

Laboratory XRF Results Identify Further High-Grade Caesium at Igrejinha

HIGHLIGHTS

- Laboratory XRF analysis returned outstanding caesium oxide (Cs_2O) grades of up to **30.11% Cs_2O** ¹.
- These results highlight Igrejinha's strategic potential, with **caesium a known mineral with constrained global supply** and with very few known deposits.
- **Selective samples were collected from reject piles beside historical artisanal pollucite workings**, confirming the presence of high-grade caesium-bearing mineralisation.
- Certified laboratory assays are pending and expected in the coming weeks.
- Upcoming milestones include release of expected confirmatory assay results from surface sampling and **results of the maiden drilling at Igrejinha**, with additional drilling and regional exploration planned across Perpetual's Lithium Valley tenure thereafter.

Perpetual Resources Limited ("Perpetual" or "the Company") (ASX: PEC) is pleased to announce that laboratory XRF testing² has returned exceptionally high-grade pollucite mineralisation at its Igrejinha prospect in Brazil. Results of up to 30.11% Cs_2O show potential for Igrejinha to become a strategically important source of caesium in a globally supply-constrained market.

Certified laboratory assays, which provide greater certainty, are currently in progress and are expected in the coming weeks. While assays typically report lower grades than XRF, the Company remains highly confident that they will confirm the presence of significant caesium mineralisation grades at Igrejinha.

Table 1: Laboratory XRF results from selective pollucite testing at Igrejinha samples collected from artisanal reject piles and outcrop (refer Figure 1).

Sample ID	XRF Cs_2O (%)
PRIRO12	26.60%
PRIRO13	29.47%
PRIRO14	2.98%
PRIRO15	30.11%
PRIRO16	22.03%

Cautionary Statement: Laboratory XRF results reported in this announcement are preliminary screening values only. They are not equivalent to certified assays and should not be considered a proxy for quantitative laboratory analyses which are required to determine the actual abundance and grade of the mineralisation. Certified laboratory assays are in progress and will be reported once received.

¹ XRF results are preliminary only and not equivalent to certified assays. They should not be relied upon for Mineral Resource estimation. Assay results are pending.

² The laboratory XRF screening was performed by Laboratórios Preisser (Sete Lagoas-MG, Brazil); internal and external QAQC checks indicate results within expected analytical uncertainty and no material bias

These samples were collected from reject piles located approximately 30 metres from the site of historic artisanal pollucite extraction, in an area long recognised for its caesium potential.

While the reported grades are exceptionally high, Perpetual notes that further work, including drill results, is required to determine the true width of the mineralised intersections, which will be an important factor in assessing potential economic significance.

Commenting on the results, Executive Chairman Julian Babarczy, said:

"These XRF results are compelling and align with historical reports of pollucite production at Igrejinha. With assays pending, we expect they will confirm the presence of very high-grade caesium, though typically at levels somewhat lower than XRF. Igrejinha is shaping up as a highly promising caesium exploration opportunity."



Figure 1: Map of sample locations adjacent to historical artisanal pollucite workings at the Igrejinha Project, Lithium Valley, Brazil.

Economic and Strategic Context

Caesium differs from commodities such as lithium in that deposits do not need to be large in scale to achieve economic viability. Economic caesium deposits are typically in the range of <10 kt to 350,000 kt, compared to lithium pegmatite deposits that commonly range in the tens of millions of tonnes.

Owing to its high unit value, rarity, and constrained global supply, relatively modest tonnages of caesium can represent a strategically significant resource opportunity. Caesium is a rare and highly valuable mineral used in high-technology, defence, and critical infrastructure applications, with pollucite being the primary commercial source. Global supply remains very limited, with few known deposits of comparable grade.

While these preliminary results provide compelling evidence of high-grade mineralisation, the Company notes that assay confirmation remains pending and further exploration is required to determine the continuity and thickness of mineralised zones, which will be critical in defining the economic potential of the mineralisation.



Figure 2: Sample collection at Reject Pile 2 (left hand image) and sample PRIR012 taken from reject pile 2 (right hand image) at Igrejinha Project, Brazil

Next Steps

Perpetual is awaiting certified assay results for these corresponding samples and also from its maiden drilling program at Igrejinha, which tested both **Target 1** and the **South-East Anomaly**. This program was designed to follow up on high-grade surface results and evaluate subsurface mineralisation across multiple priority targets.

Results from the maiden drilling program are expected in the next 2 weeks, and will provide critical data on the continuity, thickness, and overall scale of mineralisation at Igrejinha. Once these results are announced, Perpetual will commence planning for follow-up exploration, including further targeted drilling at Igrejinha and broader regional exploration across the Company's large, high-quality exploration areas in the heart of Brazil's Lithium Valley.

- ENDS -

This announcement has been approved for release by the Board of Perpetual.

KEY CONTACT

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About Perpetual Resources Limited

Perpetual Resources Limited (Perpetual) is an ASX listed company pursuing exploration and development of critical minerals essential to the fulfillment of global new energy requirements.

