Continental RESOURCES

August 14, 2025

Mr. Jordan Kannianen
Deputy Executive Director
ATTN: Oil and Gas Research Program
North Dakota Industrial Commission
State Capitol – 14th floor
600 East Boulevard Avenue, Department 405
Bismark, ND 58505-0840

Dear Mr. Kannianen,

Subject: Proposal Entitled "Williston Basin Resource Optimization: Large-scale Miscible Gas Huff n Puff EOR Pilot in Continental's Dunn County Acreage - Roadrunner/Clover Pad"

Continental Resources is pleased to propose a Large-scale Miscible Gas Huff n Puff pilot aimed at enhancing oil recovery from the Bakken and Three Forks formations. This project involves designing, constructing, and operating facilities to evaluate incremental oil recoveries from miscible gas injection EOR for four strategically selected pilot wells. The pilot's goal is to evaluate and optimize gas cyclic gas injection and, if necessary, test innovative technologies, such as gas-foam cycling, to enhance gas injection conformance.

We firmly believe successful EOR implementation will transform the basin by increasing domestic oil production and extending asset life, thereby enhancing energy independence and security. EOR will boost state revenues through higher tax contributions from increased output, leading to job creation and community development. Continental is excited to collaborate with the Oil and Gas Research program and advance EOR technologies that benefit both the industry and the State of North Dakota. Thank you for considering our proposal.

Please find attached the $100 application fee. Continental is committed to executing the project as described in this proposal. If you have any questions, please do not hesitate to contact me by telephone at (405) 234-9283 or by email at brad.aman@clr.com.

Sincerely,

Bradley Aman

Bradley Aman, PE
Vice President, Project Development and Services
Continental Resources, Inc.

Industrial Commission

Tax Liability Statement

Applicant:

Continental Resources
20 N. Broadway Ave
Oklahoma City, OK 73102

Application Title:

North Dakota Industrial Commission Oil and Gas Research Program - The Enhanced Oil Recovery Grant Program authorized in 2025 by Senate Bill No. 2014

Project Title: Williston Basin Resource Optimization: Large-scale Miscible Gas Huff n Puff EOR Pilot in Continental's Dunn County Acreage - Roadrunner/Clover

Program:

- ☐ Lignite Research, Development and Marketing Program
- ☐ Renewable Energy Program
- X Oil & Gas Research Program
- ☐ Clean Sustainable Energy Authority

Certification:

I hereby certify that the applicant listed above does not have any outstanding past due tax liability owed to the State of North Dakota or any of its political subdivisions.

Signature

Damon Metcalf - Vice President, Chief Accounting Officer
Title

8/5/2025
Date

Oil and Gas Research Program

North Dakota

Industrial Commission

Application

Project Title: Williston Basin Resource Optimization: Large-scale Miscible Gas Huff n Puff EOR Pilot in Continental's Dunn County Acreage - Roadrunner/Clover Pad

Applicant: Continental Resources

Principal Investigator: Jose Zaghloul, Ph D

Date of Application: August 13th, 2025

Amount of Request: $8,771,905

Total Amount of Proposed Project: $26,889,228

Duration of Project: 42 months

Point of Contact (POC): Jose Zaghloul, Ph D

POC Telephone: 405.774.5739

POC E-Mail Address: jose.zaghloul@clr.com

POC Address: 20 N. Broadway, OKC OK 73102

TABLE OF CONTENTS

Additional Required Info:

Transmittal and Commitment Letter

Affidavit of Tax Liability

Statement of status on Other Project Funding

1. ABSTRACT

Objective:

The proposed project objective is to pilot Enhanced Oil Recovery (EOR) in the Bakken and Three Forks formations of the Williston Basin. Its primary goal is to evaluate the potential of Intermittent Gas Injection (IGI), also known as miscible gas Huff n Puff, to enhance oil recovery post-primary development.

Miscible Gas Huff n Puff EOR, proven effective in low permeability conventional reservoirs, is in a stage that still requires further research and development for consistent and successful application in unconventional reservoirs. Huff n Puff EOR involves injecting sufficient miscible gas to increase pressure and dissolve gas in the stimulated reservoir areas surrounding completed wells. The injected gas swells the contacted oil, reduces its viscosity, enhances near-fracture permeability, and significantly improves reservoir deliverability. This technique has the potential to unlock vast remaining resources in the Bakken and Three Forks formations after primary development.

The large-scale pilot proposed herein involves evaluation of intermittent miscible gas injection in four wells: Clover 4-10H, Clover 5-10H, Roadrunner 6-15H, and Roadrunner 7-15H, all located in Dunn County. The project includes the design, construction, and operation of the facilities necessary to assess the incremental oil recoveries for the selected wells. Field and experimental evaluation goals include assessing gas injectivity, containment, injection conformance, efficiency of the miscible gas injection process, uplift, and potential scalability of the outcome. Gas cycling optimization will be a key part of this project. Novel technologies for improving gas injection conformance, such as gas-foam cycling, may also be implemented as determined by Continental, if feasible and necessary.

Expected Results:

Preliminary integrated modeling results suggest an expected incremental oil recovery of ~100,000 barrels of oil per well for a pilot spanning 3 Huff n Puff cycles (~ 20% uplift). The three Huff n Puff cycles are expected to last approximately two years and may yield a total incremental oil recovery of ~ 400,000 barrels between all four wells. The pilot may be extended beyond this timeline if economically viable.

Duration:

We expect to pilot at least three Huff n Puff cycles over a period of up to two years of operation. The project is planned to start March 2026, and it is expected to be executed and operated over a span of 42 months. Project first gas injection is anticipated in 1Q 2027. A large-scale EOR pilot project, as proposed herein, typically requires 3 to 5 years for completion depending on its level of success.

Total Project cost:

The pilot's total estimated cost is $26.89 million.

Participants:

Continental Resources will be the sole operator participating in this project.

2. PROJECT DESCRIPTION

2.1 Objectives:

A Huff n Puff project involves injecting miscible gas into an existing well to raise near-reservoir pressure (huff) and dissolve gas in the oil. This is followed by a brief soaking period, after which the energized reservoir fluids are produced (puff). Figure 1 illustrates the process.

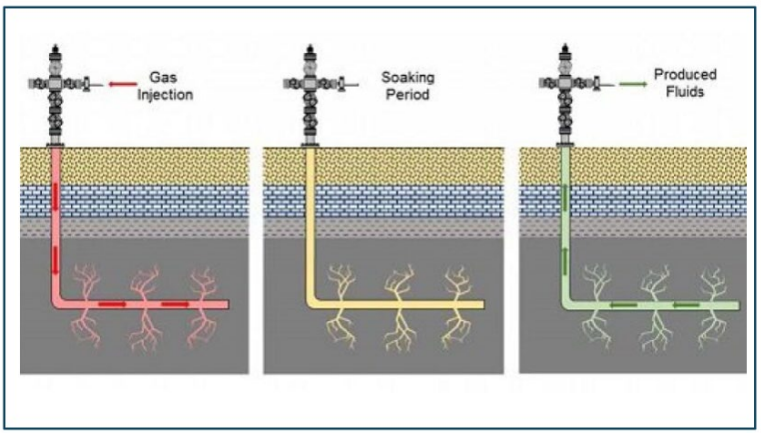


Figure 1. Huff n Puff process description.

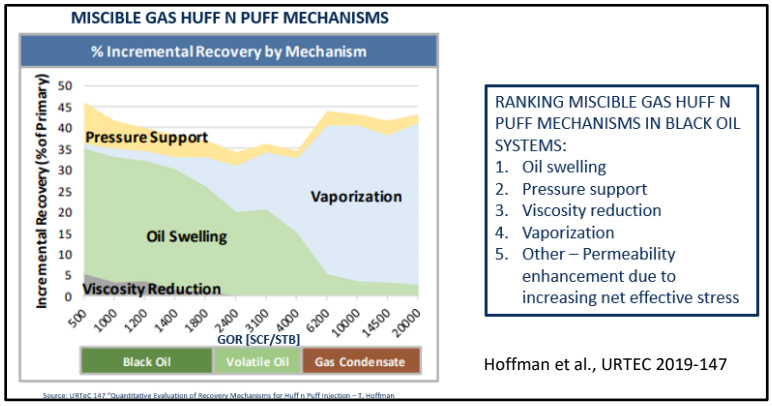


Figure 2. Miscible gas Huff n Puff mechanisms (Hoffman et al, 2019).

