

ASX Announcement | 5 February 2024

## Geological Interpretation Exposes the Potential Scale of the Trieste Lithium Project, James Bay, Quebec, Canada

### Highlights:

- Six months post the lithium discovery, geological analysis provides insights into the unique geological setting and exposes the potential scale of the Trieste Lithium Project.
- To date, six spodumene bearing pegmatite dykes have been discovered within a 20km<sup>2</sup> Metasediment Fault Flow Zone with fast tracked drilling results confirming the significance of this major discovery at Trieste.
- Additional discoveries are likely within two highly perspective areas - the underexplored Trieste Greenstone Discovery Trend and the Metasediment Fault Flow Zone, which is located south of the Trieste Greenstone Belt.
- In addition to the six known spodumene bearing pegmatite dykes, multiple locations of fertile geochemistry and anomalous magnetics have been identified within the Metasediment Fault Flow Zone, indicating a high potential for new discoveries.
- Nearby lithium discoveries by Winsome Resources, Rio Tinto/Midland and Azimut follow a distinct interpreted geophysical trend, enhancing the prospectivity for new discoveries within Loyal Lithium's portion of the Trieste Greenstone Discovery Trend.
- Current focus is on a low cost drilling program on Dyke #04 and Dyke #05, with LLI considering further drilling, geophysical and field-based programs to assist in unlocking the potential of the Trieste Lithium Project.
- Dyke #04 and Dyke #05 display impressive spodumene mega crystals at surface, up to 2.8m in length, and have recorded strong mineralisation up to 7.60% Li<sub>2</sub>O via recent rock chip and channel sample assays.
- The Trieste Lithium Project is located on the prolific Trieste Greenstone Belt, which sits just 10km east of Winsome Resources' (ASX:WRI) Adina-Jamar project with a JORC Inferred Mineral Resource Estimate of 59 Mt at 1.12% Li<sub>2</sub>O<sup>1</sup>.

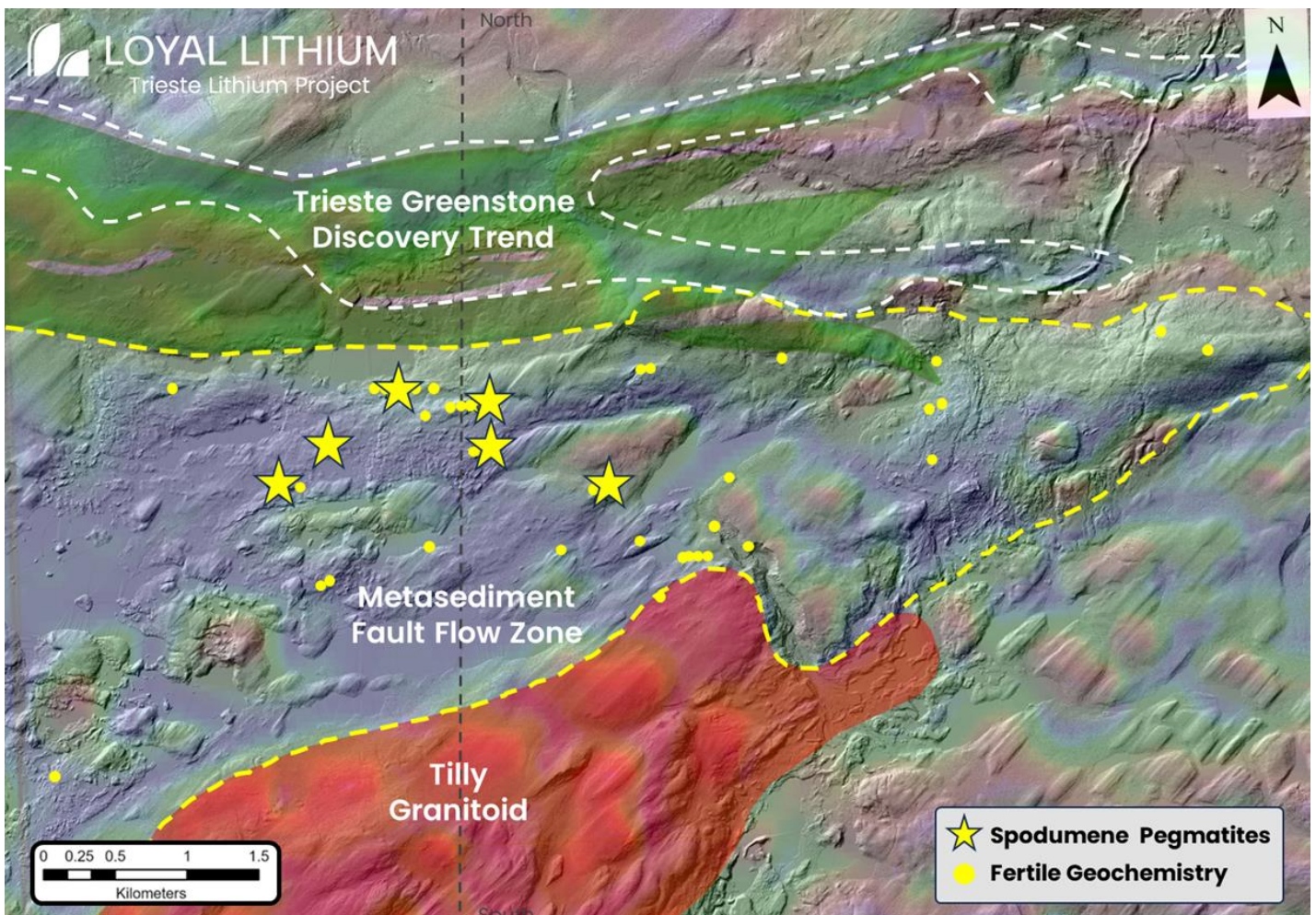
Loyal Lithium Limited (ASX:LLI) (**Loyal Lithium, LLI**, or the **Company**) is delighted to provide further significant geological insights into the Trieste Lithium Project (**Trieste, Project**) located in James Bay, Quebec, Canada. Six months after the discovery of lithium, extensive geological analysis has provided insights into the unique geological setting and exposed the potential scale of the Project. The analysis has identified two highly perspective areas within the project, namely, the underexplored Trieste Greenstone Discovery Trend and the 20km<sup>2</sup> Metasediment Fault Flow Zone. The Project has already yielded a significant find with six spodumene-bearing pegmatite dykes discovered, however the analysis and interpretation indicates a high potential for new discoveries within these areas. Loyal Lithium is considering further drilling, geophysical and field-based programs to unlock the potential of the Trieste Lithium Project.

