



## **ADVANCE CONTRACT AWARD NOTICE (ACAN)**

### **1. Title**

**Laser Ablation Split Stream (LASS) Zircon Lu-HF – U-Pb Analysis**

### **2. Definition**

An Advance Contract Award Notice (ACAN) allows departments and agencies to post a notice, for no less than fifteen (15) calendar days, indicating to the supplier community that it intends to award a good, service or construction contract to a pre-identified contractor. If no other supplier submits, on or before the closing date, a Statement of Capabilities that meets the requirements set out in the ACAN, the competitive requirements of the government's contracting policy have been met. Following notification to suppliers not successful in demonstrating that their Statement of Capabilities meets the requirements set out in the ACAN, the contract may then be awarded using the Treasury Board's electronic bidding authorities.

If other potential suppliers submit Statement of Capabilities during the fifteen (15) calendar day posting period, and meet the requirements set out in the ACAN, the department or agency must proceed to a full tendering process on either the government's electronic tendering service or through traditional means, in order to award the contract.

### **3. Background**

The Targeted Geoscience Initiative (TGI) is a Government of Canada initiative (2015–20), through the auspices of NRCAN, to develop new knowledge on the large-scale processes that drive Canada's major ore systems, with the goal of improving exploration success for the deeply buried or otherwise hidden mineral deposits. The generation of porphyry-style deposits are directly related to tectonic processes within a protracted orogenic system. Advancing the knowledgebase on how the discrete mineralizing events fit within the overall evolution of orogens will provide the basis for improved exploration models. As is the case for many NRCAN research programs (i.e. Geomapping for Energy and Mapping), TGI has a requirement for research grade analytical procedures that are typically only provided by research institutions, in this case the Department of Earth Sciences at Memorial University of Newfoundland (herein MUN).

Best practices to reduce the potential for material handling errors and/or contamination dictate that the highest level of data integrity will be achieved through access to the full spectrum of analytical processes. Data integrity is further enhanced through the life of a project. Innovative, multi-year projects typical of TGI and other NRCAN research programs often require iterative data analysis, whereby the results of one suite of analyses determine the requirements for subsequent analyses.

Analytical data obtained through the proposed Standing Offer is intended for public domain release, in accordance with the Government of Canada's commitment to open science/open data.

### **4. Objective**

It is NRCAN's objective to obtain data obtained through a Standing Offer in support of fulfilling Government of Canada mandated research objectives of providing evidenced based decision-making. Analytical data obtained through the proposed Standing Offer is intended for public domain release, in accordance with the Government of Canada's commitment to open science/open data. It is intended that the Standing Offer will be in effect for a period of five (5) years ending December 31, 2023.

### **5. Project Requirements**

#### **5.1 *Tasks, Deliverables, Milestones and Schedule***

Contractor is to supply specified analytical data using methods (i.e. LASS U-Pb and Lu-Hf determinations). All reporting is to be provided to the designated scientific authority in English in Microsoft Office and/or Adobe Acrobat compatible formats.



Method
<b>U-Pb analyses</b>
LA-ICPMS U-Pb geochronology (or SIMS at NordSIMS) per sample: work includes sample processing, separating the minerals, imaging, dating, data reduction and interpretation, and report writing
LA-ICPMS U-Pb geochronology (or NordSIMS) per sample: work not completed by MUN staff (sample processing, separating the minerals, imaging, dating, data reduction and interpretation)
<b>LA-ICPMS lab</b>
Person comes with the sample mounted, and documented with images and ready to analyze and they reduce the data, interpret the results, and make concordia diagram
LA-ICPMS (ElementXR) for trace elements or U-Pb
LA-MC-ICPMS (Neptune) for isotopes
LASS (ElementXR + Neptune)
Heavy liquids and picking, mounting, and polishing
Rock sample sawed, jaw crushed and disk milled; magnetite removed (in furnace), sieved, washed, and put through heavy liquids and the Frantz or Wilfley and hand-picked under a binocular microscope, mounted, and polished
Sample has a lot of sulphides and requires special processing
<b>Mounting mineral samples</b>
Mounting separated zircon crystals for SEM, EMPA, and U-Pb analyses
<b>SEM – MLA analyses</b>
<b>SEM – CL/BSE imaging of zircon samples</b>
<b>EPMA Analyses</b>
Major, minor and trace elements
X-ray maps

**5.2 Reporting Requirements**

Contractor will be required to provide ad hoc updates to the Project Authority on progress on demand. Such updates may include detailing operational parameters and clarifying progress. Should tasks not be completed by the stated milestones, then payments will be pro-rated to correspond with the volume of work completed.

On site visits by the Project Authority, and/or designated proxy, to monitor to confirm compliance to methodological standards and progress may be initiated at the Project Authority’s discretion, with at least 48 hours’ notice to the Contractor.

The Contractor is expected to collaborate with the Scientific Authority to facilitate the release of data into the public domain in compliance with the Government of Canada’s commitment to Open Data.

**5.3 Method and Source of Acceptance**

All deliverables rendered are subject to inspection by the Project Authority. The Project Authority shall have the right to reject any deliverables that are not considered satisfactory, or require their correction before payment will be authorized.

**6. Other Terms and Conditions**

**6.1 Contractor’s Obligations**

In addition to the obligations outlined in Section 2 of this Statement of Work, the Contractor shall:

1. keep all documents and proprietary information confidential;
2. return all materials belonging to NRCan (i.e. unused zircon separates) upon completion of the contracted analyses;
3. submit all written reports in electronic Microsoft Office or Adobe Acrobat format;
4. participate in teleconferences, as needed.



