COLORADO
Energy & Carbon Management Commission
Department of Natural Resources

DIRECTOR'S RECOMMENDATION

Docket Number 230900284

Kerr McGee Onshore Oil and Gas LP, Operator number 47120

SPROUT OGDP (OGDP ID #485787)

Pursuant to Rule 306, the Director submits to the Commission this recommendation for APPROVAL of this Kerr McGee Oil and Gas Development Plan located in Weld County.

The underlying permit documents in support of this Recommendation may be found through the Colorado Energy and Carbon Management Commission (ECMC) website under "Permits".

SPROUT OGDP
Form 2C #403428925
Form 2A #403278400 (Alfalfa)
Form 2A #403278417 (Clover)
Form 2A #403278425 (Rademacher)
Form 2B #403364201

All supporting hearing documents, including Kerr McGee Oil and Gas LP (KMOG) hearing application, may be found in ECMC's eFilings System under Docket No. 230900284.

BACKGROUND

On September 13, 2023, KMOG submitted to the ECMC an application for their Sprout Oil and Gas Development Plan (OGDP). Staff returned the Form 2As to DRAFT status on December 1, 2023, and requested corrections and/or additional information. The applicant resubmitted the Form 2As on December 18, 2023, and the Director determined the application was complete on December 28, 2023. This Director Recommendation is based on information finalized in the Form 2A(s), the Form 2B, and the hearing application as of February 22, 2024. No additional revisions will be made to the application prior to the Commision Hearing scheduled for March 6, 2024.

PROPOSED DEVELOPMENT

The Sprout OGDP is located in Weld County and consists of three proposed locations, the Alfalfa, the Clover, and the Rademacher. All three locations are on cropland. The proposed Alfalfa location is at lat/long 40.124550/-104.908943, outside of Firestone. The proposed development is for 13 wells, seven separators, and other miscellaneous production equipment with an initial disturbance of 12.5 acres reduced down to 4.13 acres after interim reclamation. There will not be any storage tanks utilized for oil or produced water at the proposed Alfalfa location. The proposed Clover location is at lat/long 40.114904/-104.912186, outside of Firestone and Fredrick. The proposed development is for 12 wells, six separators, and other miscellaneous production equipment on an initial 11.71 acres of disturbance reduced down to 3.79 acres after interim reclamation. There will not be any storage tanks utilized for oil or produced water at the proposed Clover location. The proposed Alfalfa and Clover locations are planned for one occupation for drilling and one occupation for completions at each location. The proposed Rademacher location overlaps existing Location ID #336118, that was permitted for three wells. Two of the wells have been plugged and abandoned and the third has a Shut In status with an intent to P&A prior to construction of the proposed location. KMOG preferred to have a new location ID with the proposed wells and production equipment. The proposed Rademacher development includes 18 new wells, one condensate/maintenance tank, four produced water tanks, five separators, and other miscellaneous production equipment on an initial 12.77 acres of disturbance reduced down to 4.25 acres after interim reclamation. The proposed Rademacher location is planned for two occupations for drilling and two occupations for completions based on Wildlife Habitat timing stipulations.

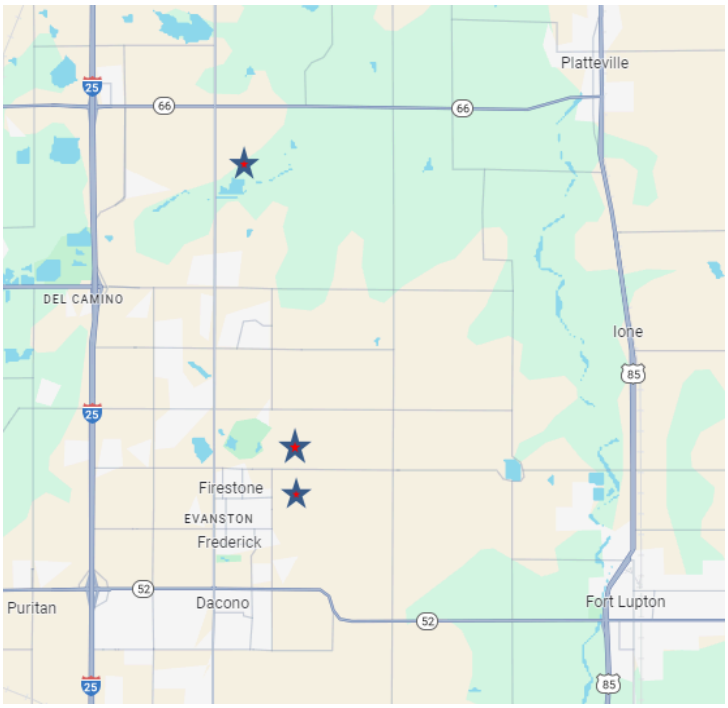


Figure 1: Stars are the approximate area of proposed Locations.

DRILLING AND SPACING CONSIDERATIONS

KMOG is requesting the development of FEE minerals covering approximately 7,360 total acres from the Sharon Springs, Niobrara, Fort Hays, Codell and Carlile Formations as follows:

- Vacate Order: 407-3007.
- Establish a new Drilling and Spacing Unit (DSU)
    - The proposed DSU would establish 1,920 acres for oil and gas development and approve up to eleven (11) horizontal wells.
    - KMOG requests the following unit setbacks for the DSU:
        - Niobrara and Sharon Springs formations wells:
            - 65 feet from the eastern and western unit boundaries;
            - 195 feet from the northern and southern unit boundaries;
        - Codell, Fort Hays and Carlile formations wells:
            - 110 feet from the eastern and western unit boundaries;
            - 330 feet from the northern and southern unit boundaries;
    - All wells: an interwell distance of 150 feet.
- Establish a new Drilling and Spacing Unit (DSU)
    - The proposed DSU would establish 1,760 acres for oil and gas development and approve up to seven (7) horizontal wells.
    - KMOG requests the following unit setbacks for the DSU:
        - Niobrara and Sharon Springs formations wells:
            - 65 feet from the northern and southern unit boundaries;
            - 195 feet from the eastern and western unit boundaries;
        - Codell, Fort Hays and Carlile formations wells:
            - 110 feet from the northern and southern unit boundaries;
            - 330 feet from the eastern and western unit boundaries;
    - All wells: an interwell distance of 150 feet.
- Establish a new Drilling and Spacing Unit (DSU)
    - The proposed DSU would establish 1,280 acres for oil and gas development and approve up to seven (7) horizontal wells.
    - KMOG requests the following unit setbacks for the DSU:
        - Niobrara and Sharon Springs formations wells:
            - The lateral ends of the wells shall be no closer than 50 feet from the unit boundaries;
            - The axis of the wells shall be no closer than 150 feet from the unit boundaries;
        - Codell, Fort Hays and Carlile formations wells:
            - The lateral ends of the wells shall be no closer than 115 feet from the unit boundaries;
            - The axis of the wells shall be no closer than 345 feet from the unit boundaries;
    - All wells: an interwell distance of 150 feet.

    - NOTE: see the DIRECTIONAL WELL PLAT attachment on the ALFALFA 8-20HZ Form 2A (Doc# 403278400) for more clarity on the multiple wellbore orientations planned.
- Establish a new Drilling and Spacing Unit (DSU)
    - The proposed DSU would establish 2,400 acres for oil and gas development and approve up to eighteen (18) horizontal wells.
    - KMOG requests the following unit setbacks for the DSU:
        - Niobrara and Sharon Springs formations wells:
            - 50 feet from the eastern and western unit boundaries;
            - 150 feet from the eastern/northern and western/southern unit boundaries;
        - Codell, Fort Hays and Carlile formations wells:
            - 115 feet from the eastern and western unit boundaries;
            - 345 feet from the eastern/northern and western/southern unit boundaries;
    - All wells: an interwell distance of 150 feet.

There are multiple wells producing or permitted to produce the Sharon Springs, Niobrara, Fort Hays, Codell and Carlile Formations, or portions thereof, within the application lands and within the proposed DSU boundaries; those wells will remain subject to their originally permitted spacing, and will not be included in this OGDP.

This spacing, as outlined in KMOG's amended Hearing Application, complies with applicable ECMC rules.

FINANCIAL ASSURANCE

Staff confirmed that KMOG has a valid blanket plugging bond on record consistent with Rule 702.

PUBLIC COMMENT

Pursuant to Rule 303.d.(1).A.ii, the Public Comment Period was open for 30 days from December 28, 2023 through January 28, 2024. No public comments were received on the Alfalfa Form 2A. Four public comments were provided on the Clover Form 2A, three in support of the development and one general against oil and gas drilling. Two public comments were received on the Rademacher Form 2A, both were in support of the planned development. Four public comments were received through the eFilings system in January 2024 in support of the development of the Sprout OGDP. ECMC staff reviewed the public comments and KMOG provided a public comment response document, which has been attached to the Form 2As.

LOCAL GOVERNMENT PERMITTING AND PRE-APPLICATION CONSULTATIONS

All three proposed locations for the Sprout OGDP are located in Weld County. A WOGLA pre-application consultation with Weld County was held on August 31, 2022, for the Rademacher location and on February 1, 2023, for the Alfalfa and Clover locations. The Town of Firestone is the proximate local government for all three proposed locations and did not have concerns regarding the sites, but did comment on the haul routes being through Firestone jurisdiction during the pre-application meeting for compliance and communication. The Town of Firestone did not provide comments on the Form 2A or request consultation with ECMC. The Town of Frederick is a proximate local government for the Clover location and did not provide comments on the Clover Form 2A and did not contact ECMC for a consultation. The Weld County WOGLA applications have been approved and are attached to the related Form 2As.

DIRECTOR'S CONSULTATIONS

The Director consulted with the Colorado Department of Public Health and the Environment (CDPHE) and Colorado Parks & Wildlife (CPW) on this OGDP application pursuant to Rule 309.e; summary and results are as follows:

All three proposed locations in the Sprout OGDP are within the Denver-Front Range Ozone Non-attainment area. A consultation with CDPHE occurred on January 22, 2024, with KMOG, ECMC, and CDPHE. CDPHE provided a consultation letter with the agreed upon BMPs. The Consultation letter is attached to the Form 2A and the BMPs have been added to each Form 2A.

The proposed Rademacher location is within the High Priority Habitat (HPH) under Rule 1202.d. For Mule Deer Migration Corridor and Mule Deer Severe Winter Range. A consultation with KMOG, CPW, and ECMC occurred on January 29, 2024. KMOG and CPW discussed timing window stipulations and compensatory mitigation. CPW provided comments on the Rademacher Form 2A.

ECMC STAFF'S TECHNICAL REVIEW HIGHLIGHTS

This section addresses issues related to siting, public health, safety, welfare, the environment, and wildlife resources, within the context of § 34-60-106(2.5)(a).

Alternative Location Analysis (ALA)

The proposed Alfalfa and Clover locations did not meet the ALA criteria listed in Rule 304.b.(2).B. The proposed Rademacher location is within 2,000 feet of two Residential Building Units (RBUs), the nearest being 1,139 feet from the Working Pad Surface (WPS), immediately

upgradient of a wetland, and within HPH. KMOG evaluated four additional locations as part of their ALA. Within Township 3N, Range 67W, alternate locations were reviewed in Sections 27, 28, and 33 and in Township 3N, Range 68W, an alternate location in Section 25 was reviewed.

Alternate Locations in Section 27 and 28 also had RBUs within 2,000 feet of the WPS and were upgradient of wetlands or a floodplain. The Alternate Location in section 25 was also upgradient from a wetland, and while there are not currently any RBUs within 2,000 feet, a proposed housing development would be in the future, and not all of the minerals would be able to be produced from the Alternate Location. The Alternate Location in Section 33 did not meet any ALA criteria, but would not be able to develop all of the minerals, requiring an additional location, and would impact the agricultural production in the area.

Public Health, Safety, and Welfare Considerations

The proposed Alfalfa and Clover locations do not have any RBUs, High Occupancy Building Units (HOBU), schools, child care facilities, nursing homes, hospitals, Designated Outdoor Activity Areas (DOAA) within 2,000 feet, are not within any mapped HPH, and are greater than 500 feet from wetlands or surface water bodies.

A RBU is approximately 2,005 feet from the proposed Alfafa location and a RBU is approximately 2,003 feet from the proposed Clover location. KMOG has proposedBest Management Practices (BMPs) at the Alfalfa and Clover locations that include:

- Sound walls for noise and light mitigation;
- Dust controls with speed restrictions and the use of fresh water to control dust;
- Group III drilling mud;
- Rig power supply will be two natural gas engines with battery energy storage system;
- Piping of water to the proposed locations and a Modular Large Volume Tank (MLVT) for completions operations;
- Piping of natural gas, oil, and produced water; and
- Remote monitoring and shut-in capabilities at these two proposed locations.

The proposed Rademacher location is within 2,000 feet of two RBUs, with the closest at 1,139 feet from the WPS. There are no HOBUs or DOAAs within 2,000 feet of the WPS. The proposed Rademacher will have oil and gas piped from the location, but a produced water pipeline was not available. The proposed Rademacher location will have four produced water tanks and one condensate tank for maintenance purposes. KMOG is requesting the siting of the Rademacher location be granted via Rule 604.b.(4). KMOG has committed to the following BMPs for consideration as substantially equivalent protections:

- Sound walls for noise and light during drilling and completions operations;
- Sensors on lighting and switched off when not needed and limited for safety during production operations;

- Speed restrictions and freshwater use for dust control;
- Group III drilling mud;
- Rig power supply will be two natural gas engines with battery energy storage system;
- Piping of water to the proposed locations and a Modular Large Volume Tank (MLVT) for completions operations;
- Temporary and permanent tanks will have 150% lined containment;
- Fluid monitoring and shut-in capabilities on tanks;
- Remote sensing and monitoring on wells and tanks; and
- VOC Combustors and tank emissions monitoring systems.

KMOG had community outreach meetings in August 2023 and February 2024. A summary of interactions is attached to all three Form 2As as "OTHER" document numbers 403522199 and 21316828. KMOG provided a summary of the 604.b.(4) as part of their executive summary which is attached on all three Form 2As under "OTHER" document number 21316827.

Environmental Resource Considerations

The nearest wetland from the proposed Alfalfa location is 511 feet upgradient. The nearest downgradient wetland and surface water body is 1,800 feet from the proposed location. Depth to groundwater is estimated to be 21 feet below ground surface.

The nearest mapped wetland from the Clover location is 77 feet downgradient. This is a man-made pond used for cattle. No wetland vegetation was identified and the pond is isolated from other drainages or surface water bodies. Groundwater is estimated to be approximately 5 feet below ground surface.

The proposed Alfalfa and Clover locations do not have permanent tanks on location, but all liquids and gas will be piped off location. Temporary tanks during drilling and completions will have a liner and berming. Stormwater controls with a ditch and berm system will be in place. All tanks during drilling and completions will be monitored with high-level shut-off sensors. Pipelines will be monitored remotely for pressure and automatic shut-off valves.

The proposed Rademacher location is 28 feet from a mapped wetland. CPW granted a 1202.a.(3) waiver based on BMPs and the wetland delineation provided by KMOG. Groundwater is estimated to be 23 feet below ground surface. KMOG will utilize remote monitoring and shut-in capabilities for tanks, production equipment, and wells on the proposed location. Tanks will also have lined, secondary containment to limit potential impacts to surface or groundwater.

Wildlife Resource Considerations

The proposed Alfalfa and Clover locations are not in any mapped HPH. KMOG will perform raptor nesting surveys, and burrowing owl surveys based on timing of operations.

A portion of the proposed Rademacher location is in a mapped HPH for Mule Deer Migration Corridor and Mule Deer Severy Winter Range. KMOG has agreed to timing stipulations for Mule Deer and will pay compensatory mitigation for the proposed location. CPW provided comments on the Form 2A related to the consultation. KMOG has avoidance through the timing stipulations, minimization by limiting fencing, using a Mule Deer friendly seed mix and limiting the access road and location to the edge of the Mule Deer HPH, and compensatory mitigation.

The proposed Rademacher location is within 500 feet of a mapped wetland. KMOG requested a waiver from 1202.a.(3) for "...prohibits operators from situating new staging, refueling, or chemical storage areas within 500 feet of the Ordinary High Water Mark ("OHWM") of any river, perennial or intermittent stream, lake, pond, or wetland." CPW granted the waiver request to KMOG based on the wetland delineation provided by KMOG and the BMPs for stormwater and secondary containment, and other spill prevention BMPs. Staff supports CPW's waiver, and notes that the required BMPs have been added to the Form 2A.

DIRECTOR'S RECOMMENDATION:

The Director has obtained and fully reviewed all required and supplemental information necessary to evaluate the OGDP's proposed operations and its potential impacts to public health, safety, welfare, the environment and wildlife resources. Through this review, the Director has determined that this OGDP complies with all applicable requirements of the Commission's Rules and recommends approval by the Commission.

01/25/24

To Whom It May Concern,

My name is Kim Wallace Hartman and I have been an Oil and Gas Royalty Owner of Kerr-McGee Oil & Gas Onshore (Anadarko- Occidental Petroleum) for over 25 years. I inherited the interests from my mother and she from her parents.

I have found dealing with Kerr McGee over the years has been very professional as they communicate with their royalty owners in an efficient
and timely matter and are always prompt to answer questions regarding our interests. We reside in Denver, CO in the Rocky Mountain region so are television viewers of all local stations and have viewed the CRED (Coloradans For Responsible Energy Development) promotions and are confident, per the advertising spots that Kerr McGee is fully compliant in all phases of their energy extraction operations and strive to be good corporate citizens of the Rocky Mountain Region.

I'm confident given the opportunity to move forward with their plans to increase oil and gas development that their efforts will be conducted with the utmost attention to detail for the citizens interests and for that of the environmental impact for the region.

Sincerely,

Kim Wallace Hartman
745 S. Alton Way, Unit 7C
Denver, CO 80247

January 22, 2024

Julie Murphy, Director
Colorado Energy & Carbon Management Commission
(formerly known as the Colorado Oil and Gas Conservation Commission)
1120 Lincoln Street
Suite 801
Denver, Colorado 80203

Re: Sprout OGDP Application

Dear Director Murphy,

In the matter of the application submitted by Kerr-McGee O&G for the Sprout development plan, I have thoroughly read through the application, corresponding documents, the ECMC rules and regulations. I have followed the policies and statutes closely for a number of years and I appreciate and understand the significance of this development in the Wattenberg Field. I respectfully ask you to take the following into consideration:

W.E. Russell established the Russell Coal Company in 1913. He had come from Scotland, arriving in Denver in 1889 and is considered a well respected Colorado Pioneer. He owned the Emerson/Russell Mine from 1913-1947. The land remained in the family until recent years, but in that time, the ranch was cared for and respected, including but not limited to the below surface mineral resources. Enormous contributions to Colorado and the development of local communities have been provided by generations of this ancestral family of Colorado pioneers. Not only was W. Russell President of the Russell Coal company, he was also former President of the Denver Chamber of Commerce. His extended family was commissioned by the State of Colorado to construct the Colorado State Capital Building, the Cheeseman Dam and many landmark buildings & structures in Colorado, many in downtown Denver that still stand today. Generations of the family, Colorado natives, have honorably & humbly held positions of public service and have passed on a continued sense of pride & responsibility in supporting the stability, strength, economics & appreciation for the state of Colorado. Their care and consideration for the safety and wellbeing of the communities they lived and worked in throughout Colorado is notable and their contributions in Weld County is equally important. So much of that continues and is driven by the respect and values that began with a family of Colorado pioneers and continues to this day. They are good values with relevance in this project.

Mr. Russell provided the resources needed for Colorado families to heat their homes with the contributions he could provide. In 1970-1971 the original Oil, Gas & Mineral leases were signed. Those leases, an important part of the history of the ranch in Weld County, are still in place today and held by family and Kerr-McGee. They too are part of County, State and family history.

In examining the Sprout Development Plan and the care and consideration of all interests, public health, safety, welfare, the environment and wildlife resources, I strongly believe this development not only is consistent with the love and respect this pioneer family considered important when it was in their care, but I believe they would appreciate and take pride in the advances in technology, commitment to the environment and to their vision of providing resources for the local community and State of Colorado. From contributing to the State's GDP, intelligently using science and technology by providing a resource to heat homes, as well as much needed tax revenues into the State & local funds as a solution to budget needs, jobs & local economic benefits, this permit application has far reaching benefits.

I respect the due diligence of Kerr-McGee/Oxy, their commitment to meeting and exceeding every expectation, rule and regulation, their consideration of community needs and the value Kerr-McGee places on being one of, if not, the BEST operator in the State of Colorado, with their attention to detail, safety & responsibly commitments in transitioning from old, outdated wells, to new industry advancements in construction, development, operations, safety & reclamation, all meeting the Colorado's statutes and mineral owners expectations. All phases of this energy development provides a reasonable solution and confidence this is a good plan for Colorado.

These are important Colorado natural resources. I and others consider Kerr-McGee to be leading in smart, scientifically driven, environmental advances and production technology, a highly respected operator that brings full integrity and transparency with this application. The work they do on and off the field is appreciated. I hope you agree this application and supporting documents is evidence of proof that satisfies the requirements. I strongly support the owners who legally own these resources and have a legal right to develop them, as has historically been the case with precedence here. Many of them are the descendants of hard working visionaries, Colorado pioneers, who settled in Colorado on this ranch. I believe there is an important historical value in this project, with these multi-generational mineral right owners and Kerr McGee leading the way in this transition. I respectfully request you grant full approval of the Sprout (Clover, Alfalfa & Rademacher) permit application and development plan. It is an exciting time to advance this important new science and technology in Colorado and allow Sprout to proceed with support and approval from ECMC.

Sincerely,

Maureen T. Hartman

Maureen T. Hartman
1651 Adams Street
Denver, CO 80206

To: Energy and Carbon Management Commission
From: Vivian Teets
InRe: Kerr-McGee Sprout Oil and Gas Development Plan
Alfalfa 8-20HZ, Clover 2-29HZ, Rademacher 14-30HZ

I am in full support of the application for permitting the three pads planned for this development.