The mechanisms enabling miscible gas Huff n Puff in black and volatile oil systems include pressure support, oil swelling, viscosity reduction, near-fracture oil vaporization, and enhanced permeability from decreased net effective stress around fractures. Figure 2 shows the contribution of each mechanism to incremental oil recovery, with oil swelling being the primary driver in black oil systems.

The pilot's primary objective is to evaluate the potential of Intermittent Cyclic Gas Injection Enhanced Oil Recovery (EOR) in unlocking the vast resource remaining in the Bakken and Three Forks formations after primary development. The pilot aims to assess gas injectivity, containment, gas injection conformance, efficiency of the miscible gas injection process, pressure dependent permeability effects, incremental oil recoveries, and potential for scalability.

The wells selected for the pilot include Clover 4-10H, Clover 5-10H, Roadrunner 6-15H, and Roadrunner 7-15H. A detailed summary of our multidisciplinary screening can be found in Appendix A. Continental's screening process is supported by in-depth reservoir characterization and integrated modeling.

Figure 3 provides a visual representation of the proposed pilot location, offering a glimpse of the available EOR footprint in which Continental's working interest exceeds 96%. Figure 3 also highlights the proximity of one of the main field pipelines with surplus capacity, the Williston Basin Interstate (WBI) pipeline, positioned within only 4,000 feet of the referenced pad. This advantageous proximity minimizes the investment required for infrastructure development, optimizing the project's economic viability.

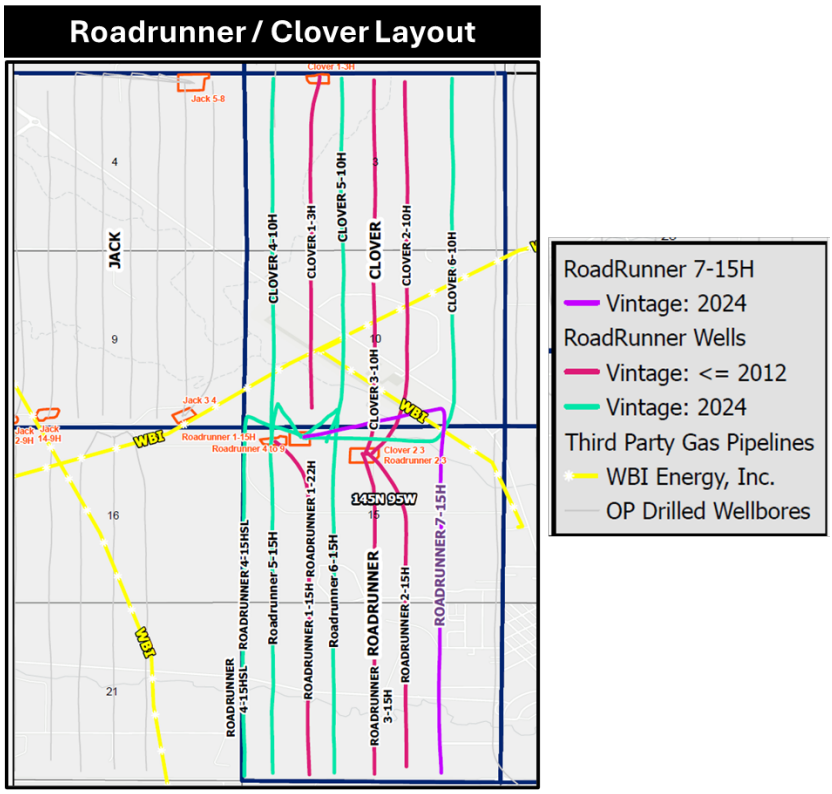
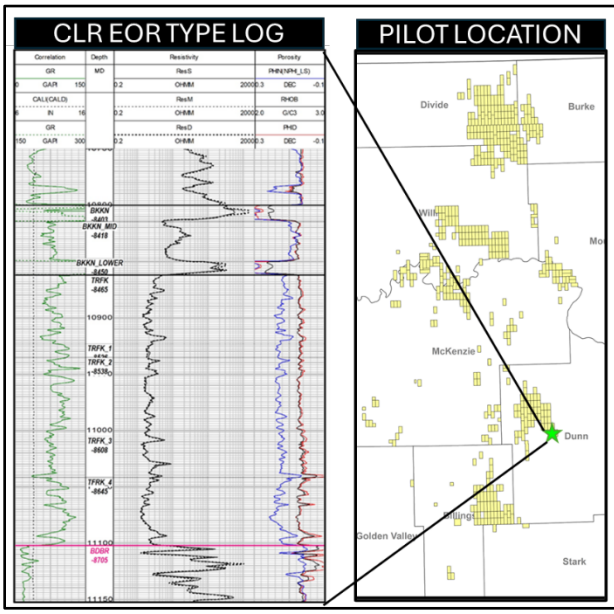


Figure 3: Proposed MB / TF Pilot Location (Roadrunner 4 to 9 Pad).

Figure 4 illustrates the location of the proposed pilot and provides an overview of basic rock and fluid properties for the area. The area offers abundant resources, where EOR holds promising potential for substantial production enhancement. The Middle Bakken and Three Forks formations present an attractive opportunity for cyclic miscible gas injection due to its low primary recovery rates, ranging from 8 to 12%.

Continental Resources plans to inject gas sequentially one well at a time, with huff cycle injection rates of up to 18 MMSCFD for 60 to 90 days, until target pressures are achieved. Injection pressures will be closely monitored to ensure they remain below formation fracture gradient. Following the injection

phase, production cycles are planned to last between 60 and 120 days, with the goal of reaching a minimum BHP of approximately 700 psia during the puffs and recovering a large fraction of the working gas after the first cycle. These initial estimates will guide our operations, and we intend to explore multiple strategies to optimize gas cycling throughout this pilot project.



Reservoir	Middle Bakken	Three Forks
Geology and Petrophysical Properties		
Lithology	Limestone: silty and partially dolomitic	Dolostone: tan interbedded with greenish-blue shale lenses: silty and argillaceous
Depositional environment	Deposited in the late Devonian to early Mississippian in an offshore marine environment	Deposited in the late Devonian in an arid-evaporitic to shallow marine environment
Clay content [%]	*0.5-25*	*0.5– 35*
Total organic content [wt%]	0.1 – 0.7	0.03-0.3
Avg Porosity [%]	6.3	6.6
Avg Water saturation [%]	26	54
Permeability Range [nD]	300 – 600	130 – 650
Fluid Properties		
GOR [SCF/STB]	650	650
API gravity	38.3	38.3
Viscosity [cp]	0.45	0.45
In Place Volumes		
OOIP [MMSTOB / 640 ACRE]	*9 - 10*	*10 - 15*

Figure 4. Proposed pilot location and basic rock and fluid properties.

Pilot results will be analyzed and evaluated through extensive data collection and detailed reservoir modeling to enhance gas operation cycling and maximize recovery. Later stages of this project may consider injecting simultaneously into more than one well, however, this would require increasing compression capacity.

2.2 Methodology:

Continental's proposed approach for the pilot consists of two distinct stages. The initial stage will assess gas injectivity, containment, pressure dependent permeability effects, overall efficiency of the miscible gas injection process, and incremental oil recovery. This stage will require injecting gas into four wells; two partially bound wells and two fully bound wells to ensure an in-depth evaluation in a complex development environment at scale. During this first stage, a tracer will be added to the injection gas to evaluate communication between the wells, while also conducting pressure interference analysis using installed downhole pressure gauges.

Later, a second stage will shift its focus to conformance assessment, with the primary objective of evaluating strategies to minimize well-to-well communication, enhance containment, and increase recovery for individual wells in a pad. In this phase of testing, and after the detailed initial gas conformance evaluation, we plan to explore the potential of foam as an agent to improve conformance, recognizing its potential significance in optimizing the EOR process. Gas/Foam cycling is a promising and novel technique

that still requires significant development but may have the potential for unlocking substantial resources in an economic manner.

2.3 Anticipated Results:

A compositional and fully integrated fracture-reservoir model for the proposed pilot is currently being built and calibrated using a state-of-the-art simulator (ResFrac). The model will be utilized for estimating incremental recoveries and further refining operational conditions for achieving the best outcomes in the field. Meanwhile, an existing integrated model for an analogous area is being used to estimate potential project benefit. The results of the analogous model suggest an expected uplift of approximately 100,000 barrels of oil per well over a span of 3 Huff n Puff cycles, which amounts to an incremental recovery of approximately 20% over primary production per well within that timeframe. Total estimated recovery for this project over three Huff n Puff cycles (~ two years) may yield approximately 400,000 incremental oil barrels. The pilot may be extended beyond this timeline if economically viable.