## 6.2 *NRCan's Obligations*

NRCan commits to providing the following:

1. sample materials for analysis with available and applicable sample metadata;
2. access to the Scientific Authority for consultation and coordination of research;
3. facilitate open file data release following contract completion.

## 7. **Estimated Cost**

The estimated cost of the full term of the Standing Offer will not exceed an estimated amount of \$900,000, including applicable taxes.

The resulting call-up limitation for each requirement will be \$75,000.00, including all applicable taxes.

## 8. **Trade Agreements**

### ***Applicable Limited Tendering Provision under NAFTA (Article 1016.2)***

**1016.2(b)** - where, for works of art, or for reasons connected with the protection of patents, copyrights or other exclusive rights, or proprietary information or where there is an absence of competition for technical reasons, the goods or services can be supplied only by a particular supplier and no reasonable alternative or substitute exists;

### ***Applicable Limited Tendering Provision under Canada-Chile (Article Kbis-09)***

**Kbis-09 (b)** - where, for works of art, or for reasons connected with the protection of patents, copyrights or other exclusive rights, or proprietary information or where there is an absence of competition for technical reasons, the goods or services can be supplied only by a particular supplier and no reasonable alternative or substitute exists;

### ***Applicable Limited Tendering Provision under Canada-Peru / Canada-Colombia (Article 1409)***

**1409 (b)** where the goods or services can be supplied only by a particular supplier and no reasonable alternative or substitute goods or services exist for any of the following reasons:

- (i) the requirement is for a work of art,
- (ii) the protection of patents, copyrights or other exclusive rights, or
- (iii) due to an absence of competition for technical reasons

### ***Applicable Limited Tendering Provision under AIT (Article 506.12)***

**506.12(b)** – where there is an absence of competition for technical reasons and the goods or services can be supplied only by a particular supplier and no alternative or substitute exists;

### ***Applicable Limited Tendering Provision under Canada-Honduras (Article 17.11)***

**17.11.2 b)** a good or service being procured can be supplied only by a particular supplier and a reasonable alternative or substitute does not exist because:

- (i) the good or service is a work of art,
- (ii) the good or service is protected by a patent, copyright or other exclusive intellectual property right, or
- (iii) there is an absence of competition for technical reasons;

### ***Applicable Limited Tendering Provision under Canada-Panama (Article 16.10)***

**16.10.1b)** a good or service being procured can be supplied only by a particular supplier and a reasonable alternative or substitute does not exist because:

- (i) the good or service is a work of art,
- (ii) the good or service is protected by a patent, copyright or other exclusive intellectual property right, or
- (iii) there is an absence of competition for technical reasons;



## 9. Exception to the Government Contracts Regulations and applicable trade agreements

Sole Source Justification - Exception of the Government Contract Regulations (GCR):

(d) Only one person or firm is capable of performing the contract

The Supplier must be able to meet all of the following criteria:

- Be able to do in situ laser ablation split stream (LASS) determinations of zircon U-Pb and Lu-Hf isotopes.
- Be able to use inductively coupled plasma mass spectrometry (ICP-MS), whereby ablated sample materials are split into two streams on exiting the ablation cell.
- Be able to do ablation spot sizes of approximately 30 µm; targeting of spot locations to be determined by cathodoluminescence back-scatter image to characterize zonation patterns.
- Be able to monitor data quality via in house and standard reference materials.
- Have a track record over the past five (5) years of integrating LASS and other analytical methods (i.e. SEM – MLA/CL/BSE, EPMA) to constrain Phanerozoic orogenesis.
- Have a track record over the past five (5) years of conducting in situ zircon Lu-Hf-U-Pb analyses via LASS on plutonic rocks associated with porphyry-style mineralization and to constrain tectonic processes with accretionary tectonic belts.
- Be able to conduct monazite LASS U-Th-Pb isotope measurement via ThermoFinnigan Element2 ICP-MS, and measurement of Sm-Nd isotope composition (in addition to isotopes of Ce, Eu and Gd for concentration determination) via ThermoFinnigan Neptune MC-ICP-MS

The selected Supplier is the only vendor able to meet all of the above criteria as well as meet all of the requirements described in Section 5 – Project Requirements.

## 10. Name and Address of the Proposed Contractor

Memorial University of Newfoundland (MUN)  
Department of Earth Sciences  
St John's, Newfoundland  
A1B 3X5

## 11. Inquiries on Submission of Statement of Capabilities

Suppliers who consider themselves fully qualified and available to provide the services/goods described herein, may submit a Statement of Capabilities in writing, preferably by e-mail, to the contact person identified in this Notice on or before the closing date and time of this Notice. The Statement of Capabilities must clearly demonstrate how the supplier meets the advertised requirements.

## 12. Closing Date

Closing Date: September 21, 2018  
Closing Time: 2:00 p.m. EDT

## 13. Contract Authority

Valerie Holmes  
Procurement Specialist  
Natural Resources Canada  
580 Booth Street, 5<sup>th</sup> Floor.  
Ottawa, ON  
K1A 0E4



Telephone: (343) 292-8371  
Fax: (613) 947-5477  
E-mail: [Valerie.holmes@canada.ca](mailto:Valerie.holmes@canada.ca)