As a mineral rights owner, I have always found them to be helpful, available to answer questions, and prompt in making royalty payments.

As a previous owner of surface areas in Sections 20 and 29, I found that Kerr-McGee was a responsive, reliable and conscientious producer. They were careful and efficient, always proactive and completely transparent during the development and operation of their wells. They respected the land and land owners.

I believe that this is the right action at the right time by the right company and I urge the Commission to approve this application.
Thank you.

Vivian Teets
10091 Prima Run Place
Colorado Springs, CO 80924
vivian@teets.net

From: ricknjudyg@aol.com <ricknjudyg@aol.com>
Sent: Saturday, January 20, 2024 2:35 PM
To: Wizeman, Laurie <laurie_wizeman@oxy.com>
Subject: [EXTERNAL] Mineral interest

To Whom it may concern:

I am writing to you to let you know how important it is to our family to continue drilling Township 2 North, Range 67 West 6th P.M. These were mineral rights bequeathed to the children of Salena Hittson Ernest Moore(my Great Grandmother). She was the daughter of a great sheriff and cattleman John Hittson from Texas. Due to his cattle business the family moved to Denver about 1870 their ranch was just outside Denver. Salena married Finis Ernest in 1880 who was also a cattleman. They were very prominent in Denver and she was active in society including dinners with the Governor. Later in life she was on the only women's committee at the1904 St.Louis Worlds Fair. She continued being involved in women's suffrage and Indian rights in her later years. In 1907 she was widowed and several years later married W.T. Moore of San Antonio who was an oil man. She was widowed again several years later and eventually bought mineral rights in Weld County Co. These wells did not start producing until the late 1990's. These mineral rights have been a legacy to many of her heirs over the last 20 or so years. Approximately 12 cousins including myself and brother have all received mineral rights. Some have passed on and handed down to their families. All of us are very proud of our heritage and ties to Colorado, Denver and Manitou.

The mineral rights has enabled my husband and I to help pay for four of our grand children's college education. The last who is a freshman this year so has at least three years to go and his sister is starting her masters this fall. This means so much to us to help them on this road of educations and bright futures.

I am sure my great grand mother had no idea she would still be helping her great great great grand children in 2024!

We were visiting Colorado this fall for our daughters wedding. We took a side trip to Fairmount Cemetery in Denver where my great grand parents are buried and many other relatives. We were not disappointed in the beautiful burial spot or the Denver area!

Our hopes are you will see that there are many people who prosper from these mineral rights not just big corporations.

We also hope this area of drilling will continue to prosper for many years to come.

Thank you for your time.

Judith Grimmer

COLORADO
Department of Public Health & Environment

January 31, 2024

Julie Murphy, Director
Energy and Carbon Management Commission
1120 Lincoln St, Suite 801
Denver, CO 80203

Re: Colorado Department of Public Health and Environment's Rule 309.f Consultation Comments for the Kerr McGee Sprout Oil and Gas Development Plan (Docket Number 230900284)

The Colorado Department of Public Health and Environment (CDPHE) appreciates the opportunity to consult on the Kerr-McGee Sprout Oil and Gas Development Plan (OGDP), as well as the ongoing collaboration with the Colorado Energy and Carbon Management Commission (ECMC) to fulfill our shared mission to protect public health and the environment. CDPHE's consultation timeline for this OGDP is as follows: CDPHE was contacted initially by Weld County staff through its local process on June 20, 2023. CDPHE was notified of completeness by ECMC staff on January 8, 2024. CDPHE provided the Best Management Practices (BMPs) spreadsheet for CDPHE-ECMC Consultations to the operator, Oxy (Kerr McGee parent company), on January 8, 2024. Oxy provided to CDPHE its completed BMP spreadsheets for the Sprout OGDP on January 19, 2024. A consultation meeting including CDPHE, ECMC, and Oxy was held on January 22, 2024. Revisions were requested by CDPHE and were received on January 29, 2024. Oxy agreed with committed BMPs as listed on January 30, 2024.

CDPHE notes that the proposed Sprout OGDP contains three pads: Alfalfa, Clover, and Rademacher. There are two residential building units (RBUs) within 2,000 feet of any pad. The OGDP is located within the Denver Metro/North Front Range Ozone Nonattainment Area. None of the pads in the OGDP are within the boundaries of an identified Disproportionately Impacted Community area.

CDPHE notes that the Alfalfa and Clover pads will have dedicated pipeline takeaway for produced water. The Rademacher pad will not, and Oxy actively sought and received a pre-application consultation from CDPHE on July 11, 2023 for guidance on this pad.

To protect public health and air and water resources, CDPHE supports incorporation of each of the BMPs that Oxy has committed to for all pads in the Sprout OGDP, as listed below:

• Operator will properly maintain vehicles and equipment
• Operator will use non-emitting pneumatic controllers
• Operator will use Tier IV or equivalent engines, such as NG Tier II w/ battery assist, (or better) for drilling (dual-fuel engines are not considered equivalent)
• Operator will use Tier IV or equivalent engines, such as NG Tier II w/ battery assist, (or better) for hydraulic fracturing (dual-fuel engines are not considered equivalent)
• Operator will use electric equipment and devices (e.g. vapor recovery units or VRUs, fans, etc.) to minimize combustion sources on site (if yes, operator will provide a list outlining which equipment and devices will be electrified)
• Operator will use service providers who utilize at least 50% Tier IV or equivalent engines, such as NG Tier II w/ battery assist, (or better) for nonroad construction equipment (dual-fuel engines are not considered equivalent)
• Operator will not store hydrocarbon liquids in permanent storage tanks on site (other than a maintenance tank possibly used for well unloading or other maintenance activities)
• Operator will implement a "hybrid or modern" production flowack method (eliminates tanks by routing the oil, natural gas and water directly to permanent production equipment)
• Operator will use pipelines to transport water used for hydraulic fracturing to location
• Operator will have adequate and committed pipeline takeaway capacity for all produced gas and oil
• Operator will shut in the facility to reduce the need for flaring if the pipeline is unavailable
• Operator will use lease automatic custody transfer (LACT) system to remove/reduce the need for truck loadout
• Operator will use OGP Group III drilling fluid
• Operator will cover trucks transporting drill cuttings
• Operator will use a squeegee or other device to remove drilling fluids from pipes as they exit the wellbore
• Operator will ensure that all drilling fluid is removed from pipes before storage
• Ozone mitigation on forecasted high ozone days: operator will eliminate use of VOC paints and solvents
• Ozone mitigation on forecasted high ozone days: operator will minimize vehicle and engine idling
• Ozone mitigation on forecasted high ozone days: operator will reduce truck traffic and worker traffic
• Ozone mitigation on forecasted high ozone days: operator will postpone the refueling of vehicles
• Ozone mitigation on forecasted high ozone days: operator will suspend or delay the use of non-essential fossil fuel powered ancillary equipment
• Ozone mitigation on forecasted high ozone days: operator will adjust construction schedules to postpone non-essential construction activity, including but not limited to temporary tank removals and cleaning on ozone action days

• Ozone mitigation on forecasted high ozone days: operator will send notification to all operational staff requesting that where possible, they delay all non-essential operational activity (such as pigging, well unloading and tank cleaning) on ozone action days
• Operator will use Modular Large Volume Storage Tanks
• Operator will not use fracturing fluids which contain PFAS compounds
• Operator will continue to participate in the Colorado Preparedness Resources Network (CPRN)CPRN, which has a non-PFAS foam location identification to be sure, in an emergency, that non-PFAS foam will be available
• Operator will coordinate with nearby fire district(s) to evaluate whether PFAS-free foam can provide the required performance for the specific hazard
• If PFAS-containing foam is used at a location: operator will properly characterize the site to determine the level, nature and extent of contamination
• If PFAS-containing foam is used at a location: operator will perform appropriate soil and water sampling to determine whether additional characterization is necessary and inform the need for and extent of interim or permanent remedial actions
• If PFAS-containing foam is used at a location: operator will properly capture and dispose of PFAS-contaminated soil and fire and flush water

In addition, CDPHE supports incorporation of each of the BMPs that Oxy has committed to exclusively for the Alfalfa and Clover pads in the Sprout OGDP, as listed below:

• Operator will not store produced water in permanent storage tanks on site (other than a maintenance tank possibly used for well unloading or other maintenance activities)
• Operator will use pipelines to transport water used for hydraulic fracturing from location

CDPHE has run Colorado EnviroScreen analyses on these sites, with an overall score of 55.18 for the Alfalfa and Clover pads, and 45.53 for the Rademacher pad. The reports may be viewed as an appendix to this letter.

CDPHE appreciates this opportunity to consult and looks forward to continued collaboration with ECMC. CDPHE also appreciates Oxy's attentive and timely engagement during this process and we have no additional recommendations at this time. Please do not hesitate to contact me if you have any questions.

Sincerely,

Tessa Sorensen
Energy Liaison
Colorado Department of Public Health & Environment

Appendix A - Colorado EnviroScreen Air Reg3 Reports follow

COLORADO
Air Pollution Control Division
Department of Public Health & Environment

Air Quality Regulation (Reg.) 3

Environmental Justice Report

Applicant Information

Company Name: Kerr-McGee

Facility Name: Sprout - Alfalfa

Plant AIRS ID Number:

Permit Type: OGDP

Permit Number:

Facility location used for generating the report: 40.124 , -104.9089

Environmental Justice Summary

Weld County

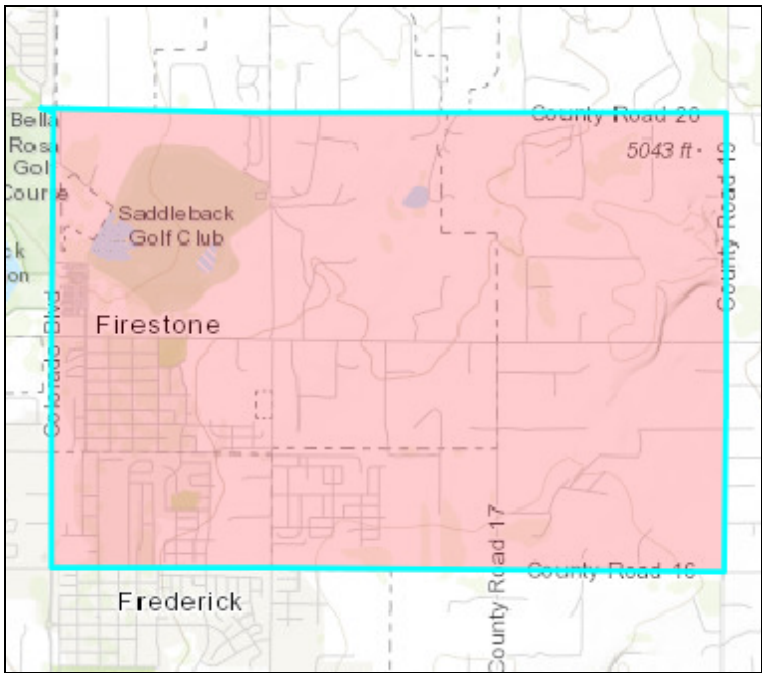
Census Block Group 081230020161

Air Quality Reg. 3 Disproportionately Impacted (DI) Community

No

Air Quality Reg. 3 Community Type

Not Disproportionately Impacted



Low-income Population	23.1%
People of Color Population	26.8%
Limited English Proficiency Population	0%
Housing Cost Burdened Population	30.4%
CO EnviroScreen Percentile Score	55.18

Environmental Justice Overview

Environmental Exposures Percentile Score 52.58

The environmental exposures score represents a community's exposure to certain environmental risks relative to the rest of the state. The score ranges from 0 to 100, with higher scores indicating higher burden. The environmental exposures score does not cover all pollutants; it is the average of data on diesel particulate matter, traffic proximity, ozone, PM 2.5, air toxics, other air pollutants, lead exposure risk, drinking water violations, and noise.

Environmental Effects Percentile Score 62.12

The environmental effects score represents how many hazardous or toxic sites are in a community relative to the rest of the state. The score ranges from 0 to 100, with a higher score indicating higher burden. The score is the average of data on proximity to mining, oil and gas operations, impaired surface waters, wastewater discharge facilities, Superfund sites, facilities that use hazardous chemicals, and facilities that generate, treat, store, or dispose of hazardous wastes.

Climate Vulnerability Percentile Score 42.61

The climate burden score represents a community's risk of drought, flood, extreme heat, and wildfire compared to the rest of the state. The score ranges from 0 to 100, the higher the score, the higher the burden.

Sensitive Populations Percentile Score 51.56

The sensitive populations score captures how at risk a community is to environmental exposures and climate impacts as it relates to health. For example, air pollution has stronger impacts on older and younger people, and people with chronic conditions such as asthma. The score ranges from 0 to 100, with a higher score being worse. The score is calculated using data on asthma hospitalization rate, cancer prevalence, diabetes prevalence, heart disease prevalence, life expectancy, low birth weight rate, mental health, population over 65, and population under 5.

Demographics Percentile Score 48.19

The demographics score represents a community's social and economic vulnerabilities. The score ranges from 0 to 100, with a higher number representing a higher vulnerability. It is calculated using data on people living with disabilities, housing cost burden, educational attainment, limited English proficiency, income, and race and ethnicity.

Pollution and Climate Indicators

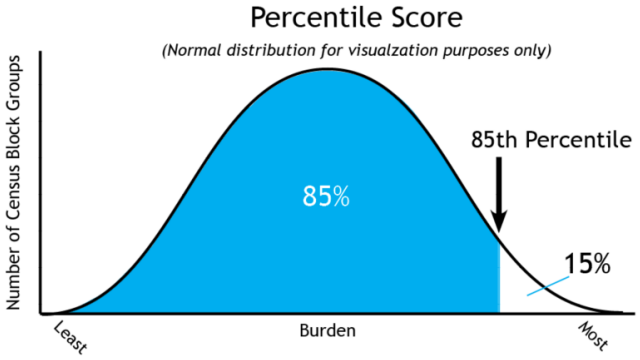
Indicator	Original Unit of Measure	Percentile
Air Toxics Emissions	distance weighted measure of estimated air toxics emissions	93.63
Diesel Particulate Matter	micrograms per cubic meter	44.37
Drinking Water Regulations	population weighted duration (in weeks) of resolved and unresolved health based violations from active community public water systems	83.49
Fine Particle Pollution (PM 2.5)	micrograms per cubic meter	91.36
Impaired Streams and Rivers	average impairment and assessment status of streams	0
Lead Exposure Risk	percentage of housing units built before 1960, as an indicator of potential exposure to lead	53.03
Noise	decibles A	26.64
Other Air Pollutants	distance weighted measure of estimated other air pollutant emissions	85.56
Ozone	parts per billion	30.24
Proximity to Hazardous Waste Facilities	distance weighted count of hazardous waste facilities within 5 km	61.47
Proximity to Mining Locations	distance weighted measure of the total number of active coal, hard rock, and construction materials mining permits	87.6
Proximity to National Priorities List Sites	distance weighted count of proposed or listed NPL sites with 5 km	37.46
Proximity to Oil and Gas	distance weighted measure of the total number of active oil and gas locations	98.13
Proximity to Risk Management Plan Sites	distance weighted count of RMP facilities within 5 km	39.1
Traffic Proximity and Volume	amount of vehicular traffic nearby, and distance from roads	12.02
Wastewater Discharge Indicator	toxic chemical concentrations in stream segments per km	0
Drought	sum of weekly total percent of an area experiencing a severe, extreme, or exceptional drought	22.93
Extreme Heat Days	average number of high heat days between May and September from 2016 to 2020	40.52
Floodplains	percentage of each geographic area where there is at least a one percent chance of flooding annually	72.25
Wildfire Risk	mean wildfire hazard potential within each geographic area as determined by the US Forest Service, 2021	83.66

Health and Social Indicators

Indicator	Orignial Unit of Measure	Percentile
Asthma Hospitalization Rate	rate of hospitalization per 100,000 people	19.65
Cancer Prevalence	percent of adults	38.21
Diabetes Prevalence	percent of adults	63.86
Heart Disease in Adults	percent of adults	70.82
Life Expectancy	years	0
Low Birth Weight	percent of singleton births	20.31
Mental Health Indicator	percent of adults	51.21
Population over 64 years of age	percent of total population	56.91
Population under 5 years of age	percent of total population	39.64
Disability	percent of total population	13.89
Housing Cost Burdened	percent of total population	52.36
Less Than High School Education	percent of total population	70.13
Linguistic Isolation	percent of total population	54.42
Low Income	percent of total population	49.24
People of Color	percent of total population	53.71

Understanding the Data

The values shown in the Pollution and Climate Indicator and Health and Social Indicator tables are percentiles. Percentiles are a way to see how one area compares to other areas in Colorado. Percentile values range from 0 - 100. A higher score indicates higher burden. Specifically, the percentile tells you the percentage of places in Colorado that have a lower score than the selected location. For example, an area with 85 percentile score for the noise indicator, ranks in the top 15% of areas impacted by noise in Colorado. That means that 85% of the other Census Block Groups in Colorado have a lower score for noise impacts.



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populations, and demographics to better understand environmental injustice and environmental health risks in Colorado. For more detailed information on the data sources used in Colorado EnviroScreen Version 1.0 see the technical documentation.

On the first page of the report, red text highlights if values for a census block group meet or exceed the criteria for definition of Disproportionately Impacted Community for Air Quality Regulation 3. On subsequent pages of the report, red text highlights indicators in the top percentiles for Colorado that may warrant additional consideration during the permitting process. The Environmental Justice Report is not intended to show individual health risk or exposure.

In the Environmental Justice Summary on the first page, values shown in red indicate a census block group that meets or exceeds the following criteria to qualify as a Disproportionately Impacted (DI) Community for Air Quality Reg 3:

- Over 40% of households are low-income (meaning they are at or below 200% of the federal poverty level),
- 40% of the population identify as people of color,
- 50% of households are housing-cost burdened (meaning they spend more than 30% of household income on housing costs), or
- 20% of the population is linguistically isolated (meaning no adults in a household speak English well).

A census block group that meets or exceeds any of these percentages is labeled as a Socioeconomically Vulnerable Community (SVC).

The CO EnviroScreen Percentile Score, which is also found on the first page of the Environmental Justice Report, is written in red if it is above the 80th percentile. A census block group with a CO EnviroScreen Score above the 80th percentile is labeled as a Cumulatively Impacted Community (CIC).

In other sections of the Environmental Justice Report, including the Environmental Justice Overview, Pollution and Climate Indicators, and Health and Social Indicators sections, indicator and component scores over the 80th percentile are also highlighted in red. The 80th percentile threshold is used in most cases to flag census block groups that have indicators and groups of indicators (components) that are in the top 20% of census block groups in Colorado. These indicators and components are flagged because they may warrant further review in the permitting process by the permit applicant and/or the Division staff reviewing the permit.

As explained on page 11 of the User Guide, for most indicators, the indicator is highlighted in red if it is above the 80th percentile to indicate that the census block group where the facility is located faces higher risks based on that indicator compared to other Colorado communities. However, less than 20% of census block groups in Colorado have oil and gas facilities or mining locations. Accordingly, all census block groups in Colorado score above the 80th percentile for proximity to these two types of facilities because even having zero facilities puts a community in the top 20%. Accordingly, the Environmental Justice Report highlights a census block group in red if it is above the 85th percentile for mining facilities and above the 90th percentile for oil and gas facilities. This ensures that only census block groups with a greater number of facilities than the statewide average of zero are highlighted on the EJ Report.

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-Show which areas in Colorado are more likely to have higher environmental health injustices.
-Identify areas in Colorado where government agencies can prioritize resources and work to reduce pollution and other sources of environmental injustice.
-Provide information to empower communities to advocate to improve public health and the environment.
-Identify areas that meet the updated definition of "Disproportionately Impacted Community" under House Bill 23-1233 adopted a definition that applies to all state agencies, including CDPHE.
-Identify areas where the Air Quality Regulation (Reg.) Number 3, which governs permitting in disproportionately impacted communities, applies.
-Identify areas that meet the prior definition of "Disproportionately Impacted Community" under the Colorado Environmental Justice Act (HB21-1266).

Colorado EnviroScreen does not:

-Define a healthy or unhealthy environment.
-Establish causal associations between environmental risks and health.
-Define all areas that may be affected by environmental injustice or specific environmental risks.
-Provide information about an individual person's health status or environment.
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-Tell us about smaller areas within a census block group that may be more vulnerable to environmental exposures than other areas.
-Provide information about non-human health or ecosystem risks.