**Loyal Lithium’s Managing Director, Mr. Adam Ritchie, commented:**

*"It's been an incredible six months for the Loyal Lithium team and the Trieste Lithium Project. A significant amount of high-quality work has been completed in a very short period of time to provide a full suite of inputs for this geological analysis."*

*"In addition to the summer field program, that discovered the six spodumene bearing dykes, the team also conducted a number of valuable geophysical surveys in parallel with our fast-tracked drilling program. The collective analysis and subsequent geological interpretation is extremely encouraging and suggest that a large fertile lithium system exists at the heart of the Trieste Lithium Project. Exactly where our six spodumene-bearing dykes were discovered."*

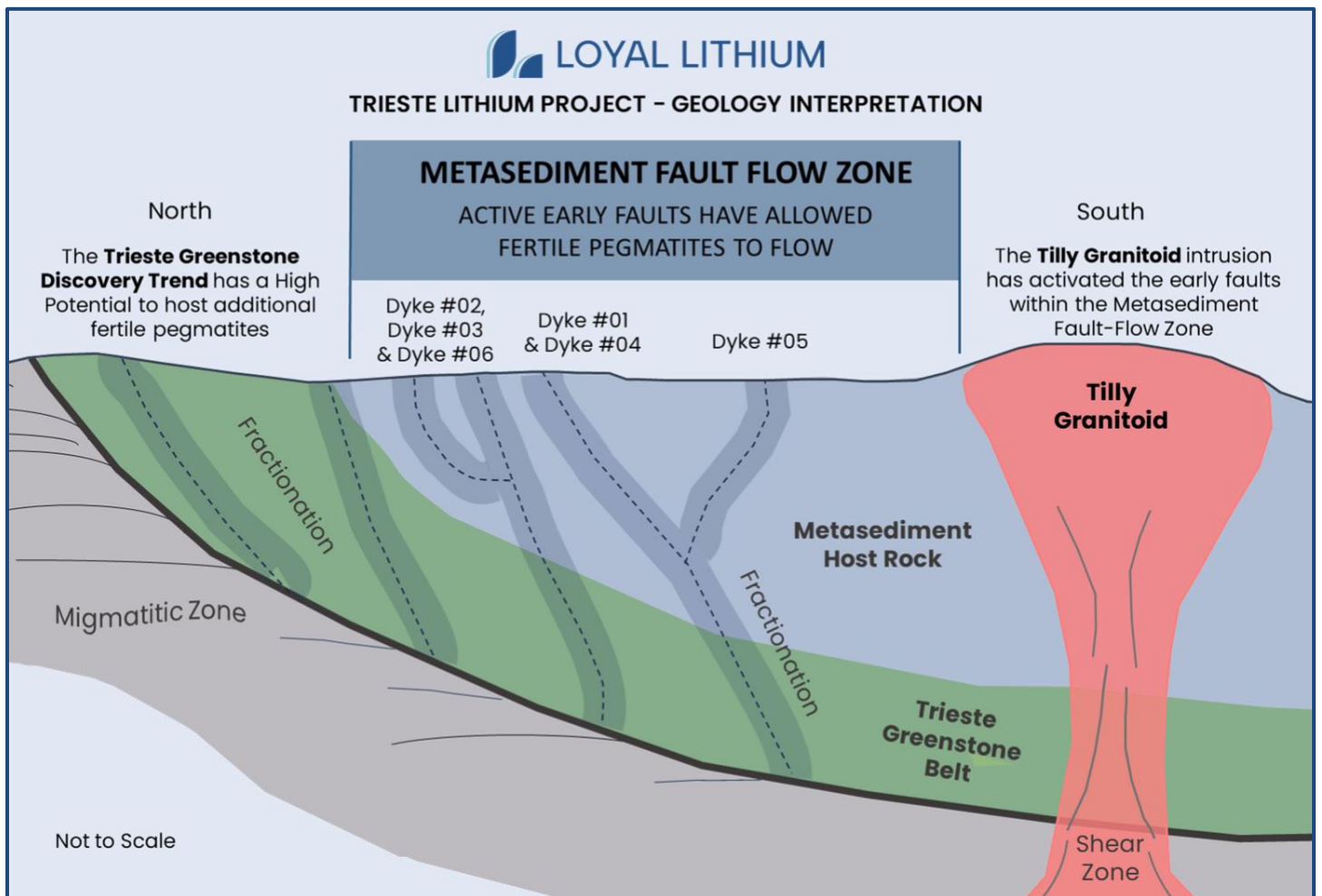
*"When considering the high likelihood of additional discoveries and the potential scale of Trieste, our approach to exploration needs to be considered and systematic. The team is energized by this work and excited about exposing the true potential of the Trieste Lithium Project."*



