

Technical Reviewers' Rating Summary

Proposal Number **G-62-H** Application Title **"Enhanced Oil Recovery an** Submitted
 By **Cobra Oil & Gas Corporation** Request For **\$5,000,000.00** Total Project Costs
\$10,000,000.00

Section A. Scoring

Statement	Weighting Factor	G-62-H1	G-62-H2	G-62-H3	Average Weighted Score
1. Objectives	9	3	4	4	27
2. Achievability	7	3	3	4	21
3. Methodology	8	2	4	5	24
4. Contribution	8	2	4	3	24
5. Awareness / Background	5	3	3	5	15
6. Project Management	3	3	4	4	9
7. Equipment / Facilities	2	3	3	3	6
8. Value / Industry - Budget	4	3	3	4	12
9. Financial Match - Budget	4	3	4	4	12
Average Weighted Score		134	182	203	173

Total: 50

250 possible points

OVERALL RECOMMENDATION

FUND **X**

FUNDING TO BE CONSIDERED **X**

DO NOT FUND **X**

Section B. Ratings and Comments

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:

The proposal clearly outlines its goal to develop EOR and completion strategies for tight carbonate reservoirs, with a strong focus on the Stoneview-Stonewall Unit and broader applicability to ND reservoirs.

- Reviewer: G-62-H1

- Rating: 3

The objectives of this proposal align well with the legislative intent in SB 2014

- Reviewer: G-62-H2

- Rating: 4

The objectives and goals are very clear on what the project is going to accomplish. Where there could have been more clarity is the implementation of lab testing to field testing. What would have helped is to provide more detail on how the lab testing would be implemented (or how it would change the base case approach), on which wells, and how. It is understandable the the lab testing will dictate which direction the project will move, but there should be a

base case given the anticipated costs shown in the table for field testing.

- Reviewer: G-62-H3

- Rating: 4

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

The scope, timeline, and budget are realistic. The partnership with EERC and Cobra's operational control of the SSU enhances feasibility.

- Reviewer: G-62-H1

- Rating: 3

The applicant has limited experience operating similar projects, but has detailed data on the previous EOR projects in the SSU.. The proposed timetable and budget are based on that information and EERC experience. They are realistic, but are not likely to deliver any results by the 2027 legislative assembly.

- Reviewer: G-62-H2

- Rating: 3

The timelines seem achievable. From my experience, lab testing, simulation, and numerical models always take longer than anticipated if an appropriate buffer is not built in.

- Reviewer: G-62-H3

- Rating: 4

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

The five-task structure is well-organized and technically sound. Use of lab testing, simulation, and field validation is appropriate.

- Reviewer: G-62-H1

- Rating: 2

The applicant is leveraging lessons learned from the previous SSU projects to design an improved project methodology that increases the probability of success.

- Reviewer: G-62-H2

- Rating: 4

The partnership with the EERC is great. The quality of the methodology and the resources available make this a great research heavy project.

- Reviewer: G-62-H3

- Rating: 5

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 project addresses underexplored tight carbonate reservoirs and could influence broader EOR strategies in ND but is not immediately adjacent to more meaningful reserves in ND.

- Reviewer: G-62-H1

- Rating: 2

The scientific and technical information from this project could lead to large scale implementation of tight conventional resource EOR. Project success will mean decades of additional oil and gas production in the state.

- Reviewer: G-62-H2

- Rating: 4

I agree that this could have a large impact to similar conventional reservoirs that display the same or nearly the same petrophysical and reservoir properties. I don't agree that this project

could be directly applied to the Bakken as stated, although I do think that the project could indirectly help future studies/projects similar to this for the Bakken by way of workflows, EOR methods, etc.

- Reviewer: G-62-H3

- Rating: 3

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:

Cobra's team has relevant experience, and EERC brings strong technical depth. The resumes support the team's capability.

- Reviewer: G-62-H1

- Rating: 3

The applicant has limited experience in the area of this research project, but can leverage data from previous SSU projects and EERC expertise to greatly increase the probability of success.

- Reviewer: G-62-H2

- Rating: 3

Cobra has partnered with the EERC, which would have vast knowledge of the current research and studies. There is no doubt they are aware of all the available published literature and current studies related to their proposed project.

- Reviewer: G-62-H3

- Rating: 5

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:

The management structure is functional, with EERC leading technical tasks and Cobra managing field operations.

- Reviewer: G-62-H1

- Rating: 3

The project plans are based on data from similar projects. Infrastructure has to be built and gas acquisition and marketing agreements have to be negotiated.

- Reviewer: G-62-H2

- Rating: 4

The project management plan is solid with the appropriate details. The only item I wished there was more detail and background on was the financial plan as it relates to the field testing and associated equipment.

- Reviewer: G-62-H3

- Rating: 4

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

Equipment needs are reasonable and aligned with project goals. The ICV system adds value.

- Reviewer: G-62-H1

- Rating: 3

This proposal is based on data from previous projects. The budget avoids NDIC purchase of gas for injection. I would like to see NDIC and applicant funds redistributed to reduce NDIC equipment/CAPEX purchases/ownership and increase NDIC share of equipment leases and OPEX.

- Reviewer: G-62-H2
- Rating: 3

I feel the details on the field testing were lacking. If there was a "base case" of current thinking that would have detailed where the purchase of equipment was coming from, that would have helped. Undoubtedly, equipment will have to be purchased to implement the field testing and it is justified, it could have been explained in more detail.

- Reviewer: G-62-H3
- Rating: 3

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

The \$10M budget is proportionate to the scope. Cobra’s 50% cost share strengthens the value proposition. Unclear on what the money will be used for.

- Reviewer: G-62-H1
- Rating: 3

The lessons learned from the previous projects and EERC expertise accelerate the project timeline and provide a sound budget.

- Reviewer: G-62-H2
- Rating: 3

The budget seems reasonable based on the scope and the commitment from the EERC as well as Cobra is why this is rated as Notably Good.

- Reviewer: G-62-H3
- Rating: 4

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

Cobra provides a full 50% match, meeting program guidelines.

- Reviewer: G-62-H1
- Rating: 3

The financial position of the applicant provides a sound matching fund budget. Funding should be contingent upon written commitment of cost share being provided by an existing EERC project with DOE, the details of which are in the final stages of negotiation and are unable to be explicitly shared at this time.

- Reviewer: G-62-H2
- Rating: 4

The contribution from Cobra and the assumed contribution from the Department of Energy, is what makes this a high value commitment.

- Reviewer: G-62-H3
- Rating: 4

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

This proposal is well-structured but targets a niche reservoir type. The integration of lab, modeling, and field testing is commendable. While not transformative basin-wide, it fills a critical knowledge gap and offers scalable insights.

- Reviewer: G-62-H1

The applicant has the information and EERC experience to greatly increase the probability of success with this project. The applicant should provide more information about why injectivity of this project is expected to be significantly better than the previous projects, what lessons were learned from previous projects, and how that increases the probability of success.

- Reviewer: G-62-H2

My view is that this is a very sound project that incorporates a high level of technical work prior to testing lab and model results in the field. This could have a meaningful impact across similar conventional reservoirs in North Dakota and extending the life of these type of conventional reservoirs should be pursued. They are an existing asset with a high degree of potential that could be extracted with successful outcomes of projects such as this one. The only flaw from the document was not outlining the field testing portion in more detail and establishing a base case of what is known today. There could have been more detail about the potential wells that would test (x) or (y), downhole equipment needed, what would alter that plan, etc.

- Reviewer: G-62-H3