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

Subject: Proposal – "A Multi-Well, Multi-Zone Enhanced Oil Recovery Project Utilizing Produced Natural Gas in Williams County – Durant Pad"

Dear Mr. Kannianen,

Continental Resources is pleased to submit a proposal to the Oil and Gas Research Program for a project aimed at advancing cyclic miscible natural gas injection ("huff n puff") technology. This initiative has the potential to increase oil recovery by 30% or more, directly addressing production declines in the Williston Basin and supporting North Dakota's carbon-neutral goals through its applicability to CO_2 injection.

With nearly 40 years of experience in North Dakota's oil and gas industry, Continental is committed to leveraging this emerging technology to inform future infrastructure investments and development strategies. The project will utilize existing natural gas and potential future CO_2 supplies to enhance recovery from current wells, offering significant economic and environmental benefits.

Continental will provide substantial in-kind cost share alongside funding from the U.S. Department of Energy and OGRP. As a demonstration of our commitment, Continental will purchase the injection gas, covering nearly one-third of the project cost. Continental Resources has not been awarded previous funding by the NDIC.

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: Bakken Resource Development Optimization: A Multi Well, Multi Zone Enhanced Oil Recovery Project Utilizing Produced Natural Gas in Williams County - Durant

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: Bakken Resource Development Optimization: A Multi Well, Multi Zone Enhanced Oil Recovery Project Utilizing Produced Natural Gas in Williams County – Durant Pad

Applicant: Continental Resources

Principal Investigator: Dave Ratcliff

Date of Application: 13Aug2025

Amount of Request: $9,836,905

Total Amount of Proposed Project: $29,918,810

Duration of Project: 2 to 4 years

Point of Contact (POC): Dave Ratcliff

POC Telephone: (405) 234-9704

POC E-Mail Address: dave.ratcliff@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 pilot's primary objective is to evaluate the potential of Intermittent Gas Injection ("Huff n Puff") Enhanced Oil Recovery (EOR) to unlock the vast resource remaining in the Bakken and Three Forks formation after 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. 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.

This multi well, multi bench pilot proposed herein involves evaluation of intermittent miscible gas injection in up to four wells all located on the Durant Pad of Continental's Williston North acreage in Williams 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 and understanding the issues involved with scalability 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:

The expected modelled uplift over the 'baseline' production (e.g. production we would expect if nothing had been done) after three cycles of Huff n Puff will be ~20% increase, resulting in an incremental oil recovery of ~100,000 barrels of oil per well.

Duration:

We anticipate piloting at least three cycles which may last up to two years after injection begins. The overall duration of the project will be subject to the economic viability of subsequent cycles. The pilot duration may be extended if results prove to be successful.

Total Project Cost:

The project is expected to cost $29.92 million.

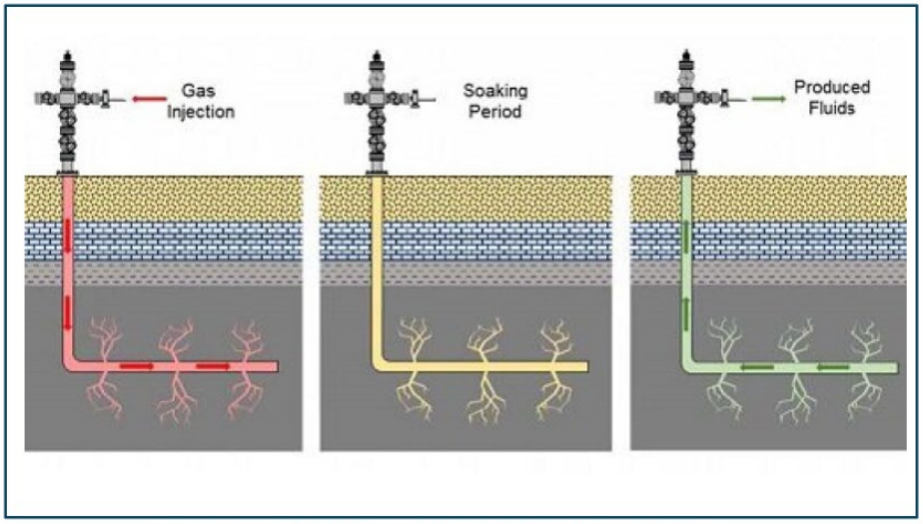
Participants:

Continental Resources will be the sole operator.

2. PROJECT DESCRIPTION

2.1 Objectives:

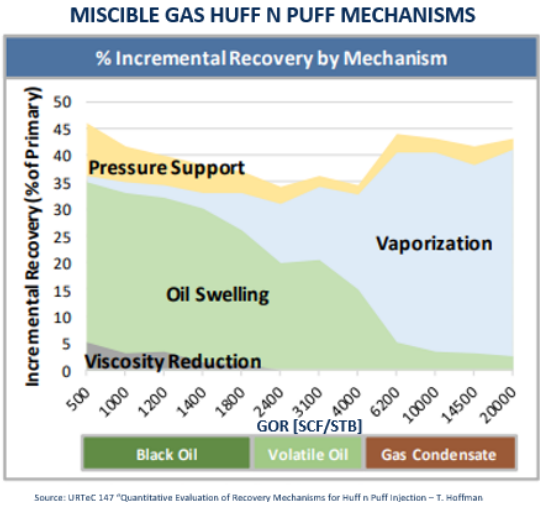
A huff n puff project involves injecting miscible gas into an existing well to raise near-reservoir pressure (huff) and dissolve gas in the oil. This is followed by a brief soaking period, after which the energized reservoir fluids are produced (puff). Figure 1 illustrates the process.



