

G-019-B

***Identification of Shallow Biogenic Gas
Systems in Eastern North Dakota***

Submitted by GeoShurr Resources, LLC

Principal Investigators:

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Request for \$90,000

Total Project Costs \$180,000

Duration: 12 months

Identification of Shallow Biogenic Gas Systems in Eastern North Dakota

- The primary objective of the proposed investigation is to generate information that will enhance exploration and development of shallow biogenic gas in counties in eastern North Dakota that are currently not producing oil or gas.

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- The methodology employed in this investigation will employ published structural and stratigraphic information, satellite images as well as compilation of published gravity and magnetics, syntheses of Precambrian basement geology to identify regional lineament zones as ‘sweetspots’.

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- Water well sets in sweetspots will be screened for methane.
- Based on the results of this field screening, water samples will be collected and analyzed for bicarbonate and sulfate, headspace gases, and possible preliminary indications of methanogenic microbes.
- If it is feasible to collect actual gas samples, isotopic analyses will be done to evaluate the relative importance of early-generation and late-generation biogenic gas.

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- *Anticipated results* include a map of regional lineament zones, locations of ranked sweetspots, and a set of supporting field and laboratory measurements.

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- The project was critiqued by 2 independent reviewers.
- They gave the project a total of 184/250 points.
- Both recommend that funding be considered for the project.

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- Reviewer concerns include:
 - - current weakness in the gas market.
 - -lack of detail in work plan.
 - -possible overlap of NDGS investigations.

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- The project has been reviewed by one OGRC technical advisor.
- The advisor believes that concerns raised by reviewers have been addressed and recommends this project be funded.