

UND's Department of Petroleum Engineering Oil and Gas Research

Submitted by:

University of North Dakota

- ☐ Total Funding Request - \$2,980,000**
Total Project Costs - \$6,613,930
Project Duration: 2 years

PROJECT DESCRIPTION

This funding request is for a period of 2 years March 1, 2023- March 1, 2025. The funding would support the followings:

- Tuition and graduate teaching and research assistance (GTA/GRA) for a total of 30 Ph.D. students.
- One month of faculty summer salary for a total of 7 faculty in Department of Petroleum Engineering.
- Support of DRACOLA with the idea to make it fully automated and add data acquisition and collection capabilities. The applicant is expecting to start various operations in 2022 including drilling, fracking and completion design and several other oil and gas related operations at real field scales in this lab and collect some initial and necessary data. The applicant believes it is important to make the rig fully automated to the current industry standard and add full capabilities for collecting as much data as possible in order to learn and improve the design and operations. The goal is to make this lab a big data hub in drilling and fracking worldwide. The budget requested is for the supplies, maintenance, material and programming supports towards this upgrade. The main part of the work will be completed in 2023 and with additional work during the following 2 years.

TECHNICAL REVIEWERS' RATING SUMMARY

		Technical Reviewer			
Statement	Weighting Factor	<u>G-55-03A</u>	<u>G-55-03B</u>	<u>G-55-03C</u>	<u>Average Weighted Score</u>
Objectives	9	4	4	3	27
Achievability	7	4	4	3	21
Methodology	8	3	3	3	24
Contribution	8	4	4	2	24
Awareness / Background	5	3	4	4	15
Project Management	3	2	3	3	6
Equipment / Facilities	2	3	3	3	6
Value / Industry-Budget	4	3	3	3	12
Financial Match – Budget	4	3	3	3	12
Average Weighted Score		171	179	147	165
Maximum Weighted Score				250 possible points	

TECHNICAL REVIEWER TOTALS

- G-55-03A

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

FUND

- G-55-03B

Average Weighted Score: **179 out of 250**

FUND

- G-55-03C

Average Weighted Score: **147 out of 250**

FUNDING TO BE CONSIDERED

TECHNICAL REVIEWER COMMENTS

Reviewer G-55-03A

The UND Petroleum Engineering program and the proposed program as presented, provides a significant resource to the ND Oil & Gas Industry its highly technical workforce needs. The future of a successful Oil & Gas Industry in North Dakota will continue to be challenged. The ND Oil & Gas Industry will need successful programs such as outlined in this proposal to help meet the future challenges. Recommendation is fund the project.

Recommendation: FUND

Reviewer G-55-03B

This proposal is forward looking to promote Petroleum Engineering PHD graduates in the future, so the project management plan is structured around measures such as engagement in industry conferences, publishing relevant and impactful papers and in-State job placement rate. I strongly recommend regular and structured communication sessions between UND PE and OGRC to ensure regular feedback and input, and to provide the opportunity adjust the project goals as appropriate during the 2 year term.

Recommendation: FUND

Reviewer G-55-03C

This program is important to maintaining a viable petroleum engineering program at UND, at all levels from under-graduate to PHD, so the state can continue to grow our own workforce. With competition around the country for a limited number of prospective petroleum engineering students and high value oil and gas industry workers, it is essential we show the world that ND is serious about developing a world-class petroleum engineering department that produces world-class research.

Recommendation: FUNDING TO BE CONSIDERED

Director's Recommendation:

Fund in the amount of \$2,980,000.