

## TECHNICAL REVIEWERS' RATING SUMMARY

**G-013-A**

**Identification of a Shallow Gas Source System in Southwestern Steele County,  
North Dakota**

Submitted by Fischer Oil & Gas, Inc.

Principal Investigators: George Shurr, David Fischer

Request for \$15,100; Total Project Costs \$30,200

<b>Rating Category</b>	<b>Weighting Factor</b>	<b>Technical Reviewer</b>		<b>Average Weighted Score</b>
		<b>13A-01</b>	<b>13A-02</b>	
Objective	9	3	4	31.5
Availability	9	4	5	40.5
Methodology	7	3	4	24.5
Contribution	7	3	5	28.0
Awareness	5	5	4	22.5
Background	5	5	5	25.0
Project Management	2	4	5	9.0
Equipment Purchase	2	5	5	10.0
Facilities	2	3	5	8.0
Budget	2	5	5	10.0
<b>Average Weighted Score</b>		189	229	<b>209.0</b>
<b>Maximum Weighted Score</b>				<b>250</b>
<b><u>OVERALL RECOMMENDATION</u></b>				
<b>FUND</b>		<b>X</b>	<b>X</b>	
<b>FUNDING TO BE CONSIDERED</b>				
<b>DO NOT FUND</b>				

1. The objectives or goals of the proposed project with respect to clarity and consistency with North Dakota Industrial Commission/Oil and Gas Research Council goals are: 1 – very unclear; 2 – unclear; 3 – clear; 4 – very clear; or 5 – exceptionally clear.

Reviewer 013A-01 (Rating: 3)

The objectives are clearly stated.

Reviewer 013A-02 (Rating: 4)

This proposal clearly expresses how the content of the work is consistent with 4 of the 5 OGRC goals and purposes.

2. With the approach suggested and time and budget available, the objectives are: 1 – not achievable; 2 – possibly achievable; 3 – likely achievable; 4 – most likely achievable; or 5 – certainly achievable.

Reviewer 013A-01 (Rating: 4)

Can the investigators briefly explain the differences in identifying each of the three kinds of natural gas accumulations? I understand the definitions of each kind, but how does analysis differentiate them?

Reviewer 013A-02 (Rating: 5)

The proposal provides adequate time and funding to obtain and analyze the required samples.

3. The quality of the methodology displayed in the proposal is: 1 – well below average; 2 – below average; 3 – average; 4 – above average; or 5 – well above average.

Reviewer 013A-01 (Rating: 3)

The methodology is straightforward.

Reviewer 013A-02 (Rating: 4)

The methodology incorporated into this proposal has been proven in other biogenic gas plays like the Antrim shale play in Michigan.

4. The scientific and/or technical contribution of the proposed work to specifically address North Dakota Industrial Commission/Oil and Gas Research Council goals will likely be: 1 – extremely small; 2 – small; 3 – significant; 4 – very significant; or 5 – extremely significant.

Reviewer 013A-01 (Rating: 3)

The goals of the proposed project appear to mesh well with those of the Oil and Gas Research Council.

Reviewer 013A-02 (Rating: 5)

The possibility of identifying natural gas resource potential as far to the east as Steele County has enormous economic potential for the state.

5. The principal investigator's awareness of current research activity and published literature as evidenced by literature referenced and its interpretation and by the reference to unpublished research related to the proposal is: 1 – very limited; 2 – limited; 3 – adequate; 4 – better than average; or 5 – exceptional.

Reviewer 013A-01 (Rating: 5)

The managers of the proposed project do not list any of their own research, publications, etc. and they list only one publication by another individual. However, I believe both individuals are very aware of research in this activity.

Reviewer 013A-02 (Rating: 4)

The investigators have all authored publications in the area of research contained in this proposal.

6. The background of the investigator(s) as related to the proposed work is: 1 – very limited; 2 – limited; 3 – adequate; 4 – better than average; or 5 – exceptional.

Reviewer 013A-01 (Rating: 5)

Both investigators are well qualified to conduct this research.

Reviewer 013A-02 (Rating: 5)

The combined background of the investigators in geology and shale gas research creates an exceptional team.

7. The project management plan, including a well-defined milestone chart, schedule, financial plan, and plan for communications among the investigators and subcontractors, if any, is: 1 – very inadequate; 2 – inadequate; 3 – adequate; 4 – very good; or 5 – exceptionally good.

Reviewer 013A-01 (Rating: 4)

The timetable is clearly stated and seems reasonable.

Reviewer 013A-02 (Rating: 5)

The project plan is clear, well financed and follows a logical schedule through to completion.

8. The proposed purchase of equipment is: 1 – extremely poorly justified; 2 – poorly justified; 3 – justified; 4 – well justified; or 5 – extremely well justified. (Circle 5 if no equipment is to be purchased.)

Reviewer 013A-01 (Rating: 5)

No comment

Reviewer 013A-02 (Rating: 5)

No purchase is anticipated. Equipment and services are leased.

9. The facilities and equipment available and to be purchased for the proposed research are: 1 – very inadequate; 2 – inadequate; 3 – adequate; 4 – notably good; or 5 – exceptionally good.

Reviewer 013A-01 (Rating: 3)

No comment

Reviewer 013A-02 (Rating: 5)

The detection and sampling equipment, as well as the lab facilities identified are “state of the art”.

10. The proposed budget “value”<sup>1</sup> relative to the outlined work and the financial commitment from other sources is of: 1 – very low value; 2 – low value; 3 – average value; 4 – high value; or 5 – very high value. (See below)

Reviewer 013A-01 (Rating: 5)

No comment

Reviewer 013A-02 (Rating: 5)

The economic benefit to the state of potential shallow gas resources is many orders of magnitude greater than the requested funds. However, further funding requests in the future are anticipated in this project proposal.

Section C. Overall Comments and Recommendations:

Please comment in a general way about the merits and flaws of the proposed project and make a recommendation whether or not to fund.

Reviewer 013A-01 (FUND)

The intent of this project is logical. The goals and methodology are straightforward. The potential for shallow gas production in eastern North Dakota (and elsewhere) has long been speculated and this project may help to better understand that potential.

The costs involved are small in view of the potential economic benefits.

Reviewer 013A-02 (FUND)

This proposal represents tremendous economic potential at a low cost.

The proposal includes a small amount of state agency general fund monies for matching contributions.

Future funding of expanded project work is anticipated.

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<sup>1</sup> “Value” – The value of the projected work and technical outcome for the budgeted amount of the project, based on your estimate of what the work might cost in research settings with which you are familiar.

Financial commitment from other sources – A minimum of 50% of the total project must come from other sources to meet the program guidelines. Support less than 50% from Industrial Commission sources should be evaluated as favorable to the application.