

JUSTIFICATION AND APPROVAL

Justification for Other Than Full and Open Competition (FAR 13.106 (b))

1. Contracting Agency and Activity. The Department of the Interior, United States Geological Survey, Office of Acquisition and Grants, Sacramento, plans to contract by means other than full and open competition. This document sets forth the justification and approval for use of one of the exceptions to full and open competition allowed under the Competition in Contracting Act (CICA) of 1984.

2. Nature of Action Being Approved. The action is a new contract. The proposed awardee is 2G Enterprises (281 East Java Drive, Sunnyvale, CA 94089).

3. Description of Supplies or Services. The USGS, Menlo Park GMEG team requires a superconducting rock magnetometer that is capable of measuring a wide range of geologic samples. The system must include the following general characteristics: (1) a pulse tube He cryocooler, (2) triaxial DC SQUIDS, (3) a heat switch on the superconducting shield, (4) a dynamic range between 1×10^{-12} and 2×10^{-4} Am², and (5) a vertically oriented standard sample access port of <5 cm diameter. The system also should be relatively compact for use in a magnetically shielded room, be able to cool down from room to operating temperatures relatively quickly (<36 hours), and have a bore large enough to measure 2.54 cm diameter specimens.

4. Estimated Dollar Value. Estimated value: \$414,000.

5. Statutory Authority. The proposed action may be awarded without full and open competition under 41 U.S.C. 253(c)(2) as implemented in FAR 13.106 (b).

6. Rationale Supporting Use of Citation in No. 5.

a. The superconducting rock magnetometers manufactured by 2G are the only ones presently available with large access bores (≥ 2.54 cm; for example, the entire USGS sample collection and all drilling equipment are 2.54 cm in diameter) that have been specifically designed to measure samples of rocks and other geologic materials for paleomagnetic and rock magnetic studies. In addition, the USGS sample handling and demagnetizations system is designed to attach to these instruments thereby automating a number of laboratory measurements. The other superconducting magnetometers either have bores that are too small (e.g., 1 cm; Tristan DRM-300 Rock Magnetometer) or have been designed for medical, material, and other biophysical applications and are not easily modified to meet the requirements needed by Government users because the sample sizes are quite different or need to be inserted into the instrument manually.

b. The USGS PRM Lab is part of the international RAPID (Rock- and Paleo- magnetic Instrument Development) Consortium of eight laboratories (and counting) using the same sample handling robotics and software. All of these labs use equipment manufactured by 2G to ensure continuity of data between labs. The consortium provides a large pool of experts for the development of system improvements (both hardware and software), and the troubleshooting technical problems. Purchasing an instrument from a different vendor, even if one were

available, would render data generated by the Government non-compliant with data generated by other consortium members.

7. Other Information. N/A

8. The Efforts to Identify Additional Sources Including the Market Research Conducted.

A comprehensive review of industry web sites was made, and other academic customers were contacted in order to identify any additional sources known to them. These inquiries resulted in the conclusion that 2G is the only firm manufacturing cryogenic rock magnetometers for the acquisition of paleomagnetic data which will meet the continuity of data requirements discussed in paragraph 6. There are no resellers for this product.

9. Future Plans to Permit Competition. Future requirements for similar equipment will be competed to the maximum extent practical.

10. Recommendation and Certification from Program Office. Based on the above, I recommend this acquisition be conducted on the basis of other than full and open competition. I certify that technical data which form a basis for this justification that are the responsibility of technical or requirements personnel are complete and accurate.

Jonathan T. Hagstrum
Research Geophysicist

Signature

29 March 2016
Date

11. Certifications from the Contracting Officer:

The Contracting Officer hereby determines the anticipated award will be fair and reasonable IAW the criteria of FAR 13.106-3.

Stewart Evans, Contracting Officer

Date

12. Approvals

Jennifer Kelley, Bureau Competition Advocate

Date