Source: Application to Multiwell Simulation of a Huff 'n' Puff Pilot in the Permian Basin (spe.org)

Figure 1: Miscible gas injection at high pressures.

The mechanisms enabling miscible gas huff and 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.



Source: URTeC 147 "Quantitative Evaluation of Recovery Mechanisms for Huff n Puff Injection – T. Hoffman

RANKING MISCIBLE GAS HUFF N PUFF MECHANISMS IN BLACK OIL SYSTEMS:

1. Oil swelling
2. Pressure support
3. Viscosity reduction
4. Vaporization
5. Other – Permeability enhancement due to increasing net effective stress

Figure 2: Miscible gas Huff n Puff mechanisms for enhancing oil production.

The objective of this pilot is to optimize injection rates and volumes for a successful intermittent gas injection operation (Huff n Puff) to maximize oil recovery. The focus of this project is to assess the gas injectivity, well connectivity, containment, pressure dependent permeability effects, uplift, the overall efficiency of the miscible gas injection process and the potential for scalability.

The project will consist of 5 wells that will be divided into two groups with wells landed in both the Middle Bakken and the Three Forks formations. A detailed summary of our multidisciplinary screening can be found in Appendix A. The wells are all located on the same pad, but the two groups would alternate injection and production in an asynchronous manner. Furthermore, the injection will be limited to one or two wells, depending on the grouping, to test containment and connectivity between multiple wells to ensure they can be pressured up and produced simultaneously. The ability to achieve containment will have a profound effect on all Middle Bakken and Three Forks development with regards to large scale EOR Huff n Puff implementation. This is due to how closely the wells are originally drilled to maximize the recovery of primary development. Figure 3 shows how the wells were drilled, grouped and their respective groupings. Continental has a working interest of 91.4% in these wells.

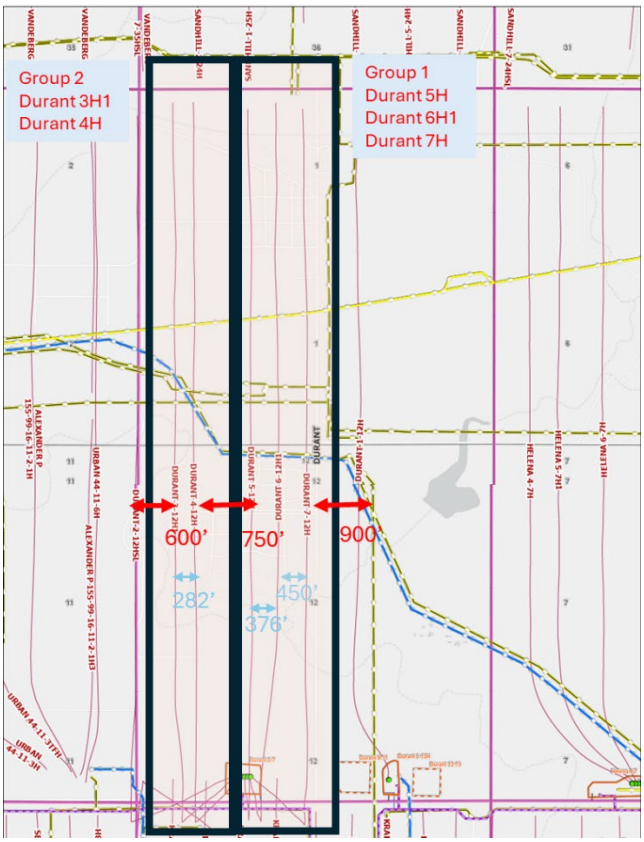


Figure 3: Well layout with the groupings and well spacings defined for each phase of Huff n Puff.

Each injection period is anticipated to require between 2-to-9 months each, followed by a 2-to-9-month production period. The miscible natural gas will be compressed and injected to achieve miscibility pressure at reservoir conditions. The injected gas will then be partially recovered during the production

cycle. The total injected volume required for the first cycle is estimated to be ~2-3 Bcf per well grouping, with a smaller amount for subsequent cycles. The injected gas volumes are estimates to reach the desired pressures before flowback, which is the estimated original reservoir pressure of 7,850 psi. The expected oil recovery uplift is ~20% over the original baseline values for all wells over a span of 3 cycles.

The same leased compressors will be used for both groupings of wells with a high-pressure line running to each of the two groupings. A new high-pressure pipeline will be built from an existing tap used for a previous Huff n Puff project, also performed by Continental. This metered gas source is located on the Williston Basin Interstate (WBI) pipeline on the Willison-Tioga-Minot system in Williams County, ND and will require approximately 2.1 miles of pipeline to reach the Durant pad as shown in Figure 4. The total throughput of the pipeline is adequate to supply this project. The expected gas requirement for this project is between 12-36 Mmscf/day, depending on the number of compressors being utilized.

