

Unitized Legacy Oil Fields: Prototypes for Revitalizing Conventional Oil Fields in North Dakota

Submitted by:

Eagle Energy Partners/EERC

- ☐ Request for - \$3,000,000; Total Project Costs - \$6,000,000
Project Duration: 36 months**

PROJECT DESCRIPTION

- Eagle Energy Partners I, LLC (EEPI) proposes a multidisciplinary research program to address technical challenges facing revitalization of conventional reservoirs in North Dakota. EEPI will investigate a unitized legacy oil field producing from the Madison Group (or other suitable production horizons) as a prototype for implementing CO₂ enhanced oil recovery (EOR) in North Dakota. EEPI will conduct the program in close collaboration with the Energy & Environmental Research Center (EERC). Information generated in this project will positively affect ultimate recovery from North Dakota's conventional oil pools and will lead to additional projects, processes, ideas, and activities to facilitate implementation of oil exploration and production technologies presently not used in the state. The potential to revitalize conventional oil fields and increase ultimate recovery will bring new investment to North Dakota, resulting in the growth of oil and gas jobs, wealth, and tax revenues for North Dakota.
- **Objective:** Investigate waterflood optimization as a precursor for CO₂ EOR and development pathways for unitized legacy oil fields producing from the Madison Group (or other suitable production horizon) as prototypes for the revitalization of analog conventional oil fields in North Dakota. Objectives to be accomplished to meet the stated goal are 1) evaluate waterflood optimization and CO₂ EOR potential and implementation approaches specific to the Madison or other suitable production horizons; 2) develop cost-effective operational strategies that address key technical challenges, optimize current facilities, and systematically consider necessary new facilities; and 3) frame the results from this project as a prototype for revitalizing analogous conventional oil fields in North Dakota in anticipation of tertiary CO₂ EOR.

TECHNICAL REVIEWERS' RATING SUMMARY

		Technical Reviewer			
Statement	Weighting Factor	<u>G-45-03A</u>	<u>G-45-03B</u>	<u>G-45-03C</u>	<u>Average Weighted Score</u>
Objectives	9	5	4	3	36
Achievability	7	4	4	4	28
Methodology	8	4	4	4	32
Contribution	8	3	5	3	24
Awareness / Background	5	3	3	3	15
Project Management	3	4	3	5	12
Equipment / Facilities	2	3	3	3	6
Value / Industry-Budget	4	5	3	3	12
Financial Match – Budget	4	4	4	3	12
Average Weighted Score		198	194	171	187
Maximum Weighted Score				250 possible points	

TECHNICAL REVIEWER TOTALS

- G-45-03A

Average Weighted Score: **198 out of 250**

FUND

- G-45-03B

Average Weighted Score: **194 out of 250**

FUND

- G-45-03C

Average Weighted Score: **171 out of 250**

FUND

DIRECTOR'S RECOMMENDATIONS

To fund in the amount of \$3,000,000 over the course of 2 biennium.