2.4 Facilities:

The project will require well modifications, production facility modifications, and design and construction of injection facilities. Well modifications include wellbore cleanouts, isolation of tubing and casing conduits, and installation of bottom hole pressure gauges. The cost for well modifications is estimated at $730,000 per well.

Production facilities must be upgraded to (1) accommodate increased gas production during the puff cycles and (2) endure the pressures and temperatures associated with Huff n Puff operations. Upgrades to the production facility include replacing Christmas trees, upsizing flow lines, installing larger separators, and adding line heaters to address the low temperatures anticipated during the puff cycles. The estimated costs for production facility upgrades (from the wellbore to sales lines) are approximately $1,140,560.

Injection facilities: The scope of the injection facility work includes the following: Pipeline construction from tie-in to compression facility (~ 4,000’), installation of incoming meter and inlet separation, construction of a building for housing compression unit, transportation and installation of a large scale 3606 compressor, installation of fuel and instrument air skids, installation of discharge line and high pressure manifold skids and metering stations for injecting gas into each well. Our initial estimate for the injection facility construction is $6,721,250.

A large-scale compression unit dedicated to this project will be leased at a rate of ~ $120,000 per month. Continental estimates requiring the acquisition of 2.8 BCF of injection gas at approximately $3 per MCF, resulting in total costs of about $8.4 million. These costs will be considered in-kind contributions covered by Continental Resources.

A detailed description of the project scope of work and the costs associated with its execution can be found in Appendix B.

2.5 Resources:

Continental has a well-established and dedicated team focused on EOR initiatives. The EOR team's responsibilities include screening new potential opportunities, evaluating and ranking options within Continental's portfolio, designing pilot and forecasting performance, executing the pilot design with the support of our multidisciplinary teams, and supporting the operation of our EOR pilots.

Our EOR team has been part of the Facilities and Projects organization since 2017 and includes a select group of professionals and technical experts with more than 140 years of combined experience in development of primary and secondary recovery projects in conventional and unconventional assets, but more specifically with direct experience in the development of our current unconventional reservoir pilots in the Anadarko and Williston Basins.

Our EOR organization is supported by a talented multi-disciplinary team of professionals from all disciplines including, but not limited to, Geology, Geophysics, Petrophysics, Completion, Production, Reservoir, Facilities Engineering, Land and Legal. This multidisciplinary approach ensures a comprehensive and holistic perspective when evaluating, designing, developing, and operating EOR pilots. With its unique wealth of expertise and a dedicated support network, Continental is well-prepared to address the complexities of upcoming EOR pilots and tackle the expansion of projects moving forward.

Our talented team will conduct in-house detailed reservoir characterization (including rock and fluid properties), compositional, and fully integrated fracture-reservoir numerical modeling, while also collecting field and laboratory data for evaluating reservoir responses and improving the robustness of modeling results.

2.6 Techniques to Be Used, Their Availability and Capability:

The Bakken petroleum system represents an attractive opportunity for cyclic miscible injection due to low recovery rates ranging from 8 to 12%. Modeling suggests that the low recovery factors are driven in part by low permeability, pressure dependent permeability effects and proppant pack degradation. We believe cyclic injections could arrest some of the permeability reductions observed during depletion, significantly enhancing oil well performance, and extending well life. Permeability enhancements due to pressure support, along with the other positive benefits associated with EOR, such as reservoir oil swelling, viscosity reduction and vaporization will all have an important positive effect.

Continental has an extensive library of rock and fluid data including PVT datasets and core analysis. Additionally, there have been multiple studies in nearby Bakken pads using fiber, pressure interference testing, time-lapse geochemistry analysis, and microseismic that are being used to constrain modeling efforts.

The selection of this pilot is supported by learnings from an earlier Huff n Puff pilot in the basin. Our previous pilot consisted of two 'parent' wells that were not affected by depletion from offset existing production. Both wells were located on the same pad, with one well landed in the Middle Bakken and

drilled south and the other landed in the Three Forks and drilled north, so they had no impact on each other. Three cycles of Huff n Puff were performed.

The results for this project were a technical success, with the wells demonstrating undisputable incremental oil recovery, however, the magnitude of the uplift was less than expected. A coupled fracture and reservoir simulator (ResFrac) had been used in another basin to successfully match both primary and enhanced oil recovery simultaneously and is being used to successfully predict the oil uplift for each subsequent cycle. Based on this success, a model for this area of the Williston Basin was built to determine the root cause of the limited success for these wells and predict the uplift.

Modeling suggests that the age and size of the original completion, along with flow assurance issues and proppant pack degradation, were some of the main drivers of the limited success. The previous pilot wells were completed in 2012 with relatively small stimulations compared to modern day completions. The modeling suggests that a larger completion, which produces a larger propped area, would have been more suitable. Additionally, the modeling suggests that there may be significant proppant pack degradation due to a variety of reasons such as age resulting in fines production, salt deposition etc., although the exact cause is speculatory. Finally, due to the above stated reasons, the injection capacity of the well was limited due to the limited area open to flow. The shortcomings identified in the previous pilot are addressed in this proposed iteration.

The Clover / Roadrunner wells will be in production for a little more than 30 months at the time of first gas injection and their production then is expected to be approximately 100 bopd, therefore limited degradation of the proppant pack is anticipated in this case. The stimulation designs are also substantially larger than our previous pilot completion designs, providing significantly larger surface areas for connection and enhanced injectivity.

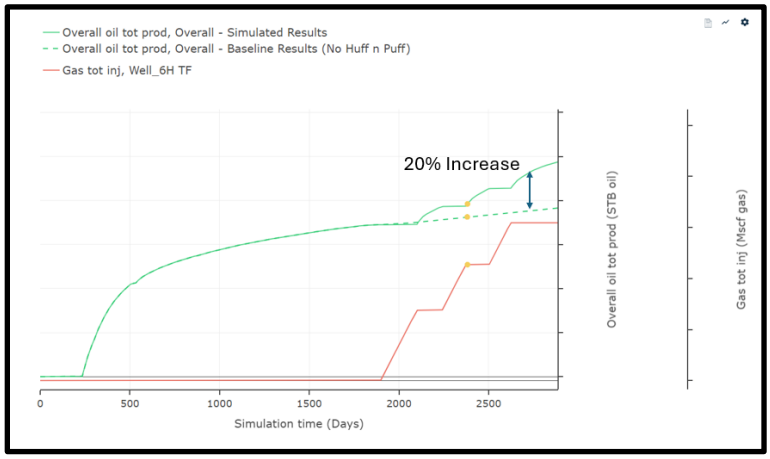


Figure 5. Modeling study estimated incremental oil recovery.

Leveraging the learnings from the model built for our initial Bakken Huff n Puff pilot, a similar model was used to match the primary production for a pad located four miles away from our first pilot, which included wells with modern completions. The model included the Durant 5H (Middle Bakken), Durant 6H1 (Three Forks) and the Durant 7H (Middle Bakken) wells, which are to an extent analogous to

the Roadrunner / Clover wells. Model predictions indicate incremental oil recoveries of approximately 20% or ~ 100,000 barrels of oil per well after three cycles (Figure 5).

2.7 Environmental and Economic Impacts while Project is Underway:

The project is not anticipated to have any negative economic impacts on offset operations. Environmentally, we will install a large-scale gas injection compressor that will necessitate effective noise mitigation measures. The design of the building for these compressors in our ongoing Williston Basin pilots has successfully reduced noise to admissible levels without disrupting operations or nearby communities.

2.8 Ultimate Technological and Economic Impacts:

The potential size of the prize for the successful implementation of a large-scale EOR program in the Williston Basin is very large. Internal and industry estimates are that EOR may yield incremental oil recoveries ranging from 3 to 8 billion barrels of oil [1,2]. Continental's internal screenings indicate that in nearly fully developed Dunn County alone, EOR could be deployed in at least 928 locations, potentially recovering over 150 million barrels of incremental oil. The results of this pilot will be applicable far beyond Dunn County's footprint. EOR will not only deliver substantial incremental oil production but also offers a substantial advantage by effectively mitigating depletion declines and extending the lifespan of existing wells. This technique will drive economic growth through job creation and local investment while promoting environmentally sustainable practices. EOR will allow operators to increase production without the need to drill additional wells.

