**Invitation to Tender**

**Energy Dispersive X-ray Fluorescence Spectrometer (ED-XRF)**

**Ref: BCR/ED-XRF/2025/03**

# 1. About company name

Bluecap Resources Ltd., a research company focussed on the processing and analysis of mining waste, is currently establishing a cutting-edge in-house analytical laboratory

# 2. Background and Context

Bluecap Resources invites qualified suppliers to submit tenders for the supply, delivery, installation, and commissioning of an energy dispersive X-ray fluorescence spectrometer ED-XRF.

The instrument will be used primarily for ore and mining applications, requiring robust performance for complex matrices and precise rare earth element analysis..

We will assess tenders received on lowest compliant Tender.

# 3. Tender requirements

The XRF system must meet specifications to support accurate and reliable analysis of mining waste.

1. Lightweight for standard benchtops without the need for specialist supporting tables and operates using a single-phase mains plug and must have capability to analyse light elements with helium purge. Has light-elemental detection, or a given Light Element % (e.g., carbon, nitrogen, oxygen)
2. Qualitative and quantitative analysis, and semi- quantitative analysis via a standardless analysis solution, Proven capability for mining applications, including calibration solutions tailored to user-defined applications, Low detection limits and robust analytical accuracy, Capable of analysing powders, liquids, and solids.
3. Advanced algorithms for background correction, peak matching, and matrix effect compensation (e.g. for line overlaps). Correction for non-homogeneity or surface irregularities, e.g. continuous sample rotation during measurement, Advanced fundamental parameters (FP) algorithm for automatic adaptation to sample characteristics, Smart FP matrix modelling for corrections related to thickness, volume, geometry, and undetected elements, Rare earth element analysis capability, Capability to handle complex ore and mining matrices with precision and ease of method development
4. Integrated power surge protection for sensitive components, including the X-ray tube, Reduced helium consumption with sensors to monitor temperature and air pressure, allowing for air-atmosphere applications. If a chiller is required, it must be supplied as part of the system and either built-in or standalone
5. The additional specification is 50 kV minimum unit with a maximum current setting of up to 3.0 mA. Silicon drift detector technology for higher intensities and enhanced sensitivity. Low-drift X-ray tube with an automatic drift correction system to minimise calibration needs.
6. Software compatibility with transparency on any additional package costs. Access to material reference libraries and databases for rapid identification. Automatic transfer of data to a central location with remote access capabilities. Integration with LIMS, Office365, and advanced data analysis tools. Trend analysis capabilities, even for unknown samples. Visual inspection of spectra and scans for comprehensive evaluation.
7. The desirables items are Polarised ED for better detection on light elements and a Vacuum, for major and minor trace elements optimisation. A complete pellet press sample prep kit, if using vacuum.
8. Must include carousel functionality with a minimum of 10 sample sites for multiple sample loading and Manual compaction press, for loose powders.
9. The application features should be Stability and norm-compliant performance Specs that can assure minimum downtime and maintenance Accurate and reproducible results without in-type standards for R&D usage and unknown material analysis.
10. Provide installation, warrantee and service support plus training.
	1. Provide detailed technical specifications of the proposed ED-XRF system.
	2. Provide a comprehensive quote including all associated costs (delivery, installation, training, recommended spare parts for maintenance etc.) Delivery to Unit 7 Parkengue, Kernick Industrial Estate, Penryn, Cornwall, TR10 9DQ
	3. Training of personnel in the operation, calibration and maintenance of the system. Provision of relevant documentation, including user manuals and software instructions.
	4. Provide warranty details (minimum of 3 year) including checks and replacements for critical components.
	5. Provide costed after-sales service support if appropriate. This will not form part of the budget consideration.

4**. Budget**

The total maximum budget available for this commission is £75,000 (exc VAT) but inclusive of all expenses.

**Tenders that exceed the total budget will not be considered.**

The budget will be reviewed as part of the tender evaluation detailed in Section 10 and will reflect the degree to which there is a saving on the maximum budget.