**Figure 1: Map showing two highly prospective areas: the underexplored Trieste Greenstone Discovery Trend (white) and the Metasediment Fault Flow Zone (yellow). Yellow dots are rock samples with fertile geochemistry ratios (K/Rb and Nb/Tl) and share uniquely similar geochemistry with known spodumene bearing dykes.**

The Loyal Lithium team has analysed multiple data sets that include, aeromagnetic data, multispectral imagery, LiDAR data, rock chip and channel assays, as well as field mapping, and drilling observations from Dyke #01, to create a geological interpretation of the Metasediment Fault Flow Zone, presented in Figures 1 & 2.

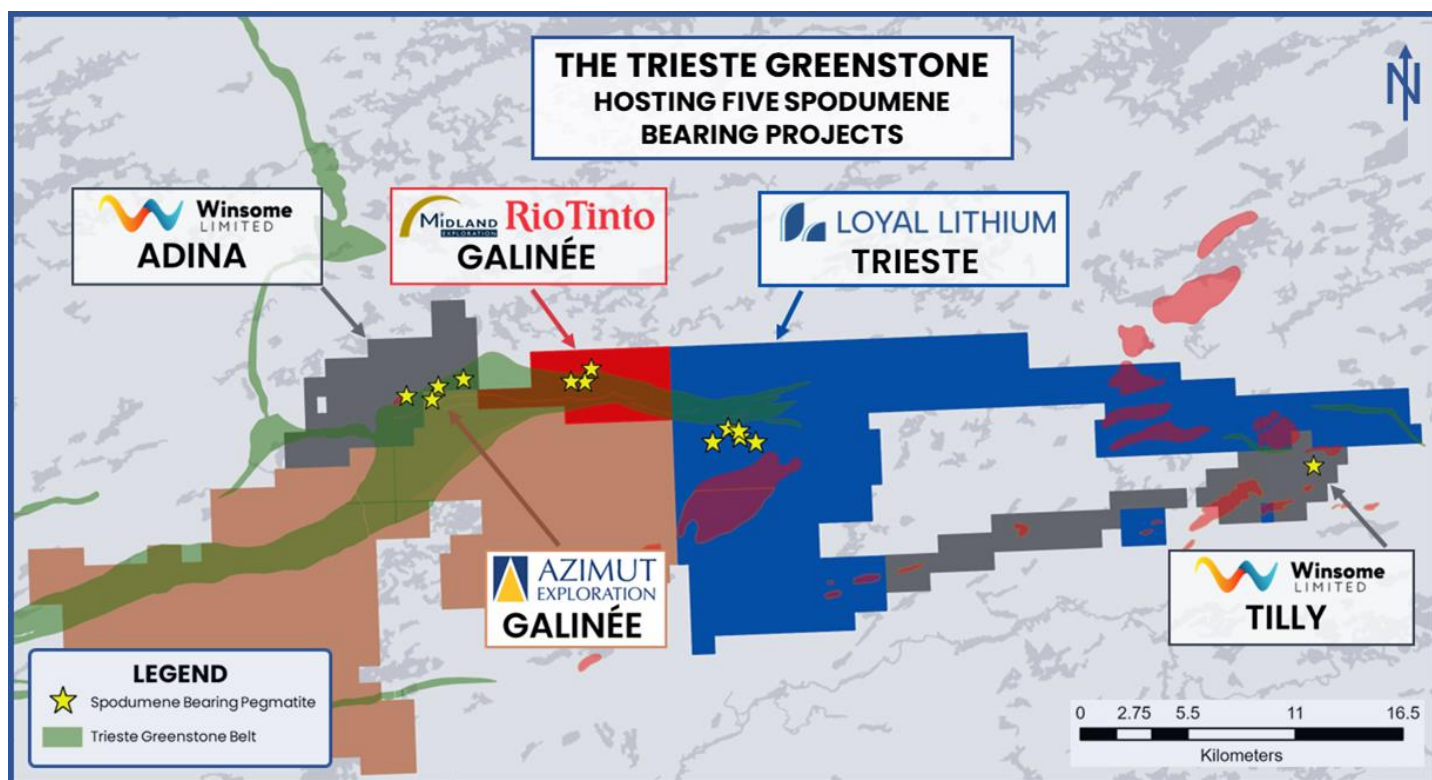
The cross section in Figure 2 illustrates a large fertile pegmatite system located between the Tilly Granitoid and the northern boundary of the Trieste Greenstone Belt. Whilst spodumene-bearing pegmatites are commonly associated with the greenstone, the geological interpretation suggests that the Tilly Granitoid has activated early faults within the metasediments, facilitating the flow of lithium-fertile pegmatites. This is precisely where our six spodumene-bearing dykes have been identified.



