

# Technical Reviewers' Rating Summary

Proposal Number **G-60-02** Application Title **Well Site Thief Hatch Methar** Submitted By  
**Blue Rock Solutions, LLC, dt** Request For **\$450,000.00** Total Project Costs  
**\$900,000.00**

## Section A. Scoring

Statement	Weighting Factor	G-60-02A	G-60-02B	G-60-02C	Average Weighted Score
1. Objectives	9	3	4	4	27
2. Achievability	7	3	5	3	21
3. Methodology	8	3	4	4	24
4. Contribution	8	2	4	4	24
5. Awareness / Background	5	4	5	4	20
6. Project Management	3	2	2	2	6
7. Equipment / Facilities	2	3	4	2	6
8. Value / Industry - Budget	4	3	4	4	12
9. Financial Match - Budget	4	3	3	3	12
<b>Average Weighted Score</b>		<b>144</b>	<b>202</b>	<b>179</b>	<b>175</b>
	Total: 50				<b>250 possible points</b>

## OVERALL RECOMMENDATION

FUND

**X**

FUNDING TO BE CONSIDERED

**X**

**X**

DO NOT FUND

## Section B. Ratings and Comments

- 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:

The objectives of the Phase II Well Site Thief Hatch Methane Detectors align well with the following two goals and purposes of the OGRP. •Promote efficient, economic, and environmentally sound exploration, development, and use of North Dakota's oil and gas resources. •Encourage, and promote the use of new technologies and ideas that will have a positive economic and environmental impact on oil and gas exploration, development, and production in North Dakota.

- Reviewer: G-60-02A

- Rating: 3

Blue Rock, Continental Resources, and the Universities are all well-versed in the submission of OGRC grant applications; there application reflects that knowledge.

- Reviewer: G-60-02B

- Rating: 4

AS stated in the proposal a key issue for the oil and gas industry is a reduction in green house gas emissions. The proposed technology under development will assist with helping the industry in addressing this issue.

- Reviewer: G-60-02C

- Rating: 4

No additional comments

- Applicant

2. With the approach suggested and time and budget available, the objectives are:

The applicant's timeline and budget details were relatively short on specifics. There appear to be some carry-over items from Phase I that were incomplete (UL listing/field tests). Two of the six stated objectives were open-ended with no clear timeline. These open-ended items included: 'Explore other target areas of methane emissions such as gas cooling compressors, compressor buildings, etc.' and 'Initiate research related to quantification (estimation of gas being released measured as standard cubic feet per minute).

- Reviewer: G-60-02A

- Rating: 3

All objectives appear achievable within the confines of the 18-month timeframe and proposed economics.

- Reviewer: G-60-02B

- Rating: 5

The budget proposed in this application does not provide much detail in the budget for the various partners noted. There is no line item for equipment purchases. Therefore, this reviewer would only rate as noted above.

- Reviewer: G-60-02C

- Rating: 3

Additional details have been added to the budget. A timeline was inadvertently missed in the proposal and has been added. A brief summary of the methodology for proposed quantification and associated research has also been added.

- Applicant

3. The quality of the methodology displayed in the proposal is:

No significant omissions were observed, and I have no major concerns with the overall methodology presented in the proposal. However, additional details would have been helpful to support each of the individual stated objectives.

- Reviewer: G-60-02A

- Rating: 3

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- Reviewer: G-60-02B

- Rating: 4

No comment

- Reviewer: G-60-02C

- Rating: 4

A brief summary of the methodology for proposed quantification and associated research has been added.

- Applicant

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:

The abstract on page 1 states that the expected result is 'to achieve commercialization of the IMSA product.' It appears that the majority of the scientific research was completed in Phase I, with finalizing commercial deployment being one of the principal objectives of Phase II. Along with product commercialization being the primary objective, the applicant notes the objective to 'initiate research related to quantification....,' which would make the most significant scientific contribution to OGRC goals.

- Reviewer: G-60-02A

- Rating: 2

The oil and gas industry desires localized sensors and data transmission to operators without the presence of an operator on location. This consortium of applicants has perfected their methodology and proposal to achieve the desired result of automated tank emissions technology

- Reviewer: G-60-02B

- Rating: 4

The work has great potential to benefit both producers operating in ND and the state itself. The governor has challenged the industry to significantly reduce green house emissions by 2030 and the technology will assist in achieving this goal.

- Reviewer: G-60-02C

- Rating: 4

Reviewer G-60-02A provides good point on commercialization. The intention for this application is to focus on the remaining research and development related to addressing recent and upcoming regulations as well as producer feedback.

- Applicant

5. The background of the principal investigator and the 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:

The team assigned to complete the outlined work appears highly qualified to achieve the goals and objectives of the application. I have no concerns regarding the team's capability to successfully execute the proposed project.