Additional Resources

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COLORADO
Air Pollution Control Division
Department of Public Health & Environment

Air Quality Regulation (Reg.) 3

Environmental Justice Report

Applicant Information

Company Name: Kerr-McGee

Facility Name: Sprout - Clover

Plant AIRS ID Number:

Permit Type: OGDP

Permit Number:

Facility location used for generating the report: 40.114 , -104.9122

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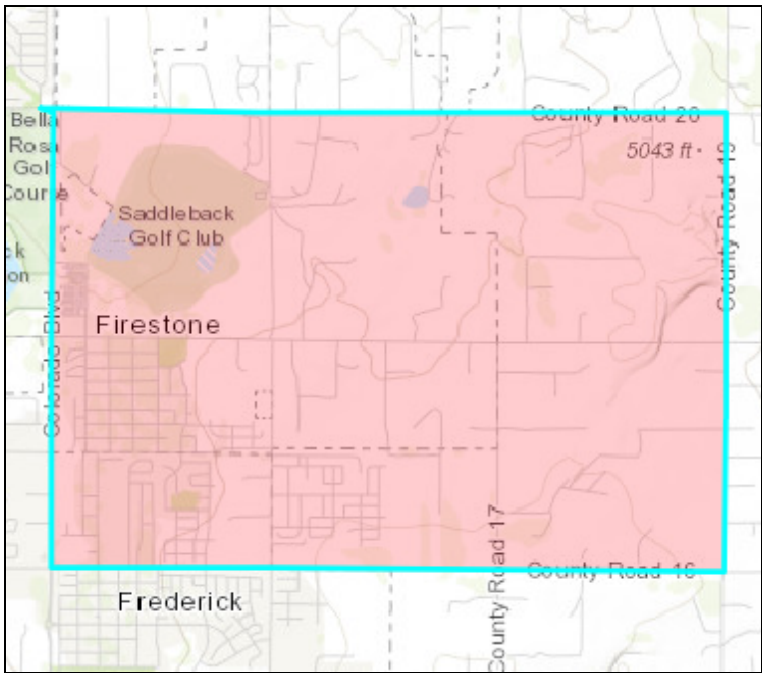

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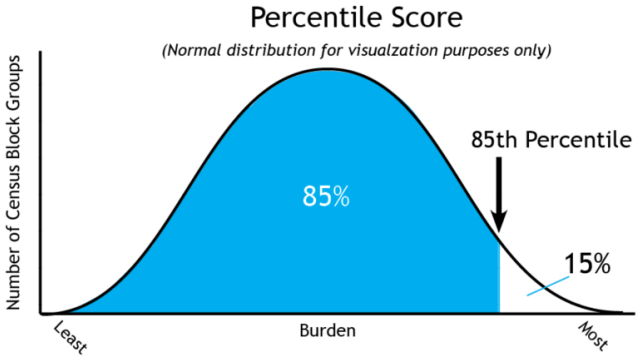

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Air Quality Regulation (Reg.) 3

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Permit Number:

Facility location used for generating the report: 40.191 , -104.9337

Environmental Justice Summary

Weld County

Census Block Group 081230021033

Air Quality Reg. 3 Disproportionately Impacted (DI) Community

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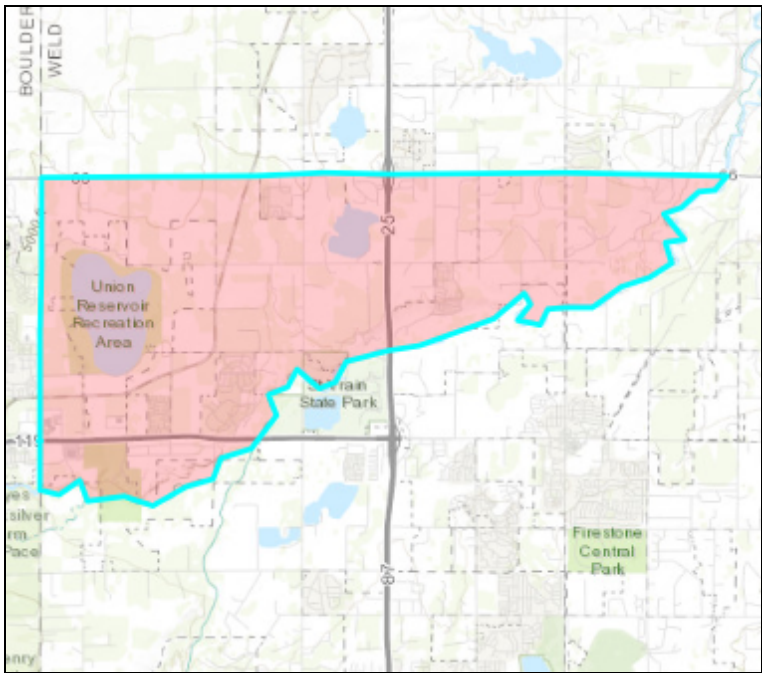
Air Quality Reg. 3 Community Type

Not Disproportionately Impacted



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Housing Cost Burdened Population	16.2%
CO EnviroScreen Percentile Score	45.53

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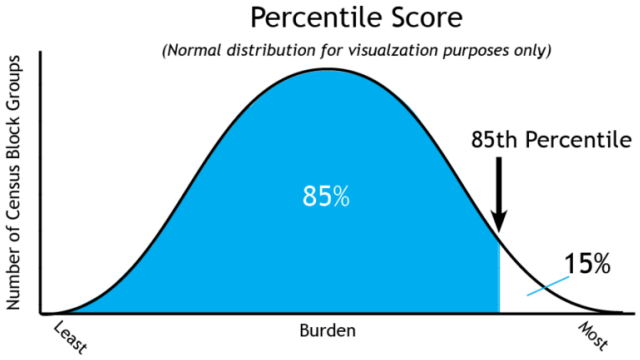
Extreme Heat Days	average number of high heat days between May and September from 2016 to 2020	86.01
Floodplains	percentage of each geographic area where there is at least a one percent chance of flooding annually	83.64
Wildfire Risk	mean wildfire hazard potential within each geographic area as determined by the US Forest Service, 2021	65.97

Health and Social Indicators

Indicator	Orignial Unit of Measure	Percentile
Asthma Hospitalization Rate	rate of hospitalization per 100,000 people	40.09
Cancer Prevalence	percent of adults	67.74
Diabetes Prevalence	percent of adults	36
Heart Disease in Adults	percent of adults	88.93
Life Expectancy	years	16.39
Low Birth Weight	percent of singleton births	9.02
Mental Health Indicator	percent of adults	45.25
Population over 64 years of age	percent of total population	32.73
Population under 5 years of age	percent of total population	67.78
Disability	percent of total population	27.07
Housing Cost Burdened	percent of total population	11.62
Less Than High School Education	percent of total population	62
Linguistic Isolation	percent of total population	54.42
Low Income	percent of total population	15.24
People of Color	percent of total population	46.06

Understanding the Data

The values shown in the Pollution and Climate Indicator and Health and Social Indicator tables are percentiles. Percentiles are a way to see how one area compares to other areas in Colorado. Percentile values range from 0 - 100. A higher score indicates higher burden. Specifically, the percentile tells you the percentage of places in Colorado that have a lower score than the selected location. For example, an area with 85 percentile score for the noise indicator, ranks in the top 15% of areas impacted by noise in Colorado. That means that 85% of the other Census Block Groups in Colorado have a lower score for noise impacts.



The data in the report comes from Colorado EnviroScreen version 1.0. Developed in 2022 by CDPHE and Colorado State University, EnviroScreen maps the overlap of environmental exposures and effects, climate vulnerability, sensitive

populations, and demographics to better understand environmental injustice and environmental health risks in Colorado. For more detailed information on the data sources used in Colorado EnviroScreen Version 1.0 see the technical documentation.

On the first page of the report, red text highlights if values for a census block group meet or exceed the criteria for definition of Disproportionately Impacted Community for Air Quality Regulation 3. On subsequent pages of the report, red text highlights indicators in the top percentiles for Colorado that may warrant additional consideration during the permitting process. The Environmental Justice Report is not intended to show individual health risk or exposure.

In the Environmental Justice Summary on the first page, values shown in red indicate a census block group that meets or exceeds the following criteria to qualify as a Disproportionately Impacted (DI) Community for Air Quality Reg 3:

- Over 40% of households are low-income (meaning they are at or below 200% of the federal poverty level),
- 40% of the population identify as people of color,
- 50% of households are housing-cost burdened (meaning they spend more than 30% of household income on housing costs), or
- 20% of the population is linguistically isolated (meaning no adults in a household speak English well).

A census block group that meets or exceeds any of these percentages is labeled as a Socioeconomically Vulnerable Community (SVC).

The CO EnviroScreen Percentile Score, which is also found on the first page of the Environmental Justice Report, is written in red if it is above the 80th percentile. A census block group with a CO EnviroScreen Score above the 80th percentile is labeled as a Cumulatively Impacted Community (CIC).

In other sections of the Environmental Justice Report, including the Environmental Justice Overview, Pollution and Climate Indicators, and Health and Social Indicators sections, indicator and component scores over the 80th percentile are also highlighted in red. The 80th percentile threshold is used in most cases to flag census block groups that have indicators and groups of indicators (components) that are in the top 20% of census block groups in Colorado. These indicators and components are flagged because they may warrant further review in the permitting process by the permit applicant and/or the Division staff reviewing the permit.

As explained on page 11 of the User Guide, for most indicators, the indicator is highlighted in red if it is above the 80th percentile to indicate that the census block group where the facility is located faces higher risks based on that indicator compared to other Colorado communities. However, less than 20% of census block groups in Colorado have oil and gas facilities or mining locations. Accordingly, all census block groups in Colorado score above the 80th percentile for proximity to these two types of facilities because even having zero facilities puts a community in the top 20%. Accordingly, the Environmental Justice Report highlights a census block group in red if it is above the 85th percentile for mining facilities and above the 90th percentile for oil and gas facilities. This ensures that only census block groups with a greater number of facilities than the statewide average of zero are highlighted on the EJ Report.

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Colorado EnviroScreen does:

-Show which areas in Colorado are more likely to have higher environmental health injustices.
-Identify areas in Colorado where government agencies can prioritize resources and work to reduce pollution and other sources of environmental injustice.
-Provide information to empower communities to advocate to improve public health and the environment.
-Identify areas that meet the updated definition of "Disproportionately Impacted Community" under House Bill 23-1233 adopted a definition that applies to all state agencies, including CDPHE.
-Identify areas where the Air Quality Regulation (Reg.) Number 3, which governs permitting in disproportionately impacted communities, applies.
-Identify areas that meet the prior definition of "Disproportionately Impacted Community" under the Colorado Environmental Justice Act (HB21-1266).

Colorado EnviroScreen does not:

-Define a healthy or unhealthy environment.
-Establish causal associations between environmental risks and health.
-Define all areas that may be affected by environmental injustice or specific environmental risks.
-Provide information about an individual person's health status or environment.
-Take all environmental exposures into account.
-Tell us about smaller areas within a census block group that may be more vulnerable to environmental exposures than other areas.
-Provide information about non-human health or ecosystem risks.

Additional Resources

Frequently Asked Questions: Environmental Justice Report Tool for Air Quality Regulation 3

Air Pollution Control Division's Small Business Assistance Program

CDPHE Environmental Justice Program

Colorado EnviroScreen Version 1.0 Reports, Guides, and Resources Folder

FORM 2A Rev 05/22

State of Colorado
Energy & Carbon Management Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109

Document Number: 403278400

Date Received: 09/13/2023

Oil and Gas Location Assessment

This Oil and Gas Location Assessment is to be submitted to the COGCC for approval prior to any ground disturbance activity associated with oil and gas operations. Approval of this Oil and Gas Location Assessment will allow for the construction of the below specified Location; however, it does not supersede any land use rules applied by the local land use authority. Please see the COGCC website at https://cogcc.state.co.us/ for all accompanying information pertinent this Oil and Gas Location Assessment.

Location ID:
OGDP ID:
Expiration Date:

[X] New Location [ ] Refile [ ] Amend Existing Location # _____

If this Location assessment is a component of an Oil and Gas Development Plan (OGDP) application, enter the OGDP docket number(s).

Docket Number	OGDP ID	OGDP Name
230900284		

If this Location assessment is part of an approved Oil and Gas Development Plan, enter the OGDP ID number(s).

<No existing OGDP number provided>

CONSULTATION

[ ] This location is included in a Comprehensive Area Plan (CAP). CAP ID # _____
[ ] This Location or its associated new access road, utility, or Pipeline corridor meets Rule 309.e.(2).A, B, or C.
[ ] This Location is within 2,640 feet of a GUDI or Type III Well per Rule 411.b.(4).
[ ] This Location includes a Rule 309.e.(2).E variance request.
[ ] This location includes a Rule 309.f.(1).A.ii. variance request.

Operator

Operator Number: 47120
Name: KERR MCGEE OIL & GAS ONSHORE LP
Address: P O BOX 173779
City: DENVER State: CO Zip: 80217-3779

Contact Information

Name: Rachel Friedman
Phone: (720) 9296564
Fax: ( )
email: djregulatory@oxy.com

FINANCIAL ASSURANCE FOR THIS LOCATION (check all that apply)

[X] Plugging, Abandonment, and Reclamation 20010124
[ ] Centralized E&P Waste Management Facility _____
[ ] Gas Gathering, Gas Processing, and Underground Gas Storage Facilities _____
[ ] Surface Owner Protection Bond. _____

Federal Financial Assurance

[ ] In checking this box, the Operator certifies that it has provided or will provide at least this amount of Financial Assurance to the federal government for one or more Wells on this Location.

Amount of Federal Financial Assurance $ _____

LOCATION IDENTIFICATION

Name: ALFALFA Number: 8-20HZ

Provide the location description and the latitude and longitude of a single point near the center of the Working Pad Surface as a reference for this Location.

QuarterQuarter: SENE Section: 20 Township: 2N Range: 67W Meridian: 6 Ground Elevation: 4975

Latitude: 40.124550 Longitude: -104.908943

GPS Quality Value: 1.3 Type of GPS Quality Value: PDOP Date of Measurement: 02/10/2023

RELATED REMOTE LOCATIONS

(Enter as many Related Locations as necessary. Enter the Form 2A document # only if there is no established COGCC Location ID#)

This proposed Oil and Gas Location is:	LOCATION ID #	FORM 2A DOC #
☐		

RELEVANT LOCAL GOVERNMENT SITING INFORMATION

County: WELD Municipality: N/A

Per § 34-60-106 (1)(f)(I)(A), the following questions pertain to the "Relevant Local Government approval of the siting of the proposed oil and gas location."

This proposed Oil and Gas Location is in an area designated as one of State interest and subject to the requirements of § 24-65.1-108, C.R.S. Yes

Does the Relevant Local Government regulate the siting of Oil and Gas Locations, with respect to this location? Yes

A siting permit application has been submitted to the Relevant Local Government for this proposed Oil and Gas Location: Yes

Date Relevant Local Government permit application submitted: 10/09/2023

Current status or disposition of the Relevant Local Government permit application for this proposed Oil and Gas Location: Approved

Status/disposition date: 01/11/2024

If Relevant Local Government permit has been approved or denied, attach final decision document(s).
Provide the contact information for the Relevant Local Government point of contact for the local permit associated with this proposed Oil and Gas Location:

Contact Name: Stephanie Frederick Contact Phone: 970-400-3581

Contact Email: sfrederick@weldgov.com

PROXIMATE LOCAL GOVERNMENT INFORMATION

For every Proximate Local Government (PLG) associated with this proposed Oil and Gas Location, provide the PLG's point of contact and their contact information.

Type of Proximate Govt	County	Municipality	Contact Name	Contact Phone	Contact Email
Municipality		Firestone	Todd Bjerkas	303-531-6276	tbjerkaas@firestoneco.gov

FEDERAL PERMIT INFORMATION

A Federal drilling permit (or related siting application) has been submitted for this proposed Oil and Gas Location: No

Date submitted:

Current status or disposition of the Federal drilling permit (or related siting application) for this proposed Oil and Gas Location:

Status/disposition Date:

If Federal agency permit has been approved or denied, attach the final decision document(s).
Provide the contact information of the Federal point of contact for the Federal permit associated with this proposed Oil and Gas Location.

Contact Name: Contact Phone:

Contact Email: Field Office:

Additional explanation of local and/or federal process:

RELEVANT LOCAL GOVERNMENT OR FEDERAL PRE-APPLICATION CONSULTATION

Complete this section for any pre-application consultation related to this proposed Oil and Gas Location that occurred prior to the submission of this Form 2A. If a pre-application Formal Consultation Process occurred, attach a Consultation Summary.

Did a pre-application Formal Consultation Process occur with the Relevant Local Government per Rule 301.f.(3)? Yes

Date of local government consultation: 02/01/2023

Did a pre-application Formal Consultation Process occur with the Federal land manager per Rule 301.f.(3)? No

Date of federal consultation:

Was an ALA that satisfies Rule 304.b.(2).C (or substantially equivalent information per Rule 304.e) developed during a federal or local government permit application process? If yes, attach the ALA to the Form 2A. No

ALA APPLICABILITY AND CRITERIA

Complete this section for any pre-application consultation related to this proposed Oil and Gas Location that occurred prior to the submission of this Form 2A. If a pre-application Formal Consultation Process occurred, attach a Consultation Summary.

Does the proposed Oil and Gas Location meet any of the criteria listed in Rule 304.b.(2)B? No

If YES, indicate by checking the box for every Rule 304.b.(2).B criterion met by this proposed Location, and attach an ALA. See Rule 304.b.(2).B.i-x for full text of criteria.

- ☐ i. WPS < 2,000 feet from RBU/HOBU
- ☐ ii. WPS < 2,000 feet from School/Child Care Center
- ☐ iii. WPS < 1,500 feet from DOAA
- ☐ iv. WPS < 2,000 feet from jurisdictional boundary and PLG objects/requests ALA
- ☐ v. WPS within a Floodplain
- ☐ vi.aa. WPS within a surface water supply area
- ☐ vi.bb. WPS < 2,640 feet from Type III or GUDI well
- ☐ vii. WPS within/immediately upgradient of wetland/riparian corridor
- ☐ viii. WPS within HPH and CPW did not waive
- ☐ ix. Operator using Surface bond
- ☐ x. WPS < 2,000 feet from RBU/HOBU/School within a DIC

Is the proposed Oil and Gas Location within the exterior boundaries of the Southern Ute Indian Reservation, and the Tribe objects to the Location or requests an ALA? If YES, attach an ALA to the Form 2A. No

Operator requests the Director waive the ALA requirement per Rule 304.b.(2).A.i: ☐

Provide an explanation for the waiver request, and attach supporting information (if necessary).

ALTERNATIVE LOCATIONS DASHBOARD

List every alternative location reviewed and included in the ALA. Provide a latitude and longitude for the approximate center of the alternative location, all Rule 304.b.(2).B Criteria met, if a variance would be required to permit the location, and a brief comment on the key points of the alternative location.

304.b.(2).B.i-x Criteria Met:

< No row provided >

SURFACE & MINERAL OWNERSHIP

Surface Owner Info:

Name: ANADARKO E&P ONSHORE LLC Phone: 7209296000

Address: 1099 18th St. Fax:

Address: Suite 700 Email: thomas_crouch@oxy.com

City: Denver State: CO Zip: 80202

Surface Owner at this Oil and Gas Location: [X] Fee [ ] State [ ] Federal [ ] Indian

Check only one:

[X] The Operator/Applicant is the surface owner.

[ ] The Operator has a signed Surface Use Agreement for this Location – attach SUA.

[ ] All operations on this Oil & Gas Location will develop the minerals beneath the Location, and the surface owner owns the minerals beneath this Location and is committed to an oil and gas lease – attach lease map or provide lease description.

[ ] All operations on this Oil & Gas Location will develop the minerals beneath the Location, and the Operator intends to use a surface bond per Rule 703 to secure access to this Location – attach lease map or provide lease description.

Surface Owner protection Financial Assurance type: N/A Surety ID Number:

Mineral Owner beneath this Oil and Gas Location: [X] Fee [ ] State [ ] Federal [ ] Indian

Minerals beneath this Oil and Gas Location will be developed from or produced to this Oil and Gas Location: No

Lease description if necessary:

SITE EQUIPMENT LIST

Indicate the number and type of major equipment components planned for use on this Oil and Gas Location:

Wells	13	Oil Tanks	0	Condensate Tanks	0	Water Tanks	0	Buried Produced Water Vaults	0
Drilling Pits	0	Production Pits	0	Special Purpose Pits	0	Multi-Well Pits	0	Modular Large Volume Tank	1
Pump Jacks	13	Separators	7	Injection Pumps	0	Heater-Treaters	0	Gas Compressors	0
Gas or Diesel Motors	0	Electric Motors	0	Electric Generators	0	Fuel Tanks	0	LACT Unit	1
Dehydrator Units	0	Vapor Recovery Unit	2	VOC Combustor	0	Flare	0	Enclosed Combustion Devices	0
Meter/Sales Building	2	Pigging Station	0			Vapor Recovery Towers	0		

OTHER PERMANENT EQUIPMENT

Permanent Equipment Type	Number
CHEMICAL TOTES	3
AIR COMPRESSORS	1
ELECTRICAL BOXES	2
Maintenance Pump	1
E HOUSES	1
Well manifold	15
FG SCRUBBERS	1
COMMUNICATION TOWERS	1
Oil Cooler	1
Water Pump	2

OTHER TEMPORARY EQUIPMENT

Temporary Equipment Type	Number
PURGE FLARES	3
Sand Tank	4
PROPANE TANKS	1
GENERATOR	1
Sand Trap	3
ENCLOSED COMBUSTION DEVICES	1

GAS GATHERING COMMITMENT

Operator commits to connecting to a gathering system by the Commencement of Production Operations? Yes

If the answer is NO, a Gas Capture Plan consistent with the requirements of Rule 903.e MUST be attached on the Plans tab.

FLOWLINE DESCRIPTION

Per Rule 304.b.(6), provide a description of all onsite and off-location oil, gas, and/or water flowlines.

Flowlines - 2"-3" size (outside diameter), constructed of carbon steel.
Oil, gas and water pipelines will be used at this location. Water for completions operations will be brought to the location through temporary water lines using KMG's Water on Demand system. The oil and gas pipelines will be constructed by a 3rd party midstream company.

CULTURAL DISTANCE AND DIRECTION

Provide the distance and direction to the nearest cultural feature as measured from the edge of the Working Pad Surface.

	Distance		Direction	Rule 604.b Conditions Satisfied (check all that apply): 604.b. (1)	604.b. (2)	604.b. (3)	Details of Condition(s)	604.b. (4)
Building:	1340	Feet	N					
Residential Building Unit (RBU):	2005	Feet	N	☐	☐	☐		☐
High Occupancy Building Unit(HOBU)	5280	Feet	SW	☐	☐	☐		☐
Designated Outside Activity Area:	5280	Feet	W					
Public Road:	2114	Feet	N					
Above Ground Utility:	316	Feet	NE					
Railroad:	5280	Feet	E					
Property Line:	25	Feet	S					
School Facility:	5280	Feet	SW					
Child Care Center:	5280	Feet	NW					
Disproportionately Impacted (DI) Community:	5280	Feet	E					
RBU, HOBU, or School Facility within a DI Community.	5280	Feet	E	☐	☐	☐		☐

RULE 604.a.(2). EXCEPTION LOCATION REQUEST

☐ Operator requests an Exception Location Request from Rule 604.a.(2) [well is less than 150 feet from a property line]. Exception Location Request Letter and Waiver signed by offset Surface Owner(s) must be attached.