**Figure 2: Trieste Lithium Project geological cross section schematic showing the interpretation of the highly prospective Metasediment Fault Flow Zone and Trieste Greenstone Discovery Trend.**

Geophysical and geochemical analyses support this interpretation, revealing numerous anomalous areas beyond our six known spodumene-bearing dykes. This geological interpretation also provides a potential explanation for the close-spaced spodumene bearing pegmatite clusters, and the high likelihood of additional new pegmatites to be found either shallowly concealed or at depth, within Trieste Greenstone Discovery Trend and the Metasediment Fault Flow Zone.

The discoveries to the west of the Trieste Lithium Project by Winsome Resources, Rio Tinto/Midland and Azimut Exploration align with a distinct geophysical trend, heightening the prospectivity for further findings within Loyal Lithium's Trieste Greenstone Discovery Trend.



**Figure 3: Loyal Lithium's Trieste Project relative to other regional projects that have identified spodumene bearing pegmatites within the greater Trieste Greenstone Belt Lithium Complex.**

Loyal Lithium has recently commenced a focused low-cost drilling program on Dyke #04 and Dyke #05, and is considering additional drilling, geophysical, and field-based programs to unlock the full potential of the Trieste Lithium Project. Both Dyke #04 and Dyke #05 display impressive spodumene mega crystals at surface, with crystals spanning up to 2.8m in length and have recorded strong mineralisation of up to 7.60% Li<sub>2</sub>O via rock chip and channel sample assay results.

*This announcement has been authorised for release by Loyal Lithium's Board of Directors*

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## **About Loyal Lithium**

Loyal Lithium Limited (ASX: LLI) is a North American focused lithium led battery minerals company with projects in the Tier 1 North American mining jurisdictions in the Northwest Territories, Canada, James Bay Lithium District in Quebec, Canada and Nevada, USA. Through the systematic exploration of its projects, the Company aims to delineate JORC (2012) compliant resources, creating value for its shareholders.

### **Future Performance**

*This announcement may contain certain Forward-Looking statements and opinion Forward-looking statements, including projections, forecasts and estimates, and are provided as a general guide only and should not be relied on as an indication or guarantee of future performance and involve known and unknown risks, uncertainties, assumptions, contingencies and other important factors, many of which are outside the control of the Company and which are subject to change without notice and could cause the actual results, performance or achievements of the Company to be materially different from the future results, performance or achievements expressed or implied by such statements. Past performance is not necessarily a guide to future performance and no representation or warranty is made as to the likelihood of achievement or reasonableness of any forward-looking statements or other forecast. Nothing contained in this announcement, nor any information made available to you is, or and shall be relied upon as, a promise, representation, warranty or guarantee as to the past, present or the future performance of Loyal Lithium Limited.*