The successful implementation of EOR will be game changer for the basin, enhancing energy independence and security by increasing domestic oil production. EOR will significantly boost state revenues through higher tax contributions from increased oil output. The economic growth generated from this initiative will lead to more job opportunities and community benefits, fostering local development and infrastructure improvements. Overall, cyclic gas injection EOR will play a pivotal role in strengthening both the local economy and the broader energy landscape.

2.9 Why the Project is Needed:

Oil production from most unconventional reservoir basins in the USA is expected to plateau and start declining within the next five years, so piloting large scale EOR projects is becoming both important and urgent. There is a window of opportunity for the implementation of this type of process. Enhanced Oil recovery will arrest production declines, increase recoveries, and extend the life of Williston Basin resources, all while increasing the values of the produced streams. Those values are crucial for maintaining our country's energy independence, maintaining state and local revenues, and consolidating our energy security. EOR will be one of the tools necessary to maximize the value of the thousands of wells drilled in our unconventional oil basins.

1. Study pegs potential $9 billion tax impact for CO2 in North Dakota oil wells, North Dakota Monitor, Jan 28th, 2025
2. Unconventional EOR: The Size of the Prize in the Williston Basin, Williston Basin Petroleum Conference, May 14th 2024

3. STANDARDS OF SUCCESS

The ultimate measure of success for this project will be the incremental oil production achieved after the pilot gas cycling process is completed. To achieve an uplift, the wells must demonstrate sufficient injectivity to pressure the reservoir in a reasonable timeframe, and enough containment to properly energize the resources near the fracture region. Injectivity and containment assessments will also be secondary measures of success for the project.

The current project provides an opportunity to understand the scalability of EOR in Continental's Dunn County acreage, which is almost fully developed. The current pad is representative of recent multi-well developments in this area. This will include understanding the miscibility, injectivity and containment of the gas in a multi well, multi bench development.

The successful development of this technology could unlock hundreds of millions of barrels of oil, which represent billions of dollars in additional tax revenue for the state and increased economic activity. The proposed project aims to decisively prove this technology in the Williston Basin, paving the way for optimizing its economic development. Potential advancements needed for progressing this technology include fully integrated reservoir modeling for gas cycling evaluation and conformance optimization technologies like foam or other agents. Additionally, insights gained from this hydrocarbon gas pilot will inform and provide guidance for CO2 applications through the use of ongoing compositional reservoir modeling.

4. BACKGROUND/QUALIFICATIONS

Continental Resources, Inc. ("Continental"), one of the pioneers of the shale revolution, has a longstanding history in North Dakota, with operations dating back to 1990. Continental is one of the largest lease holders in the state and proudly stands as one of North Dakota's largest producers, securing its position as the second-largest producer in the Williston Basin, where its estimated daily production rate reaches ~ 200,000 barrels of oil equivalent a day (BOE/D).

Continental's unconventional EOR program has been in execution since 2017. In the past few years, we have designed and implemented four miscible gas Huff n Puff EOR pilots. Among these are two of the most successful industry-wide Miscible Gas Huff n Puff EOR pilots that are located in the Anadarko Basin. Additionally, Continental initiated Huff n Puff operations in 2023 for two pilots located in the Williston Basin and is currently preparing for the execution of two pilots in the Powder River Basin.

Over a dozen EOR pilots have been implemented in the Williston Basin since 2008 by multiple operators with limited to no success. Many of the previous pilots failed because they were undercapitalized and/or failed to follow a rigorous technical screening process. Continental recently conducted a large-scale pilot, which proved to be an undisputable technical success, and attained some valuable lessons that will be implemented in this iteration in anticipation of a more robust and economic uplift in the Williston Basin.

Following a successful pilot, Continental has the footprint and potential for scaling up one of the largest EOR development programs in the basin, potentially targeting an important portion of thousands

of locations and leading to potential incremental oil recoveries ranging from 3 to 8 billion barrels. Continental's internal screenings indicate that in nearly fully developed Dunn County alone, EOR could be deployed in at least 928 locations, potentially recovering over 150 million barrels of incremental oil. EOR plays a pivotal role in Continental's strategic investment approach, aimed at maximizing oil recovery and extending the lifespan of our valuable assets.

Continental has successfully implemented groundbreaking EOR pilots in unconventional reservoirs that outperformed currently deemed industry success standards in the Eagle Ford Basin. Figure 6 benchmarks Continental's Anadarko pilots in comparison to potential recoveries from established developments in the Eagle Ford shale. This analysis is based on public data reported to the Texas Railroad Commission. The figure below illustrates the remarkable performance of our Anadarko EOR pilot program.

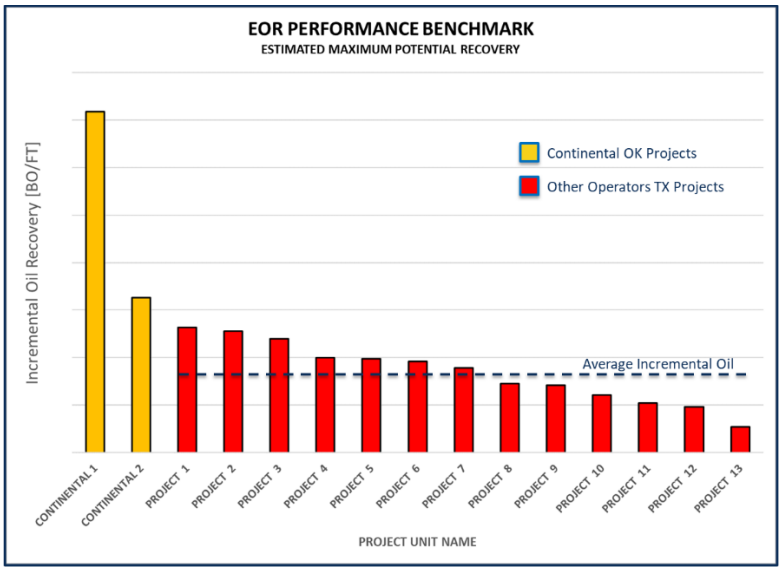


Figure 6. Benchmark of existing EOR projects.

Continental's EOR team has been part of the Project Development and Services organization since 2017 and includes a select group of technical experts and professionals with 140+ years of combined experience in development of enhanced recovery projects. Specifically, our team has had successful experiences in the development of unconventional reservoir pilots in the Anadarko and Williston Basins.

Our EOR organization is supported by a talented multi-disciplinary team of professionals from all disciplines including, but not limited to, Geology, Geophysics, Petrophysics, Completion, Production, Reservoir, Facilities Engineering, Land and Legal. This multidisciplinary approach ensures a comprehensive and holistic perspective when evaluating, designing, developing, and operating EOR pilots. With its unique wealth of expertise and a dedicated support network, Continental is well-prepared to address the complexities of upcoming EOR pilots and tackle the expansion of projects moving forward. More details on the background of key team members can be found in Appendix C.

5. MANAGEMENT

- A manager will be appointed for the project execution. The project manager will be responsible for tracking project timelines, costs, and ensuring that critical path activities are achieved without delay.
    - The project manager will provide quarterly progress reports, with weekly check ins with the execution team members to facilitate communication and guarantee interdisciplinary alignment.
- Safety:
    - The project team will conduct at least one pre-startup safety review of the facility to ensure commissioning has taken place and the equipment is ready to operate.
    - Commissioning and startup of the facility will include JW personnel (compressor manufacturer) and associated field teams to verify the equipment is operationally ready.
- Injection Start:
    - Existing field crews will manage and provide daily production updates via email to the Continental Resources team.
    - Additional on-call teams will be available for assistance in operations and maintenance of the compressors.
- Continual operations:
    - Compressor run-time will be tracked via automation and kept internally at Continental Resources for reference to the project. This will be how Continental Resources keeps track of compressor run time as a percentage (uptime/time).
    - Injection or production rates and pressures will be tracked and reviewed internally daily.
    - Downhole pressure gauges will be monitored and reviewed daily by Continental personnel.
    - Gas injection tracer will be sampled and monitored to understand the extent of gas migration through the fracture.

6. TIMETABLE

Figure 7 provides an execution timeline for the project. As anticipated, facilities design and construction constitute the critical path for a timely and successful pilot. A pilot of this scale usually takes 3 to 5 years to complete, depending on its success.