Perpetual is active in exploring for lithium and other critical minerals in the Minas Gerais region of Brazil, where it has secured approximately 12,000 hectares of highly prospective lithium exploration permits, within the pre-eminent lithium (spodumene) bearing region that has become known as Brazil's "Lithium Valley".

Perpetual also operates the Beharra Silica Sand development project, which is located 300km north of Perth and is 96km south of the port town of Geraldton in Western Australia. Perpetual continues to review complementary acquisition opportunities to augment its growing portfolio of exploration and development projects consistent with its critical minerals focus.



COMPLIANCE STATEMENTS**Competent Person Statement**

The information in this report related to Geological Data and Exploration Results is based on data compiled by Mr. Allan Harvey Stephens. Mr. Stephens is an Exploration Manager at Perpetual Resources Limited and is a member of both the Australasian Institute of Mining and Metallurgy (AusIMM) and the Australian Institute of Geoscientists (AIG). He possesses sound experience that is relevant to the style of mineralisation and type of deposit under consideration, as well as the activities he is currently undertaking. Mr. Stephens qualifies as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources, and Ore Reserves.' He provides his consent for the inclusion of the matters based on his information, as well as information presented to him, in the format and context in which they appear within this report. The laboratory XRF results reported in this announcement are considered suitable for preliminary characterisation only and are not suitable for use in any Mineral Resource or Ore Reserve estimate.

Forward-looking statements

This announcement contains forward-looking statements which involve a number of risks and uncertainties. These forward-looking statements are expressed in good faith and believed to have a reasonable basis. These statements reflect current expectations, intentions or strategies regarding the future and assumptions based on currently available information. Should one or more of the risks or uncertainties materialise, or should underlying assumptions prove incorrect, actual results may vary from the expectations, intentions and strategies described in this announcement. No obligation is assumed to update forward looking statements if these beliefs, opinions and estimates should change or to reflect other future developments.

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Appendix A – Rock Type Descriptions

Table 1 – Sample Descriptions and Locations

Coordinate Presented in SIRGAS 2000 / UTM 24S³

Figure	Easting	Northing	Lithology
2	193352	8132346	<p>Sample ID: PRIR012: 26.60% Cs₂O</p> <p>Approximate modal composition (visual estimate, supported by pXRF guidance):</p> <ul style="list-style-type: none"> • Pollucite ~20% (suspected, pending confirmatory analysis) • Feldspar/Albite ~70% • Opaque mineral stringers ~5% • Quartz ~5% <p>Notes:</p> <ul style="list-style-type: none"> • Preliminary XRF results from this announcement, final certified laboratory results pending • Percentages are approximate and based on field observation of reject material. • Mineral identification is indicative only; confirmation requires laboratory techniques (e.g. XRD). • pXRF was used in the field to guide selection of suspect pollucite-bearing material. • Reject pile samples may not represent in-situ mineral proportions.
N/A	193352	8132346	<p>Sample ID: PRIR013: 229.47% Cs₂O</p> <ul style="list-style-type: none"> • Preliminary XRF results from this announcement, final certified laboratory results pending
N/A	193352	8132346	<p>Sample ID: PRIR014: 2.98% Cs₂O</p> <ul style="list-style-type: none"> • Preliminary XRF results from this announcement, final certified laboratory results pending
N/A	193352	8132346	<p>Sample ID: PRIR015: 30.11% Cs₂O</p> <ul style="list-style-type: none"> • Preliminary XRF results from this announcement, final certified laboratory results pending
N/A	193352	8132346	<p>Sample ID: PRIR016: 22.03% Cs₂O</p> <ul style="list-style-type: none"> • Preliminary XRF results from this announcement, final certified laboratory results pending

³ Multiple coordinates for rock chip samples were recorded from underground tunnels. As satellite systems cannot accurately determine positions below ground, the GPS coordinates provided correspond to the tunnel entry points.

Appendix B: JORC Code, 2012 Edition – Table 1 report
Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> 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. 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 (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. 	<ul style="list-style-type: none"> Selective samples presented in the pXRF table are surface rock chip samples that were selectively collected and analysed in the field using a Bruker SI Titan portable XRF analyser. The instrument was factory-calibrated, and readings were taken from flat, prepared sample surfaces for approximately 60 seconds each. No matrix-matched calibration or certified reference standards were applied. The results are considered semi-quantitative and are intended to support preliminary field interpretation only. In addition to field pXRF spot readings, selective hand specimens were submitted for laboratory bench-top XRF analysis at Laboratórios Preisser (Sete Lagoas-MG, Brazil). Laboratory XRF is used here as a screening technique to characterise cesium-rich material prior to certification assays. A summary of the XRF spot readings is provided in Table 1 of the body of the announcement. Samples were selectively collected from areas of ore reject piles and are not representative of the entire outcrop or geological interval
Drilling techniques	<ul style="list-style-type: none"> 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). 	<ul style="list-style-type: none"> Reverse Circulation (RC) drilling has recently been completed. The results are anticipated to be completed in late August 2025. No core drilling has been undertaken to date. Samples and assays referenced in this announcement are only from reject pile located 30m from artisanal working.
Drill sample recovery	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> No applicable no new drilling results being reported.

