



**Quantum Resources Limited**  
**ABN 84 006 690 348**

Level 17, 500 Collins Street  
Melbourne, Victoria 3000, Australia  
T + 61 3 9614 0600 | F + 61 3 9614 0550

## **QUANTUM RESOURCES LIMITED**

(ASX: QUR)

### **ASX and Media Release**

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## **EXPLORATION UPDATE - THOMPSON BROS LITHIUM PROJECT**

**Quantum Resources Limited (ASX: "QUR" or the "Company")** is pleased to announce the following exploration update in relation to its Thompson Bros Lithium Project ("Thompson Bros" or the "Property") in Manitoba, Canada.

Mapping of lithium bearing outcrops as well as surface sampling of spodumene bearing pegmatites was undertaken at Thompson Bros. The purpose of the sample collection was to prove lithium content in rock samples analysed with modern technology in relation to broader results from historic work.

### **Results from Reconnaissance Exploration**

The collection of representative rock chip samples collected during the visit has identified and confirmed the main Thompson Bros lithium-rich spodumene bearing pegmatite dyke.

The Company received assays for the two samples taken from Thomson Bros with highly encouraging results. Analyses for these samples are presented as percentages of  $\text{Li}_2\text{O}$  in Table 1. Results of the chip samples compare favourably with the range of historic values reported in Manitoba government assessment files and historical technical reports.

<b>Sample #</b>	<b>Li (ppm)</b>	<b>Li (ppm)</b>	<b><math>\text{Li}_2\text{O}\%</math></b>
1139251	9240	0.92%	1.99%
1139252	5540	0.55%	1.19%

**TABLE 1.** Rock Chip Sample Results from Confirmation Sampling Program

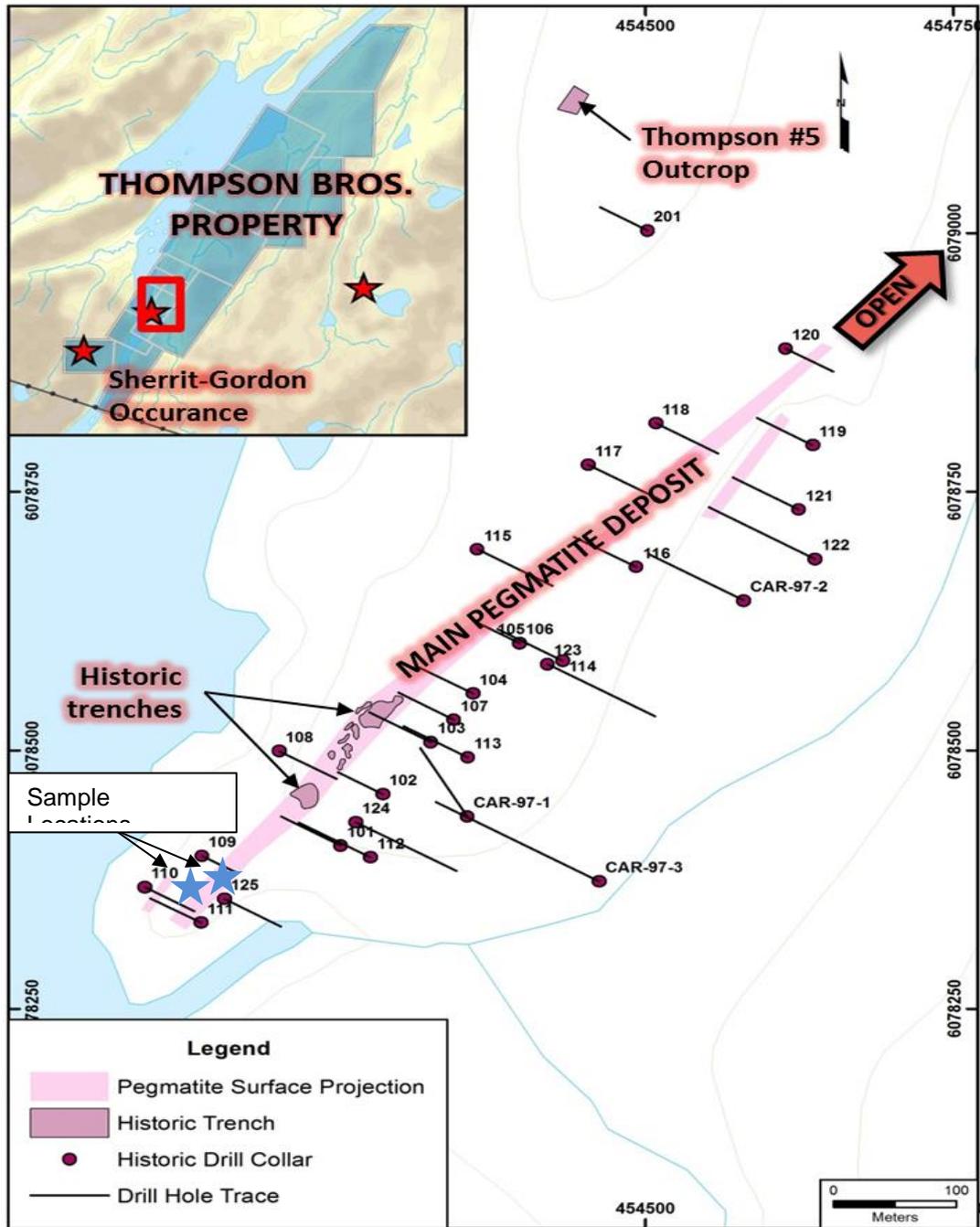
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**Figure 2:** Spodumene Mineralisation at Thompson Bros Project