Execution start: March 2026

First gas injection start: 1Q 2027

Duration: The project is expected to span approximately 42 months, broken down as follows:

- **Month 1-9:** Engineering, site preparation, and infrastructure building.
- **Month 10-24:** Initial gas injection evaluation of injectivity, containment, and uplift.

- **Month 25-36:** Continued gas conformance evaluation. Gas cycling optimization and/or gas-foam cycling implementation if feasible and necessary, as determined by Continental.

- **Month 37-42:** Laboratory data analysis, field performance evaluation, and reporting.

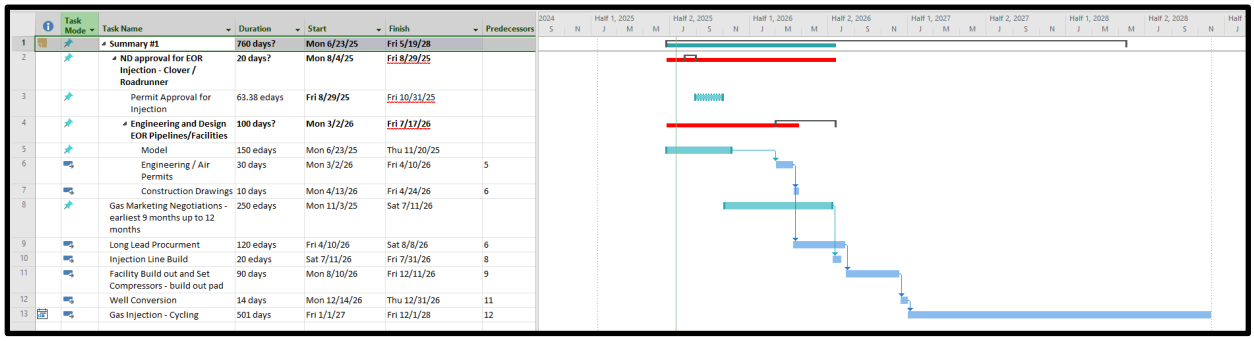


Figure 7. Project proposed timeline.

7. BUDGET

Table 1 summarizes the budget for the program. It offers a breakdown of costs related to facilities, compressors, and pipeline construction.

Our plan involves executing the initial stage of the pilot over a limited period, followed by the immediate commencement of the second stage. The second stage is expected to require approximately one year for refining cyclic gas schedules and gaining a deeper understanding of well conformance and communication, in a manner similar to our previous pilots in other basins.

Table 1. Summary of the expenses related to the project

Project Associated Expense	NDIC Share	Applicant Share (Cash)	Applicant Share (In Kind)	Other Sponsor's Share	Applicant Share (In Kind)
CAPEX: Engineering	$175,687.50	$175,687.50	$0.00	$0.00	$351,375.00
CAPEX: Construction - Fabricated Items	$733,000.00	$733,000.00	$0.00	$0.00	$1,466,000.00
CAPEX: Equipment	$458,500.00	$458,500.00	$0.00	$0.00	$917,000.00
CAPEX: Construction - Building	$808,437.50	$808,437.50	$0.00	$0.00	$1,616,875.00
CAPEX: Construction - Injection Facility	$1,185,000.00	$1,185,000.00	$0.00	$0.00	$2,370,000.00
CAPEX: Construction - Production Facility	$570,280.00	$570,280.00	$0.00	$0.00	$1,140,560.00
CAPEX: Construction - Well Cleanouts	$700,000.00	$700,000.00	$0.00	$0.00	$1,400,000.00
CAPEX: Construction - Well modifications	$760,000.00	$760,000.00	$0.00	$0.00	$1,520,000.00
CAPEX: Construction - Hot Tap & Pipeline	$875,000.00	$875,000.00	$0.00	$0.00	$1,750,000.00
OPEX: Tracer analysis	$256,000.00	$256,000.00	$0.00	$0.00	$512,000.00
OPEX: Gas purchase	$0.00	$0.00	$8,400,000.00	$0.00	$8,400,000
OPEX: Line heaters - Lease	$360,000.00	$360,000.00	$0.00	$0.00	$720,000.00
OPEX: Compressors - Fuel gas	$150,000.00	$150,000.00	$0.00	$0.00	$300,000.00
OPEX: Booster compressor - Lease	$300,000.00	$300,000.00	$0.00	$0.00	$600,000.00
OPEX: Main compressor - Lease	$1,440,000.00	$1,440,000.00	$0.00	$0.00	$2,880,000.00
OPEX: Chemical Injection Equipment* - Lease	$0.00	$250,000.00	$0.00	$0.00	$250,000.00
OPEX: Foaming Agent purchase (Up to 2 cycles)*	$0.00	$695,418.00	$0.00	$0.00	$695,418.00
Total Costs	$8,771,905.00	$9,717,323.00	$8,400,000.00	$0.00	$26,889,228.00
*** Foam will be tested if deemed feasible and necessary by Continental Resources**					

8. CONFIDENTIAL INFORMATION

No confidential information is presented as part of this proposal.

9. PATENTS/RIGHTS TO TECHNICAL DATA

No patent rights are reserved for this application.

10. STATUS OF ONGOING PROJECTS

Continental Resources has not been awarded previous funding by the NDIC.

APPENDIX A

EOR Screening Criteria Summary

SCREENING CRITERIA FOR CYCLIC GAS INJECTION PILOTS

Continental's comprehensive EOR screening process focuses on various critical factors that significantly influence the successful design of a pilot project. Table 2 summarizes some of the criteria supporting Continental's pilot selection. Key considerations for our pilot programs include the following:

- Examination of fluid properties and miscibility estimation
- Assessment of gas source availability and transmission capacity
- Evaluation of containment potential
- Estimation of Original Oil In Place ("OOIP") and gas-oil contact areas
- Estimation of the Stimulated Rock Volume ("SRV") depletion
- Gas injectivity assessments
- Detailed review of well design and well integrity
- Examination of land and legal constraints affecting the project

Table 2. EOR screening highlights

Criteria	***Screening highlights***
Miscibility	• ***Black oil system (GOR ~ 650 SCF/STB, API ~ 38)*** • ***Initial Reservoir Pressure (~ 7,570 psia) >> MMP (~ 3,200 psia) – multi-contact***
Gas source & transmission	• ***WBI pipeline has available capacity and is located ~ 4,000' from pilot wellheads***
Depletion	• ***Current average reservoir pressure estimates are clearly above Pb (~ 2,020 psia)*** • ***Candidate production at gas injection start is estimated at 100 – 120 Bo/d*** • ***Initial production peaks of the pilot wells were ~ 1,500 Bo/d***
Injectivity	• ***Injectivity is one of the most challenging parameters to estimate using production data as pressurization during the injection may significantly contribute to well injectivity enhancement.*** • ***Productivity Index for the selected pilot wells compare favorably with other successful pilots Continental has conducted***
Containment	• ***Structure seems relatively quiescent in this area. No significant faults, or large natural fracture network are identified that may diminish containment potential.***
OOIP	• ***Large completion designs were pumped into the pilot wells. Completion designs consist of 11 clusters per stage, 35' cluster spacing and a proppant intensity of ~ 1,160 lbs/ft. The pumped completion design promoted the creation of large surface contact areas (Ac).***
Scale	• ***Recovery factors estimated for the selected wells are relatively modest, between 8 – 12%. Assuming a typical EOR uplift (30 – 50%) to the current pilot wells, EURs will offer the potential for significantly scaling up operations.***
Pressure support	• ***Preliminary observations indicate that pressure support would also have a positive impact on reservoir permeability. That effect will add on to typical EOR mechanisms (swelling, vaporization, viscosity reduction and pressure support), making gas injection an even more attractive option for this reservoir.***
Well Integrity	• ***Pilot wells were drilled and completed recently (2024) with no major apparent mechanical issues. Wells still need to be intervened to isolate tubing and casing conduits in preparation for Huff n Puff operations. More detailed mechanical integrity evaluations may also be required.***
Land	• ***No limitations for Huff n Puff EOR have been reported in our agreements***

Continental is currently conducting additional in-depth technical analysis to further evaluate the Clover / Roadrunner pilot opportunity, while also evaluating other targets of similar scale. We reserve the right to adjust targets if a more attractive opportunity is identified and vetted. Target adjustments will be made with the agreement and approval of the NDIC.