CULTURAL FEATURE INFORMATION REQUIRED BY RULE 304.b.(3).B.

Provide the number of each Cultural feature identified within the following distances, as measured from the Working Pad Surface:

0-500 feet **501-1,000 feet** **1,001-2,000 feet**

Building Units	0	0	0
Residential Building Units	0	0	0
High Occupancy Building Units	0	0	0
School Properties	0	0	0
School Facilities	0	0	0
Designated Outside Activity Areas	0	0	0

CONSTRUCTION

Size of disturbed area during construction in acres: 12.50

Size of location after interim reclamation in acres: 4.13

Estimated post-construction ground elevation: 4975

DRILLING PROGRAM

Will a closed-loop drilling system be used? Yes

Is H2S gas reasonably expected to be encountered during drilling operations at concentrations greater than or equal to 100 ppm? No If YES, attach H2S Drilling Operations Plan.

Will salt sections be encountered during drilling: No

Will salt based (>15,000 ppm Cl) drilling fluids be used? No

Will oil based drilling fluids be used? Yes

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Method: Commercial Disposal

Cutting Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

Please see attached Waste Management Plan
Multiple E&P waste management facilities are used - they are outlined in the Waste Management Plan

Beneficial reuse or land application plan submitted? Yes

Reuse Facility ID: _____ or Document Number: _____

Centralized E&P Waste Management Facility ID, if applicable: 456644

CURRENT LAND USE

Current Land Use: check all that apply per Rule 304.b.(9).

Crop Land: ☐ Irrigated ☒ Non-Irrigated ☐ Conservation Reserve Program (CRP)

Non-Crop Land: ☐ Rangeland ☐ Forestry ☐ Recreation ☐ Other

Subdivided: ☐ Industrial ☐ Commercial ☐ Residential

Describe the current land use:

AGRICULTURE-DRYLAND CROP

Describe the Relevant Local Government's land use or zoning designation:

AGRICULTURE

Describe any applicable Federal land use designation:

N/A

FINAL LAND USE

Final Land Use: check all that apply per Rule 304.b.(9).

Crop Land:	☐ Irrigated	☒ Non-Irrigated	☐ Conservation Reserve Program (CRP)	
Non-Crop Land:	☐ Rangeland	☐ Forestry	☐ Recreation	☐ Other
Subdivided:	☐ Industrial	☐ Commercial	☐ Residential	

REFERENCE AREA INFORMATION

If Final Land Use includes Non-Crop Land (as checked above), the following information is required:

Describe landowner's designated final land use(s):

N/A

Reference Area Latitude: _____ Reference Area Latitude: _____

Provide a list of plant communities and dominant vegetation found in the Reference Area.

< No row provided >

Noxious weeds present: _____

SOILS

List all soil map units that occur within the maximum extent of the proposed Oil and Gas Location. Attach the National Resource Conservation Service (NRCS) report showing the "Map Unit Description" listing the typical vertical soil profile(s). This data is to be used when segregating topsoil.

The required information can be obtained from the NRCS website at https://www.nrcs.usda.gov/wps/portal/nrcs/surveylist/soils/survey/state/ or from the COGCC website GIS Online map page. Instructions are provided within the COGCC website help section.

NRCS Map Unit Name: 44-Olney loamy sand, 1 to 3 percent slopes

NRCS Map Unit Name: 72-Vona loamy sand, 0 to 3 percent slopes

NRCS Map Unit Name: 73 - Vona loamy sand 3 to 5 percent slopes & 70-Valent sand 3 to 9 percent slopes

GROUNDWATER AND WATER WELL INFORMATION

Provide the distance and direction, as measured from the Working Pad Surface, to the nearest:

water well: 610 Feet E

Spring or Seep: 5280 Feet N

Estimated depth to shallowest groundwater that can be encountered at this Oil and Gas Location: 21 Feet

Basis for estimated depth to and description of shallowest groundwater occurrence:

existing well permit number 306439- SWL 6.9' Elevation 4960
4960 – 6.9 = 4953.1
4974-4953.1 = 20.9

SURFACE WATER AND WETLANDS

Provide the distance and direction to the nearest downgradient surface Waters of the State, as defined 1800 Feet NW

in the 100-Series Rules, measured from the Working Pad Surface:

If less than 2,640 feet, is the Waters of the State identified above within 15 stream miles upstream of a Public Water System intake? No

Provide the distance and direction to the nearest downgradient wetland, measured from the Working Pad Surface: 511 Feet W

Provide a description of the nearest downgradient surface Waters of the State:

DITCH

If the proposed Oil and Gas Location is within a Rule 411.a Surface Water Supply Area buffer zone, select the buffer zone type: _____

Public Water System Administrator - Contact Name _____ Email _____

If the proposed Oil and Gas Location is within a Rule 411.b GUDI/Type III buffer zone, select the buffer zone type: _____

Public Water System Administrator - Contact Name _____ Email _____

Is a U.S. Army Corps of Engineers Section 404 permit required for the proposed Oil and Gas Location, access road, or associated pipeline corridor? No

If a U.S. Army Corps of Engineers Section 404 permit is required, provide the permit status, and permit number if available:

Is the Location within a Floodplain? No Floodplain Data Sources Reviewed (check all that apply):

- [X] Federal (FEMA)
- [ ] State
- [X] County
- [ ] Local
- [ ] Other

Does this proposed Oil and Gas Location lie within a Sensitive Area for water resources, as defined in the 100-Series Rules? Yes

CONSULTATION, WAIVERS, AND EXCEPTIONS

When Rule 309.e.(2) Consultation must occur, check all that apply:

- [ ] This location is included in a Wildlife Mitigation Plan
- [ ] This Oil and Gas Location or associated new access road, utility, or pipeline corridor falls within federally designated critical habitat or an area with a known occurrence for a federal or Colorado threatened or endangered species. Provide description in Comments section of Submit tab.
- [ ] This Oil and Gas Location or associated new access road, utility, or pipeline corridor falls within an existing conservation easement established wholly or partly for wildlife habitat. Provide description in Comments section of Submit tab.

When Rule 309.e.(3) Consultation is not required, check all that apply:

- [ ] This Oil and Gas Location has been included in a previously approved, applicable Wildlife Protection Plan.
- [ ] This Oil and Gas Location has been included in a previously approved, applicable Wildlife Mitigation Plan.
- [ ] This Oil and Gas Location has been included in a previously approved, applicable conservation plan.

Pre-application Consultation:

- [ ] A pre-application consultation with CPW, regarding this Oil and Gas Location, occurred on: _____

CPW Waivers and Exceptions (check all that apply and attach all CPW waivers to this Form 2A):

- [ ] The applicant has obtained a Rule 304.b.(2).B.viii CPW waiver for the requirement to complete an ALA.
- [ ] The applicant has obtained a Rule 309.e.(2).G CPW waiver and consultation is not required.
- [ ] The applicant has obtained a Rule 309.e.(5).D.i CPW waiver and is requesting an exception from Rule 1202.c.(1).R.
- [ ] The applicant has obtained a Rule 309.e.(5).D.ii CPW waiver and is requesting an exception from Rule 1202.c.(1).S.
- [ ] The applicant has obtained a Rule 309.e.(5).D.iii CPW waiver of Rule 1202.c.(1).T.

☐ The applicant has obtained a Rule 309.e.(5).D.iv CPW waiver and is requesting an exception from Rule 1202.c.(1) in accordance with an approved CAP.

☐ The applicant has obtained a Rule 1202.a CPW waiver.

☐ The applicant has obtained a Rule 1202.b CPW waiver.

☐ In accordance with Rule 1203.a.(3), the applicant requests an exception from compensatory mitigation

Rule(s): _____

HIGH PRIORITY HABITAT AND COMPENSATORY MITIGATION

This Oil and Gas Location, associated access roads, utility, or Pipeline corridor falls wholly or partially within the following High Priority Habitats (Note: dropdown options are abbreviated - see Rule 1202 for full rule text):

< No row provided >

The following questions are for Oil and Gas Locations that cause the density to exceed one Oil and Gas Location per square mile in Rule 1202.d High Priority Habitat:

Direct Impacts:

Is Compensatory Mitigation required per Rule 1203.a for this Oil and Gas Location? No

Is a Compensatory Mitigation Plan proposed to address direct impacts for this Oil and Gas Location? No

Have all Compensatory Mitigation Plans been approved for this Location? No

If not, what is the current status of each Plan?

N/A

Is a Compensatory Mitigation Fee proposed for this Oil and Gas Location? No

Direct impact habitat mitigation fee amount: $ _____

Indirect Impacts:

Is Compensatory Mitigation required per Rule 1203.d for this Oil and Gas Location? No

Is a Compensatory Mitigation Plan proposed to address indirect impacts for this Oil and Gas Location? No

Have all Compensatory Mitigation Plans been approved for this Location? No

If not, what is the current status of each Plan?

N/A

Is a Compensatory Mitigation Fee proposed for this Oil and Gas Location? No

Indirect impact habitat mitigation fee amount: $ _____

Operator Proposed Wildlife BMPs

No BMP

CPW Proposed Wildlife BMPs

No BMP

AIR QUALITY MONITORING PROGRAM

Will the Operator install and administer an air quality monitoring program at this Location? Yes

Operator Proposed BMPs

No BMP

CDPHE Proposed COAs OR BMPs

No BMP

PLANS

Total Plans Uploaded: 16

- [ ] (1) Emergency Spill Response Program consistent with the requirements of Rules 411.a.(4).B, 411.b.(5).B, & 602.j
- [X] (2) Noise Mitigation Plan consistent with the requirements of Rule 423.a
- [X] (3) Light Mitigation Plan consistent with the requirements of Rule 424.a
- [X] (4) Odor Mitigation Plan consistent with the requirements of Rule 426.a
- [X] (5) Dust Mitigation Plan consistent with the requirements of Rule 427.a
- [X] (6) Transportation Plan
- [X] (7) Operations Safety Management Program consistent with the requirements of Rule 602.d
- [X] (8) Emergency Response Plan consistent with the requirements of Rule 602.j
- [ ] (9) Flood Shut-In Plan consistent with the requirements of Rule 421.b.(1)
- [ ] (10) Hydrogen Sulfide Drilling Operations Plan consistent with the requirements of Rule 612.d
- [X] (11) Waste Management Plan consistent with the requirements of Rule 905.a.(4)
- [ ] (12) Gas Capture Plan consistent with the requirements of Rule 903.e
- [X] (13) Fluid Leak Detection Plan
- [X] (14) Topsoil Protection Plan consistent with the requirements of Rule 1002.c
- [X] (15) Stormwater Management Plan consistent with the requirements of Rule 1002.f
- [X] (16) Interim Reclamation Plan consistent with the requirements of Rule 1003
- [X] (17) Wildlife Plan consistent with the requirements of Rule 1201
- [X] (18) Water Plan
- [X] (19) Cumulative Impacts Plan
- [ ] (20) Community Outreach Plan
- [X] (21) Geologic Hazard Plan

VARIANCE REQUESTS

Check all that apply:

- [ ] This proposed Oil and Gas Location requires the approval of a Rule 502.a variance from COGCC Rule or Commission Order number: _____

ALL exceptions and variances require attached Request Letter(s). Refer to applicable rule for additional required attachments (e.g. waivers, certifications, SUAs).

RULE 304.d LESSER IMPACT AREA EXEMPTION REQUESTS

Check the boxes below for all Exemptions being requested. Lesser Impact Area Exemption Request must be attached, and will include all requested exemptions.

- [ ] 304.b.(1). Local Government Siting Information
- [ ] 304.b.(2). Alternative Location Analysis
- [ ] 304.b.(3). Cultural Distances
- [ ] 304.b.(4). Location Pictures
- [ ] 304.b.(5). Site Equipment List
- [ ] 304.b.(6). Flowline Descriptions
- [ ] 304.b.(7). Drawings
- [ ] 304.b.(8). Geographic Information System (GIS) Data
- [ ] 304.b.(9). Land Use Description
- [ ] 304.b.(10). NRCS Map Unit Description
- [ ] 304.b.(11). Best Management Practices
- [ ] 304.b.(12). Surface Owner Information
- [ ] 304.b.(13). Proximate Local Government
- [ ] 304.b.(14). Wetlands
- [ ] 304.b.(15). Schools and Child Care Centers
- [ ] 304.c.(1). Emergency Spill Response Program
- [ ] 304.c.(2). Noise Mitigation Plan
- [ ] 304.c.(3). Light Mitigation Plan
- [ ] 304.c.(4). Odor Mitigation Plan
- [ ] 304.c.(5). Dust Mitigation Plan
- [ ] 304.c.(6). Transportation Plan
- [ ] 304.c.(7). Operations Safety Management Program
- [ ] 304.c.(8). Emergency Response Plan
- [ ] 304.c.(9). Flood Shut-In Plan
- [ ] 304.c.(10). Hydrogen Sulfide Drilling Operations Plan
- [ ] 304.c.(11). Waste Management Plan
- [ ] 304.c.(12). Gas Capture Plan
- [ ] 304.c.(13). Fluid Leak Detection Plan
- [ ] 304.c.(14). Topsoil Protection Plan
- [ ] 304.c.(15). Stormwater Management Plan
- [ ] 304.c.(16). Interim Reclamation Plan
- [ ] 304.c.(17). Wildlife Plan
- [ ] 304.c.(18). Water Plan
- [ ] 304.c.(19). Cumulative Impacts Plan
- [ ] 304.c.(20). Community Outreach Plan
- [ ] 304.c.(21). Geologic Hazard Plan

OPERATOR COMMENTS AND SUBMITTAL

Comments

A Weld County 1041 WOGLA was submitted in association with this pad.
This location is not proposed within 2,000 feet of a Residential Building Unit, High Occupancy Building Unit, or School Facility located within a Disproportionately Impacted Community, a Rule 304.c.(20) Community Outreach Plan is not required. KMOG's "Community Consultation Plan" attached as "Other" is intended to provide supplemental information regarding efforts on community outreach and communication.
A signed EAP is included with this permit
KMOG`s general Air Monitoring Plan has been approved by the CDPHE and is attached to the 2B. A site-specific Air Monitoring Plan for this location will be submitted to the ECMC and CDPHE for approval of air monitor locations prior to operations.
Flowlines: Flow lines will flow to the production facility location. During production, flow direction in the flow lines is from the wellhead to the production facility. Flow lines will be constructed from steel pipe, buried, and will equal the distance between the well heads and the production facility.
Gas custody transfer will occur at the custody transfer meter located on the proposed production facility location. Oil custody transfer will occur at the LACT Unit located on the proposed production facility location.
Gas lift lines are also occasionally installed (one per well) from the well head to the production facility. During operation flow direction in the gas lift lines will be from the production facility to the well head. The size of the gas lift lines is typically 2". Gas lift lines will be constructed from steel pipe, buried, and will equal the distance between the well heads and the tank battery.
Air Supply Lines: Compressed air supply lines will also be installed from the well head to the production facility. During operation flow direction in the supply lines will be from the production facility to the well head. The size of the supply lines is typically 1". Supply lines will be constructed from steel pipe, buried, and will equal the distance between the well heads and the production facility.
KMOG is proposing one 25,000 BBL MVLT for this location – 36 feet tall with 70 foot diameter. The proposed manufacturer and vendor is Shalestone Resources. The MLVT is approximately 2,485 feet from the nearest RBU and is a temporary piece of equipment (on location for approximately 2 months). Please see additional mitigation measures in the BMP section.
An attachment listed as "other" is included and outlines KMOG's best management practices that are either generally recommended by CDPHE or are not included in any of the attached plans. These are also on the Operator BMPs tab.

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.
Signed: _____ Date: 09/13/2023 Email: rachel_friedman@oxy.com

Print Name: Rachel Friedman Title: Geological Advisor

Based on the information provided herein, this Oil and Gas Location Assessment complies with COGCC Rules, applicable orders, and SB 19-181 and is hereby approved.

COGCC Approved: _____ **Director of COGCC** Date: _____

Conditions Of Approval

All representations, stipulations and conditions of approval stated in this Form 2A for this location shall constitute representations, stipulations and conditions of approval for any and all subsequent operations on the location unless this Form 2A is modified by Sundry Notice, Form 4 or an Amended Form 2A.

COA Type	Description
0 COA	

Best Management Practices

No	BMP/COA Type	Description
1	Pre-Construction	An environmental assessment will be conducted immediately prior to pad construction, drilling, and completion operations. `
2	Traffic control	KMOG will upgrade an existing access road off of WCR 18 to access the location for drilling, completions, and production operations, including maintenance of equipment. The road will be properly constructed and maintained to accommodate for emergency vehicle access. `

3	General Housekeeping	All loadlines shall be bullplugged or capped. `
4	General Housekeeping	Construction Phase: • During construction of all phases, KMOG will only conduct day light operation and there will be no nighttime operations that require lighting. • Exterior lighting shall be directed away from residential and other sensitive areas or shielded from said areas to eliminate glare. Light spillage beyond the perimeter of the well site shall be minimized. • Bulbs shall be fully shielded to prevent light emissions above a horizontal plane drawn from the bottom of each fixture. • Prior to commencement of drilling and completion activities, a partial perimeter, engineered sound wall consisting of approximately 900 linear feet of 32-foot-tall, STC32 wall will be installed around the northern half of the well pad to reduce noise levels at the critical receptor points. • 200 linear feet on west edge of the well pad • 500 linear feet on north edge of well pad • 200 linear feet on the east edge of well pad Drilling Phase: • KMOG will utilize LED fixtures to reduce skyglow. • KMOG will position all lights to point in a downward direction where vertical lighting is not required. Where it is required, lights are angled in a vertical direction to provide task lighting for safety and operations involving personnel. • Derrick mast lighting in Section 6.1 is facing horizontally to provide adequate lighting for safe operation. • Lighting is angled to mitigate the amount of light leaving the location boundary, and away from surrounding off site buildings. • Lighting within the Drilling area has been reduced to provide a minimum acceptable value for safe operation. • Light masts are automatically switched off/on based on lighting sensors. • Lights are switched off when not required. • Low power (63 W) LED lights are used for the drill rig. • In the event of a lightning complaint, KMOG will address the complaint and work with all parties involved to ensure the complaint is resolved. Completions and Flowback Phases: • KMOG will utilize LED fixtures to reduce skyglow. • KMOG will position all lights to point in a downward direction where vertical lighting is not required. Where it is required, lights are angled in a vertical direction to provide task lighting for safety and operations involving personnel. • Lighting is angled to mitigate the amount of light leaving the location boundary, and away from surrounding off site buildings. • Lighting within the Completion and Flowback areas have been reduced to provide a minimum acceptable value for safe operation. • Light masts are automatically switched off/on based on lighting sensors. • Lights are switched off when not required. • Lights are directed to task areas only. • In the event of a lightning complaint, KMOG will address the complaint and work with all parties Kerr McGee Oil & Gas Onshore LP Alfalfa 8-20 HZ Lighting Mitigation Plan Project Number: 21010-23 Rev. 1, MAY 17, 2023 PAGE 13 of 14 21010 Kerr McGee Alfalfa 8-20 HZ Lighting Mitigation Plan Rev 1 involved to ensure the complaint is resolved. Production Phase: • KMOG will utilize LED fixtures to reduce skyglow. • KMOG will position all lights to point in a downward direction, in order to mitigate light leaving the location boundary. • Lighting within the Production areas have been reduced to provide a minimum acceptable value for safe operation. • In the event of a lighting complaint, KMOG will address the complaint and work with all parties involved to ensure the complaint is resolved.`
5	General Housekeeping	Wastes will be stored in containers or on lined containment that are chosen for compatibility and checked periodically for leaks or integrity problems. Examples of containment include but are not limited to 3-sided steel tanks, steel tanks, lined containment, plastic totes, drums, etc. During drilling, completions, and facility construction, human waste and septic from temporary buildings will be stored in tanks. These tanks will be emptied via vacuum truck for disposal. Temporary portable restrooms will also be available for workers during this phase.`
6	General Housekeeping	Good housekeeping measures will be implemented to prevent sediment, trash and toxic or hazardous substances from entering surface waters or impacting soils. Housekeeping practices include routine inspections, regular cleaning, site and equipment organization and maintenance, and appropriate chemical storage. Dumpsters and trash receptacles will be enclosed and/or covered to prevent dissemination of rubbish when not in use.`
7	Wildlife	Alfalfa 8-20HZ If construction coincides with the raptor nesting season, KMOG will perform pre-construction surveys to determine nearby nest statuses. If construction occurs during the Burrowing Owl nesting season, CPW protocol-level surveys will be performed prior to construction. If active Burrowing Owl burrows are identified within 1/4 mile of the Site, KMOG will proceed with CPW consultation.`