# 5. Tender and commission timetable

The timescale of the programme is from the date of signing the contract until the installation, training and commissioning of the item is complete. The timetable for submission of the Tender, completion of the programme are set out below.

|  |  |
| --- | --- |
| **Milestone** | **Date** |
| Date ITT available on Contracts Finder | 13 January 2025 |
| Last date for raising queries | 1700: 20 January 2025 |
| Last date for clarifications to queries | 1700: 21 January 2025 |
| Deadline to return ITT | **1700: 29 January 2025** |
| Evaluation of ITT | 30 January 2025 |
| Award of Contract  | 31 January 2025 |
| Delivery no later than  | 28 February 2025 |

# 6. Tender submission requirements

Please include the following information in your Tender submission.

6.1 Please provide your proposal and any necessary technical or specification sheets.

6.2 Provide a Conflict of Interest Statement as per Section 8.

6.3 Budget

**7. Sub-contracting**

Tenderers should note that a consortia can submit a tender but the sub-contracting of aspects of this commission after appointment will only be allowed by prior agreement with Bluecap Resources Ltd.

**8. Conflicts of Interest**

Tenderers must provide a clear statement with regard to potential conflicts of interests. Therefore, **please confirm within your tender submission** whether, to the best of your knowledge, there is any conflict of interest between your organisation and Bluecap Resources Ltd or its programme team that is likely to influence the outcome of this procurement either directly or indirectly through financial, economic or other personal interest which might be perceived to compromise the impartiality and independence of any party in the context of this procurement procedure.

Receipt of this statement will permit Bluecap Resources Ltd to ensure that, in the event of a conflict of interest being notified or noticed, appropriate steps are taken to ensure that the evaluation of any submission will be undertaken by an independent and impartial panel.

# 9. Tender clarifications

Any clarification queries arising from this Invitation to Tender which may have a bearing on the offer should be raised by email to:

KC@bluecapresources.com

in accordance with the Tender and Commission Timetable in section 5.

Responses to clarifications will be anonymised and uploaded by Bluecap Resources Ltd to Contracts Finder and will be viewable to all tenderers.

No representation by way of explanation or otherwise to persons or corporations tendering or desirous of tendering as to the meaning of the tender, contract or other tender documents or as to any other matter or thing to be done under the proposed contract shall bind Bluecap Resources Ltd unless such representation is in writing and duly signed by a Director/Partner of the tenderer. All such correspondence shall be returned with the Tender Documents and shall form part of the contract.

# 10. Tender evaluation methodology

Each Tender will be checked for completeness and compliance with all requirements of the ITT. The award of the contract will be to the LOWEST COMPLIANT BID.

11**. Tender Award**

Any contract awarded as a result of this tender process will be in accordance with this ITT and the tenderer’s response.

# 12. Tender returns

Tenders are to be returned by email.

Tenders are to be returned in accordance with Section 5

Latest date to be returned: As per Section 5

Latest time to be returned: 17:00

Emailed tenders should be sent electronically to

KC@bluecapresources.com

with the following message clearly noted in the Subject box;

 ITT - BCR/ED-XRF/2025/03

**Tenderers are advised to request an acknowledgement of receipt of their email.**

**13.** **Disclaimer**

The issue of this documentation does not commit Bluecap Resources Ltd to award any contract pursuant to the tender process or enter into a contractual relationship with any provider of the service. Nothing in the documentation or in any other communications made between Bluecap Resources Ltd or its agents and any other party, or any part thereof, shall be taken as constituting a contract, agreement or representation between Bluecap Resources Ltd and any other party (save for a formal award of contract made in writing by Bluecap Resources Ltd or on behalf of Bluecap Resources Ltd).

Tenderers must obtain for themselves, at their own responsibility and expense, all information necessary for the preparation of their tender responses. Information supplied to the tenderers by Bluecap Resources Ltd or any information contained in Bluecap Resources Ltd.’s publications is supplied only for general guidance in the preparation of the tender response. Tenderers must satisfy themselves by their own investigations as to the accuracy of any such information and no responsibility is accepted by Bluecap Resources Ltd for any loss or damage of whatever kind and howsoever caused arising from the use by tenderers of such information.

Bluecap Resources Ltd reserves the right to vary or change all or any part of the basis of the procedures for the procurement process at any time or not to proceed with the proposed procurement at all.

Cancellation of the procurement process (at any time) under any circumstances will not render Bluecap Resources Ltd liable for any costs or expenses incurred by tenderers during the procurement process.