr. Morgan has advised that this consent remains in place for this release by the Company of the same information in the same form and context, until the consent is withdrawn or replaced by a subsequent report and accompanying consent. The Company confirms that it is not aware of any new information

or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters in the market announcements 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 announcements.

Appendix 1.

Passive Seismic (Tromino®) Survey Summary

Phase I Passive Seismic Survey Specifications		
Lake Way Survey Line	**Number of Stations**	**Approx Line Length (Km)**
1	52	10.8
2	35	7
3	40	7.8
4	32	6.4
5	27	5.2
6	27	6.9
7	30	5.8
8	23	4.4
Total	**266**	**54.3**

Phase II Passive Seismic Survey Specifications		
Survey Line	**Number of Stations**	**Approx. Line Length (km)**
202301	43	8.4
202301b	4	0.6
202302	31	6
202302b	5	0.8
202303	44	8.6
202304	49	9.6
202305	34	6.6
202306	34	6.6
202307	32	6.2
202308	34	6.6
202309	15	2.8
202310	16	3
202311	34	6.6
202312	34	6.6
202313	34	6.6
202314	17	3.2
202315	17	3.2
Total	**477**	**92**

Appendix 2.

JORC Code, 2012 Edition (Table 1) – Lake Way Passive Seismic Survey

Section 1 Sampling Techniques and Data

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

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.*	• In March 2023, Great Western completed a passive seismic survey programme, using the horizontal to vertical spectral ratio (HVSR) method. • Tromino® ENGY TEB seismometers were utilised, with the programme comprising 23-line sections utilising 743 HVSR stations, spaced ~200m apart with a total of 146-line kilometres completed. The survey was completed over two phases, this is summarised in Appendix 1. • At each HSVR station a Tromino® was firmly coupled to the ground and covered with a heavy-duty bucket weighed down by sandbags in order to shield the Tromino® from wind motion and wayward animals, effectively reducing unwanted noise. The data acquisition time for each HVSR station was 20 minutes.

Criteria	JORC Code explanation	Commentary
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).*	• Not applicable. No drilling reported.
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.*	• Not applicable. No drilling reported.
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.*	• Not applicable. No drilling reported.
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 representativity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected,*	• Not applicable. No drilling reported.

Criteria	JORC Code explanation	Commentary
	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.*	• Tromino ® ENGY TEB seismometer specifications: ○ Manufacturer: MoHo s.r.l. ○ Dimensions: 10 x 14 x 8 cm ○ Weight: 1.1 kg ○ Vibration sensors: 3 orthogonal velocimeters ○ Sampling rate: 64 kHz per chn. ○ Output sample rate: 128 Hz ○ Sensor frequency range: 0.1 - 1024 Hz
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.*	• Resource Potentials were engaged by GTE to manage and interpret the Tromino® data, with the company inspecting the HVSR passive seismic survey data daily and applied quality control protocols. The Resource Potential paleochannel model was reviewed by the independent Kevin Morgan (of KH Morgan & Associates). • All survey data was recorded by the field crew on the Tromino® seismometers and checked daily by Resource Potentials. Manual filed logs were also recorded as a fail-safe to match stations to their digitally recorded location. Digital data is stored by Great Western Exploration on its' cloud server. • Resource Potentials manually cleaned final passive seismic HVSR data before converting peak frequency data to depth. • Passive seismic HVSR data were amplitude normalised by applying a filter process that equalises variations in the HVSR peak amplitudes observed at individual station recordings. This amplitude normalisation allows for subtle peak frequency responses to be amplified and stronger amplitudes to become subdued, enhancing lateral continuity along a survey line and across the project area.
Location of data points	• *Accuracy and quality of surveys used to locate*	• Location information was recorded by the Tromino® in-built GPS system.

Criteria	JORC Code explanation	Commentary
	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 grid system used was GDA94, MGA Zone 51. • Elevations were obtained from SRTM 1 arc-second (30m cell size resolution) digital elevation data.
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 programme comprised 23-line sections utilising 743 HVSR stations, spaced ~200m apart with a total of 146-line kilometres completed. Sections were spaced between 2-2.5km for north-south lines, with east-west lines spaced between 1.7 to 2km apart. • The passive seismic data is not being utilised for Mineral Resource or Ore Reserve estimations. • No drilling or sample compositing has taken place.
Orientation of data in relation to geological structure	• *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 considered to have introduced a sampling bias, this should be assessed and reported if material.*	• Survey lines were orientated perpendicular to the trend of the interpreted paleochannel orientation and is appropriate for the type of survey completed. • No drilling completed.
Sample security	• *The measures taken to ensure sample security.*	• Survey data was collected by field staff and uploaded to a secure cloud server where it was quality controlled and interpreted by Resource Potentials and provided to Great Western.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Data collection was reviewed, and quality controlled by geophysical consultancy Resource Potentials. The Resource Potential paleochannel interpretation has been reviewed by Great Western Geologists and the hydrogeologist, Kevin Morgan (KH Morgan & Associates).

Section 2 Reporting of Exploration Results

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

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.*	**Tenement No:**	E 53/1949, E 53/2026, E 53/2017, and E 53/2146.
		Tenement Type:	Exploration Licenses
		Status:	Tenements in good standing
		Location:	Approximately 50km south-east of Wiluna.
		Size (sq.km)	415.6
		Ownership:	100% owned by Great Western Exploration Ltd
		Native Title:	Project area covered by Determined Native Title claims: the TMPAC and the Kutlju Native Title Holders Land Access Agreements are in place.
		Other Agreements:	Two Priority 1 calcrete PECs cover portions of the north-western and south-eastern ends of the Project. These are not expected to impact GTEs current work programmes. GTE has current Access Agreements and tenement conditions that allow BHP NICKEL WEST PTY LTD access to their Miscellaneous Licenses (L53/82, L53/125, L53/126 and L53/127) that cover a portion of the Lake Way Project Area. The Access Agreements also outline that GTE must not impede upon BHP NICKELWEST PTY LTD's activities on, or purpose of their Miscellaneous Licenses. The Goldfield Gas Transmission Pipeline 24 passes through the Western end of GTE's Lake Way Project. Tenement conditions outline the consultation and Access Agreements required between GTE and the Gas Pipeline Operator.
		Non-State Royalties:	none

Criteria	JORC Code explanation	Commentary
		Other Encumbrances: none **National Parks:** none **Other Environmental:** none
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Legacy bore-hole sampling completed by WMC, See GTE ASX Announcement July 2021: *Lake Way Potash Project – Work Programme to Commence*
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The project area is located within a paleochannel on a Salt Lake, targeting potash brine.

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 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.*
		• Not applicable. No drilling reported.

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*	• Not applicable – drill assay results not reported.

Criteria	JORC Code explanation	Commentary
	aggregations should be shown in detail. • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	
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').*	• Not applicable – drill assay results not reported.
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.*	• Relevant location maps and sections are displayed in the announcement body; Figures 1-3. Survey location data is summarised in Appendix 1.
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 results have been reported from the passive seismic survey.
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 substantive exploration data has been reported by GTE in this announcement or previous ASX announcements.
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*	• Further exploration work will include further passive seismic survey data modelling, volumetric and permeability estimations of paleochannel sediment, and drill testing and sampling to confirm continuity of brine potassium grade.

Criteria	JORC Code explanation	Commentary
	possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	