Criteria	JORC Code explanation	Commentary
Logging	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Samples were collected and described, this information was imported into a database. No laboratory mineralogical confirmation (e.g. XRD) has yet been received.
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> 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 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. 	<ul style="list-style-type: none"> Samples were collected under dry conditions and packaged in sealed bags. No sub-sampling applied to pXRF samples. Final laboratory assays are pending. Samples were dried, crushed and homogenised prior to analysis at Laboratórios Preisser to minimise nugget/heterogeneity effects associated with pegmatite gangue and pollucite.
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> 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 (eg standards, blanks, duplicates, external laboratory checks) and whether 	<ul style="list-style-type: none"> Laboratory bench-top XRF (screening): Selective specimens were analysed by Laboratórios Preisser (Sete Lagoas-MG, Brazil) using bench-top XRF. The laboratory lists X-ray fluorescence among its analytical methods and routinely conducts chemical analyses on rocks and ores. Internal laboratory QC and Perpetual's check program (CRMs, blanks and duplicates at appropriate frequencies) indicate acceptable precision and no material bias, consistent with fit-for-purpose screening results pending certification assays. Certification assays are pending: Representative samples from the program have been dispatched to ALS Belo Horizonte for certified

Criteria	JORC Code explanation	Commentary
	acceptable levels of accuracy (ie lack of bias) and precision have been established.	laboratory assays with standard QAQC (CRMs, blanks, duplicates).
Verification of sampling and assaying	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> These initial grab samples will not be used in any resource estimate. Laboratory XRF results have been reviewed by Company geologists and checked against QAQC inserts; a small external umpire check indicated no material bias Laboratory XRF results were reviewed by Company geologists and cross-checked against QAQC inserts (CRMs, blanks and duplicates). A small external umpire check indicated no material bias, with no significant variation observed between internal and external results, supporting confidence in the screening data. Field pXRF readings remain indicative only.
Location of data points	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Sample and locations were captured using handheld GPS (Garmin 65s). The coordinate system used is SIRGAS 2000 / UTM Zone 24S. Accuracy is considered sufficient for early-stage exploration..
Data spacing and distribution	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Rock chip samples were selectively collected and are not representative.
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Rock chip sampling is only point samples and as such is not effected by orientations.. No applicable no new drilling results being reported.

Criteria	JORC Code explanation	Commentary
Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> Samples were sealed in poly-weave bags and cable-tied. Samples for bench-top XRF were delivered to Laboratórios Preisser (Sete Lagoas-MG) under chain-of-custody; samples for certification assays were hand-delivered or securely transported to ALS Belo Horizonte. No breaches in sample custody were observed during transport or analysis.
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> Internal QAQC reviews of laboratory XRF screening data and field pXRF have been completed by Company personnel; no external audits have been conducted at this stage.

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> 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. 	<p>PEC holds exploration rights over the following licences:</p> <ul style="list-style-type: none"> Matrix Project: 832.169/1995* Igrejinha Project: 830.224/2004* Renaldinho Project: 830.851/2010* <p>*Perpetual has executed option and earn-in agreements and is earning up to a 90% interest in each of the Matrix, Igrejinha and Renaldinho tenements.</p>
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> No formal historical exploration is recorded. Artisanal mining for spodumene and pollucite was conducted historically in the area.
Geology	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. 	<ul style="list-style-type: none"> The Igrejinha Project is hosted in highly fractionated lithium–caesium–tantalum (LCT) pegmatites associated with the Araçuaí Orogen.
Drill hole information	<ul style="list-style-type: none"> A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> No applicable no new drilling results being reported. Please refer to Appendix B – Table 2 of the release for co-ordinates relevant to published results.

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> 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. 	
Data aggregation methods	<ul style="list-style-type: none"> 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. 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. 	<ul style="list-style-type: none"> No aggregation or compositing applied.
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> 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'). 	<ul style="list-style-type: none"> Estimated true widths are based on preliminary logging only. No lab confirmation available at this stage.
Diagrams	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Exploration plans and diagrams are included in the body of this release as deemed appropriate by the Competent Person.
Balanced reporting	<ul style="list-style-type: none"> Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of 	<ul style="list-style-type: none"> Laboratory XRF results are reported as screening data to characterise selective pollucite-bearing material; certified assays (ALS) are pending and

Criteria	JORC Code explanation	Commentary
	both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	will supersede screening values for any future grade reporting, compositing or resource work.
Other substantive exploration data	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Trenching, mapping, and soil sampling have been used to support targeting. Further detail to be disclosed in assay releases.
Further work	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Please refer to the body of this release, noting further exploration is warranted across the project.