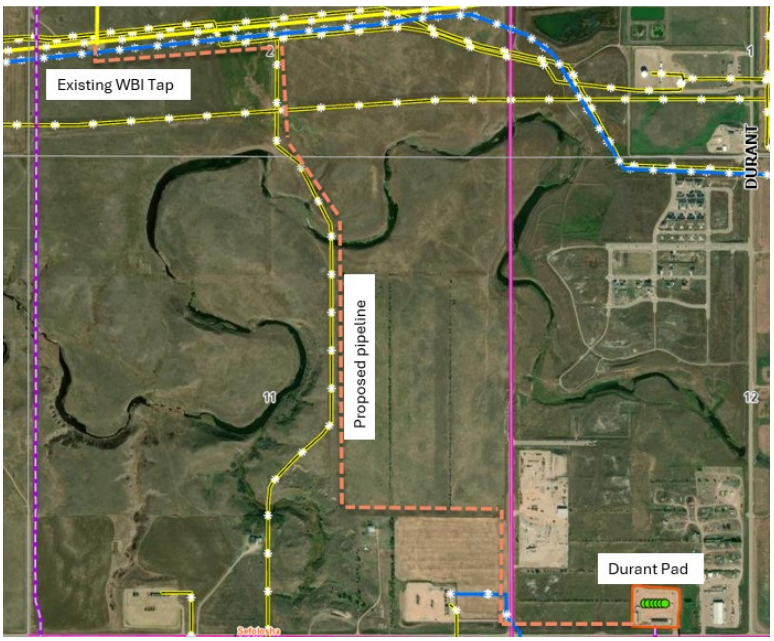


Figure 4: Proposed high pressure pipeline from the Durant Pad to an existing WBI tap.

2.2 Methodology:

Continental Resources will convert the Durant 4-12H, Durant 5-12H, Durant 6-12H1 and Durant 7-12H wells located in Williams County to accommodate both production and injection. Converting the wells will entail modifying the existing wellhead for injection, modifying the pad to accommodate a compressor, adding a separator, line heater, compressor building, and flow lines. The wells will then be subject to cyclic intermittent miscible gas injection. The wells will be divided into two groups with both groups including wells landed in both the Middle Bakken and Three Forks.

Although all wellheads are on the same pad, injection would only occur in one well grouping at a time, and the two groups of wells would alternate injection and productions cycles in an asynchronous manner. The respective well groupings are Group 1: Durant 3-12H1/Durant 4-12H and Group 2: Durant 5-

12H/Durant 6-12H1/Durant 7-12H. The miscible gas will be compressed and injected to achieve miscibility pressure at reservoir conditions. 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.

During this stage pressure interference testing will be conducted prior and potentially during the Huff n Puff process to better understand the well-to-well communication. Additionally, a tracer will be added to the injection gas and monitored on offset wells to evaluate communication between the wells.

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 (increasing pressure with the least gas injection volume), and increasing incremental 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:

We anticipate increasing oil production for each grouping of wells by 20% utilizing one or more compressors to inject and produce multiple wells. This will result in understanding injectivity of gas, the miscibility of the gas into the oil, containment between the two well groupings, and finally the scalability of the project

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 $380,000 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 (~2.1 miles), 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 and pipeline construction is $8,821,250. Additionally, two large-scale compression units dedicated to this project will be leased at a rate of ~ $120,000 per month.

Finally, Continental estimates require 3.1 BCF of injection gas at approximately $3 per MCF, resulting in a $9.3 million expenditure. These costs will be considered in-kind contributions covered by Continental Resources.

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

2.5 Resources

Continental Resources, Inc. ("Continental") has a longstanding history in North Dakota, with operations dating back to 1990. In 1995 Continental discovered Cedar Hills, the seventh largest oilfield in the lower 48 states and the first to be developed exclusively through horizontal drilling. In 2004, Continental Resources completed the Robert Heuer N0. 1-17R well in Divide County which was the first commercially successful horizontal Bakken well completed with hydraulic fracturing.

Continental operates approximately 2700+ wells in North Dakota, with an extensive footprint targeting multiple reservoir units and are one of the largest lease holders and producers in the state. Currently, Bakken production is ~200,000 BOE/day. Most of our future development is planned to be centered around the Bakken and Three Forks formations, where we currently estimate adding more than 125 new wells in the next two years. We currently believe EOR will play a pivotal role in improving hydrocarbon recovery in future and existing wells and with plans of designing future completions with this in mind. Continental's internal screening criteria indicate that in Williams County alone, EOR could be deployed in over 770 locations, potentially recovering over 88 million barrels of incremental oil. The results of this pilot will be applicable far beyond Williams County.

Additionally, Continental has conducted four previous pilots in the Williston and Anadarko Basins and is currently getting ready to kick off two additional pilots in the Powder River Basin. We have had a continuously active EOR program since 2017 and are currently operating the two most successful EOR projects in the United States as shown in Figure 8. We would like to continue to apply this knowledge to the Bakken.