APPENDIX B

DETAILED SCOPE OF WORK

PROJECT DETAILED SCOPE OF WORK

The project will require well modifications, production facility modifications, and design and construction of injection facilities.

Well modifications: The proposed pilot wells were drilled and completed recently (2024) with no major apparent mechanical issues. Wells will still need to be intervened to isolate tubing and casing conduits in preparation for Huff n Puff operations. Additional detailed mechanical integrity evaluations may be deemed necessary after intervention.

The scope of work of the well modifications include:

1. Pull existing tubing, packer, and gas-lift valves. Laydown tubing. Clean wellbores to TD.
2. Run BHA, new packer, new 2-7/8" P110 BTS-8 connection tubing, and new live Bottom Hole Pressure Gauges (BHPG) with banded TEC for annulus isolation, illustrated in Figure 8.

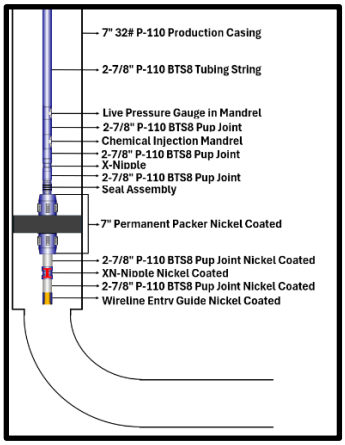


Figure 8. Required well configuration for high pressure gas injection.

In summary, well modification costs (for downhole equipment/components) are estimated at approximately $380,000 per well. Wellbore cleanouts will cost an additional $350,000 per well.

Production facilities: Production facilities must be upgraded to (1) accommodate increased gas production during the puff cycles and (2) endure the pressures and temperatures associated with Huff n Puff operations. The scope of work includes:

- Replacing Christmas Trees with higher-rated models (10K).
- Upsizing flow lines to manage the increased gas production during puff cycles, including lines from the wellhead to separators, separators to sales, and flaring lines.
- Adding (4) new two-phase separators (one for each well) to handle additional gas during puff cycles.
- Adding (2) line heaters to manage lower temperatures during the initial stages of the puff cycles.

In summary, the estimated costs for production facility upgrades (from the wellbore to sales lines) are approximately $1,140,560.

Injection facilities: The working gas for cycling operations will be sourced from the WBI pipeline. The quality of the sourced gas will be relatively rich (~ 1,100 BTU/MSCF) and highly miscible with the in-situ oil according to our existing PVT laboratory testing. WBI estimates more than 25,000 MSCF/D of available uninterrupted supply for injection.

Figure 9 presents the facility process flow diagram for the pilot, while Figure 10 provides an outline for the equipment overlay. The scope of work includes the following:

1. Pipeline construction from pipeline tie-in to compression facility (~ 4,000').
2. Incoming meter and inlet separation.
3. Constructing a building for housing compression unit.
4. Large scale 3606 compressor transport and installation.
5. Fuel skid installation including metering.
6. Instrument air skid.
7. Discharge line and high-pressure manifold skids.
8. Metering stations for gas injected into each well.

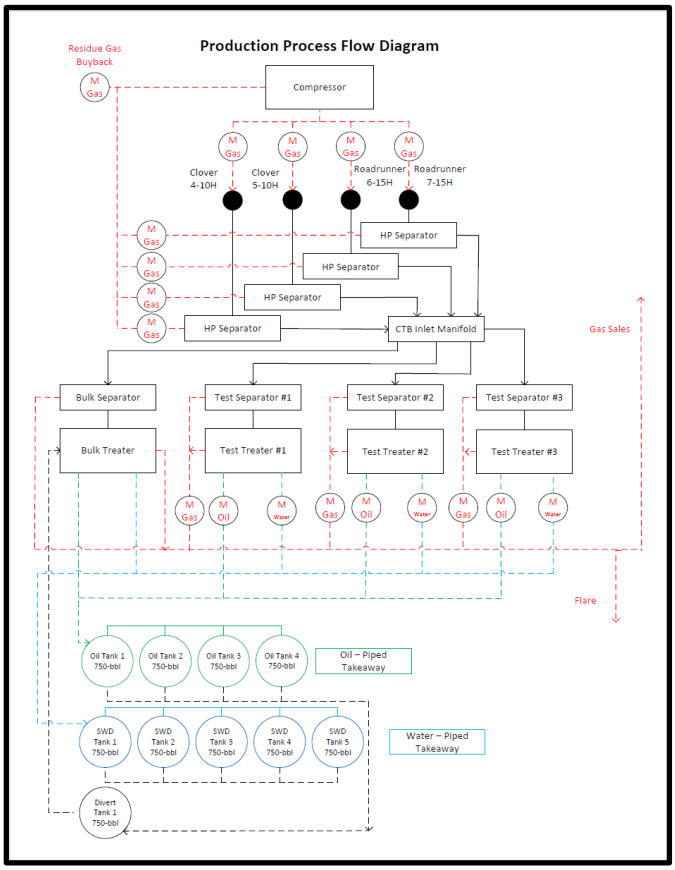


Figure 9. Injection facility process flow diagram for the pilot.

Our initial estimate for the injection facility construction is $6,721,250. Along with the injection facility, it is necessary to include the compressor lease and the cost of the hot tap to be conducted by the transmission pipeline company. A large-scale compressor brand: JW. Model: 3606 or similar will be leased to satisfy the injection requirements. The lease cost is $120,000 per month. Total cost for 24 months lease is $2,880,000. The hot tap into the WBI pipeline is estimated to cost $1,000,000 and would need to be performed by the gas transmission company. A 4,000-foot pipeline connecting the WBI tie in point with the injection facilities is estimated to cost ~ $750,000.

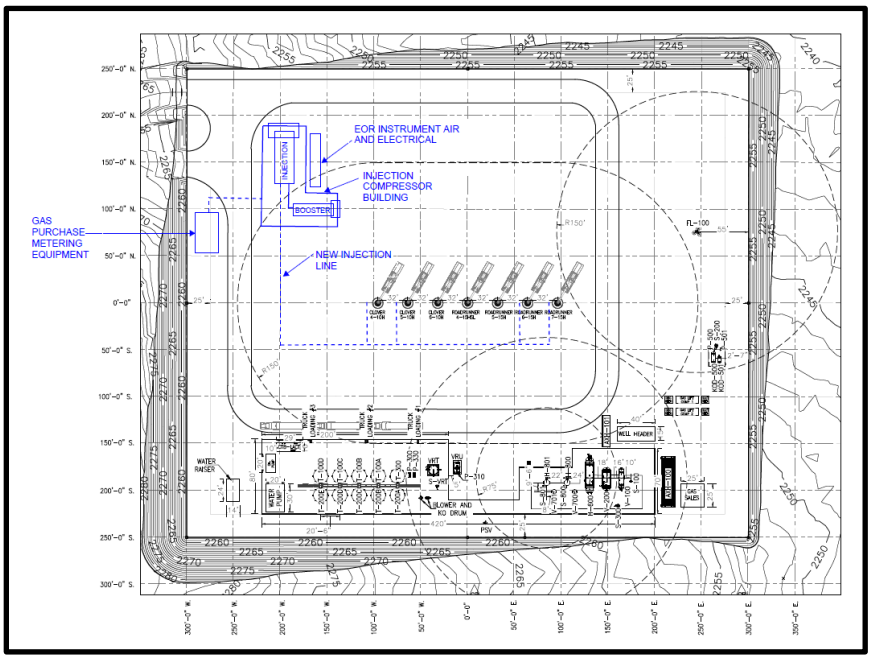


Figure 10. Preliminary equipment layout.

Gas tracer analysis: The objective of this tracer study is to enhance gas utilization and conformance by understanding injector and producer relationships. Tracers will help estimate interwell communication while assessing reservoir heterogeneity, preferential channeling, and communication. This evaluation will serve as a tool for identifying remediation needs and conformance mitigation measures, such as foam (if necessary, as determined by Continental).

The tracer evaluation program involves sampling from all wells offsetting the injectors. Several different chemical (non-radioactive) tracer components will be injected into the wells, with weekly sample collections from all surrounding wells. We anticipate collecting and analyzing 36 samples over the first six months of the pilot, and another 36 samples after the first year of injection to evaluate gas-foam conformance (if necessary). Potential cost for foam injection implementation would be covered by Continental Resources. The estimated cost for the gas sampling and tracer analysis program is $512,000, based on a competitive tracer vendor quote.