- Reviewer: G-60-02A

- Rating: 4

The devices' levels of modification and useful input from partners have led to increased knowledge of how best to achieve the desired results through the eyes of the State of North Dakota and the industry. This has been one of the job training for Blue Rock Solutions, LLC and the university researchers, with assistance from industry partners.

- Reviewer: G-60-02B

- Rating: 5

The principals in this activity appear well versed in the areas necessary to successfully complete development of the devices noted.

- Reviewer: G-60-02C

- Rating: 4

No additional comments

- Applicant

6. 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:

As previously noted, the application lacked a detailed schedule with defined milestones. Financial plan details were not very well defined in the application. Regarding communications, I would suggest relying on past performance in Phase I with OGRC/NDIC staff.

- Reviewer: G-60-02A
- Rating: 2

I did not see a milestone chart

- Reviewer: G-60-02B
- Rating: 2

There is no milestone chart provided. The text indicated the project lead would monitor progress to the milestones, but no specific milestones are noted.

- Reviewer: G-60-02C
- Rating: 2

A timeline was inadvertently missed in the proposal and has now been added.

- Applicant

7. The proposed purchase of equipment and the facilities available is:

Due to the limited budget details, it was challenging to fully assess the justification for any major expense category. However, no particular category raised significant concerns.

- Reviewer: G-60-02A
- Rating: 3

The equipment appears to be modifications and improvements of the current design. Continental Resources and the universities provide facilities. There appears to be utilization of other producers well sites anticipated in phase 2, as well.

- Reviewer: G-60-02B
- Rating: 4

There is no line item in the budget material provided for equipment. The total costs to be incurred is all the information provided. This reviewer much prefers more detail in budget information in order to evaluate the adequacy of the budgeted amounts.

- Reviewer: G-60-02C
- Rating: 2

More details have been added to the budget table taking into account similarly incurred costs from Phase I.

- Applicant

8. The proposed budget “value”<sup>1</sup> relative to the outlined work and the commitment from other sources is of:

The proposed value appears to be fair and adequate for the goals and objectives outlined in the application. The costs associated with the outlined work seem reasonable in the context of current market conditions.

- Reviewer: G-60-02A
- Rating: 3

This is a high-value project for the industry and the State of North Dakota. Detection of methane leaks is the paramount first step to maintenance to eliminate that leak and reducing

GHG releases into the atmosphere.

- Reviewer: G-60-02B

- Rating: 4

The successful completion of this activity will have significant value to both the industry and the state. The governor has challenged the industry to achieve CO2 neutrality by 2030. This is a challenge, and this activity should prove valuable in assisting industry in achieving that goal.

- Reviewer: G-60-02C

- Rating: 4

No additional comments

- Applicant

9. The “financial commitment”<sup>2</sup> from other sources in terms of “match funding” have been identified:

The applicant’s overall financial commitment is right at the minimum 50% (25% cash / 25% in-kind). I am encouraged that pilot locations have been identified with Continental Resources, but it would have been nice to see some additional producer participation, even if only in-kind.

- Reviewer: G-60-02A

- Rating: 3

It needs to be clarified what portion of the applicant's share or applicant share (in-kind) is coming from Continental Resources. Perhaps this is fine as an aggregate, but typically, as the reviewer, I have been aware of the breakdown of financial commitments. the NDIC is only being asked to fund 50% of the total project so perhaps not necessary to understand the internal contributions of the project.

- Reviewer: G-60-02B

- Rating: 3

The budget material provided shows the required one to one match is available for this project.

- Reviewer: G-60-02C

- Rating: 3

Continental Resources has committed resources for installation and support during pilot projects (field testing and quantification studies). The budget has been updated to reflect this. We are also currently in active discussions with other producers and collaborators for additional pilot projects.

- Applicant

1 “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. A commitment of support from industry partners equates to a higher value.

2 “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; industry partnerships equates to increased favorability.

## General Comments

I can only recommend considering funding the full application. I would likely change my recommendation to 'fund,' but only for the research components of the application (e.g., methane quantification). I agree with the applicant that identifying and quantifying wellsite emissions are top priorities for North Dakota’s producers, and continued research in these areas is warranted.

However, the application was limited in research and overly focused on commercialization. I recognize the importance of commercialization efforts for achieving widespread utilization of the applicant's product and its subsequent benefits to North Dakota. However, these efforts may be better suited for funding through the NDIC's CSEA grant/loan programs.

- Reviewer: G-60-02A

The ability to detect a leak is the first step towards eliminating an atmospheric leak. North Dakota has the ability to continue funding this grant to lead the way for the nation and globe in early detection and, therefore, early elimination of leaks.

- Reviewer: G-60-02B

I believe the proposed work has significant value for the state and the oil and gas industry. I do believe there is a lack of detail on the budget, the milestone chart and I would have liked additional information on the device that has been developed in the phase one activity. I believe the NDIC's technical representative will need that information to adequately monitor the progress during the execution of this activity if selected for funding and will want to be appraised in the additional information noted by this reviewer.

- Reviewer: G-60-02C