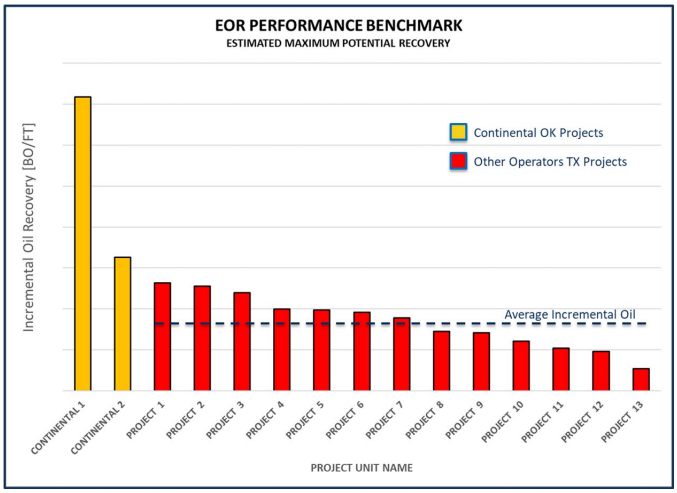


Figure 8: Continental's southern United States EOR project benchmarked against competitors.

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 did not succeed because they were undercapitalized and/or did not 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.

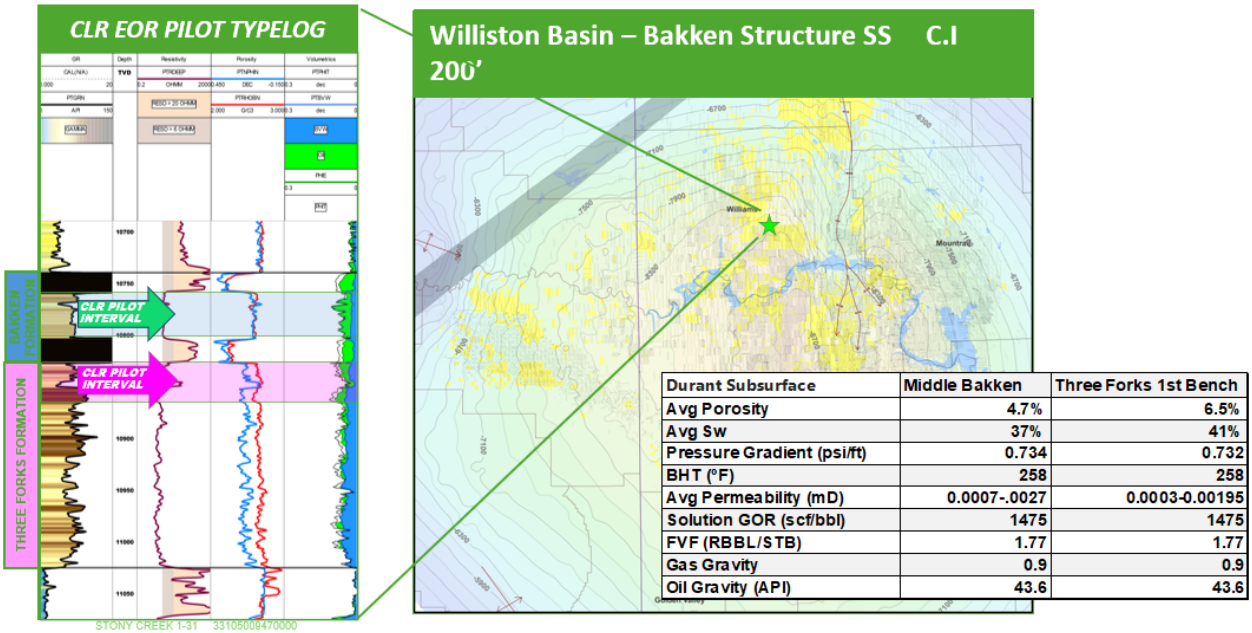
Following a successful pilot, Continental has the footprint and potential for scaling up one of the largest EOR development programs in the basin. EOR plays a pivotal role in Continental's strategic investment approach, aimed at maximizing oil recovery and extending the lifespan of our valuable assets.

Continental has a dedicated Enhanced Oil Recovery Team consisting of three Advisor Level Engineers and a VP with extensive background in fluids, modelling and facilities background and over 140 years of oil and gas experience. Our talented team will be conducting all facets of the EOR project development in house. Additionally, we have a dedicated Williston Basin Asset Team committed to growing Continental's EOR's footprint at all levels of the organization. Please see the background/qualifications section for a brief description of team members and their experience.

2.6 Techniques to Be Used, Their Availability and Capability:

The Bakken Petroleum System represents an attractive opportunity for cyclic miscible gas injection due to low recovery rates ranging from 8 to 12%. Modelling suggests that this is in part driven 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, Geochem analysis and microseismic that are being used to constrain modelling efforts. The target reservoirs for this project will consist of the Middle Bakken and Three Forks formations. Figure 9 shows a type log for the Durant Pad with approximate landing zones labelled and basic reservoir properties presented.



Durant Subsurface	Middle Bakken	Three Forks 1st Bench
Avg Porosity	4.7%	6.5%
Avg Sw	37%	41%
Pressure Gradient (psi/ft)	0.734	0.732
BHT (°F)	258	258
Avg Permeability (mD)	0.0007-.0027	0.0003-0.00195
Solution GOR (scf/bbl)	1475	1475
FVF (RBBL/STB)	1.77	1.77
Gas Gravity	0.9	0.9
Oil Gravity (API)	43.6	43.6

Figure 9: Type log, reservoir characterization and location within Continental's operated field for the Durant Pad wells.

The selection of this pilot is supported by learnings from an earlier Huff n Puff pilot located approximately four miles away. That 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 while was the other landed in the Three Forks and drilled north. These wells had no impact on each other. Three cycles of Huff n Puff were performed in each well.