Gas Purchase: Continental Resources estimates requiring the acquisition of 2.8 BCF of injection gas at approximately $3 per MCF, resulting in total costs of about $8.4 million. These costs will be considered in-kind contributions covered by Continental Resources.

APPENDIX C

EOR Team Qualifications

Continental's EOR team has been part of the Project Development and Services organization since 2017 and includes a select group of technical experts and professionals with 140+ years of combined experience in development of enhanced recovery projects. Specifically, our team has had successful experiences in the development of unconventional reservoir pilots in the Anadarko and Williston Basins. More details on the background of key team members can be found in Appendix B.

Key team members include:

Bradley Aman, PE is currently VP, Project Development and Services for Continental. Previous job responsibilities have included heading up Continental's completion and production operations. Currently, his job responsibilities include leading Continental's EOR efforts. An industry veteran with over forty years of experience, Mr. Aman has had extensive hands-on experience with numerous EOR/IOR processes and projects including waterflooding, continuous gas injection, high pressure air injection, CO2 flooding and Huff n Puff gas injection. He has a BS/PE from the University of Missouri-Rolla (now Missouri University of Science and Technology).

John Argo currently serves as Vice President of the Williston Basin for Continental Resources, the largest privately-owned oil and gas producer in the world. Mr. Argo has over 19 years of experience in the oil and gas industry. He most recently served as Vice President Resource and Business Development for Continental, with responsibilities for Reservoir Engineering as well as acquisitions, divestitures, and joint ventures. Prior to joining Continental in 2014, Mr. Argo worked for HighMount Exploration & Production for seven years and served in roles of increasing responsibility. He began his career with Dominion Exploration & Production. Mr. Argo currently serves on the Board of Visitors for the OU Mewbourne College of Earth and Energy. He has previously served in leadership/board positions with the Society of Petroleum Engineers, the advisory board for the OU Mewbourne School of Petroleum & Geological Engineering, and ADAM OKC. Mr. Argo earned his bachelor's degree in petroleum engineering and his Master of Business Administration in energy from the University of Oklahoma.

Dr. Jose Zaghloul, Reservoir Engineering Advisor, has more than 30 years of experience in the field of reservoir engineering. Throughout his career, Dr. Zaghloul has played a pivotal role in the development of primary and secondary recovery strategies across both conventional and unconventional fields, both in the USA and internationally. Dr. Zaghloul's secondary and tertiary recovery experience includes waterfloods, continuous gas floods, N2 and CO2 Enhanced Coal Bed Methane, and Huff n Puff EOR in conventional and unconventional reservoirs. His journey has included tenures with renowned industry leaders such as BP America, BHP Billiton, Ecopetrol, and Chesapeake Energy. Dr. Zaghloul's expertise encompasses a wide spectrum of skills, including fluid characterization, PVT and EoS modeling, Rate Transient Analysis, Fracture Modeling, and Integrated Reservoir Modeling. Notably, Dr. Zaghloul was recently a key figure in the modeling and design of Chesapeake Energy's prospective Eagle Ford EOR pilots. His commitment to advancing reservoir engineering continues at Continental. Dr. Zaghloul holds a Ph D in Petroleum and Natural Gas Engineering from Penn State University.

Sonia J. Thomas is an Engineering Advisor at Continental Resource. She has over 20 years of experience in numerous unconventional and conventional plays across the United States and Canada as

an engineer (reservoir, operations, and project planning/management) and as a leader. The last two years, Sonia has been focused on the enhanced oil recovery techniques. Prior to joining Continental Resources in 2015, she worked for Schlumberger and Marathon Oil. Sonia is a native Oklahoman who graduated with a Bachelor of Science degree in Petroleum Engineering from the University of Oklahoma.

Dave R. Ratcliff is Engineering Advisor at Continental Resources. He has over 30 years of experience in numerous unconventional and conventional reservoirs across the Unites States, Canada, South America and Alaska as an engineer, manager and petrophysicist. Dave joined the Continental team in 2024 to enhance the modeling capabilities of the current team. He specializes in coupled fracture and reservoir simulation and petrophysics. Before joining Continental, Dave was the Director of User Success and Consulting Engineer Manager for ResFrac. He has also worked for Forest Oil, QEP Resources and SLB in a variety of positions. Dave graduated from the University of Texas with a Bachelor of Science degree in Mechanical Engineering.

Our EOR organization is supported by a talented multi-disciplinary team of professionals from all disciplines including, but not limited to, Geology, Geophysics, Petrophysics, Completion, Production, Reservoir, Facilities Engineering, Land and Legal. This multidisciplinary approach ensures a comprehensive and holistic perspective when evaluating, designing, developing, and operating EOR pilots. With its unique wealth of expertise and a dedicated support network, Continental is well-prepared to address the complexities of upcoming EOR pilots and tackle the expansion of projects moving forward.

APPENDIX D

Letters of Support

Occidental Petroleum Corporation

5 Greenway Plaza, Suite 110, Houston, Texas 77046
Telephone 713.366.5124
Jeff_simmons@oxy.com

Jeff F. Simmons
Senior Vice President Technical and Operations Support
Chief Petrotechnical Officer

Mr. Jordan Kannianen
Deputy Executive Director NDIC

Dear Mr. Kannianen,

I am writing to express Occidental's support for Continental Resources in their application for grant funds to support Huff n Puff Enhanced Oil Recovery (EOR) pilot projects in the Bakken and Three Forks formations. EOR is becoming increasingly important as we look to maximize recovery from unconventional resources and extending EOR to unconventional reservoirs is essential to sustaining US energy supply. Continental's pioneering efforts are important to meet these objectives.

Occidental is one of the largest O&G companies in the United States with operations in four regions: the Permian Basin and Gulf of America, the Middle East, and Latin America. Oxy has been a major contributor to transforming the domestic energy industry through innovations in both shale development and historically the largest operator of traditional EOR projects in conventional reservoirs. Occidental shares Continental's vision regarding the enormous potential to extend EOR to unconventional reservoirs and we are likewise investing in EOR pilots in unconventional reservoirs in the Permian basin of West Texas and New Mexico.

Similarly, Continental has dedicated years of effort to address the unique challenges associated with EOR in unconventional formations. We are familiar with Continental's EOR technical efforts and their commitment to innovation has positioned them as a leader in this field. Their work is crucial for the advancement of EOR techniques that can yield substantial benefits for North Dakota's energy sector.

In addition to their technical expertise, Continental has demonstrated a commendable commitment to collaboration. They have actively engaged with other operators like us and others in the region to tackle the complex challenges associated with EOR in unconventional reservoirs. As an example, in June 2024, Continental and Occidental held a workshop in Houston to share technical progress on unconventional EOR projects. This collaborative spirit not only fosters knowledge sharing but also accelerates the development of effective solutions that can benefit the entire industry.

I firmly believe that the funding support for Continental's Huff n Puff EOR pilot projects will contribute significantly to the advancement of EOR technologies in North Dakota and other basins within the United States and help secure a sustainable energy future for the region and country. I encourage the North Dakota Industrial Commission to consider this proposal favorably.

Sincerely,

Lynn D. Helms, PhD
2440 High Country Dr N
Mandan, ND 58554
August 12, 2025

Oil and Gas Research Council
North Dakota Industrial Commission
600 East Boulevard Ave., Dept. 405
Bismarck, ND 58505-0840

Subject: Letter of Support – Continental Resources' Clover/Roadrunner and Durant Miscible Gas EOR Pilot Projects

Dear Industrial Commissioners and Council Members,

It is my pleasure to offer this letter of support for Continental Resources' proposed Clover/Roadrunner and Durant enhanced oil recovery (EOR) pilots submitted to the North Dakota Industrial Commission's Oil and Gas Research Program.

During my tenure as Director of the Department of Mineral Resources, I witnessed firsthand the importance of research-driven pilot projects in advancing North Dakota's energy production, resource recovery, and environmental stewardship. Both of these Continental pilots are founded on solid technical merit, robust design, and excellent potential for impactful contributions to the state's future oil and gas landscape.

These projects come at a pivotal time. With current Bakken and Three Forks recovery rates estimated at just 8-12%, there remains vast untapped potential of 3–8 billion barrels of additional recoverable oil according to reputable industry estimates. Successful EOR implementation could generate billions in new tax revenues while greatly extending the productive life of our vital infrastructure and local communities.

