



### **Sole Source Application and Determination Form**

A sole source determination is not effective until the sole source application for determination has been posted on the Purchasing website for thirty (30) calendar days without protest and is subsequently approved in writing by the Vice President of Administration and Finance.

- Name of Department: Bureau of Geology

Contact Name: Sean Connell

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- Name of Prospective Vendor:

Contact Name: Les Lambert

Phone: (504) 731-2995

Email: lambert@seiscoin.com

Estimated Cost: \$71,950.00

Duration (for Services or Professional Services – limited to four years): one-time purchase with delivery by December 25, 2025.

- Purpose/need for purchase and detailed list of items of tangible property, services, or professional services:

*The Bureau requires seismic-reflection data in the Mimbres basin of southwestern New Mexico to map and constrain subsurface geology, including major fault systems that influence aquifer structure, groundwater flow, and water resource availability. This purchase supports the Bureau's mandate to provide reliable hydrogeologic frameworks for aquifer management in data-sparse regions.*

*Existing boreholes and geologic mapping alone are insufficient to characterize subsurface fault geometries and stratigraphic frameworks. Vintage seismic data, when reprocessed and integrated with interpretation products, provides the necessary subsurface control to enhance groundwater models and reduce uncertainty in structural interpretations. Without these seismic datasets, the Bureau would lack critical geophysical control in the Area of Interest, limiting its ability to develop accurate aquifer models and to fulfill statutory obligations under the Water Data Act.*

- Detailed explanation of criteria developed for this purchase: performed a search of online databases for 6 major seismic vendors with extensive seismic coverage in North America. This search of SEI, TGS, Seitel, Spectrum GEO, Fairfield Geotechnologies, and Schlumberger showed no record of these surveys and interpretation maps. This search indicates that SEISCO may be the sole source of this data.

***Criteria Developed for this Purchase:*** *To ensure that the Bureau identified all potential sources of seismic data in the Area of Interest (AOI), a systematic vendor review process was established. The following criteria guided the search and evaluation:*

***A. Geographic Coverage of the AOI:*** *Vendors were required to demonstrate ownership of 2D seismic datasets and interpretation maps that directly intersect or cover the Bureau's defined AOI in southwestern New Mexico. Because seismic data are acquired along specific transects, only vendors with holdings in the AOI could be considered viable.*

***B. Availability of Reprocessable Data:*** *In order to meet project standards, seismic data must be accompanied by field acquisition metadata, enabling modern reprocessing to SEG-Y format. Vendors unable to provide reprocessable datasets were deemed non-responsive to the Bureau's technical requirements.*

***C. Integration of Interpretation Products:*** *Preference was given to vendors able to supply both seismic lines and interpretation maps. The ability to provide contemporaneous interpretations significantly increases the value of the purchase and accelerates the Bureau's project timeline.*

***C. Licensing Terms Compatible with Bureau Mission:*** *The Bureau required licensing terms that would permit perpetual internal use and limited publication (with sanitized datasets). Vendors with restrictive licenses that hinder data sharing or impose expiration dates did not meet this requirement.*

***Results of Vendor Search:*** *A targeted search was conducted across six major seismic vendors with extensive North American coverage:*

- ***Seismic Exchange, Inc. (SEI):*** *Limited coverage of AOI; many datasets lack field records and cannot be reprocessed.*
- ***TGS Seismic Library:*** *No coverage in AOI (reviewed July 29, 2025).*
- ***Seitel, Inc.:*** *No comparable seismic data in AOI (reviewed July 29, 2025).*

- **Spectrum GEO:** No onshore seismic datasets available for AOI.
- **Fairfield Geotechnologies:** No coverage in AOI (reviewed July 30, 2025).
- **Schlumberger (SLB):** Large library, but no datasets in AOI (reviewed July 29, 2025).

*This comprehensive review confirmed that none of the other seismic vendors maintain ownership of the required surveys and interpretation maps in the AOI.*

*The search results demonstrate that SEISCO, Inc. is the sole vendor with relevant, reprocessable seismic lines and interpretation maps covering the Bureau's AOI. Accordingly, SEISCO is the only source capable of providing the tangible property and professional services necessary to meet the Bureau's objectives.*

- Provide a detailed, sufficient explanation of the reasons, qualifications or unique capabilities of the prospective vendor that make that prospective vendor the one source for providing the items of tangible property, services, or professional services:

**Proprietary Ownership of Seismic Data in the AOI:** *SEISCO, Inc. is the sole owner of the Texaco 12-fold vibroseis seismic lines (Akela & Akela West, NM648–651) and associated interpretation maps that cross the Bureau's Area of Interest in Luna and Doña Ana Counties. These data are not available through other seismic vendors, as confirmed through direct outreach and review of the multi-client seismic libraries of SEI, TGS, Seitel, Fairfield Geotechnologies, and Schlumberger. Because seismic data are proprietary intellectual property, SEISCO's ownership and licensing rights establish them as the only possible source.*