8	Storm Water/Erosion Control	KMOG will conduct weekly storm water inspections during normal operations in addition to post-precip / melt response inspections based on COR40 permit. `
9	Storm Water/Erosion Control	KMOG will use Modular Large Volume Storage Tanks. `
10	Storm Water/Erosion Control	KMOG will install perimeter controls to control potential sediment-laden runoff in the event of spill or release from Modular Large Volume Storage Tank. `
11	Storm Water/Erosion Control	Outlet protection will be used when a conveyance discharges onto a disturbed area where there is potential for accelerated erosion due to concentrated flow. Outlet protection should be provided where the velocity at the culvert outlet exceeds the maximum permissible velocity of the material in the receiving channel. `
12	Storm Water/Erosion Control	KMOG will ensure that control measures are designed, installed and adequately sized in accordance with good engineering, hydrologic and pollution control practices. `
13	Storm Water/Erosion Control	If it is infeasible to install or repair a control measure immediately after discovering a deficiency, operator will document and keep on record in the stormwater management plan: (a) a description of why it is infeasible to initiate the installation or repair immediately; and (b) a schedule for installing or repairing the control measure and returning it to an effective operating condition as soon as possible. `
14	Storm Water/Erosion Control	KMOG will anchor all tanks to resist floatation.`
15	Storm Water/Erosion Control	The temporary produced water storage tanks will be staged on a geosynthetic liner and surrounded by an earthen berm. The berms will enclose an area sufficient to provide secondary containment for 150% of the volume of the largest single tank and will be sufficiently impervious to contain spilled or released material. Berms and the liner and all secondary containment devices will be inspected at the same time as stormwater inspections, with personnel on location, daily inspections will occur. During non-active, but while under construction, site inspections will occur every 14 days. When construction is completed and the location is on production, site inspections will occur every 28 days at a minimum.`
16	Storm Water/Erosion Control	A diversion ditch and berm will be implemented to divert stormwater run-on & run-off throughout Alfalfa 8-20HZ to a designated outlet structure(s). ? This BMP will be installed prior surface disturbing activities and will surround the entirety of the location to create continuous perimeter control. ? An additional berm will be installed on the western and southwestern perimeter of the well pad working surface, and on the northern perimeter of the facility pad working surface. ? Diversion ditch and berm will remain in-place until interim reclamation activities are complete.`
17	Storm Water/Erosion Control	A temporary spillway and/or outlet are designed to capture sediment transported in surface runoff and slowly release flows to allow time for settling of sediment prior to discharge from the location. ? Spillway and/or outlet will be installed concurrently with the facility diversion ditch and berm, and prior to commencement of surface disturbing activities. ? A temporary spillway/outlet will be installed in the northwestern and southwestern segment of the disturbance area ditch and berm and the southern and southwestern segments of the well pad berm for Alfalfa 8-20HZ. ? All spillways and outlets will remain in-place until interim reclamation activities are complete. Culverts will be installed at the northeastern and eastern location access points for Alfalfa 8-20HZ facility pad and well pad`

18	Storm Water/Erosion Control	A temporary diversion ditch & berm around the entire location to manage run-on and run-off; an additional berm placed on the southern and western perimeters of the well pad working surface and the northern perimeter of the facility pad working surface; temporary spillways and outlet structure placed in the northwestern and southwestern portions of the disturbance area ditch and berm and the northeastern portion of the well pad berm, which will allow for settling of sediment from stormwater prior to discharge; ~4 temporary culverts with inlet and outlet protection installed at the location access points to direct stormwater to designated outlet structures; seed & mulch to stabilize areas no longer needed for construction, as well as for topsoil stockpiles which will remain in place until interim and final reclamation. During active construction, daily inspections will be completed by on-site personnel. A contractor will conduct stormwater compliance inspections every 14-days and/or following a rain event which produces 0.25” of precipitation or equivalent snow melt which causes surface erosion. Inspections will review all control measures / BMPs implemented, their status, and whether repair or replacement is needed. Maintenance and repair will be completed as soon as practicable, immediately in most cases.`
19	Material Handling and Spill Prevention	KMOG will refuel vehicles only on impervious surfaces and never during storm events. `
20	Material Handling and Spill Prevention	KMOG will ensure that a fueling contractor is present during the entire fueling process to prevent overfilling, leaks and drips from improper connections. `
21	Material Handling and Spill Prevention	KMOG will install adequate down gradient controls if they can not have a control at the source. `
22	Material Handling and Spill Prevention	KMOG will properly test for and dispose of TENORM. `
23	Material Handling and Spill Prevention	Automation technology will be utilized at this facility. This technology includes the use of fluid level monitoring for the tanks and produced water sumps, high-level shut offs, and electronic sensors to monitor the interstitial space of double-walled produced water sumps. All automation is monitored by Kerr-McGee's Integrated Operations Center (IOC), which is manned 24 hours per day, 7 days per week.`
24	Material Handling and Spill Prevention	Appropriate secondary containment will be utilized when equipment maintenance is conducted on location. KMOG will shut down transfer pump and close supply valve when transfer or circulation is completed. KMOG will ensure fluids cannot enter holding tank through gravity feedback. Pre-job inspection will be conducted prior to start up which include the visual inspection of hoses, lines, and valves to ensure proper connection and alignment. During operations, all fluid containing equipment is inspected daily.`
25	Material Handling and Spill Prevention	Completion: During completions operations, the following site-specific best management practices will be used: KMOG will monitor pressure responses and containment to identify potential leaks. Lines will also be walked continuously throughout operations (between stages) to identify potential leaks. In addition, there is a slam valve and control valve with Emergency Shut Down system in line to the external temp tanks to prevent overflowing tanks during the green flowback duration.`
26	Material Handling and Spill Prevention	production: Automation technology will be utilized at this facility. This technology includes the use of fluid level monitoring for the tanks and produced water sumps, high-level shut offs, and electronic sensors to monitor the interstitial space of double-walled produced water sumps. All automation is monitored by Kerr-McGee's Integrated Operations Center (IOC), which is manned 24 hours per day, 7 days per week. All personnel on location on behalf of KMOG are trained in AVO techniques. All personnel are empowered with ‘Stop Work Authority’ and to report any leaks immediately.`

27	Dust control	Access roads are not paved, they are constructed with a minimum of four - inches of gravel road base KMOG will proactively deploy fresh water to suppress dust along access road to well pad/ facility during all phases of pre-production operations ? Speed limits will be reduced to 10 mph on access road and 5 mph once vehicles reach well pad/ facility ? Access roads and Vehicle Tracking Control will receive maintenance as needed throughout operations. In the event of high winds that generate dust that cannot be mitigated with an application of water, KMOG will shut down construction operations. During the Completions phase, KMOG will utilize a fully enclosed sand containerized proppant delivery system that eliminates the use of pneumatic transfer on location. This methodology utilizes a gravity choke feed system that reduces dust significantly. The dust levels from this system are minimal and below Occupational Safety and Health Administration (OSHA) permissible exposure limit which eliminates the need for additional Personal Protective Equipment (PPE)`
28	Dust control	Vehicle Tracking VTC will be installed at the primary access for Alfalfa 8-20HZ, which is to the northeast of both the well pad and facility pad. The access road adjoins/intersects Weld County Road 20, approximately 0.59 miles northeast of the location. Additional VTC installation for facility access will be incorporated as needed and constructed.`
29	Noise mitigation	Drilling Operations NIA • Compliant with mitigation: Partial-perimeter, engineered sound wall consisting of 800 linear feet of 32-foot-tall wall, rated at STC32 and 100 linear feet of 24- foot-tall wall, rated at STC43 Completions Operations NIA • Compliant with mitigation: Partial-perimeter, engineered sound wall consisting of 800 linear feet of 32-foot-tall wall, rated at STC32 and 100 linear feet of 24- foot-tall wall, rated at STC43 Flowback Operations • Utilizes a fraction of similar, but smaller equipment compared to the three other operations studied. Leave perimeter sound wall in place until flows are initiated. Production Operations NIA • Compliant without mitigation`
30	Emissions mitigation	KMOG commits to monitoring ambient air quality during drilling and completion operations and for the first 6 months of production in accordance with Reg. 7. `
31	Emissions mitigation	KMOG will not flare or vent gas during completion or flowback, except in upset or emergency conditions, or with prior written approval from the Director for necessary maintenance operations. `
32	Emissions mitigation	KMOG will control emergency flaring with an enclosed combustor with a destruction efficiency of 98% or better. `
33	Emissions mitigation	KMOG will control bradenhead/casinghead venting. `
34	Emissions mitigation	During Drilling: Rig power will be supplied by two natural gas engines with a battery energy storage system and an automated engine management system. As necessary, a diesel generator will be used to supplement additional power during the highest demand portions of the wells. KMOG uses an automated engine management system that preferentially uses natural gas engines over diesel for rig power. During Completions: During completions KMOG uses a closed loop system. As a standard practice, KMOG has also implemented the pipelined Water on Demand (WOD) system which will eliminate approximately 393,676 truck trips at the Sprout OGDP locations during completions activities. During Flowback: Fluids will flow through separation equipment where the gas will be collected through a gas gathering line instead of vented or burned.`
35	Emissions mitigation	During Production: KMOG uses production facilities that have been designed to eliminate most emission sources. Oil will not be stored on location where it could cause emissions but will be gathered and sent via pipeline to a stabilization facility.`
36	Emissions mitigation	Produced water will be piped from the Alfalfa locations.`

37	Odor mitigation	drilling: All oil-based drilling fluids will be built using a Group III base oil with negligible aromatic content and PAH less than 0.001% so that it does not emit odor during all production drilling operations. • The Group III base oil will be utilized in a closed loop drilling fluid system and eliminate odor at the shakers, transfer tank, active/reserve tanks, and cuttings in collection tanks and during transport. • All drill cuttings are processed through centrifugal dryers to remove residual oil-based drilling fluid not removed by shale shakers. • All tubulars pulled out of the hole will be wiped prior to being racked in the derrick or laid down. • Cuttings storage time on location will be minimized prior to transport to local landfills. • New drilling fluid will be built using transfer line outlets located below tank fluid level to minimize splashing/agitation. New fluid will only be built using Group III base oils.`
38	Odor mitigation	production: • KMOG uses pipelines to transport hydrocarbons (oil & gas) from the production facility eliminating odors that could occur during truck loading. • Production facilities are inspected regularly by KMOG to make sure the equipment is working property and necessary maintenance is performed, to reduce potential odors. KMOG incorporates Audio, Visual, Olfactory (AVO) observations at production facility inspections. • KMOG will use Best Management Practices to reduce unloading events and to reduce potential odor causing emissions when liquids unloading is necessary (i.e., maintenance activities to remove liquids from existing wells that are inhibiting production). • KMOG remotely monitors production facilities, this reduces traffic onto production facilities which may create odors from truck traffic.`
39	Drilling/Completion Operations	All storage tanks used for active production rig drilling operations, used in lieu of pits, will contain pit level monitors with Electronic Drilling Recorders (EDR). KMOG uses EDRs with pit level monitor(s) and alarm(s) for production rigs. Basic level gauges will be used on tanks associated with the surface rig. `
40	Drilling/Completion Operations	Test separators and associated flow lines, sand traps and emission control systems? shall be installed on-site to accommodate completions techniques. When commercial? quantities of salable quality gas are achieved at each well, the gas shall be? immediately directed to a sales line or shut in and conserved. If a sales line is? unavailable or other conditions prevent placing the gas into a sales line, KMOG shall? not produce the wells. KMOG agrees to comply with both Rules 903.c.(3).B. and 903.c.(3).C.? `
41	Drilling/Completion Operations	Guy line anchors will not be used. Base Beams will be used to stabilize the rig and removed after drilling. `

42	Drilling/Completion Operations	KMOG is proposing one 25,000 BBL MVLT for this location for use during completions – 36 feet tall with a 70 foot diameter. The proposed manufacturer and vendor is Shalestone Resources. The MLVT is approximately 2,485 feet from the nearest RBU and is a temporary piece of equipment (on location for approximately 2 months). The MLVT will be in compliance with the following COGCC safety setbacks. 1. Seventy-five (75) feet from a wellhead, fired vessel, heater-treater, or a compressor with a rating of 200 horsepower or more; 2. Fifty (50) feet from a separator, well test unit, or other non-fired equipment. 3. Signs shall be posted on each MLVT to indicate that the contents are fresh water and that no E&P waste fluids are allowed. Location and additional signage shall conform to Rule 210. 4. MLVTs will be operated with a minimum of 1 foot freeboard at all times. 5. Access to the tanks shall be limited to operational personnel. 6. Construction and installation of the tank structure, liner and sub-grade shall meet or exceed the manufacturer specifications. 7. KMOG follows manufacturers Standard Operating Procedures (SOPs) and will provide these SOPs upon request to the COGCC. 8. KMOG will conduct daily, visual inspections of the exterior wall and general area for any integrity deficiencies before, during, and after filling the MLVTs. If deficiencies are noted, KMOG will repair them as soon as practicable. Records of repairs will be maintained per Rule 205. 9. KMOG will follow pre-construction risk assessment measures to address safety concerns and minimize environmental impacts and property damage in the unlikely event of a MLVT release. 10. In the event of a catastrophic MLVT failure, KMOG shall notify the COGCC as soon as practicable but not more than 24 hours after discovery, submit a Form 22-Accident Report within 10 days after discovery, conduct a root cause analysis´ and provide same to COGCC on a Form 4-Sundry Notice within 30 days of the failure. 11. All MLVT liner seams shall be welded and tested in accordance with applicable ASTM international standards. Any repairs to liners shall be made using acceptable practices and applicable standards. 12. The MLVT shall be constructed and operated in accordance with a design package certified and sealed by a Licensed Professional Engineer either in Colorado or the state where the MLVT was designed or manufactured. 13. KMOG hereby certifies to the Director that the MLVT at this location will be designed and implemented consistent with the Colorado Oil and Gas Conservation Commission policy dated June 13, 2014.`	
43	Drilling/Completion Operations	The following are BMPs agreed on by the Operator as an outcome of the CDPHE consultation: • Operator will properly maintain vehicles and equipment • Operator will use non-emitting pneumatic controllers • Operator will use Tier IV or equivalent engines, such as NG Tier II w/ battery assist, (or better) for drilling (dual-fuel engines are not considered equivalent) • Operator will use Tier IV or equivalent engines, such as NG Tier II w/ battery assist, (or better) for hydraulic fracturing (dual-fuel engines are not considered equivalent) • Operator will use electric equipment and devices (e.g. vapor recovery units or VRUs, fans, etc.) to minimize combustion sources on site (if yes, operator will provide a list outlining which equipment and devices will be electrified) • Operator will use service providers who utilize at least 50% Tier IV or equivalent engines, such as NG Tier II w/ battery assist, (or better) for nonroad construction equipment (dual-fuel engines are not considered equivalent) • Operator will not store hydrocarbon liquids in permanent storage tanks on site (other than a maintenance tank possibly used for well unloading or other maintenance activities) • Operator will implement a "hybrid or modern" production flowack method (eliminates tanks by routing the oil, natural gas and water directly to permanent production equipment) • Operator will use pipelines to transport water used for hydraulic fracturing to location • Operator will have adequate and committed pipeline takeaway capacity for all produced gas and oil • Operator will shut in the facility to reduce the need for flaring if the pipeline is unavailable • Operator will use lease automatic custody transfer (LACT) system to remove/reduce the need for truck loadout	

		• Operator will use OGP Group III drilling fluid • Operator will cover trucks transporting drill cuttings • Operator will use a squeegee or other device to remove drilling fluids from pipes as they exit the wellbore • Operator will ensure that all drilling fluid is removed from pipes before storage • Ozone mitigation on forecasted high ozone days: operator will eliminate use of VOC paints and solvents • Ozone mitigation on forecasted high ozone days: operator will minimize vehicle and engine idling • Ozone mitigation on forecasted high ozone days: operator will reduce truck traffic and worker traffic • Ozone mitigation on forecasted high ozone days: operator will postpone the refueling of vehicles • Ozone mitigation on forecasted high ozone days: operator will suspend or delay the use of non-essential fossil fuel powered ancillary equipment • Ozone mitigation on forecasted high ozone days: operator will adjust construction schedules to postpone non-essential construction activity, including but not limited to temporary tank removals and cleaning on ozone action days • Ozone mitigation on forecasted high ozone days: operator will send notification to all operational staff requesting that where possible, they delay all non-essential operational activity (such as pigging, well unloading and tank cleaning) on ozone action days • Operator will use Modular Large Volume Storage Tanks • Operator will not use fracturing fluids which contain PFAS compounds • Operator will continue to participate in the Colorado Preparedness Resources Network (CPRN)CPRN, which has a non-PFAS foam location identification to be sure, in an emergency, that non-PFAS foam will be available • Operator will coordinate with nearby fire district(s) to evaluate whether PFAS-free foam can provide the required performance for the specific hazard • If PFAS-containing foam is used at a location: operator will properly characterize the site to determine the level, nature and extent of contamination • If PFAS-containing foam is used at a location: operator will perform appropriate soil and water sampling to determine whether additional characterization is necessary and inform the need for and extent of interim or permanent remedial actions • If PFAS-containing foam is used at a location: operator will properly capture and dispose of PFAS-contaminated soil and fire and flush water In addition, CDPHE supports incorporation of each of the BMPs that Oxy has committed to exclusively for the Alfalfa and Clover pads in the Sprout OGDP, as listed below: • Operator will not store produced water in permanent storage tanks on site (other than a maintenance tank possibly used for well unloading or other maintenance activities) • Operator will use pipelines to transport water used for hydraulic fracturing from location`
44	Interim Reclamation	The completed wellsite will be surrounded with a fence and gate with adequate lock to restrict access to authorized personnel only. KMOG personnel will monitor the wellsite upon completion of the wells. Authorized representatives and/or KMOG personnel shall be on-site during drilling and completions operations. `

45	Interim Reclamation	Ditch and berm shall be installed around the perimeter of the location, and subsequently around all topsoil stockpiles, to intercept and divert stormwater run-on/run-off and sediment from precipitation and melt events. Track packing all topsoil stockpiles will occur to prevent erosion from stormwater and wind, as well as provide temporary stabilization. Seeding and crimped straw mulch will be applied to prevent erosion and soil loss from stormwater and wind. Vegetation establishment through seeding efforts will promote soil health and maintain carbon exchange. ? Weed control will occur seasonally and as needed to hinder the spread of weeds throughout the topsoil stockpile(s) and help native grass establishment. Topsoil stabilization with mulch, seeding, track walking, perimeter control or a combination of BMPs. Weeds on stockpiles shall be controlled as to prevent production of weed seed and/or enough biomass that would interfere with redistribution of soil or cause onsite debris. Signage shall be installed to identify topsoil stockpiles to facilitate subsequent reclamation and indicate to personnel that the area may not be disturbed by drilling and completion operations. Vegetation establishment through seeding efforts will promote soil health and maintain carbon exchange. ? Weed control will occur seasonally and as needed to hinder the spread of weeds throughout the topsoil stockpile(s) and help native grass establishment.`
46	Interim Reclamation	After topsoil re-distribution, the interim reclamation area shall be cross ripped to a depth of eighteen inches with an agricultural ripper/subsoiler; however, this depth may be adjusted in rocky or shallow soils. Chiseling/ripping will be performed at the minimum depth of topsoil. Cultipacking or disking may be required to reduce soil clod size. Ripping with construction style shanks, for the purpose of surface ridge roughness as a stormwater BMP, is only allowed to a six-inch depth, and will be maintained following any precipitation or surface erosion which has the potential to compromise the BMP.`
47	Interim Reclamation	Mulch application in cropland shall be applied as requested by surface owner. If using straw or hay mulch, only mulch that has been certified as weed-free forage may be used. All mulch types must be anchored properly by methods such as crimping, disking and/or tackifier. Contractor may adjust the rate of mulch and type based on site location, soils, slopes, and time of year to maximize seeding and erosion control success.`
48	Interim Reclamation	Seed and mulch are utilized in disturbed areas to establish stabilization through vegetative cover. ? Seeding will take place once surface disturbing activities are complete. Topsoil stockpiles will be stabilized with seed and mulch no longer than 14-days after completion of stockpiling efforts unless weather or ground conditions are not suitable to properly create a seedbed and promote successful germination. ? Seed & mulch will be installed on all disturbed areas no longer utilized for construction, and on all topsoil stockpiles which will remain on Alfalfa 8-20HZ for use during final reclamation. Anticipated topsoil stockpiles will be situated along the northern perimeter of the facility and northern, western and southern perimeter of the well pad. ? Seeding will remain in place until re-disturbed during final reclamation efforts. ? In areas to be returned to crop, the seed bed will be prepared and left for surface owner to plant during next agricultural season.`
49	Final Reclamation	The wellsite will be cleared of all non-essential equipment within ninety (90) days after all wells associated with the pad have been plugged and abandoned. `
50	Final Reclamation	Once the wells have been plugged and abandoned, KMOG will identify the location of the wellbores with permanent monuments that will detail the well names and date of plugging. `

Total: 50 comment(s)

Attachment List

Att Doc Num	Name
2136827	OTHER
21316815	GEOLOGIC HAZARD MAP
21316819	CORRESPONDENCE
21316821	CDPHE CONSULTATION
21316823	LOCAL GOVERNMENT PERMIT
21316827	OTHER
21316828	OTHER
403278400	FORM 2A SUBMITTED
403497610	LGD CONSULTATION
403497618	ACCESS ROAD MAP
403497623	HYDROLOGY MAP
403497625	DIRECTIONAL WELL PLAT
403497628	LOCATION DRAWING
403497635	LOCATION PICTURES
403497637	LOCATION PICTURES
403497652	PRELIMINARY PROCESS FLOW DIAGRAMS
403521422	WILDLIFE HABITAT DRAWING
403521425	OIL AND GAS LOCATION GIS SHP
403521451	OTHER
403521452	CULTURAL FEATURES MAP
403627574	LAYOUT DRAWING
403627581	NRCS MAP UNIT DESC
403627589	RELATED LOCATION AND FLOWLINE MAP
403628649	OTHER

Total Attach: 24 Files

General Comments

User Group	Comment	Comment Date
OGLA	The Director has determined that the OGDP application that this Form is a component of meets all requirements of Rule 306.a. The Director's Recommendation has been attached to the Form 2A.	02/22/2024
OGLA	Operator sent final Local Government siting. ECMC staff updated the information regarding the submittal and approval of the Local permit and has attached the permit. Removed the comment "THE WOGLA WILL BE SUBMITTED SOON - WILL UPDATE OGLA WHEN THAT HAPPENS" as the information has been updated. Attached response to public comments as "OTHER" doc 21316827 and Executive Summary as "OTHER" doc 21316826.	02/16/2024
OGLA	A Consultation with CDPHE occurred on 1/22/2024 between CDPHE, Oxy, and ECMC staff. The CDPHE letter for the consultation is attached and the BMPs have been added to the BMP section.	02/12/2024
OGLA	Spoke to Operator regarding flowline between the Ruca location (loc ID 458592) to the north and this proposed Alfalfa location on the flowline map. This proposed Alfalfa location will be to the production phase before the Ruca location will be connected to the Alfalfa and the Ruca production equipment removed. As there is not an exact timeline for this to occur, the Ruca is not listed as a remote related location and is not included on the Form 2B for this OGDP. A Sundry for the OGDP will be submitted at a later date when the Ruca production equipment is removed and the flowlines are in place to the Alfalfa location.	01/11/2024
OGLA	Public comment period for this location is 30-days. A technology glitch initially assigned 45 days for public comment ending on 2/11/24. The date has been updated to be 30 days post the OGDP considered Complete on 12/28/2023 for the public comment to end on 1/27/2024.	01/09/2024
OGLA	Inform CDPHE the location is in the 8-hour ozone area. CDPHE requested a consultation for the proposed location and OGDP.	01/08/2024
OGLA	Attached Completeness spreadsheet as correspondence doc no 21316819	12/28/2023
OGLA	The Director has determined this OGDP application is complete. Form pushed to IN PROCESS.	12/28/2023
OGLA	Updated the equipment list, Geologic Hazard Plan and map per email and phone correspondence with the Operator.	12/27/2023
OGLA	The Conditions of Approval (COA) and Best Management Practices (BMPs) on the Form 2A and the Final Order are the final enforceable permit conditions for this Oil and Gas Location. Any plan or attachment that contains information or language that is contrary to or less protective than ECMC rules or the COAs and BMPs on the Form 2A or Final Order does not relieve the operator from compliance with the applied COAs, BMPs or any ECMC rules.	12/27/2023
OGLA	Completeness review - Return to draft	12/01/2023

Total: 11 comment(s)

Public Comments

No public comments were received on this application during the comment period.