### **Competent Person Statement**

*The information in this announcement that relates to Exploration Results and Targets, is based, and fairly reflects, information compiled by Mr Darren Allingham, who is the Company's geologist. Mr Allingham is a Fellow of the Australian Institute of Geoscientists. Mr Allingham has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and the activity he is undertaking to qualify as a Competent Person (CP) as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results and Mineral Resources (JORC Code). Mr Allingham consents to the inclusion in the announcement of the matters based on the information in the form and context in which it appears.*

### **References**

<sup>1</sup> ASX Announcement WRI: 11 December 2023: Globally significant maiden Mineral Resource of 59 Mt at 100% owned Adina Lithium Project.

## JORC Code, 2012 Edition – Table 1 report template

### Section 1 Sampling Techniques and Data

(Criteria in this table apply to all preceding sections.)

Criteria	JORC Code explanation	Commentary
<p><i>Sampling techniques</i></p>	<ul style="list-style-type: none"> <li>• <i>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.</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 (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.</i></li> </ul>	<p>Up to 6 teams of two, comprised of a Geologist-in-training and an assistant, geological sampled (averaging 1.28 kg per sample) and mapped. Geologists did either reconnaissance traverses (2-6km) or shorter "detailed" traverses (&lt;2km) that were pre-traced across sectors of interest. A total of 353 cumulative linear km were walked on ground by the geological teams. Geological features of interest were either described and photographed (observation points) and/or sampled. The main structures measured in the field corresponded to what was relevant in the context of LCT pegmatite exploration (dykes, contacts, magmatic descriptions, etc.). The program was managed by Quebec QP Geologists and examined on site for much of the program by the Company's JORC CP.</p> <p>High-Resolution Heliborne Magnetic Survey by Prospectair Geosurveys, 15 chemin de l'Étang Gatineau, Québec, J9J 3S9, acquired high-resolution magnetic data in the LG-4 area of the Baie-James Region, Québec. The ideal spacing did not vary by more than 30 % over more than 300m. No re-flights were attempted as line spacing did not exceed this tolerance. The minimum length of any traverse or tie-line was 3 km. Aircraft Speed and Altitude: The helicopter was flown at approximately 120 km/h in gentle terrain. Under these conditions, the distance between samples along survey lines were typically 3.3 meters. This was magnetics only data acquisition, so nominal terrain clearance of the helicopter was set to 45 m with smooth line-to-line compatible draping of</p>

Criteria	JORC Code explanation	Commentary
		<p>topography. The nominal mag detector ground clearance was approximately 25 meters. Altitude was ultimately controlled at the discretion of the helicopter pilot with safety held in priority consideration.</p>
<p><i>Logging</i></p>	<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>	<p>Geological field samples were labelled and wrapped, while recording geological descriptions on a Samsung Galaxy field tablet and coordinates with hand-held Garmin 66s GPS. Mapped and sampled locations were also marked with flagging tape. Grabs or rock chips were taken on boulders or outcrops, later sent to the SGS laboratory for analysis. Descriptions were collected using the MX deposit Software and field photos were taken for each sample with a "four-pictures framework".</p>
<p><i>Sub-sampling techniques and sample preparation</i></p>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all cores 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>	<p>SGS Laboratory: Weigh &lt;3 kg, dry 105°C, crush to 75% passing 2mm, split 250g, pulverize to 85% passing 75 microns (G_WGH_KG-WTKG, G_DRY-DRY105, G_CRU-CRU75, G_SPL-SPL_RF_WT, G_PUL- PUL85_CR). Pulps are kept in storage at SGS for future reference.</p>

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<p><i>Quality of assay data and laboratory tests</i></p>	<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 (e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e., lack of bias) and precision have been established.</i></li> </ul>	<p>All Grab/chip and channel samples were analyzed by ICP-MS after using a sodium peroxide fusion (code GE_ICM91A50). When potential for gold mineralization was interpreted in the field, gold was analyzed using fire assay (GE_FAA30V5).</p> <p>For the geophysics survey, to encourage improved magnetic data corrections, "racetrack flying" was not done. Adjacent flight lines were flown consecutively in a regular progression. Flying commenced at the end of the block and proceeded towards the other end until the block was completed. PROSPECTAIR provided the following instrumentation for this survey: Airborne Magnetometers Geometrics G-822A: The heliborne magnetic sensor consisted of a non-oriented (strap-down) optically-pumped Caesium split beam sensor. These magnetometers have a sensitivity of 0.005 nT and a range of 15,000 to 100,000 nT with a sensor noise of less than 0.02 nT. The heliborne sensor is mounted in a bird made of nonmagnetic material located 19 m below the helicopter when flying. Total magnetic field measurements were recorded at 10 Hz in the aircraft. The ground system recording magnetic data at 1 sample every second. An OmniStar Real-Time differential GPS navigation system provided real-time guidance for the pilot and to position data to an absolute accuracy of better than 5 m. The Omnistar receiver provided real-time differential GPS for the Agis on-board navigation system. The differential data set was relayed to the helicopter via the Omnistar network appropriate geosynchronous satellite for the survey location. The receiver optimized the corrections for the current location. Airborne Navigation and Data</p>