**Capability to Provide Reprocessed Data with Full Metadata:** *Unlike competitors whose legacy lines lack acquisition metadata and cannot be modernly reprocessed (e.g., SEI), SEISCO maintains full field records, enabling reprocessing to SEG-Y format. This ensures that the Bureau receives usable, high-quality datasets suitable for current seismic interpretation standards. The ability to deliver reprocessed data is a unique capability critical for hydrogeologic modeling and fault framework interpretation.*

**Complementary Interpretation Products:** *SEISCO is the only vendor offering not just line data but also seismic interpretation maps (Akela & Akela West, Las Cruces South). These products integrate seamlessly with the seismic lines and provide structural contour information essential for constraining aquifer boundaries and fault geometries. Other vendors could not offer such complementary interpretation products for the AOI.*

**Competitive and Flexible Licensing Terms:** *SEISCO provides a perpetual license with no expiration, allowing unrestricted internal use and the ability to publish sanitized results (removal of shot point IDs). Other seismic vendors often impose restrictive licensing that limits research, dissemination, or long-term use. This flexibility uniquely aligns with the Bureau's mission of making data usable for water management, research, and public reporting.*

**Demonstrated Expertise and Market Position:** *With a proprietary library of over 250,000 miles of 2D seismic data across the U.S., SEISCO is a recognized leader in maintaining, reprocessing, and licensing vintage seismic datasets. Their technical staff, led by long-standing industry contacts such as Les Lambert, have extensive experience working with state agencies, universities, and industry partners. Their capacity to deliver high-quality reprocessed data and interpretation products on schedule (December 31, 2025) demonstrates their professional service qualifications and reliability.*

*SEISCO, Inc. is the only qualified and capable vendor to provide the Bureau with seismic datasets in the AOI. Their unique combination of proprietary ownership, ability to reprocess vintage data, availability of interpretation maps, flexible licensing, and demonstrated expertise establishes them as the one source capable of meeting the Bureau's technical, scientific, and statutory requirements.*

- Provide a detailed, sufficient explanation of how the items of tangible property, services, or professional services is/are unique and how this uniqueness is substantially related to the intended purpose of the department/grant:

#### ***Uniqueness of SEISCO Seismic Data and Services***

*The tangible property to be procured—reprocessed 2D seismic lines and seismic interpretation maps from SEISCO, Inc.—is unique in several critical respects that are substantially related to the Bureau's intended purpose of subsurface characterization in southwestern New Mexico.*

##### ***1. Exclusive Ownership of Relevant Data***

*SEISCO is the only vendor that holds proprietary rights to the Texaco 12-fold vibroseis seismic lines (Akela & Akela West, NM648–651) and associated interpretation maps that cross the Bureau's defined Area of Interest (AOI) in Luna and Doña Ana Counties. No other seismic vendor has these specific datasets in their multi-client libraries. Because seismic data are proprietary intellectual property tied to field acquisition rights, equivalent datasets cannot be acquired from alternative sources.*

##### ***2. Coverage of the Exact Area of Interest***

*The Bureau's project requires seismic control directly within the AOI to constrain structural and stratigraphic interpretations that support aquifer framework modeling. SEISCO's vintage Texaco lines are the **only known seismic transects that traverse this area**. Other vendors (SEI, TGS, Seitel, Fairfield Geotechnologies, Schlumberger) were reviewed and confirmed to have **no comparable coverage** in the AOI. This makes SEISCO's datasets geographically unique and irreplaceable for the Bureau's intended hydrogeologic analyses.*

##### ***3. Ability to Provide Reprocessed Data***

*The Bureau requires seismic data that can be modernly reprocessed and interpreted. Discussions with SEI confirmed that many of their holdings lack original field acquisition records,*

rendering them unusable for reprocessing. By contrast, SEISCO maintains full acquisition metadata and offers professionally reprocessed datasets (in SEG-Y format), ensuring the data can be integrated into current interpretation and modeling workflows. This reprocessing capability is integral to the Bureau's scientific objectives, as raw or unprocessable data cannot meet project standards.

#### **4. Integration with Interpretation Products**

SEISCO uniquely offers **seismic interpretation maps** (Akela & Akela West, Las Cruces South) in addition to raw and reprocessed lines. These products provide structural contour mapping that directly complements subsurface fault and stratigraphic interpretations. No other vendor reviewed could provide both line data and contemporaneous interpretation maps for the AOI. The integration of lines and maps ensures consistency of interpretation and accelerates project deliverables.

#### **5. Licensing Terms Aligned with Bureau Needs**

SEISCO provides a **perpetual license with minimal restrictions**, allowing the Bureau to use the data internally without expiration. The license also allows sanitized publication (with shot point IDs removed), enabling the Bureau to share derivative interpretations with stakeholders while complying with intellectual property terms. This combination of perpetual use rights and limited restrictions is essential to the Bureau's public mission and distinguishes SEISCO's offer from other vendors with more restrictive licensing regimes.