**Thompson #5 Outcrop and Sherrit-Gordon Zone Could Lead to Significantly Larger Overall Tonnages**

Interpretation of the historical data has demonstrated the existence of other nearby lithium bearing structures on the Property which could significantly increase overall tonnages. These zones are in addition to the main Thompson Zone which remains open at depth and along strike.



**Figure 2:** Additional Zones and occurrences within the project area with the Main Pegmatite Deposit Open at depth and along strike.

### Thompson #5 Outcrop

The Thompson #5 Outcrop is located approximately 300 metres north of the main pegmatite deposit and is interpreted to represent a potential new, parallel zone that is yet to be drill tested. In 1989, a representative sample from the area tested 2.93%  $\text{Li}_2\text{O}$ . **(Historical Non-JORC Compliant)**. (Source: Lake Field Research - Falconbridge Limited: Document 93474 Re: Spodumene Sample MLR099)

## Sherrit-Gordon Zone

The Sherrit-Gordon Zone hosts a number of pegmatite dykes with intruded parallel structures that were subsequently deformed and locally displaced. Analysis of spodumene by the Provincial Assayer of Manitoba returned 6.80% Li<sub>2</sub>O. **(Historical, Non-JORC Compliant)**. (Source: *Manitoba Minerals Deposit Database: Deposit Number M63J / 13-109*).

The previous estimates from the Thompsons #5 Outcrop and the Sherrit-Gordon Zone (above) are historical estimates and are not reported in accordance with the JORC Code. A competent person has not done sufficient work to classify the historical estimates as mineral resources and/or reserves in accordance with the JORC Code. It is uncertain that following evaluation and/or further exploration work that the historical estimates will be able to be reported as mineral resources or ore reserves in accordance with the JORC Code.

## Engagement of Technical Team

The Company is pleased to announce the appointment of Dahrouge Geological Services ("Dahrouge") to oversee the future drilling campaign at Thompson Bros. Dahrouge is a mineral exploration, consulting, and project management group based in Edmonton, Alberta.

The team at Dahrouge has direct experience in providing services in the lithium sector, having worked on the development of lithium resources across a number of projects in the United States and Canada.

## Future Plans

The Company intends to undertake a drilling program to confirm the historical, non-JORC compliant resource previously calculated on the Property. It is proposed to undertake this program early in the new year, over the Canadian winter, where conditions and access are highly advantageous for these type of operations as winter roads can be opened across the frozen lakes.

The program is envisaged to comprise sixteen diamond drill holes along the approximately 800m strike of known mineralisation for a total of 3,200m of drilling. The Company is targeting a number of drill holes which will test the extent of the mineralization of the previously intersected zones and test the down dip extension at Thompson Bros. It is anticipated that this drilling will allow an initial JORC compliant inferred resource to be calculated for the Property.

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**Figure 3:** Northeast area of Wekusko Lake, looking over Thompson Bros claims with access near the edge of a nearby swamp.

The Company is highly encouraged by the confirmed presence of lithium mineralization as spodumene-bearing pegmatite dykes on the Thompson Bros Property. The Company looks forward to commencing the high impact drilling stage of its development strategy to follow up on these encouraging results in order to rapidly advance the Property.