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		<p>Acquisition System: Pico-Envirotec AGIS-XP system. The Airborne Geophysical Information System (AGIS-XP) is advanced, software driven instrument specifically designed for mobile aerial or ground geophysical survey work. The AGIS instrumentation package included an advanced Satellite navigation (GPS), real-time flight path information that was displayed over a map image (BMP format) of the area, and reliable data acquisition software. Thanks to simple interfacing, the radar and barometric altimeters, the RSI spectrometer and the Geometrics magnetometer were easily integrated into the system and digitally recorded. Automatic synchronization to the GPS position and time provided very close correlation between data and geographical position. The AGIS is equipped with a software suite allowing easy maintenance, upgrades, data QC, and project and survey area layout planning. A Magnetic Base Station GEM GSM-19 Overhauser magnetometer, a computer workstation and a complement of spare parts and test equipment serve as the base station. PROSPECTAIR establish the base station in a secure location with low magnetic noise. The GSM-19 magnetometer had resolution of 0.01 nT, and 0.2 nT accuracy over its operating range of 20,000- to 100,000 nT. Its data output rate is 1 Hz. A Free Flight Radar Altimeter measured height above ground to a resolution of 0.5 m and an accuracy of 5% over a range up to 2,500 ft. The radar altimeter data was recorded and sampled at 10 Hz. The digital barometric pressure sensor measured static pressure to an accuracy of <math>\pm 4</math> m and resolution of 2 m over a range up to 30,000 ft above sea level. The barometric altimeter data were sampled at 10 Hz. Survey helicopter was a Eurocopter EC120 (registration C-GEDI)</p>

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	<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>	<p>that handled efficiently the equipment load and the required survey range.</p> <p>For geological field samples, 12 rock sample controls were inserted into the sample sequence for approximately 5% of the total samples. The controls used were Oreas 250, Oreas 252 and Quartz blanks. 10 controls yielded values within 1 standard deviation from the certified values and 2 control yielded a value within 2 standard deviations from the certified value.</p> <p>DIURNAL ACTIVITY: Diurnal activity did not exceed 5nT per minute so no re-flights occurred. Base-station magnetic data for the removal of diurnal variations were collected. A 0.5 nT magnetic noise envelope was exceeded over 500 metres line-length so no re-flights occurred. The final data was lag-corrected and levelled using both tie-line leveling and micro-levelling. The data was levelled to the degree that there was no flight line striping visible in the first vertical derivative of the magnetic data and minimal flight line striping visible in the second vertical derivative of the magnetic data. This shall be ascertained using the current industry standard GEOSOFT version 2022.1 or higher. Leveling shall be done with no amplitude loss for any frequency content in the magnetic data.</p>
Location of data points	<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>	<p>The survey block was defined by the digital kml file delivered with the proposal, which was created based on the information provided by LLI and adjusted for the 3 km minimal line length. The coordinates were given with respect to NAD-83, UTM zone 18N.</p>

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<i>Data spacing and distribution</i>	<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>	<p>Geological field traverses were based on predefined prioritized areas defined by LLI staff and then fine tuned by the Geological Consultant. As in field results were found to positively identify spodumene the field traverses were concentrated in the areas of interest.</p> <p>The geophysical survey was undertaken with traverse lines oriented 178 in order to map the dominant magnetic/geological strike, at a 50m line spacing. Control lines flown perpendicular to traverse lines and at a 500 m line spacing. This led to a total survey distance of 555 l-km.</p>
<i>Orientation of data in relation to geological structure</i>	<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>	<p>Flight lines were oriented perpendicular to the D1 structural trace (east-west strike) and geological contacts (approximately east-west strike).</p>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>• <i>The measures taken to ensure sample security.</i></li> </ul>	<p>All geological field samples were brought back from the campsite with the contractor to Montreal and were then shipped via Manitoulin Transport Inc., from Montreal, Quebec, to SGS Canada Inc. in Sudbury, Ontario. All samples were carefully sealed, and their labeled number was verified before being packed and sent to the lab for analysis.</p> <p>Geophysical data was downloaded nightly and uploaded to the central office. Multiple copies of the dataset were generated to minimise the potential for data loss.</p>

Criteria	JORC Code explanation	Commentary
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li><i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	No audits or reviews of sampling techniques or data were undertaken. Channel samples on outcrop confirmed geological observations of spodumene presence and drilling has confirmed grab and channel samples high lithium values associated with spodumene percentage estimates.