#### **Substantial Relationship to Bureau Purpose**

The Bureau's mission requires accurate characterization of subsurface geology to inform aquifer management and water resource planning in data-sparse regions. The uniqueness of SEISCO's data and services directly supports this mission by:

- **Providing the only seismic control in the AOI** to constrain structural frameworks (faults, stratigraphy) relevant to groundwater flow and aquifer compartmentalization.
- **Ensuring reprocessable datasets** with modern standards of quality, critical for generating reliable hydrogeologic models.
- **Delivering interpretation products** that accelerate scientific understanding and reduce redundant work.
- **Allowing perpetual and flexible use** consistent with the Bureau's long-term responsibility to make data available to policymakers, stakeholders, and the public.

Without access to SEISCO's unique seismic datasets and maps, the Bureau would lack essential geophysical control in this region, compromising its ability to develop accurate aquifer framework models and meet statutory obligations under the Water Data Act and related resource management mandates.

- Please provide a narrative description of the department’s due diligence in determining a basis for the procurement. Include:
  - method used to research and review other available sources (i.e. list of potential vendors from Purchasing, internet, state pricing agreements, purchasing cooperatives)
  - list of vendors contacted, the date and method of contact (i.e. email, phone call)
  - documentation explaining why:
    - those vendors cannot provide the required items of tangible property, services, or professional services.
    - other similar items of tangible property, services, or professional services cannot meet the intended purpose of department/grant:

*The Bureau seeks to acquire seismic-reflection datasets in southwestern New Mexico to better map and constrain subsurface geology, including major fault systems in Luna and Doña Ana Counties. Access to these datasets is essential for hydrogeologic characterization, structural interpretation, and aquifer framework modeling in areas of limited subsurface control.*

#### **Method of Research and Vendor Review**

*A comprehensive review was conducted of available seismic vendors with proprietary data libraries in the United States. The search included targeted queries of vendor databases, outreach to sales representatives, and evaluation of dataset coverage within the specific area of interest (AOI) in southwestern New Mexico. Vendor maps, online seismic libraries, and direct communications were used to assess availability, coverage, and cost.*

*The review confirmed that only SEISCO, Inc. possesses vintage 2D seismic lines and associated interpretation maps directly covering the AOI. Other major vendors either lack coverage in the AOI or cannot provide usable, reprocessable datasets.*

#### **Vendors Contacted**

- **SEISCO, Inc.** – Contact: Les Lambert, New Orleans, LA.  
*SEISCO maintains a proprietary library of ~250,000 miles of 2D seismic data. They confirmed ownership of four Texaco 12-fold vibroseis lines (Akela & Akela West, NM648–651) and related interpretation maps. Their quote includes: \$60,950 for reprocessed data (SEGY format), \$11,000 for interpretation maps; perpetual license with minimal restrictions.*
- **Seismic Exchange, Inc. (SEI)** – Contacted regarding 2D/3D seismic datasets. *SEI has limited coverage in the AOI, and discussions revealed that many of their unprocessed lines lack original field acquisition data, making reprocessing infeasible. At \$2,075 per line-mile, SEI’s available datasets are also significantly more expensive than SEISCO’s.*
- **TGS Seismic Library** – Database reviewed as of July 29, 2025. *No seismic data coverage was found in the AOI.*

- **Seitel, Inc.** – Offers extensive U.S. seismic libraries (>250,000 line-miles). Review of Seitel’s 2D seismic coverage map (July 29, 2025) confirmed no comparable data in the AOI.
- **Spectrum GEO** – Focused on offshore seismic data; no onshore datasets available for the AOI.
- **Fairfield Geotechnologies** – Multi-client seismic library reviewed on July 30, 2025. No data present in the AOI.
- **Schlumberger (SLB)** – Large multIClient seismic library (>3 million km of 2D seismic data). AOI search (July 29, 2025) confirmed no coverage.

**Documentation of Vendor Limitations**

- **SEI:** Although possessing large 2D and 3D seismic holdings, SEI’s coverage in the AOI is limited. Moreover, lack of field acquisition records for many lines prevents reprocessing, which is essential for current project requirements.
- **TGS, Seitel, Spectrum GEO, Fairfield Geotechnologies, SLB:** All reviewed vendor libraries confirmed no seismic datasets available in the Luna–Doña Ana AOI.
- **SEISCO:** The only vendor with proven, licensable 2D seismic data and interpretation maps in the AOI.

**Conclusion and Recommendation**

Based on the vendor review, SEISCO is the sole source provider of seismic datasets meeting the Bureau’s requirements in Luna and Doña Ana Counties. Their holdings represent the only reprocessable, licensable 2D seismic lines and interpretation maps available in the AOI, at competitive costs significantly lower than alternative vendors.

I certify I have performed thorough and diligent research and analysis to determine that Seisco is the only source capable of providing the required seismic-reflection data. I understand that violations of the New Mexico Procurement Code (Chapter 13, Article 1 NMSA 1978) can carry severe penalties. I affirm that the information provided in this Sole Source Determination is true and accurate to the best of my knowledge and belief.

Name, Title: Sean D. Connell, PhD, Sr. Research Scientist II

*Sean Connell*

September 8, 2025

Review: Purchasing Services: Lisa Majkowski, Director *Lisa Majkowski* 09.09.2025

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Approval: Delilah A. Walsh  
Vice President of Administration and Finance



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Final Audit Report

2025-09-09

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