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 highly advanced, 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 ResFrac model for this area of the Bakken was built to determine the root cause of the limited success for these wells and predict the uplift for the Durant pad.

Modelling suggests that the age and size of the original completion, along with the amount of gas injected were some of the main drivers of the limited success. These previous pilot wells were completed

in 2012 with relatively small stimulations compared to modern day completions. The modelling suggests that a larger completion, which produces a larger propped area, would have been more suitable. Additionally, the modelling 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 limitations identified in the previous pilot are addressed in this proposed iteration.

The Durant pad was chosen in part because the completions are modern, the wells are only 5 years old, and there are two distinct sets of well groupings landed in both the Middle Bakken and Three Forks formations. Additionally, the Durant Pad is close to an existing and available gas transmission source that has been previously used for a Huff n Puff project. There is also sufficient infrastructure in place for significant gas takeaway capacity, which is necessary during the production phase.

Leveraging the learnings from the model built for the previous Bakken Huff n Puff project, a similar model was used to match the primary production of the Durant 5H (Middle Bakken), Durant 6H1 (Three Forks) and the Durant 7H (Middle Bakken) wells. The model's history match to primary production is shown in Figure 10 and adequately predicts hydrocarbon production for all three wells.

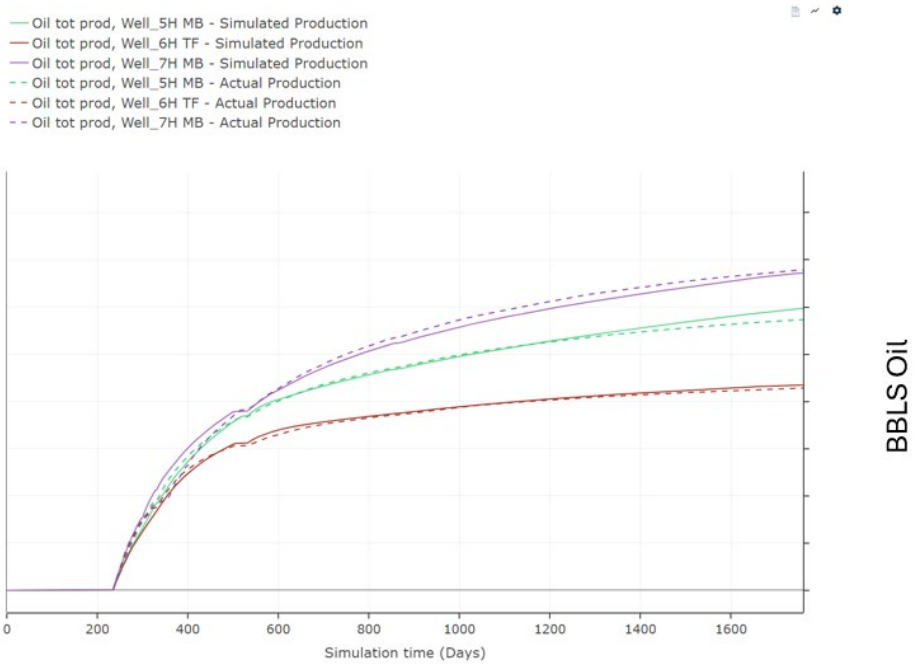


Figure 10: History match results of primary production for the Durant 5H, 6H1 and 7H wells.

Since the model is similar to the previously matched Huff n Puff project, confidence can be gained in making predictions for the incremental uplift for the Durant pad after injection. For this simulation the Durant 5H and the Durant 7H wells are the injector wells. Injection rates are assumed to be 15 Mmscf/day/well and will not exceed the maximum allowable permitted wellhead pressure of 7850 psi, which is less than the formation fracture gradient. The Durant 6H1 well will be shut in during injection

and pressure will be monitored to ensure that downhole connections between all three wells exist. It is estimated that the first injection cycle will require ~3.1 Bscf of gas to reach the maximum allowable wellhead injection pressure. All three wells will be produced for the production (Puff) cycle, and it assumed that at least 50% of the injected gas will be produced before returning the well to injection status. Incremental oil recovery is expected to decrease with each cycle. Figure 11 shows the modelled uplift after three injection cycles. Ultimate uplift projections after several more cycles could approach 50%, as they have in our other Huff n Puff project in another basin.

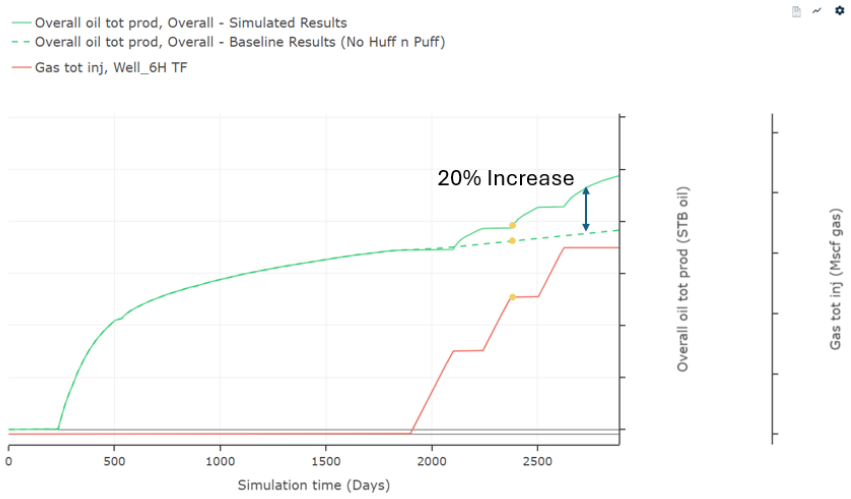


Figure 11: Modelling suggests uplifts after three cycles reaching 20%.