Continental's team brings more than 140 years of combined EOR expertise, a proven record of operating the nation's two top unconventional EOR projects, and a capital commitment of over $56 million for these pilots. Their use of advanced ResFrac modeling, comprehensive monitoring, strategic leveraging of existing pipeline assets, and phased risk-managed implementation stands out as exceptional in our industry.

Additional key future benefits for North Dakota include:

- Substantial job creation across operations, construction, and supporting sectors
- A scalable path to deploy EOR technologies across thousands of existing wells
- Environmental benefits by maximizing recovery from existing infrastructure, minimizing surface disturbance
- Positioning North Dakota as a hub for EOR innovation and technology sector growth
- Enhanced energy security through responsible, domestically produced oil

Importantly, Continental's strong public-private approach aligns well with North Dakota's policy goals to maximize resource value, promote technical innovation, and ensure cost-effective stewardship of our energy future.

I strongly urge the Council and Commission to provide full funding support for the portions of these projects seeking OGRC participation. These pilots represent the type of innovative, forward-thinking research that will generate long-term economic growth, secure our leadership in energy development, and ensure that North Dakota remains at the forefront as America's energy frontier.

Sincerely,

Lynn D. Helms, PhD
Retired Director
NDIC–Department of Mineral Resources

MINERALTRACKER®
Powered by First International Bank & Trust

July 31, 2025

To Whom it May Concern:

I am writing to express my support for Continental Resources efforts to secure funding through the North Dakota Industrial Commission Oil and Gas Research Council SB 2014 – Industrial Commission Budget – Enhanced Oil Recovery (EOR) Program. As a County Commissioner, I see firsthand the critical importance of sustaining our state's oil and gas industry, and enhanced oil recovery represents a step forward for our western communities and the state of North Dakota.

The oil fields in North Dakota are maturing; maintaining robust production levels is critical. We can't afford to leave 90% of the resource in the ground. That is why EOR utilizing our abundant natural gas is a game-changer. Projections of 30 – 50% uplift in recovery rates will significantly boost our state's economy, provide a continued source of revenue for our mineral owners, and strengthen our tax base. Ensuring the longevity of our fields means more jobs, more economic stability, and a brighter future for all vested parties.

In my professional life, I track the performance of operators throughout the Williston Basin. Continental has consistently demonstrated prudent operational practices and has been at the forefront of advancements in drilling and completion processes in North Dakota. Their initial EOR pilot in our state was a technical success, and they have a proven record of achieving EOR success in other basins. This expertise and dedication make them the ideal candidate to advance EOR in North Dakota.

I encourage you to give this application your most favorable consideration. Investing in EOR is investing in the future prosperity of our state. Thank you for championing the innovative use of technology to extend the productive life of these vital fields within our county and across North Dakota.

Respectfully,

Joel Brown
Oil & Gas Financial Solutions Manager
MineralTracker | First International Bank & Trust
100 N Main
Watford City, ND 58854
Phone: (701) 570-1504
Email: jbrown@fibt.com

NORTH DAKOTA HOUSE OF REPRESENTATIVES

STATE CAPITOL
600 EAST BOULEVARD
BISMARCK, ND 58505-0360

Representative Todd Porter
District 34
4604 Borden Harbor Drive SE
Mandan, ND 58554-7961
Residence: 701-667-2922
Facsimile: 701-255-7247
tkporter@nd.gov

COMMITTEES:
Human Services
Natural Resources, Chairman

Date: August 6, 2025

Dear Commissioners,

As Chairman of the House Energy and Natural Resources Committee, I am pleased to offer my enthusiastic support for Continental Resources' Enhanced Oil Recovery grant applications for the Clover-RoadRunner and Durant pilot projects. These projects represent precisely the kind of innovative energy initiatives that will drive North Dakota's continued leadership in domestic oil production.

Continental Resources has been an exemplary corporate partner to North Dakota for over three decades. As one of our largest leaseholders and producers, Continental consistently demonstrates commitment to responsible resource development and technological advancement. Their track record of operating the nation's two most successful unconventional EOR projects provides me with strong confidence in their ability to execute these complex pilot projects.

These EOR projects address a fundamental challenge: current recovery rates in the Bakken and Three Forks formations are only 8-12%, leaving enormous untapped potential. The proposed pilots could unlock:

- **Incremental recovery** of 400,000-500,000 barrels between both projects over initial cycles
- **Scalable technology** applicable to thousands of existing wells statewide
- **3-8 billion barrels** of additional recoverable oil basin-wide, according to industry estimates
- **Sustainable production increases** without new drilling, environmental impacts

The economic multiplier effects of successful EOR implementation are substantial:

- **State and local tax revenue** from increased production will support essential services
- **Construction and operational jobs** across multiple counties
- **Infrastructure investment** exceeding $56 million between both projects
- **Technology sector development** positions North Dakota as an EOR innovation hub
- **Extended field life,** preserving existing community investments and employment

Continental's approach demonstrates industry-leading technical sophistication:

- Advanced ResFrac modeling ensuring optimized operations
- Comprehensive team with 140+ years of combined EOR experience
- Strategic use of existing pipeline infrastructure minimizing new construction
- Rigorous screening criteria and phased implementation, reducing project risks
- Environmental benefits through increased recovery from existing wellbores

From a policy standpoint, these projects align with legislative priorities, including maximizing state resource value, promoting technological innovation, supporting rural communities, and maintaining North Dakota's competitive advantage in energy production. The substantial private investment leveraged with state research funding represents an excellent return on public investment.

Continental Resources has demonstrated the technical expertise, financial commitment, and operational track record necessary for successful EOR implementation. Their proposed Clover-RoadRunner and Durant pilots offer North Dakota the opportunity to lead national EOR development while generating significant economic benefits for our state.

I strongly recommend the approval of both grant applications and look forward to the technological advancement and economic growth these projects will deliver.

Respectfully,

Todd Porter
Chairman, Energy and Natural Resources Committee
North Dakota House of Representatives

Legislative Assembly

North Dakota Senate

STATE CAPITOL
600 EAST BOULEVARD
BISMARCK, ND 58505-0360

Senator Dale Patten
District 26
P.O. Box 812
Watford City, ND 58854-0812
dpatten@ndlegis.gov

COMMITTEES:
Finance and Taxation
Energy and Natural Resources (Chair)

Date: August 6, 2025

Dear Members of the North Dakota Industrial Commission,

As Chairman of the Senate Energy and Natural Resources Committee, I provide my strongest recommendation for Continental Resources' Enhanced Oil Recovery (EOR) grant applications for their Clover-RoadRunner and Durant pilot projects. These initiatives represent critical investments in North Dakota's energy future and economic prosperity.

Continental Resources has been a cornerstone of North Dakota's energy success since 1990, operating as one of the largest Williston Basin producers with ~200,000 barrels per day. They currently operate the two most successful unconventional EOR projects in the United States, demonstrating their technical expertise and operational excellence.

The potential economic benefits for North Dakota are transformative:

- **3-8 billion barrels** of additional recoverable oil across the Williston Basin
- **Billions in additional tax revenue** for state and local governments
- **Job creation** in construction, operations, and supporting industries
- **Extended economic life** of existing infrastructure and communities
- **Enhanced energy security** through increased domestic production

Continental's analysis shows potential for over 150 million barrels of incremental oil recovery in Dunn County alone and 88 million barrels across 770+ Williams County locations.

These projects demonstrate sophisticated planning with substantial risk mitigation:

- Leveraging 140+ years of combined team experience in EOR projects
- Advanced ResFrac modeling and integrated reservoir simulation
- Strategic positioning near existing WBI pipeline infrastructure
- Adequate capitalization totaling $56.81 million across both projects
- Comprehensive monitoring protocols and phased implementation approach

These projects perfectly align with North Dakota's energy policy objectives by maximizing recovery from existing wells, reducing environmental footprint compared to new drilling, and positioning our state as a leader in advanced oil recovery technologies.

Recommendation

The Clover-RoadRunner and Durant EOR pilots represent precisely the type of innovative, forward-thinking projects North Dakota needs to secure our energy future. With current Bakken/Three Forks recovery rates at only 8-12%, successful EOR implementation could unlock vast additional resources and generate billions in economic activity.

I strongly urge the Commission to approve both grant applications. Continental Resources has demonstrated technical expertise, financial backing, and an operational track record necessary to make these groundbreaking projects successful.

I appreciate your consideration of this critical investment in North Dakota's future.

Sincerely,

Dale Patten
Chairman, Energy and Natural Resources Committee
North Dakota State Senate