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>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.</i></li> </ul>	228 claims are part of a co-ownership agreement with Osisko Development Corporation with 75% ownership to Loyal Lithium (managers) and 25% Osisko. 12 claims were acquired from Noranda Royalties. 226 claims were acquired through online map staking in October 2022.
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li><i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	The first known acquisition of mineral claims within the area of the current Trieste Lithium Project, was in 1998 with a joint venture between Virginia Gold Mines and Cambior called the Caniapiscau Property. The Caniapiscau Property consisted of three different areas; the Bloc Est and Bloc Ouest areas fall within the current Project boundary and the Noella area is north of the current Project. Numerous field programs were executed from 1998 to 2001 including prospecting, mapping, geophysical surveys and channel sampling targeting precious metals (GM 57170, GM 58442, GM 59201). No drilling on the

Criteria	JORC Code explanation	Commentary
		<p>Project area was recorded during that time. Virginia Mines Inc. increased their land holding in the area in 2007 and signed a joint venture agreement with Breakwater Resources on the Trieste Property, which encompassed the historical Caniapiscau Property and makes up the western portion of the current Trieste Lithium Project. An intensive prospecting and mapping program was executed in the summer of 2007 resulting in the discovery of several Au mineralized outcrops and boulders. A total of 326 outcrops were described from which 94 outcrop samples and 95 boulder samples were collected from within the current Trieste Lithium Project boundary (GM63378). In 2009, Virginia Mines followed up anomalous values the 2007 exploration work with prospecting and till sampling that resulted in the collection of 235 rock samples and 155 till samples from the Trieste Property (GM65024). In 2011, additional prospecting and mapping took place on the Trieste Property with 169 outcrops and 114 boulders described and 203 rock samples collected (GM 66254). Another significant ground exploration program was completed in 2012, with 155 outcrops and 52 boulders described with 104 rock samples collected. An additional 25 trenches were excavated using a heli-portable excavator to test various geophysical and geochemical anomalies (GM67952). All samples collected from 2009 to 2012 fall within the current Trieste Project area. Numerous geophysical surveys were completed by Virginia Mines from 2008 to 2012 including a 2009 IP survey (40 line-km) (GM64304), 2009 EMH Survey (49.5 line-km) (GM64304), 2011 Heliborne HD magnetic survey (3,320 line-km) (GM65712), and a 2012 IP survey and line cutting (108.25 line-km) (GM66977). In 2015, Virginia Mines changed its</p>

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		<p>name to Exploration Osisko Baie James Inc. and continued to advance the historical Trieste Property with minimal prospecting work (5 outcrop and 3 boulder samples) and a ninety-one (91) sample till survey. Additionally, 10 NQ diamond drillholes totalling 1,559 m were completed on the southern portion of historical Trieste Property. The drillholes were designed to test Au-As anomalies in till and corresponding IP anomalies and resulted in 231 samples sent for analysis (GM 69682). All 2015 drillholes fall within the current Trieste Lithium Project boundary. In 2017, Abitibi Geophysics on behalf of Osisko Mining Inc. (formerly Osisko Baie James), executed an 11.25 km OreVision™ survey along 200 m spaced lines which resulted in several anomalies (GM70438). Osisko Mining followed up the geophysical survey with three (3) NQ diamond drillholes, totalling 636 m, to test out the identified anomalies (GM70437). A total of 226 drill core samples were sent for analysis. In 2018 the Government of Quebec continued with regional mapping in the Lac Dalmas region (33H08, 33H09, 23E05 and 23E12) at scale of 1:85,000 (RG-2018-02). This area covers the northern portion of the Property. Another mapping project, covering the southern portion of the claims, was completed in the Lac Joubert area (33H08, 33H09, 23E05 and 23E12) at a scale of 1:130,000 (RG-2018-04). In 2023 Loyal Lithium completed re-sampling of pegmatites within 13 historical drill core holes. DDH OSK-TR-17-013, 3km of Spodumene Pegmatite Dyke #05 had 2 pegmatite intersections with an average composition of 40-50% Fp, 30-35% Qz, locally 20% muscovite, and traces of fine garnets and tourmalines. No visible spodumene but was the most anomalous hole of the program. Six (6) samples returned Li<sub>2</sub>O values above 0.05% with Cs<sub>2</sub>O</p>