The other two wells in the project, the Durant 3H1 and Durant 4H, will be produced during the Group 1 injection cycle. Pressure will be monitored but, due to the increased well spacing, we do not anticipate communication between the well groupings. Once the initial injection process has been completed on the Durant 5H, 6H1 and 7H wells, the Durant 3H1 and 4H wells will be injected into via the Durant 4H and the Durant 5H, 6H1 and 7H wells will be returned to production.

2.7 Environmental and Economic Impacts while Project is Underway

The project is not anticipated to have any negative economic impacts on offset operations or nearby operators. 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]. EOR would 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 could drive economic growth through job creation and local investment while promoting environmentally sustainable practices (increasing production without the need of drilling additional wells). [1]

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

3. STANDARDS OF SUCCESS

The ultimate success of the project will be the amount of uplift in oil production after all Huff n Puff cycles are completed. Additionally, we want to understand the scalability for future projects, as this will be key in understanding the viability of this technology implemented on a larger scale. This will include understanding the miscibility, injectivity and containment of the gas in a multi well, multi bench development.

The value to the State of North Dakota will be increased revenue, increased production, and increased longevity of the Williston Basin. This will lead to increased employment from construction and maintenance, and potentially the creation of new companies specializing in the implementation of EOR projects. The results of this project will drive oil and gas operators to participate in EOR projects of their own. Additionally, since projects are often constrained by access to adequate gas supply, pipeline creation will increase, with particular emphasis on potential new CO2 pipelines. CO2 would be a slightly better alternative to natural gas but currently the supply is limited due to pipeline constraints and is therefore cost prohibitive. Large scale projects could change this narrative.

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

4. BACKGROUND/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.

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 also making sure the 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
    - Continental will conduct one pre-startup safety review of the facility to ensure commissioning has taken place and the equipment is ready to operate.
    - Additional commissioning and startup of facility to include JW personnel (compressor manufacturer) and associated field teams to verify equipment is operationally ready.
- Injection Start
    - Existing field crews will manage and will 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 SCADA 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 volumes 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 12 provides an execution timeline for the project. As anticipated, facilities design and construction constitute the critical path for a timely and successful pilot.

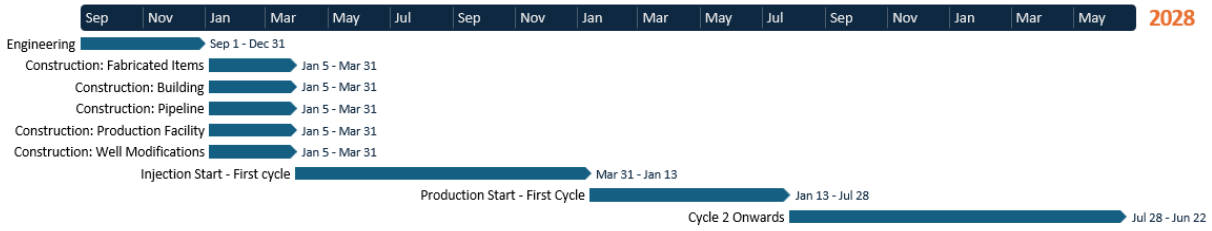


Figure 12: Project proposed timeline.

Execution starts: September 2025

First gas injection starts: 1Q 2026

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

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. Stage 2 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.

Project Associated Expense	NDIC Share	Applicant Share (Cash)	Applicant Share (In Kind)	Other Sponsor's Share	Total Project Cost
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 modifications	$760,000.00	$760,000.00	$0.00	$0.00	$1,520,000.00
CAPEX: Construction - Pipeline	$1,050,000.00	$1,050,000.00	$0.00	$0.00	$2,100,000.00
OPEX: Tracer analysis	$256,000.00	$256,000.00	$0.00	$0.00	$512,000.00
OPEX: Gas purchase	$0.00	$0.00	$9,300,000.00	$0.00	$9,300,000.00
OPEX: Line heaters - Lease	$360,000.00	$360,000.00	$0.00	$0.00	$720,000.00
OPEX: Compressors - Fuel gas	$300,000.00	$300,000.00	$0.00	$0.00	$600,000.00
OPEX: Booster compressor - Lease	$300,000.00	$300,000.00	$0.00	$0.00	$600,000.00
OPEX: Main compressor - Lease	$2,880,000.00	$2,880,000.00	$0.00	$0.00	$5,760,000.00
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	$695,000.00	$0.00	$0.00	$695,000.00
Total Costs	$9,836,905.00	$10,781,905.00	$9,300,000.00	$0.00	$29,918,810.00

Table 1: Summary of expenses

The expenses incurred are normal for a pilot of this size. It is the scalability of this project that is fundamental for future projects to occur. Continental knows the importance of making a project like this work economically viable, however additional funding to help cover costs makes a project of this size more palatable for all parties involved.

8. CONFIDENTIAL INFORMATION

No confidential information is presented in this proposal.