FORM 2A Rev 05/22

State of Colorado
Energy & Carbon Management Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109

Document Number: 403278417

Date Received: 09/13/2023

Oil and Gas Location Assessment

This Oil and Gas Location Assessment is to be submitted to the COGCC for approval prior to any ground disturbance activity associated with oil and gas operations. Approval of this Oil and Gas Location Assessment will allow for the construction of the below specified Location; however, it does not supersede any land use rules applied by the local land use authority. Please see the COGCC website at https://cogcc.state.co.us/ for all accompanying information pertinent this Oil and Gas Location Assessment.

Location ID:
OGDP ID:
Expiration Date:

[X] New Location [ ] Refile [ ] Amend Existing Location # _____

If this Location assessment is a component of an Oil and Gas Development Plan (OGDP) application, enter the OGDP docket number(s).

Docket Number	OGDP ID	OGDP Name
230900284		

If this Location assessment is part of an approved Oil and Gas Development Plan, enter the OGDP ID number(s).

<No existing OGDP number provided>

CONSULTATION

[ ] This location is included in a Comprehensive Area Plan (CAP). CAP ID # _____
[ ] This Location or its associated new access road, utility, or Pipeline corridor meets Rule 309.e.(2).A, B, or C.
[ ] This Location is within 2,640 feet of a GUDI or Type III Well per Rule 411.b.(4).
[ ] This Location includes a Rule 309.e.(2).E variance request.
[ ] This location includes a Rule 309.f.(1).A.ii. variance request.

Operator

Operator Number: 47120
Name: KERR MCGEE OIL & GAS ONSHORE LP
Address: P O BOX 173779
City: DENVER State: CO Zip: 80217-3779

Contact Information

Name: Rachel Friedman
Phone: (720) 9296564
Fax: ( )
email: djregulatory@oxy.com

FINANCIAL ASSURANCE FOR THIS LOCATION (check all that apply)

[X] Plugging, Abandonment, and Reclamation 20010124
[ ] Centralized E&P Waste Management Facility _____
[ ] Gas Gathering, Gas Processing, and Underground Gas Storage Facilities _____
[ ] Surface Owner Protection Bond. _____

Federal Financial Assurance

[ ] In checking this box, the Operator certifies that it has provided or will provide at least this amount of Financial Assurance to the federal government for one or more Wells on this Location.

Amount of Federal Financial Assurance $ _____

LOCATION IDENTIFICATION

Name: CLOVER Number: 2-29HZ

Provide the location description and the latitude and longitude of a single point near the center of the Working Pad Surface as a reference for this Location.

QuarterQuarter: NWNE Section: 29 Township: 2N Range: 67W Meridian: 6 Ground Elevation: 4996

Latitude: 40.114904 Longitude: -104.912186

GPS Quality Value: 1.4 Type of GPS Quality Value: PDOP Date of Measurement: 05/02/2023

RELATED REMOTE LOCATIONS

(Enter as many Related Locations as necessary. Enter the Form 2A document # only if there is no established COGCC Location ID#)

This proposed Oil and Gas Location is:	LOCATION ID #	FORM 2A DOC #
☐		

RELEVANT LOCAL GOVERNMENT SITING INFORMATION

County: WELD Municipality: N/A

Per § 34-60-106 (1)(f)(I)(A), the following questions pertain to the "Relevant Local Government approval of the siting of the proposed oil and gas location."

This proposed Oil and Gas Location is in an area designated as one of State interest and subject to the requirements of § 24-65.1-108, C.R.S. Yes

Does the Relevant Local Government regulate the siting of Oil and Gas Locations, with respect to this location? Yes

A siting permit application has been submitted to the Relevant Local Government for this proposed Oil and Gas Location: Yes

Date Relevant Local Government permit application submitted: 10/09/2023

Current status or disposition of the Relevant Local Government permit application for this proposed Oil and Gas Location: Approved

Status/disposition date: 01/11/2024

If Relevant Local Government permit has been approved or denied, attach final decision document(s).
Provide the contact information for the Relevant Local Government point of contact for the local permit associated with this proposed Oil and Gas Location:

Contact Name: Stephanie Frederick Contact Phone: 970-400-3581

Contact Email: sfrederick@weldgov.com

PROXIMATE LOCAL GOVERNMENT INFORMATION

For every Proximate Local Government (PLG) associated with this proposed Oil and Gas Location, provide the PLG's point of contact and their contact information.

Type of Proximate Govt	County	Municipality	Contact Name	Contact Phone	Contact Email
Municipality		Firestone	Todd Bjerkaas	303-531-6276	Tbjerkaas@firestoneco.gov
Municipality		Frederick	Ali van Deutekom	720-382-5500	avandeutekom@frederickco.gov

FEDERAL PERMIT INFORMATION

A Federal drilling permit (or related siting application) has been submitted for this proposed Oil and Gas Location: No

Date submitted:

Current status or disposition of the Federal drilling permit (or related siting application) for this proposed Oil and Gas Location:

Status/disposition Date:

If Federal agency permit has been approved or denied, attach the final decision document(s).
Provide the contact information of the Federal point of contact for the Federal permit associated with this proposed Oil and Gas Location.

Contact Name: _____ Contact Phone: _____

Contact Email: _____ Field Office: _____

Additional explanation of local and/or federal process:

RELEVANT LOCAL GOVERNMENT OR FEDERAL PRE-APPLICATION CONSULTATION

Complete this section for any pre-application consultation related to this proposed Oil and Gas Location that occurred prior to the submission of this Form 2A. If a pre-application Formal Consultation Process occurred, attach a Consultation Summary.

Did a pre-application Formal Consultation Process occur with the Relevant Local Government per Rule 301.f.(3)? Yes

Date of local government consultation: 02/01/2023

Did a pre-application Formal Consultation Process occur with the Federal land manager per Rule 301.f.(3)? No

Date of federal consultation: _____

Was an ALA that satisfies Rule 304.b.(2).C (or substantially equivalent information per Rule 304.e) developed during a federal or local government permit application process? If yes, attach the ALA to the Form 2A. No

ALA APPLICABILITY AND CRITERIA

Complete this section for any pre-application consultation related to this proposed Oil and Gas Location that occurred prior to the submission of this Form 2A. If a pre-application Formal Consultation Process occurred, attach a Consultation Summary.

Does the proposed Oil and Gas Location meet any of the criteria listed in Rule 304.b.(2)B? No

If YES, indicate by checking the box for every Rule 304.b.(2).B criterion met by this proposed Location, and attach an ALA. See Rule 304.b.(2).B.i-x for full text of criteria.

- ☐ i. WPS < 2,000 feet from RBU/HOBU
- ☐ ii. WPS < 2,000 feet from School/Child Care Center
- ☐ iii. WPS < 1,500 feet from DOAA
- ☐ iv. WPS < 2,000 feet from jurisdictional boundary and PLG objects/requests ALA
- ☐ v. WPS within a Floodplain
- ☐ vi.aa. WPS within a surface water supply area
- ☐ vi.bb. WPS < 2,640 feet from Type III or GUDI well
- ☐ vii. WPS within/immediately upgradient of wetland/riparian corridor
- ☐ viii. WPS within HPH and CPW did not waive
- ☐ ix. Operator using Surface bond
- ☐ x. WPS < 2,000 feet from RBU/HOBU/School within a DIC

Is the proposed Oil and Gas Location within the exterior boundaries of the Southern Ute Indian Reservation, and the Tribe objects to the Location or requests an ALA? If YES, attach an ALA to the Form 2A. No

Operator requests the Director waive the ALA requirement per Rule 304.b.(2).A.i: ☐

Provide an explanation for the waiver request, and attach supporting information (if necessary).

ALTERNATIVE LOCATIONS DASHBOARD

List every alternative location reviewed and included in the ALA. Provide a latitude and longitude for the approximate center of the alternative location, all Rule 304.b.(2).B Criteria met, if a variance would be required to permit the location, and a brief comment on the key points of the alternative location.

304.b.(2).B.i-x Criteria Met:

< No row provided >

SURFACE & MINERAL OWNERSHIP

Surface Owner Info:

Name: CAMENISCH CHARITABLE REMA Phone:

Address: C/O ROXIE M KOLDEWAY TRUSTEE Fax:

Address: 9842 HIGHWAY 52 Email: rocmkold2@gmail.com

City: FORT LUPTON State: CO Zip: 806218430

Surface Owner at this Oil and Gas Location: [X] Fee [ ] State [ ] Federal [ ] Indian

Check only one:

[ ] The Operator/Applicant is the surface owner.

[X] The Operator has a signed Surface Use Agreement for this Location – attach SUA.

[ ] All operations on this Oil & Gas Location will develop the minerals beneath the Location, and the surface owner owns the minerals beneath this Location and is committed to an oil and gas lease – attach lease map or provide lease description.

[ ] All operations on this Oil & Gas Location will develop the minerals beneath the Location, and the Operator intends to use a surface bond per Rule 703 to secure access to this Location – attach lease map or provide lease description.

Surface Owner protection Financial Assurance type: N/A Surety ID Number:

Mineral Owner beneath this Oil and Gas Location: [X] Fee [ ] State [ ] Federal [ ] Indian

Minerals beneath this Oil and Gas Location will be developed from or produced to this Oil and Gas Location: No

Lease description if necessary:

SITE EQUIPMENT LIST

Indicate the number and type of major equipment components planned for use on this Oil and Gas Location:

Wells	12	Oil Tanks	0	Condensate Tanks	0	Water Tanks	0	Buried Produced Water Vaults	0
Drilling Pits	0	Production Pits	0	Special Purpose Pits	0	Multi-Well Pits	0	Modular Large Volume Tank	1
Pump Jacks	12	Separators	6	Injection Pumps	0	Heater-Treaters	0	Gas Compressors	0
Gas or Diesel Motors	0	Electric Motors	0	Electric Generators	0	Fuel Tanks	0	LACT Unit	1
Dehydrator Units	0	Vapor Recovery Unit	2	VOC Combustor	0	Flare	0	Enclosed Combustion Devices	0
Meter/Sales Building	2	Pigging Station	0			Vapor Recovery Towers	0		

OTHER PERMANENT EQUIPMENT

Permanent Equipment Type	Number
Communication Tower	1
Water Pump	2
Gas Manifold	12
Maintenance Pump	1
Oil Cooler	1
Chemical Totes	3
Air compressors	1
FG Scrubbers	1
E houses	1
Electrical Boxes	2

OTHER TEMPORARY EQUIPMENT

Temporary Equipment Type	Number
Generator	1
Sand Tanks	4
Propane Tanks	1
Sand Trap	3
Purge Flares	3
Enclosed Combustion Devices	1

GAS GATHERING COMMITMENT

Operator commits to connecting to a gathering system by the Commencement of Production Operations? Yes

If the answer is NO, a Gas Capture Plan consistent with the requirements of Rule 903.e MUST be attached on the Plans tab.

FLOWLINE DESCRIPTION

Per Rule 304.b.(6), provide a description of all onsite and off-location oil, gas, and/or water flowlines.

"Flowlines - 2""-3"" size (outside diameter), constructed of carbon steel.
Oil, gas and water pipelines will be used at this location. Water for completions operations will be brought to the location through temporary water lines using KMG's Water on Demand system. The oil and gas pipelines will be constructed by a 3rd party midstream company.

CULTURAL DISTANCE AND DIRECTION

Provide the distance and direction to the nearest cultural feature as measured from the edge of the Working Pad Surface.

	Distance	Direction	Rule 604.b Conditions Satisfied (check all that apply): 604.b. (1)	604.b. (2)	604.b. (3)	Details of Condition(s)	604.b. (4)
Building:	1874 Feet	NW					
Residential Building Unit (RBU):	2003 Feet	E	☐	☐	☐		☐
High Occupancy Building Unit(HOBU)	5280 Feet	SW	☐	☐	☐		☐
Designated Outside Activity Area:	5280 Feet	NW					
Public Road:	100 Feet	N					
Above Ground Utility:	146 Feet	N					
Railroad:	5280 Feet	SW					
Property Line:	113 Feet	N					
School Facility:	5280 Feet	SW					
Child Care Center:	5280 Feet	SW					
Disproportionately Impacted (DI) Community:	5280 Feet	SW					
RBU, HOBU, or School Facility within a DI Community.	5280 Feet	SW	☐	☐	☐		☐

RULE 604.a.(2). EXCEPTION LOCATION REQUEST

☐ Operator requests an Exception Location Request from Rule 604.a.(2) [well is less than 150 feet from a property line]. Exception Location Request Letter and Waiver signed by offset Surface Owner(s) must be attached.

CULTURAL FEATURE INFORMATION REQUIRED BY RULE 304.b.(3).B.

Provide the number of each Cultural feature identified within the following distances, as measured from the Working Pad Surface:

	0-500 feet	501-1,000 feet	1,001-2,000 feet
Building Units	0	0	0
Residential Building Units	0	0	0
High Occupancy Building Units	0	0	0
School Properties	0	0	0
School Facilities	0	0	0
Designated Outside Activity Areas	0	0	0

CONSTRUCTION

Size of disturbed area during construction in acres: 11.71

Size of location after interim reclamation in acres: 3.79

Estimated post-construction ground elevation: 4996

DRILLING PROGRAM

Will a closed-loop drilling system be used? Yes

Is H2S gas reasonably expected to be encountered during drilling operations at concentrations greater than or equal to 100 ppm? No If YES, attach H2S Drilling Operations Plan.

Will salt sections be encountered during drilling: No

Will salt based (>15,000 ppm Cl) drilling fluids be used? No

Will oil based drilling fluids be used? Yes

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Method: Commercial Disposal

Cutting Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

PLEASE SEE ATTACHED WASTE MANAGEMENT PLAN
Multiple E&P Waste Management Facilities are used - they are outlined in the WMP.

Beneficial reuse or land application plan submitted? Yes

Reuse Facility ID: _____ or Document Number: _____

Centralized E&P Waste Management Facility ID, if applicable: 456644

CURRENT LAND USE

Current Land Use: check all that apply per Rule 304.b.(9).

Crop Land: ☐ Irrigated ☒ Non-Irrigated ☐ Conservation Reserve Program (CRP)

Non-Crop Land: ☐ Rangeland ☐ Forestry ☐ Recreation ☐ Other

Subdivided: ☐ Industrial ☐ Commercial ☐ Residential

Describe the current land use:

NON-IRRIGATED CROP LAND - Tall Wheatgrass.

Describe the Relevant Local Government's land use or zoning designation:

AGRICULTURE

Describe any applicable Federal land use designation:

NONE

FINAL LAND USE

Final Land Use: check all that apply per Rule 304.b.(9).

Crop Land:	☐ Irrigated	☒ Non-Irrigated	☐ Conservation Reserve Program (CRP)	
Non-Crop Land:	☐ Rangeland	☐ Forestry	☐ Recreation	☐ Other
Subdivided:	☐ Industrial	☐ Commercial	☐ Residential	

REFERENCE AREA INFORMATION

If Final Land Use includes Non-Crop Land (as checked above), the following information is required:

Describe landowner's designated final land use(s):

NON-IRRIGATED CROP LAND Tall Wheatgrass.

Reference Area Latitude: _____ Reference Area Latitude: _____

Provide a list of plant communities and dominant vegetation found in the Reference Area.

< No row provided >

Noxious weeds present: _____

SOILS

List all soil map units that occur within the maximum extent of the proposed Oil and Gas Location. Attach the National Resource Conservation Service (NRCS) report showing the "Map Unit Description" listing the typical vertical soil profile(s). This data is to be used when segregating topsoil.

The required information can be obtained from the NRCS website at https://www.nrcs.usda.gov/wps/portal/nrcs/surveylist/soils/survey/state/ or from the COGCC website GIS Online map page. Instructions are provided within the COGCC website help section.

NRCS Map Unit Name: 4-Aquolls and Aquepts, flooded

NRCS Map Unit Name: 44-Olney loamy sand, 1 to 3 percent slopes & 47-Olney fine sandy loam, 1 to 3 percent slopes

NRCS Map Unit Name: 72-Vona loamy sand, 0 to 3 percent slopes & 73-Vona loamy sand, 3 to 5 percent slopes

GROUNDWATER AND WATER WELL INFORMATION

Provide the distance and direction, as measured from the Working Pad Surface, to the nearest:

water well: 1097 Feet S

Spring or Seep: 5280 Feet N

Estimated depth to shallowest groundwater that can be encountered at this Oil and Gas Location: 5 Feet

Basis for estimated depth to and description of shallowest groundwater occurrence:

Monitoring wells were drilled to a depth of 8' within the proposed oil and gas location. Groundwater was encountered at 66 inches and 90 inches. KMOG conservatively estimates depth to groundwater at 5'.

SURFACE WATER AND WETLANDS

Provide the distance and direction to the nearest downgradient surface Waters of the State, as defined 77 Feet W

in the 100-Series Rules, measured from the Working Pad Surface:

If less than 2,640 feet, is the Waters of the State identified above within 15 stream miles upstream of a Public Water

System intake? No

Provide the distance and direction to the nearest downgradient wetland, measured from the Working Pad Surface: 77 Feet W

Provide a description of the nearest downgradient surface Waters of the State:

POND

If the proposed Oil and Gas Location is within a Rule 411.a Surface Water Supply Area buffer zone, select the buffer zone type:

Public Water System Administrator - Contact Name Email

If the proposed Oil and Gas Location is within a Rule 411.b GUDI/Type III buffer zone, select the buffer zone type:

Public Water System Administrator - Contact Name Email

Is a U.S. Army Corps of Engineers Section 404 permit required for the proposed Oil and Gas Location, access road, or associated pipeline corridor? No

If a U.S. Army Corps of Engineers Section 404 permit is required, provide the permit status, and permit number if available:

N/A

Is the Location within a Floodplain? No Floodplain Data Sources Reviewed (check all that apply):

[X] Federal (FEMA) [ ] State [X] County [ ] Local

[ ] Other

Does this proposed Oil and Gas Location lie within a Sensitive Area for water resources, as defined in the 100-Series Rules? Yes

CONSULTATION, WAIVERS, AND EXCEPTIONS

When Rule 309.e.(2) Consultation must occur, check all that apply:

- [ ] This location is included in a Wildlife Mitigation Plan
- [ ] This Oil and Gas Location or associated new access road, utility, or pipeline corridor falls within federally designated critical habitat or an area with a known occurrence for a federal or Colorado threatened or endangered species. Provide description in Comments section of Submit tab.
- [ ] This Oil and Gas Location or associated new access road, utility, or pipeline corridor falls within an existing conservation easement established wholly or partly for wildlife habitat. Provide description in Comments section of Submit tab.

When Rule 309.e.(3) Consultation is not required, check all that apply:

- [ ] This Oil and Gas Location has been included in a previously approved, applicable Wildlife Protection Plan.
- [ ] This Oil and Gas Location has been included in a previously approved, applicable Wildlife Mitigation Plan.
- [ ] This Oil and Gas Location has been included in a previously approved, applicable conservation plan.

Pre-application Consultation:

- [ ] A pre-application consultation with CPW, regarding this Oil and Gas Location, occurred on:

CPW Waivers and Exceptions (check all that apply and attach all CPW waivers to this Form 2A):

- [ ] The applicant has obtained a Rule 304.b.(2).B.viii CPW waiver for the requirement to complete an ALA.
- [ ] The applicant has obtained a Rule 309.e.(2).G CPW waiver and consultation is not required.

☐ The applicant has obtained a Rule 309.e.(5).D.i CPW waiver and is requesting an exception from Rule 1202.c.(1).R.

☐ The applicant has obtained a Rule 309.e.(5).D.ii CPW waiver and is requesting an exception from Rule 1202.c.(1).S.

☐ The applicant has obtained a Rule 309.e.(5).D.iii CPW waiver of Rule 1202.c.(1).T.

☐ The applicant has obtained a Rule 309.e.(5).D.iv CPW waiver and is requesting an exception from Rule 1202.c.(1) in accordance with an approved CAP.

☐ The applicant has obtained a Rule 1202.a CPW waiver.

☐ The applicant has obtained a Rule 1202.b CPW waiver.