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		<p>values up to 295.8 ppm (C00282308). Five (5) samples produced TaO5 value above 5 ppm. Most of those samples were collected in the wacke host rock. However, one sample in a pegmatite intersect returned from 48.5 m to 49.5 m (1 m): 0.09% Li2O, 28.1 ppm Cs2O and 3.5 ppm TaO5 in TR-15-013</p>
<p><i>Geology</i></p>	<ul style="list-style-type: none"> <li><i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<p>Archean aged LCT type pegmatites. The property is located within the limits of the Superior craton, in the La Grande sub province limits, just north (3km) of its southern contact with the Opinaca sub-province. The La Grande is mainly characterized by volcano-plutonic sequences overlying a tonalitic Archean basement (2,79 - 3,39 Ga; Goutier et al., 2002). Regional metamorphic grade is estimated to be moderate to high (amphibolite to granulite) and 5-10km of material is estimated to have been eroded post-formation, based on igneous and metamorphic pressure estimates (Percival et al., 2012). Geological mapping was done over the course of multiple regional-scale mapping programs conducted by Quebec's government's ministere des ressources naturelles et de la faune (MRNF). Most geological features were interpreted from magnetic surveys combined with field observations, geochemistry, and geochronological studies (e.g Hocq et. al., 1985; Gigon and Goutier, 2017; David, 2018; Burniaux et. al., 2018). The property is underlain by the Trieste formation in the north-west. This formation is characterized by iron formations and amphibolite units. The amphibolite is mainly derived from intermediate to mafic volcanic sequences but also, locally, from metasedimentary, ultramafic, or tuff beds. (Gigon and Goutier, 2017). Limbs of the Trieste formation were also mapped in the eastern part of the property. The unit is in contact with the metasediments of the Solomon</p>

Criteria	JORC Code explanation	Commentary
		<p>River formation. This unit locally corresponds to iron formations but mostly to gneissic rocks derived from wackes, showing variable degrees of partial melting. (Hammouche and Burniaux, 2018; Gigon and Goutier, 2017). The Lac Sao pluton and the Joubert suite are located north and south-east of the Trieste formation. They have dominant granodioritic and tonalitic compositions respectively. Pegmatitic granites (Tilly) are also present across the property. The main (most important in size) Tilly intrusive body is located 2km south of the Trieste formation in the western part of the property. The younger rocks of the region correspond to late Proterozoic dykes of the Senneterre and Lac Esprit dykes' swarms. The main regional structures that were interpreted within the property limits correspond to major faults that show an E-W trend. These faults correspond to faulted contacts between the Trieste formation and the Solomon. the Lac Sao and the Joubert suite. The geological units of the region have also been affected by regional folding that mainly occurs as E-W oriented axis traces.</p>
<p><i>Data aggregation methods</i></p>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>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.</i></li> </ul>	<p>Geochemical ratios such as Nb/Ta, K/Rb and Zr/Hf represent good indicators of the fertility of pegmatites because of the relative abundance of these elements, directly correlate with fractionation. Samples that were taken in a lithium-rich part of a pegmatite dyke (ex: Spodumene-bearing pocket or horizon) will typically share geochemical similitude (Geochemical ratio values) with another section of the same dyke that is barren because the fractionation of the mentioned elements does not depend on spodumene content but on the pegmatitic-hydrothermal evolution of the pegmatite (Fujimaki, 1986; Breiter and Skoda, 2017; Steiner, 2019).</p>



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	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	
<i>Relationship between mineralisation widths and intercept lengths</i>	<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 (e.g., 'down hole length, true width not known').</i></li> </ul>	This is a belt scale geological interpretation that does not present new data (besides multi-element assay ratios) from rock chips, channel samples, drill intercepts and does not present mineralisation widths, These data have all previously been announced on the ASX by LLI and this is a total synthesis of all of these datasets.
<i>Diagrams</i>	<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>	Appropriate plan and location maps on regional and prospect scales are included in this ASX announcement.
<i>Balanced reporting</i>	<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 avoiding misleading reporting of Exploration Results.</i></li> </ul>	All survey results are reported.
<i>Other substantive exploration data</i>	<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</i></li> </ul>	Geological interpretations of MERN 1:130k used with newly collected LLI data and surveys to produce a new geological interpretation.

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	<p><i>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></p>	
<i>Further work</i>	<ul style="list-style-type: none"> <li>• <i>The nature and scale of planned further work (e.g., 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>	<p>Given the encouraging results from this geological synthesis of all datasets, including high grade spodumene bearing pegmatite samples in rock chip samples, channel samples and drill core holes (all announced previously on the ASX: LLI) additional ground geological field surveys are being planned, with areas prioritised. More drilling is planned to test the new spodumene bearing pegmatite targets. Geophysics programs are being evaluated for the summer field season.</p>