- **ENDS**

For further information, please contact:

**Avi Kimelman**  
Chief Executive Officer  
T: 03 9999 7720  
E: avi@carraway.co

#### **Competent Persons Statement**

The information in this report that relates to Exploration Results is based on information compiled by Mr Olaf Frederickson. Mr Frederickson is a Member of The Australasian Institute of Mining and Metallurgy (AusIMM) and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the "JORC Code"). Mr Frederickson is a consultant to Quantum Resources Limited. Mr Frederickson consents to the inclusion in the report of the Exploration Results in the form and context in which they appear.

# JORC Code, 2012 Edition – Table 1 report template

## Section 1 Sampling Techniques and Data

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

Criteria	JORC Code Explanation	Commentary
<b>Sampling Techniques</b>	<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>	<i>Rock chip samples were collected at various locations within the company's granted tenements, specifically of pegmatite. Samples of approximately 2kg were collected, as multiple small fragments, from either outcrop or subcrop.</i>
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	<i>At each rock chip location the easting and northing were recorded by a handheld GPS, and noted. A brief sample description and additional comments as necessary were recorded at each sample location. All sampling protocols remained constant throughout the program.</i>
	<i>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 (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>	<i>2kg rock chip samples were collected from either outcrop, subcrop or float and placed inside individually uniquely numbered plastic bags and secured. The bags were transported to ALS Laboratories Sample Preparation Facility in Thunder Bay, Ontario, Canada for sample preparation. Subsequent geochemical analysis was conducted by ALS Laboratories in North Vancouver, British Columbia, Canada</i>  <i>In the laboratory samples are crushed and pulverised to produce an homogenous sub-sample for analysis via a 4 acid digestion ICP/OES and ICP MS for Ag,Al,As,Ba,Be,Bi,Ca,Cd,Ce,Co,Cr,Cs,Cu,Dy,Er,Eu,Fe,Ga,Gd,Ge,Hf,Ho,In,K,L a,Li,Lu,Mg,Mn,Mo,Na,Nb,Nd,Ni,P,Pb,Pr,Rb,Re,S,Sb,Sc,Se,Sm,Sn,Sr,Ta,Tb,Te,Th,Ti,Tl,Tm,U,V,W,Y,Yb,Zn and Zr. For Li results exceeding 5000ppm, are re-analyzed via sodium peroxide fusion and hydrochloric acid digestion in Teflon tubes and then analysed by ICP-MS</i>
<b>Drilling Techniques</b>	<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>	<i>Not applicable as no drilling techniques are used during rock chip sampling.</i>
<b>Drill sample recovery</b>	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	<i>Not applicable as no drilling techniques are used during rock chip sampling.</i>

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	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	<i>Not applicable as no drilling techniques are used during rock chip sampling.</i>
	<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>	<i>Not applicable as no drilling techniques are used during rock chip sampling.</i>
	<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>	<i>Rock chip samples have been described geologically, but not to a level of detail suitable for Mineral Resource estimation, mining and metallurgical studies.</i>
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	<i>Logging was restricted to describing individual rock samples collected.</i>
<b>Logging</b>	<i>The total length and percentage of the relevant intersections logged.</i>	<i>Not applicable as no drilling techniques are used during rock chip sampling.</i>
<b>Sub-sampling techniques and sample preparation</b>	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	<i>No core was collected</i>
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	<i>Samples were collected from outcrop, subcrop and float and all samples were dry.</i>
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	<i>Samples were prepared at the ALS Laboratory in Thunder Bay, Ontario Canada. Samples were dried, and the whole sample pulverised to 85% passing 75um. The procedure is industry standard for this type of sample.</i>
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples</i>	<i>No sub sampling occurred. The entire ~2kg samples were crushed, pulverised and homogenised.</i>
	<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>	<i>No field duplicate samples were collected.</i>
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	<i>Sample sizes are considered appropriate to give an indication of mineralisation for the exploration method.</i>
<b>Quality of Assay data and laboratory tests</b>	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	<i>Samples were analysed at the ALS Laboratory in North Vancouver, British Columbia, Canada. The analytical method used was 4 acid digestion/ICP-OES &amp; ICP-MS (ALS code ME-MS61L). Four acid digests with the inclusion of hydrofluoric acid targeting silicates, will decompose almost all mineral species and are referred to as "near-total digestions". Highly resistant minerals such as zircon, cassiterite, columbite-tantalite, rutile, barite and wolframite will require a fusion digest to ensure complete dissolution.</i>