9. PATENTS/RIGHTS TO TECHNICAL DATA

No patent rights are reserved for this application.

10. STATUS OF ONGOING PROJECTS (IF ANY)

Continental Resources have not been awarded funding from 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 ~ 1480 SCF/STB, API ~ 45)*** • ***Initial Reservoir Pressure (~ 7,780 psia) >> MMP (~ 3,200 psia) – multi-contact***
Gas source & transmission	• ***Williston Tioga Minot gas pipeline in Williams County has a readily available capacity and is located only ~2.1 miles from pilot candidates' wellheads***
Depletion	• ***Current average reservoir pressure estimates are clearly above Pb (~ 3,200psia)*** • ***Candidate production at gas injection start is estimated at 10-25 Bo/d*** • ***Initial production peaks of the pilot wells were ~ 1,000 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 7 clusters per stage, 27' cluster spacing and a proppant intensity of ~ 1100 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 well, 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 injection wells were drilled and completed recently (2020) 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

FACILITIES

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 (2020). Remediation work not related to this project has already been completed to clean debris from the laterals. Additionally, we have plans to isolate and clean out individual stages along the lateral by isolating and pumping fluid into each individual fracturing stage. 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 necessary after intervention.

The scope of work of the well modifications include:

11. Pull existing tubing, packer, gas-lift valves. Laydown tubing.
12. Run BHA, new packer, new 2-7/8" P110 BTS-8 connection tubing, and new live Bottom Hole Pressure Gauges with banded TEC for annulus isolation illustrated in Figure 5

In summary, well modifications will cost (for downhole equipment/components) are estimated at approximately $380,000 per well.

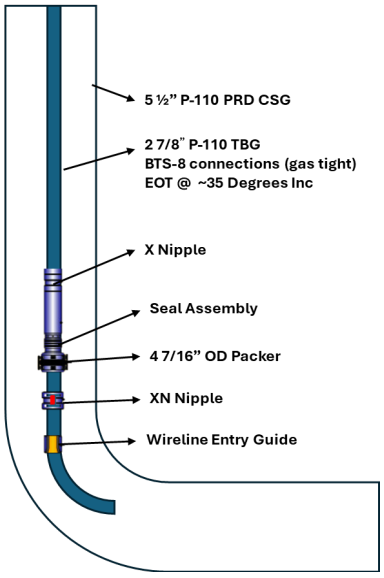


Figure 5. Required well configuration for high pressure gas injection.

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 and 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 (4) line heaters to manage lower temperatures during the early 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 6 presents the facility process flow diagram for the pilot, while Figure 7 provides an outline for the equipment overlay. The scope of work includes the following:

1. Pipeline construction from pipeline tie-in to compression facility (~2.1 miles)
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

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. A large-scale compressor brand: JW. Model: 3606 or similar will be leased to satisfy the injection requirements. The lease will be $120,000 per month per compressor. Total lease cost for 24 months and 2 compressors is $5,760,000. A 2.1-mile pipeline will be constructed to connect the existing tap to the Durant Pad at a cost of ~2,100,000.

Pilot execution work could begin as soon as 3Q Sept 2025 with the first gas injection as early as March 2026.