☐ In accordance with Rule 1203.a.(3), the applicant requests an exception from compensatory mitigation

Rule(s): _____

HIGH PRIORITY HABITAT AND COMPENSATORY MITIGATION

This Oil and Gas Location, associated access roads, utility, or Pipeline corridor falls wholly or partially within the following High Priority Habitats (Note: dropdown options are abbreviated - see Rule 1202 for full rule text):

< No row provided >

The following questions are for Oil and Gas Locations that cause the density to exceed one Oil and Gas Location per square mile in Rule 1202.d High Priority Habitat:

Direct Impacts:

Is Compensatory Mitigation required per Rule 1203.a for this Oil and Gas Location? No

Is a Compensatory Mitigation Plan proposed to address direct impacts for this Oil and Gas Location? No

Have all Compensatory Mitigation Plans been approved for this Location? No

If not, what is the current status of each Plan?

N/A

Is a Compensatory Mitigation Fee proposed for this Oil and Gas Location? No

Direct impact habitat mitigation fee amount: $ _____

Indirect Impacts:

Is Compensatory Mitigation required per Rule 1203.d for this Oil and Gas Location? No

Is a Compensatory Mitigation Plan proposed to address indirect impacts for this Oil and Gas Location? No

Have all Compensatory Mitigation Plans been approved for this Location? No

If not, what is the current status of each Plan?

N/A

Is a Compensatory Mitigation Fee proposed for this Oil and Gas Location? No

Indirect impact habitat mitigation fee amount: $ _____

Operator Proposed Wildlife BMPs

No BMP

CPW Proposed Wildlife BMPs

No BMP

AIR QUALITY MONITORING PROGRAM

Will the Operator install and administer an air quality monitoring program at this Location? Yes

Operator Proposed BMPs

No BMP

CDPHE Proposed COAs OR BMPs

No BMP

PLANS

Total Plans Uploaded: 16

- [ ] (1) Emergency Spill Response Program consistent with the requirements of Rules 411.a.(4).B, 411.b.(5).B, & 602.j
- [X] (2) Noise Mitigation Plan consistent with the requirements of Rule 423.a
- [X] (3) Light Mitigation Plan consistent with the requirements of Rule 424.a
- [X] (4) Odor Mitigation Plan consistent with the requirements of Rule 426.a
- [X] (5) Dust Mitigation Plan consistent with the requirements of Rule 427.a
- [X] (6) Transportation Plan
- [X] (7) Operations Safety Management Program consistent with the requirements of Rule 602.d
- [X] (8) Emergency Response Plan consistent with the requirements of Rule 602.j
- [ ] (9) Flood Shut-In Plan consistent with the requirements of Rule 421.b.(1)
- [ ] (10) Hydrogen Sulfide Drilling Operations Plan consistent with the requirements of Rule 612.d
- [X] (11) Waste Management Plan consistent with the requirements of Rule 905.a.(4)
- [ ] (12) Gas Capture Plan consistent with the requirements of Rule 903.e
- [X] (13) Fluid Leak Detection Plan
- [X] (14) Topsoil Protection Plan consistent with the requirements of Rule 1002.c
- [X] (15) Stormwater Management Plan consistent with the requirements of Rule 1002.f
- [X] (16) Interim Reclamation Plan consistent with the requirements of Rule 1003
- [X] (17) Wildlife Plan consistent with the requirements of Rule 1201
- [X] (18) Water Plan
- [X] (19) Cumulative Impacts Plan
- [ ] (20) Community Outreach Plan
- [X] (21) Geologic Hazard Plan

VARIANCE REQUESTS

Check all that apply:

- [ ] This proposed Oil and Gas Location requires the approval of a Rule 502.a variance from COGCC Rule or Commission

Order number: _____

ALL exceptions and variances require attached Request Letter(s). Refer to applicable rule for additional required attachments (e.g. waivers, certifications, SUAs).

RULE 304.d LESSER IMPACT AREA EXEMPTION REQUESTS

Check the boxes below for all Exemptions being requested. Lesser Impact Area Exemption Request must be attached, and will include all requested exemptions.

- ☐ 304.b.(1). Local Government Siting Information
- ☐ 304.b.(2). Alternative Location Analysis
- ☐ 304.b.(3). Cultural Distances
- ☐ 304.b.(4). Location Pictures
- ☐ 304.b.(5). Site Equipment List
- ☐ 304.b.(6). Flowline Descriptions
- ☐ 304.b.(7). Drawings
- ☐ 304.b.(8). Geographic Information System (GIS) Data
- ☐ 304.b.(9). Land Use Description
- ☐ 304.b.(10). NRCS Map Unit Description
- ☐ 304.b.(11). Best Management Practices
- ☐ 304.b.(12). Surface Owner Information
- ☐ 304.b.(13). Proximate Local Government
- ☐ 304.b.(14). Wetlands
- ☐ 304.b.(15). Schools and Child Care Centers
- ☐ 304.c.(1). Emergency Spill Response Program
- ☐ 304.c.(2). Noise Mitigation Plan
- ☐ 304.c.(3). Light Mitigation Plan
- ☐ 304.c.(4). Odor Mitigation Plan
- ☐ 304.c.(5). Dust Mitigation Plan
- ☐ 304.c.(6). Transportation Plan
- ☐ 304.c.(7). Operations Safety Management Program
- ☐ 304.c.(8). Emergency Response Plan
- ☐ 304.c.(9). Flood Shut-In Plan
- ☐ 304.c.(10). Hydrogen Sulfide Drilling Operations Plan
- ☐ 304.c.(11). Waste Management Plan
- ☐ 304.c.(12). Gas Capture Plan
- ☐ 304.c.(13). Fluid Leak Detection Plan
- ☐ 304.c.(14). Topsoil Protection Plan
- ☐ 304.c.(15). Stormwater Management Plan
- ☐ 304.c.(16). Interim Reclamation Plan
- ☐ 304.c.(17). Wildlife Plan
- ☐ 304.c.(18). Water Plan
- ☐ 304.c.(19). Cumulative Impacts Plan
- ☐ 304.c.(20). Community Outreach Plan
- ☐ 304.c.(21). Geologic Hazard Plan

OPERATOR COMMENTS AND SUBMITTAL

Comments

A Weld County 1041 WOGLA will be submitted in association with this pad.
This location is not proposed within 2,000 feet of a Residential Building Unit High Occupancy Building Unit, or School Facility located within a Disproportionately Impacted Community, a Rule 304.c.(20) Community Outreach Plan is not required. KMOG's "Community Consultation Plan" attached as "Other" is intended to provide supplemental information regarding efforts on community outreach and communication.
The attached EAP will be submitted to the Mountain View Fire Protection District. Once the plan is approved a signed copy will be sent to the COGCC OGLA staff.
KMOG`s general Air Monitoring Plan has been approved by the CDPHE and is attached to the 2B. A site-specific Air Monitoring Plan for this location will be submitted to the COGCC and CDPHE for approval of air monitor locations prior to operations.
Flowlines: Flow lines will flow to the production facility location. During production, flow direction in the flow lines is from the wellhead to the production facility. Flow lines will be constructed from steel pipe, buried, and will equal the distance between the well heads and the production facility.
Gas custody transfer will occur at the custody transfer meter located on the proposed production facility location. Oil custody transfer will occur at the LACT Unit located on the proposed production facility location.
Gas lift lines are also occasionally installed (one per well) from the well head to the production facility. During operation flow direction in the gas lift lines will be from the production facility to the well head. The size of the gas lift lines is typically 2". Gas lift lines will be constructed from steel pipe, buried, and will equal the distance between the well heads and the tank battery.
Air Supply Lines: Compressed air supply lines will also be installed from the well head to the production facility. During operation flow direction in the supply lines will be from the production facility to the well head. The size of the supply lines is typically 1". Supply lines will be constructed from steel pipe, buried, and will equal the distance between the well heads and the production facility.
KMOG is proposing one 25,000 BBL MVLT for this location for use during completions – 36 feet tall with a 70 foot diameter. The proposed manufacturer and vendor is Shalestone Resources. The MLVT is approximately 2,214 feet from the nearest RBU and is a temporary piece of equipment (on location for approximately 2 months). Please see the Operator BMP tab for further information.
As part of this OGDP the production facility equipment on the RUCA 20-5HZ (Loc ID: 458592) location will be removed and the wells connected by flowlines to the new proposed Alfalfa location. A Form 4 Sundry will be submitted to reflect the planned equipment inventory reduction at the RUCA 20-5HZ location

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.
Signed: _____ Date: 09/13/2023 Email: rachel_friedman@oxy.com

Print Name: Rachel Friedman Title: Geological Advisor

Based on the information provided herein, this Oil and Gas Location Assessment complies with COGCC Rules, applicable orders, and SB 19-181 and is hereby approved.

COGCC Approved: _____ **Director of COGCC** Date: _____

Conditions Of Approval

All representations, stipulations and conditions of approval stated in this Form 2A for this location shall constitute representations, stipulations and conditions of approval for any and all subsequent operations on the location unless this Form 2A is modified by Sundry Notice, Form 4 or an Amended Form 2A.

COA Type	Description
0 COA	

Best Management Practices

No	BMP/COA Type	Description
1	General Housekeeping	All loadlines shall be bullplugged or capped. `
2	General Housekeeping	During construction of all phases, KMOG will only conduct day light operation and there will be no nighttime operations that require lighting. • Exterior lighting shall be directed away from residential and other sensitive areas or shielded from said areas to eliminate glare. Light spillage beyond the perimeter of the well site shall be minimized. • Bulbs shall be fully shielded to prevent light emissions above a horizontal plane drawn from the bottom of each fixture.`

3	General Housekeeping	KMOG will utilize LED fixtures to reduce skyglow. • KMOG will position all lights to point in a downward direction where vertical lighting is not required. Where it is required, lights are angled in a vertical direction to provide task lighting for safety and operations involving personnel. • Derrick mast lighting in Section 6.1 is facing horizontally to provide adequate lighting for safe operation. • Lighting is angled to mitigate the amount of light leaving the location boundary, and away from surrounding off site buildings. • Lighting within the Drilling area has been reduced to provide a minimum acceptable value for safe operation. • Light masts are automatically switched off/on based on lighting sensors. • Lights are switched off when not required. • Low power (63 W) LED lights are used for the drill rig. • In the event of a lightning complaint, KMOG will address the complaint and work with all parties involved to ensure the complaint is resolved. Completions and Flowback Phases: • KMOG will utilize LED fixtures to reduce skyglow. • KMOG will position all lights to point in a downward direction where vertical lighting is not required. Where it is required, lights are angled in a vertical direction to provide task lighting for safety and operations involving personnel. • Lighting is angled to mitigate the amount of light leaving the location boundary, and away from surrounding off site buildings. • Lighting within the Completion and Flowback areas have been reduced to provide a minimum acceptable value for safe operation. • Light masts are automatically switched off/on based on lighting sensors. • Lights are directed to task areas only. • In the event of a lightning complaint, KMOG will address the complaint and work with all parties involved to ensure the complaint is resolved. Production Phase: • KMOG will utilize LED fixtures to reduce skyglow. • KMOG will position all lights to point in a downward direction, in order to mitigate light leaving the location boundary. • Lighting within the Production areas have been reduced to provide a minimum acceptable value for safe operation.`
4	General Housekeeping	Wastes will be stored in containers or on lined containment that are chosen for compatibility and checked periodically for leaks or integrity problems. Examples of containment include but are not limited to 3-sided steel tanks, steel tanks, lined containment, plastic totes, drums, etc. During drilling, completions, and facility construction, human waste and septic from temporary buildings will be stored in tanks. These tanks will be emptied via vacuum truck for disposal. Temporary portable restrooms will also be available for workers during this phase.`
5	Wildlife	An environmental assessment will be conducted immediately prior to pad construction, drilling, and completion operations. `
6	Wildlife	If construction coincides with the raptor nesting season. KMOG will perform pre-construction surveys to determine nearby nest statuses. If construction occurs during the Burrowing Owl nesting season, CPW protocol-level surveys will be performed prior to construction. If active Burrowing Owl burrows are identified within 1/4 mile of the Site, KMOG will proceed with CPW consultation.`
7	Wildlife	Avian protection will be installed on openings larger than two inches. Approximately two weeks prior to construction start, the approved locations will be surveyed by third party biological contractor for nests. A site-specific spill prevention, control, and countermeasure plan compliant with EPA rule 40 CFR 112 has been created and submitted with the 2A for these locations. Automated emergency response systems and emergency shutdown systems will be installed. Remote monitoring systems will be utilized at these locations. Periodic inspections for nests and of avian protection will occur throughout the life of the project. Training is provided to employees and contractors on wildlife conservation practices, including no harassment, feeding of wildlife, or illegal hunting. KMOG maintains a Standard Operating Procedure (SOP) for water suction hoses and transportation Tanks that meets 1202.a.(2).A requirements with 3rd party contractors when moving equipment from locations. The contractor will use a CPW-approved disinfectant solution capable of destroying whirling disease spores and other aquatic nuisance species defined by CPW. KMOG does not use drilling pits, production pits or any other pits at oil and gas locations in the Denver-Julesburg Basin.`

8	Storm Water/Erosion Control	If it is infeasible to install or repair a control measure immediately after discovering a deficiency, KMOG will document and keep on record in the stormwater management plan: (a) a description of why it is infeasible to initiate the installation or repair immediately; and (b) a schedule for installing or repairing the control measure and returning it to an effective operating condition as soon as possible. `
9	Storm Water/Erosion Control	KMOG will install adequate down gradient controls if they can not have a control at the source. `
10	Storm Water/Erosion Control	KMOG will ensure that control measures are designed, installed and adequately sized in accordance with good engineering, hydrologic and pollution control practices. `
11	Storm Water/Erosion Control	KMOG will install perimeter controls to control potential sediment-laden runoff in the event of spill or release from Modular Large Volume Storage Tank. `
12	Storm Water/Erosion Control	Outlet protection will be used when a conveyance discharges onto a disturbed area where there is potential for accelerated erosion due to concentrated flow. Outlet protection should be provided where the velocity at the culvert outlet exceeds the maximum permissible velocity of the material in the receiving channel. `
13	Storm Water/Erosion Control	? A diversion ditch and berm will be implemented to divert stormwater run-on & run-off throughout Clover 2-29HZ to a designated outlet structure(s). ? This BMP will be installed prior surface disturbing activities and will surround the entirety of the location to create continuous perimeter control. ? An additional berm will be installed on the western and northwestern portions of the well pad and the facility pad working surface. ? Diversion ditch and berm will remain in-place until interim reclamation activities are complete. ? A temporary spillway and/or outlet are designed to capture sediment transported in surface runoff and slowly release flows to allow time for settling of sediment prior to discharge from the location. ? Spillway and/or outlet will be installed concurrently with the facility diversion ditch and berm, and prior to commencement of surface disturbing activities. ? A temporary spillway/outlet will be installed in the northwestern segment of the disturbance area ditch and berm, the western and northwestern segments of the facility berm and the northwestern and southwestern segments of the well pad berm for Clover 2-29HZ. ? All spillways and outlets will remain in-place until interim reclamation activities are complete Inspections will be conducted to document the status of construction activities, stormwater control measure placement, maintenance needs, and effectiveness, to evaluate pollution sources, and to document reclamation / final stabilization progress. Inspections will be managed by the Stormwater Manager and SWMP Administrator and conducted by their designated representative(s). Inspection forms will document non-compliance conditions, including any release of sediment or other contaminants, additional control measures that are needed, or repair and maintenance work orders. During construction, inspections shall be conducted every 14 days, and after a major precipitation or melt event, which has the potential to cause surface runoff. For sites earthwork and construction is completed, but final stabilization is not achieved due to vegetative cover, inspections shall be conducted every 30 days and exclude precipitation or melt event response. Inspections will continue until all reclaimed areas have achieved a cover of 70% the pre-construction reference vegetation (i.e. final stabilization).`
14	Material Handling and Spill Prevention	KMOG will ensure that a fueling contractor is present during the entire fueling process to prevent overfilling, leaks and drips from improper connections. `
15	Material Handling and Spill Prevention	KMOG will properly test for and dispose of TENORM. `
16	Material Handling and Spill Prevention	KMOG will refuel vehicles only on impervious surfaces and never during storm events. `
17	Material Handling and Spill Prevention	KMOG will use Modular Large Volume Storage Tanks.`

18	Material Handling and Spill Prevention	Test separators and associated flow lines, sand traps and emission control systems shall be installed on-site to accommodate completions techniques. When commercial quantities of salable quality gas are achieved at each well, the gas shall be immediately directed to a sales line or shut in and conserved. If a sales line is unavailable or other conditions prevent placing the gas into a sales line, KMOG shall not produce the wells. KMOG agrees to comply with both Rules 903.c.(3).B. and 903.c.(3).C.`
19	Material Handling and Spill Prevention	The temporary produced water storage tanks will be staged on a geosynthetic liner and surrounded by an earthen berm. The berms will enclose an area sufficient to provide secondary containment for 150% of the volume of the largest single tank and will be sufficiently impervious to contain spilled or released material. Berms and the liner and all secondary containment devices will be inspected at the same time as stormwater inspections, with personnel on location, daily inspections will occur. During non-active, but while under construction, site inspections will occur every 14 days. When construction is completed and the location is on production, site inspections will occur every 28 days at a minimum.`
20	Material Handling and Spill Prevention	Automation technology will be utilized at this facility. This technology includes the use of fluid level monitoring for the tanks and produced water sumps, high-level shut offs, and electronic sensors to monitor the interstitial space of double-walled produced water sumps. All automation is monitored by Kerr-McGee's Integrated Operations Center (IOC), which is manned 24 hours per day, 7 days per week.`
21	Material Handling and Spill Prevention	Completion: During completions operations, the following site-specific best management practices will be used: KMOG will monitor pressure responses and containment to identify potential leaks. Lines will also be walked continuously throughout operations (between stages) to identify potential leaks. In addition, there is a slam valve and control valve with Emergency Shut Down system in line to the external temp tanks to prevent overflowing tanks during the green flowback duration.`
22	Material Handling and Spill Prevention	production: Automation technology will be utilized at this facility. This technology includes the use of fluid level monitoring for the tanks and produced water sumps, high-level shut offs, and electronic sensors to monitor the interstitial space of double-walled produced water sumps. All automation is monitored by Kerr-McGee's Integrated Operations Center (IOC), which is manned 24 hours per day, 7 days per week. All personnel on location on behalf of KMOG are trained in AVO techniques. All personnel are empowered with 'Stop Work Authority' and to report an leaks immediately.`
23	Dust control	KMOG will not use produced water or other process fluids for dust suppression. `
24	Dust control	Access roads are not paved, they are constructed with a minimum of four - inches of gravel road base KMOG will proactively deploy fresh water to suppress dust along access road to well pad/ facility during all phases of pre-production operations ? Speed limits will be reduced to 10 mph on access road and 5 mph once vehicles reach well pad/ facility ? Access roads and Vehicle Tracking Control will receive maintenance as needed throughout operations In the event of high winds that generate dust that cannot be mitigated with an application of water, KMOG will shut down construction operations ? During the Completions phase, KMOG will utilize a fully enclosed sand containerized proppant delivery system that eliminates the use of pneumatic transfer on location. This methodology utilizes a gravity choke feed system that reduces dust significantly. The dust levels from this system are minimal and below Occupational Safety and Health Administration (OSHA) permissible exposure limit which eliminates the need for additional Personal Protective Equipment (PPE) Sand boxes are used during hydraulic stimulation to reduce the risk of silica dust.`
25	Construction	KMOG will properly construct or modify a road to access the location for drilling, completions, and production operations, including maintenance of equipment. The road will be adequately constructed and maintained to accommodate for emergency vehicle access.`
26	Construction	The completed wellsite will be surrounded with a fence and gate with adequate lock to restrict access to authorized personnel only. KMOG personnel will monitor the wellsite upon completion of the wells. Authorized representatives and/or KMOG personnel shall be on-site during drilling and completions operations.`

27	Noise mitigation	Prior to commencement of drilling and completion activities, a perimeter, engineered sound wall consisting of approximately 1,540 linear feet of 32-foot-tall, STC32 wall, and 80 linear feet of 24-foot-tall, STC43 wall will be installed around the edge of the well pad to reduce noise levels at the critical receptor points. The total footage is broken down below: o 320 linear feet on west edge of the well pad o 540 linear feet on north edge of the well pad o 380 linear feet on the south edge of the well pad o 380 linear feet on the east edge of the well pad • KMOG will utilize a modified drilling rig designed to reduce overall noise levels. This will include low noise level shale shakers and modifications to the generator house to reduce noise levels from the exhaust vents and radiator fans. Additional noise reduction modifications may also be implemented depending on the rig contractor utilized following a noise survey study. • KMOG will utilize a low noise completions fleet for all completions operations. • Flowback operations and equipment were reviewed as part of this Noise Mitigation Plan (NMP). Flowback utilizes a fraction of similar, but smaller equipment compared to the three other operations studied. Perimeter sound walls will be left in place until flows are initiated to appropriately manage noise levels for this operation.`
28	Emissions mitigation	KMOG commits to monitoring ambient air quality during drilling and completion operations and for the first 6 months of production. `
29	Emissions mitigation	KMOG will control bradenhead/casinghead venting. `
30	Emissions mitigation	KMOG will control emergency flaring with an enclosed combustor with a destruction efficiency of 98% or better. `
31	Emissions mitigation	KMOG will not flare or vent gas during completion or flowback, except in upset or emergency conditions, or with prior written approval from the Director for necessary maintenance operations. `
32	Emissions mitigation	Rig power will be supplied by two natural gas engines with a battery energy storage system and an automated engine management system. As necessary, a diesel generator will be used to supplement additional power during the highest demand portions of the wells. KMOG uses an automated engine management system that preferentially uses natural gas engines over diesel for rig power. During Completions: During completions KMOG uses a closed loop system. As a standard practice, KMOG has also implemented the pipelined Water on Demand (WOD) system which will eliminate approximately 393,676 truck trips at the Sprout OGDP locations during completions activities. During Flowback: Fluids will flow through separation equipment where the gas will be collected through a gas gathering line instead of vented or burned.`
33	Emissions mitigation	Produced water will be piped from the Clover location.`