	<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>	<i>Not Applicable</i>
	<i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i>	<i>0 lab blank, 0 lab check, and 0 lab standards were inserted and analysed by ALS Laboratories.</i>
<b>Verification of Sampling and Assaying</b>	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	<i>The geochemical results were checked by the Competent Person.</i>
	<i>The use of twinned holes</i>	<i>Not applicable as no drilling techniques are used during rock chip sampling.</i>
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	<i>All field logging is carried out on paper logs. Logging data is entered into a spreadsheet, then electronically to the Database Geologist in the office. Assay files are received electronically from the Laboratory. All data is stored in a Access database system, and maintained by the Database Manager.</i>
	<i>Discuss any adjustment to assay data.</i>	<i>Lithium values have been adjusted by multiplying the raw value by 2.153, to report as Li<sub>2</sub>O which is standard industry practice.</i>
<b>Location of Data Points</b>	<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>	<i>Rock chip sample locations were determined by handheld GPS with an accuracy of 5m in Northing and Easting.</i>
	<i>Specification of the grid system used.</i>	<i>Grid projection is NAD83, Zone 14.</i>
	<i>Quality and adequacy of topographic control.</i>	<i>No RL's were measured</i>
<b>Data Spacing and Distribution</b>	<i>Data spacing for reporting of Exploration Results.</i>	<i>The rock chip samples are randomly located, based upon where prospective rocks occurred, in either outcrop, subcrop or float.</i>
	<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>	<i>No mineral resource or reserve estimation has been undertaken. Rock chip sample results are not suitable for incorporation into mineral resource or ore reserve estimations.</i>
	<i>Whether sample compositing has been applied.</i>	<i>No sample compositing has been applied</i>
<b>Orientation of data in relation to geological structure</b>	<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>	<i>Rock chip sampling is of a reconnaissance nature only, and it is not possible to determine whether such sampling has achieved an unbiased sampling of possible structures.</i>
	<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>	<i>No orientation based sampling bias has been determined.</i>

<b>Sample Security</b>	<i>The measures taken to ensure sample security.</i>	<i>Pre-numbered Plastic sample bags were collected in rice sacks, sealed, and transported by Freight courier (Greyhound) to the ALS Laboratory in Thunder Bay, ON. Pulps were despatched by ALS to their laboratory in North Vancouver, BC for assaying.</i>
<b>Audits or Reviews</b>	<i>The results of any audits or reviews of sampling techniques and data.</i>	<i>Sampling and assaying techniques are industry-standard. No specific audits or reviews have been undertaken at this stage in the programme.</i>
<b>Mineral tenement and land tenure status</b>	<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>	<i>The work described in this report was undertaken on Mineral Tenure Claims MB1052, MB1053, P3203F, P3033F, MB6301, MB6303, P3035F, W49853, P2818F, P7463B, P7464B, W47380, W47378, MB6305. Samples were taken on P7464B</i>
	<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>	<i>The tenements are in good standing with The Manitoba Mineral Resources Department.</i>
<b>Exploration done by other parties</b>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	<i>The Thompson Bros Property received its first documented work In 1955-56 with 26 drill holes conducted by CDL. Additional work was conducted sporadically over the years adding metallurgical and potential mine scaenario evaluations and some additional drilling.</i>
<b>Geology</b>	<i>Deposit type, geological setting and style of mineralisation.</i>	<i>The geology is dominated by Archean mafic/ultramafic and sedimentary lithologies, intruded by granites and pegmatite dykes.</i>
<b>Drill Hole Information</b>	<i>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: eastings 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.</i>	<i>A summary of all rock chip sampling referred to in this report is presented in Table 1.</i>
<b>Data Aggregation Methods</b>	<i>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.</i>	<i>Rock chip results are presented without any weighting and/or cut-off grades applied. Lithium values have been adjusted by multiplying the raw value by 2.153, to report as Li<sub>2</sub>O which is standard industry practice.</i>
	<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>	<i>Rock chip results are presented without any weighting and/or cut-off grades applied.</i>

	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	<i>No metal equivalent values are used.</i>
<b>Relationship between mineralisation widths and intercept lengths</b>	<i>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 (eg 'down hole length, true width not known').</i>	<i>Widths of mineralisation have not been postulated. Not applicable, as no drilling has been conducted. Not applicable, as only rock chip results have been included in this report</i>
<b>Diagrams</b>	<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>	<i>Not Applicable, no drilling undertaken</i>
<b>Balanced Reporting</b>	<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>	<i>A summary of all rock chip sampling referred to in this report is presented in Table 1.</i>
<b>Other substantive exploration data</b>	<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>	<i>All relevant data has been included within this report.</i>
	<i>The nature and scale of planned further work (eg 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.</i>	<i>further surface sampling and drilling of prospective rock types to test for lateral and depth extensions.</i>