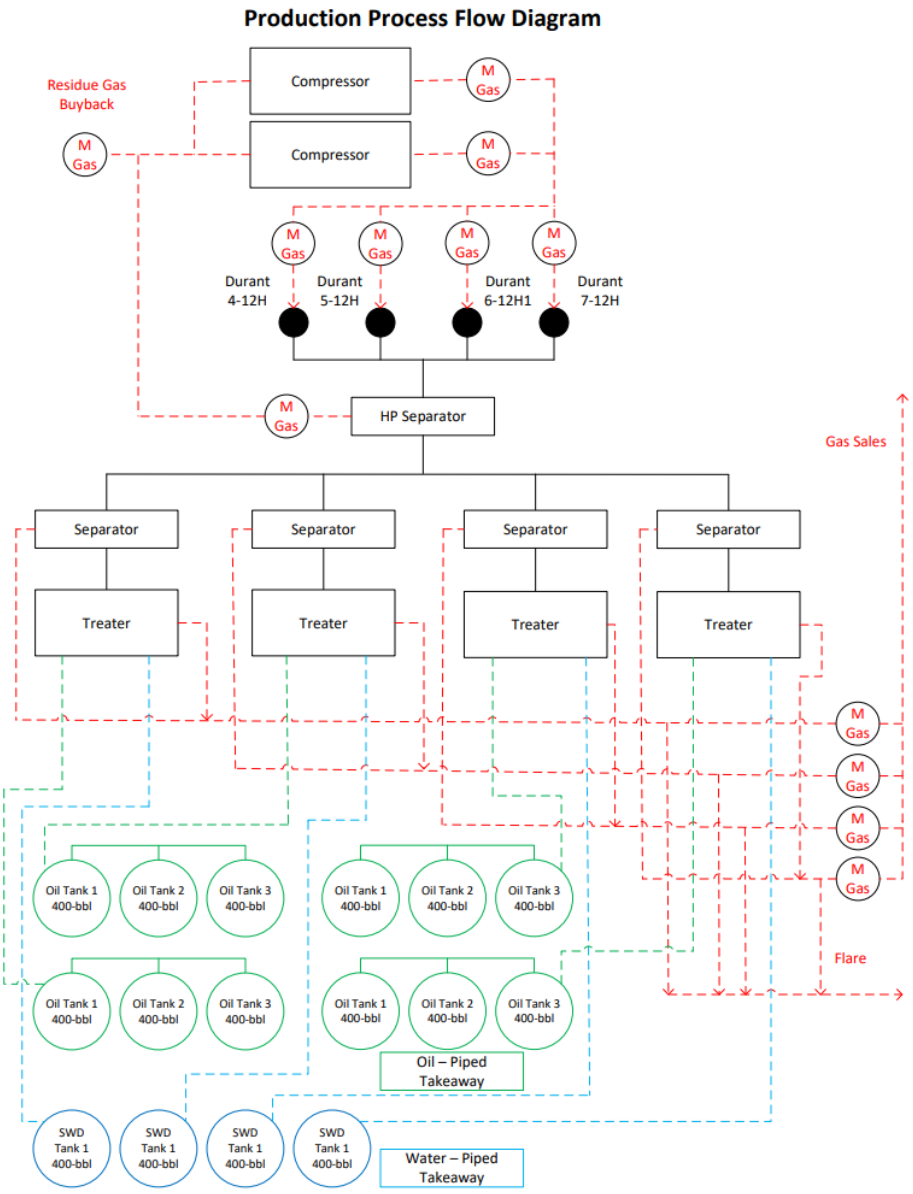


Figure 6: Injection facility process flow diagram for the pilot

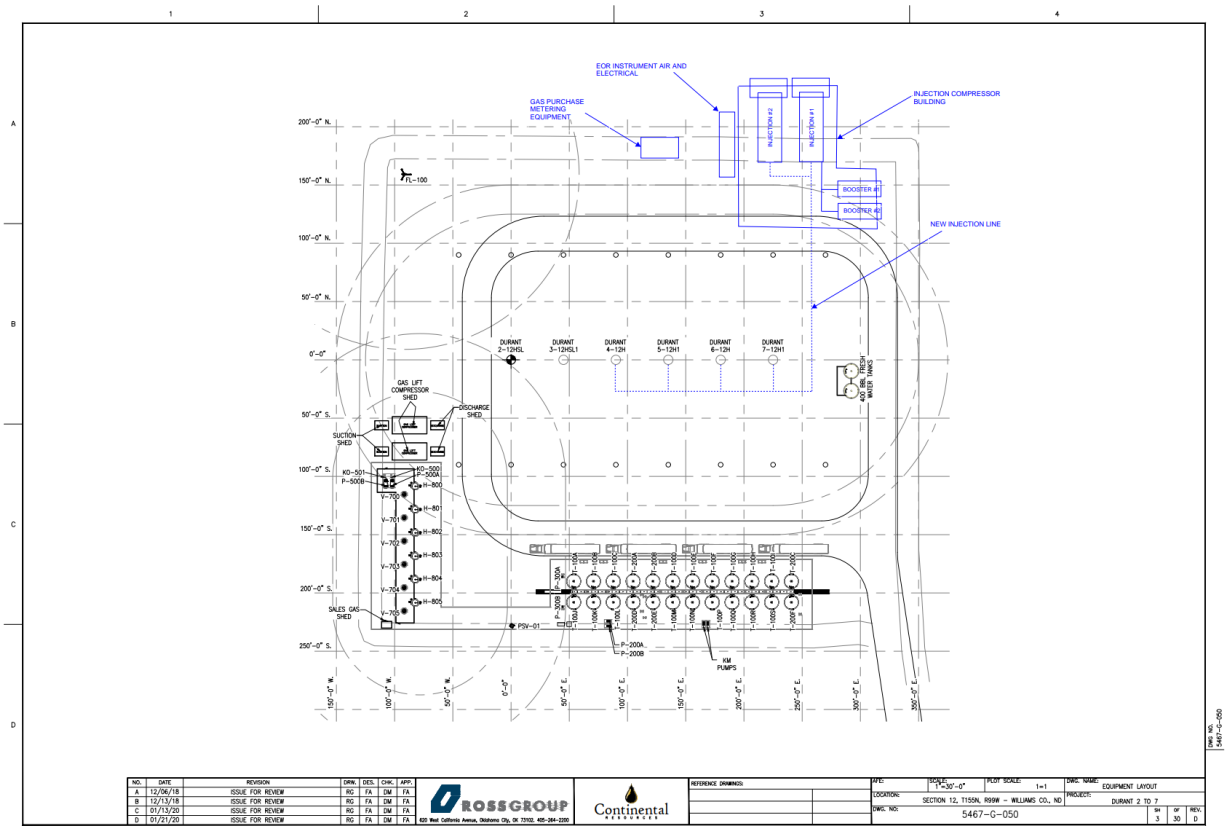


Figure 7: Preliminary equipment layout

Gas tracer: The objective of this tracer study is to enhance gas utilization and conformance by understanding injector and producer relationships. Tracers will help estimate inter well 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 offset wells to the injectors. Several different chemical (non-radioactive) tracer components will be injected into the wells, with weekly sample collections from all offsetting 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). The estimated cost for the sampling and analysis program is $512,000, based on a competitive tracer vendor quote.

Gas Purchase: We estimate requiring the acquisition of 3.1 BCF of working injection gas at approximately $3 per MCF, resulting in total costs of about $9.3 million. These costs will be considered in-kind contributions covered by Continental.

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