34	Odor mitigation	drilling: All oil-based drilling fluids will be built using a Group III base oil with negligible aromatic content and PAH less than 0.001% so that it does not emit odor during all production drilling operations. • The Group III base oil will be utilized in a closed loop drilling fluid system and eliminate odor at the shakers, transfer tank, active/reserve tanks, and cuttings in collection tanks and during transport. • All drill cuttings are processed through centrifugal dryers to remove residual oil-based drilling fluid not removed by shale shakers. • All tubulars pulled out of the hole will be wiped prior to being racked in the derrick or laid down. • Cuttings storage time on location will be minimized prior to transport to local landfills. • New drilling fluid will be built using transfer line outlets located below tank fluid level to minimize splashing/agitation. New fluid will only be built using Group III base oils. production: • KMOG uses pipelines to transport hydrocarbons (oil & gas) from the production facility eliminating odors that could occur during truck loading. • Production facilities are inspected regularly by KMOG to make sure the equipment is working property and necessary maintenance is performed, to reduce potential odors. KMOG incorporates Audio, Visual, Olfactory (AVO) observations at production facility inspections. • KMOG will use Best Management Practices to reduce unloading events and to reduce potential odor causing emissions when liquids unloading is necessary (i.e., maintenance activities to remove liquids from existing wells that are inhibiting production). • KMOG remotely monitors production facilities, this reduces traffic onto production facilities which may create odors from truck traffic.`
35	Drilling/Completion Operations	All storage tanks used for active production rig drilling operations, used in lieu of pits, will contain pit level monitors with Electronic Drilling Recorders (EDR). KMG uses EDRs with pit level monitor(s) and alarm(s) for production rigs. Basic level gauges will be used on tanks associated with the surface rig.`
36	Drilling/Completion Operations	Guy line anchors will not be used. Base Beams will be used to stabilize the rig and removed after drilling. `
37	Drilling/Completion Operations	KMOG will ensure that all drilling fluid is removed from pipes before storage. `

38	Drilling/Completion Operations	KMOG is proposing one 25,000 BBL MVLT for this location for use during completions – 36 feet tall with a 70 foot diameter. The proposed manufacturer and vendor is Shalestone Resources. The MLVT is approximately 2,214 feet from the nearest RBU and is a temporary piece of equipment (on location for approximately 2 months). The MLVT will be in compliance with the following COGCC safety setbacks. 1. Seventy-five (75) feet from a wellhead, fired vessel, heater-treater, or a compressor with a rating of 200 horsepower or more; 2. Fifty (50) feet from a separator, well test unit, or other non-fired equipment. 3. Signs shall be posted on each MLVT to indicate that the contents are fresh water and that no E&P waste fluids are allowed. Location and additional signage shall conform to Rule 210. 4. MLVTs will be operated with a minimum of 1 foot freeboard at all times. 5. Access to the tanks shall be limited to operational personnel. 6. Construction and installation of the tank structure, liner and sub-grade shall meet or exceed the manufacturer specifications. 7. KMOG follows manufacturers Standard Operating Procedures (SOPs) and will provide these SOPs upon request to the COGCC. 8. KMOG will conduct daily, visual inspections of the exterior wall and general area for any integrity deficiencies before, during, and after filling the MLVTs. If deficiencies are noted, KMOG will repair them as soon as practicable. Records of repairs will be maintained per Rule 205. 9. KMOG will follow pre-construction risk assessment measures to address safety concerns and minimize environmental impacts and property damage in the unlikely event of a MLVT release. 10. In the event of a catastrophic MLVT failure, KMOG shall notify the COGCC as soon as practicable but not more than 24 hours after discovery, submit a Form 22-Accident Report within 10 days after discovery, conduct a root cause analysis´ and provide same to COGCC on a Form 4-Sundry Notice within 30 days of the failure. 11. All MLVT liner seams shall be welded and tested in accordance with applicable ASTM international standards. Any repairs to liners shall be made using acceptable practices and applicable standards. 12. The MLVT shall be constructed and operated in accordance with a design package certified and sealed by a Licensed Professional Engineer either in Colorado or the state where the MLVT was designed or manufactured. 13. KMOG hereby certifies to the Director that the MLVT at this location will be designed and implemented consistent with the Colorado Oil and Gas Conservation Commission policy dated June 13, 2014.`	
39	Drilling/Completion Operations	The following are BMPs agreed on by the Operator as an outcome of the CDPHE consultation: • Operator will properly maintain vehicles and equipment • Operator will use non-emitting pneumatic controllers • Operator will use Tier IV or equivalent engines, such as NG Tier II w/ battery assist, (or better) for drilling (dual-fuel engines are not considered equivalent) • Operator will use Tier IV or equivalent engines, such as NG Tier II w/ battery assist, (or better) for hydraulic fracturing (dual-fuel engines are not considered equivalent) • Operator will use electric equipment and devices (e.g. vapor recovery units or VRUs, fans, etc.) to minimize combustion sources on site (if yes, operator will provide a list outlining which equipment and devices will be electrified) • Operator will use service providers who utilize at least 50% Tier IV or equivalent engines, such as NG Tier II w/ battery assist, (or better) for nonroad construction equipment (dual-fuel engines are not considered equivalent) • Operator will not store hydrocarbon liquids in permanent storage tanks on site (other than a maintenance tank possibly used for well unloading or other maintenance activities) • Operator will implement a "hybrid or modern" production flowack method (eliminates tanks by routing the oil, natural gas and water directly to permanent production equipment) • Operator will use pipelines to transport water used for hydraulic fracturing to location • Operator will have adequate and committed pipeline takeaway capacity for all produced gas and oil • Operator will shut in the facility to reduce the need for flaring if the pipeline is unavailable • Operator will use lease automatic custody transfer (LACT) system to remove/reduce the need for truck loadout	

		• Operator will use OGP Group III drilling fluid • Operator will cover trucks transporting drill cuttings • Operator will use a squeegee or other device to remove drilling fluids from pipes as they exit the wellbore • Operator will ensure that all drilling fluid is removed from pipes before storage • Ozone mitigation on forecasted high ozone days: operator will eliminate use of VOC paints and solvents • Ozone mitigation on forecasted high ozone days: operator will minimize vehicle and engine idling • Ozone mitigation on forecasted high ozone days: operator will reduce truck traffic and worker traffic • Ozone mitigation on forecasted high ozone days: operator will postpone the refueling of vehicles • Ozone mitigation on forecasted high ozone days: operator will suspend or delay the use of non-essential fossil fuel powered ancillary equipment • Ozone mitigation on forecasted high ozone days: operator will adjust construction schedules to postpone non-essential construction activity, including but not limited to temporary tank removals and cleaning on ozone action days • Ozone mitigation on forecasted high ozone days: operator will send notification to all operational staff requesting that where possible, they delay all non-essential operational activity (such as pigging, well unloading and tank cleaning) on ozone action days • Operator will use Modular Large Volume Storage Tanks • Operator will not use fracturing fluids which contain PFAS compounds • Operator will continue to participate in the Colorado Preparedness Resources Network (CPRN)CPRN, which has a non-PFAS foam location identification to be sure, in an emergency, that non-PFAS foam will be available • Operator will coordinate with nearby fire district(s) to evaluate whether PFAS-free foam can provide the required performance for the specific hazard • If PFAS-containing foam is used at a location: operator will properly characterize the site to determine the level, nature and extent of contamination • If PFAS-containing foam is used at a location: operator will perform appropriate soil and water sampling to determine whether additional characterization is necessary and inform the need for and extent of interim or permanent remedial actions • If PFAS-containing foam is used at a location: operator will properly capture and dispose of PFAS-contaminated soil and fire and flush water In addition, CDPHE supports incorporation of each of the BMPs that Oxy has committed to exclusively for the Alfalfa and Clover pads in the Sprout OGDP, as listed below: • Operator will not store produced water in permanent storage tanks on site (other than a maintenance tank possibly used for well unloading or other maintenance activities) • Operator will use pipelines to transport water used for hydraulic fracturing from location`
40	Interim Reclamation	Topsoil piles will have stabilization with mulch, seeding, track walking, perimeter control or a combination of BMPs. Weeds on stockpiles shall be controlled as to prevent production of weed seed and/or enough biomass that would interfere with redistribution of soil or cause onsite debris. Signage shall be installed to identify topsoil stockpiles to facilitate subsequent reclamation and indicate to personnel that the area may not be disturbed by drilling and completion operations ? Ditch and berm shall be installed around the perimeter of the location, and subsequently around all topsoil stockpiles, to intercept and divert stormwater run-on/run-off and sediment from precipitation and melt events. ? Track packing all topsoil stockpiles will occur to prevent erosion from stormwater and wind, as well as provide temporary stabilization. ? Seeding and crimped straw mulch will be applied to prevent erosion and soil loss from stormwater and wind. ? Vegetation establishment through seeding efforts will promote soil health and maintain carbon exchange. ? Weed control will occur seasonally and as needed to hinder the spread of weeds throughout the topsoil stockpile(s) and help native grass establishment. Vegetation establishment through seeding efforts will promote soil health and maintain carbon exchange. ? Weed control will occur seasonally and as needed to hinder the spread of weeds throughout the topsoil stockpile(s) and help native grass establishment.`

41	Final Reclamation	Once the wells have been plugged and abandoned, KMOG will identify the location of the wellbores with permanent monuments that will detail the well names and date of plugging. `
42	Final Reclamation	Once the wells have been plugged and abandoned, KMOG will identify the location of the wellbores with permanent monuments that will detail the well names and date of plugging. `
43	Final Reclamation	The wellsite will be cleared of all non-essential equipment within ninety (90) days after all wells associated with the pad have been plugged and abandoned. `

Total: 43 comment(s)

Attachment List

Att Doc Num	Name
2136827	OTHER
21316816	GEOLOGIC HAZARD MAP
21316819	CORRESPONDENCE
21316821	CDPHE CONSULTATION
21316824	LOCAL GOVERNMENT PERMIT
21316827	OTHER
21316828	OTHER
403278417	FORM 2A SUBMITTED
403497738	ACCESS ROAD MAP
403497742	DIRECTIONAL WELL PLAT
403497743	HYDROLOGY MAP
403497749	LOCATION PICTURES
403497751	LOCATION PICTURES
403497775	PRELIMINARY PROCESS FLOW DIAGRAMS
403497776	WILDLIFE HABITAT DRAWING
403498288	LOCATION AND WORKING PAD GIS SHP
403498289	OTHER
403498292	CULTURAL FEATURES MAP
403498297	LGD CONSULTATION
403522150	SURFACE AGRMT/SURETY
403627608	RELATED LOCATION AND FLOWLINE MAP
403627612	NRCS MAP UNIT DESC
403628723	OTHER
403637770	LAYOUT DRAWING
403637776	LOCATION DRAWING

Total Attach: 25 Files

General Comments

User Group	Comment	Comment Date
OGLA	Update on the Form 2A the distance to the nearest wetland and surface water body to be 77 feet vs. 130 feet. 77 feet is indicated on the hydrology map. The man-made pond is the surface water body and mapped wetland. According to the operator and photos, the pond is used for cattle and there is little to no vegetation around the pond.	02/22/2024
OGLA	The Director has determined that the OGDP application that this Form is a component of meets all requirements of Rule 306.a. The Director's Recommendation has been attached to the Form 2A.	02/22/2024
OGLA	Operator provided the approved local permit - attached to the Form 2A and updated the local government tab. Removed the comment "A 1041WOGLA will be submitted for this location. KMOG will update OGLA staff when that is submitted." Attached response to public comments as "OTHER" doc 21316827 and Executive Summary as "OTHER" doc 21316826.	02/16/2024
OGLA	Consultation with CDPHE occurred on 1/22/2024, the letter is attached and the BMPs have been added to the BMP section of the Form 2A.	02/12/2024
OGLA	Public comment period for this location is 30-days. A technology glitch initially assigned 45 days for public comment ending on 2/11/24. The date has been updated to be 30 days post the OGDP considered Complete on 12/28/2023 for the public comment to end on 1/27/2024.	01/09/2024
OGLA	Inform CDPHE the location is in the 8-hour ozone area. CDPHE requested a consultation for the proposed location and OGDP.	01/08/2024
OGLA	Attached Completeness spreadsheet as correspondence doc no 21316819	12/28/2023
OGLA	The Director has determined this OGDP application is complete. Form pushed to IN PROCESS.	12/28/2023
OGLA	The Conditions of Approval (COA) and Best Management Practices (BMPs) on the Form 2A and the Final Order are the final enforceable permit conditions for this Oil and Gas Location. Any plan or attachment that contains information or language that is contrary to or less protective than ECMC rules or the COAs and BMPs on the Form 2A or Final Order does not relieve the operator from compliance with the applied COAs, BMPs or any ECMC rules.	12/27/2023
OGLA	Replace Geologic Hazard Plan and Map and update equipment list per email and phone correspondence with Operator. Missing Location drawing and the Layout drawing file is corrupt. Push back to draft.	12/27/2023
OGLA	Completeness review - return to draft	12/01/2023

Total: 11 comment(s)

Public Comments

The following comments were provided by members of the public and were considered during the technical review of this application.

No.	Comment	Comment Date
1	Colorado has some of the strictest oil and gas regulations in the country. These rules are designed to regulate the industry in a way that protects both the public and the environment. The ECMC has proven that they are not out to shut down the industry or 'keep it in the ground', but looking to find a balance between local communities, the environment, and the oil and gas industry. Operators in Colorado have stepped up to the call to operate safely, neighborly, transparently, and with a reduced impact to the environment. Colorado is an example for the rest of the country. Occidental has done a wonderful job engaging the communities they operate in and complying with both the letter and spirit of the updated oil and gas regulations. While the world is in an energy transition, there is still a great need for fossil fuels. Why shouldn't those fossil fuels be produced responsibly? Colorado can lead the way in responsible exploration, development, production, transportation, and processing of fossil fuels. Colorado is a model for other industry regulators. I believe that the Sprout OGDP (Rademacher, Clover, and Alfalfa pads) is compliant with current regulations and rules. I believe that Occidental is a responsible operator. Therefore, I support the Sprout OGDP and hope that the ECMC approves this application and subsequent well permits.	01/23/2024
2	I am writing to you to let you know how important it is to our family to continue drilling Township 2 North, Range 67 West 6th P.M. These were mineral rights bequeathed to the children of Salena Hittson Ernest Moore(my Great-Grandmother). She was the daughter of a great sheriff and cattleman John Hittson from Texas. Due to his cattle business the family moved to Denver about 1870 their ranch was just outside Denver. Salena married Finis Ernest in 1880 who was also a cattleman. They were very prominent in Denver and she was active in society including dinners with the Governor. Later in life she was on the only women's committee at the1904 St. Louis World's Fair. She continued being involved in women's suffrage and Indian rights in her later years. In 1907 she was widowed and several years later married W.T. Moore of San Antonio who was an oil man. She was widowed again several years later and eventually bought mineral rights in Weld County Co. These wells did not start producing until the late 1990's. These mineral rights have been a legacy to many of her heirs over the last 20 or so years. Approximately 12 cousins including myself and brother have all received mineral rights. Some have passed on and handed down to their families. All of us are very proud of our heritage and ties to Colorado, Denver and Manitou. The mineral rights has enabled my husband and I to help pay for four of our grandchildren's' college education. The last who is a freshman this year so has at least three years to go and his sister is starting her masters this fall. This means so much to us to help them on this road of educations and bright futures. I am sure my great grandmother had no idea she would still be helping her great-great-great grandchildren in 2024! We were visiting Colorado this fall for our daughter's wedding. We took a side trip to Fairmount Cemetery in Denver where my great grandparents are buried and many other relatives. We were not disappointed in the beautiful burial spot or the Denver area! Our hopes are you will see that there are many people who prosper from these mineral rights not just big corporations. We also hope this area of drilling will continue to prosper for many years to come. Thank you for your time. Judith Grimmer	01/23/2024
3	To: Energy and Carbon Management Commission From: Vivian Teets InRe: Kerr-McGee Sprout Oil and Gas Development Plan Alfalfa 8-20HZ, Clover 2-29HZ, Rademacher 14-30HZ I am in full support of the application for permitting the three pads planned for this development. As a mineral rights owner, I have always found them to be helpful, available to answer questions, and prompt in making royalty payments. As a previous owner of surface areas in Sections 20 and 29, I found that Kerr-McGee was a responsive, reliable and conscientious producer. They were careful and efficient, always proactive and completely transparent during the development and operation of their wells. They respected the land and land owners. I believe that this is the right action at the right time by the right company and I urge the Commission to approve this application. Thank you. Vivian Teets	01/23/2024

	10091 Prima Run Place Colorado Springs, CO 80924 vivian@teets.net	
4	Please, there doesn't need to be more O&G drilling in this state.	01/25/2024

Total: 4 comment(s)

FORM 2A Rev 05/22

State of Colorado
Energy & Carbon Management Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109

Document Number: 403278425

Date Received: 09/13/2023

Oil and Gas Location Assessment

This Oil and Gas Location Assessment is to be submitted to the COGCC for approval prior to any ground disturbance activity associated with oil and gas operations. Approval of this Oil and Gas Location Assessment will allow for the construction of the below specified Location; however, it does not supersede any land use rules applied by the local land use authority. Please see the COGCC website at https://cogcc.state.co.us/ for all accompanying information pertinent this Oil and Gas Location Assessment.

Location ID:
OGDP ID:
Expiration Date:

[X] New Location [ ] Refile [ ] Amend Existing Location # _____

If this Location assessment is a component of an Oil and Gas Development Plan (OGDP) application, enter the OGDP docket number(s).

Docket Number	OGDP ID	OGDP Name
230900284		

If this Location assessment is part of an approved Oil and Gas Development Plan, enter the OGDP ID number(s).

<No existing OGDP number provided>

CONSULTATION

[ ] This location is included in a Comprehensive Area Plan (CAP). CAP ID # _____
[X] This Location or its associated new access road, utility, or Pipeline corridor meets Rule 309.e.(2).A, B, or C.
[ ] This Location is within 2,640 feet of a GUDI or Type III Well per Rule 411.b.(4).
[ ] This Location includes a Rule 309.e.(2).E variance request.
[ ] This location includes a Rule 309.f.(1).A.ii. variance request.

Operator

Operator Number: 47120
Name: KERR MCGEE OIL & GAS ONSHORE LP
Address: P O BOX 173779
City: DENVER State: CO Zip: 80217-3779

Contact Information

Name: Rachel Friedman
Phone: (720) 9296564
Fax: ( )
email: djregulatory@oxy.com

FINANCIAL ASSURANCE FOR THIS LOCATION (check all that apply)

[X] Plugging, Abandonment, and Reclamation 20010124
[ ] Centralized E&P Waste Management Facility _____
[ ] Gas Gathering, Gas Processing, and Underground Gas Storage Facilities _____
[ ] Surface Owner Protection Bond. _____

Federal Financial Assurance

[ ] In checking this box, the Operator certifies that it has provided or will provide at least this amount of Financial Assurance to the federal government for one or more Wells on this Location.

Amount of Federal Financial Assurance $ _____

LOCATION IDENTIFICATION

Name: RADEMACHER Number: 14-30HZ

Provide the location description and the latitude and longitude of a single point near the center of the Working Pad Surface as a reference for this Location.

QuarterQuarter: SESW Section: 30 Township: 3N Range: 67W Meridian: 6 Ground Elevation: 4820

Latitude: 40.191307 Longitude: -104.933703

GPS Quality Value: 1.5 Type of GPS Quality Value: PDOP Date of Measurement: 04/11/2001

RELATED REMOTE LOCATIONS

(Enter as many Related Locations as necessary. Enter the Form 2A document # only if there is no established COGCC Location ID#)

This proposed Oil and Gas Location is:	LOCATION ID #	FORM 2A DOC #
☐		

RELEVANT LOCAL GOVERNMENT SITING INFORMATION

County: WELD Municipality: N/A

Per § 34-60-106 (1)(f)(I)(A), the following questions pertain to the "Relevant Local Government approval of the siting of the proposed oil and gas location."

This proposed Oil and Gas Location is in an area designated as one of State interest and subject to the requirements of § 24-65.1-108, C.R.S. Yes

Does the Relevant Local Government regulate the siting of Oil and Gas Locations, with respect to this location? Yes

A siting permit application has been submitted to the Relevant Local Government for this proposed Oil and Gas Location: Yes

Date Relevant Local Government permit application submitted: 08/22/2023

Current status or disposition of the Relevant Local Government permit application for this proposed Oil and Gas Location: Approved

Status/disposition date: 11/02/2023

If Relevant Local Government permit has been approved or denied, attach final decision document(s).
Provide the contact information for the Relevant Local Government point of contact for the local permit associated with this proposed Oil and Gas Location:

Contact Name: Stephanie Frederick Contact Phone: 970-400-3581

Contact Email: sfrederick@weldgov.com

PROXIMATE LOCAL GOVERNMENT INFORMATION

For every Proximate Local Government (PLG) associated with this proposed Oil and Gas Location, provide the PLG's point of contact and their contact information.

Type of Proximate Govt	County	Municipality	Contact Name	Contact Phone	Contact Email
Municipality		Firestone	Todd Bjerkaas	303-531-6276	TBjerkaas@firestoneco.gov

FEDERAL PERMIT INFORMATION

A Federal drilling permit (or related siting application) has been submitted for this proposed Oil and Gas Location: No

Date submitted:

Current status or disposition of the Federal drilling permit (or related siting application) for this proposed Oil and Gas Location:

Status/disposition Date:

If Federal agency permit has been approved or denied, attach the final decision document(s).
Provide the contact information of the Federal point of contact for the Federal permit associated with this proposed Oil and Gas Location.

Contact Name: Contact Phone:

Contact Email: Field Office:

Additional explanation of local and/or federal process:

COMMENT: A WELD COUNTY PERMIT WAS SUBMITTED8/22/23 and determined complete 9/12/23

RELEVANT LOCAL GOVERNMENT OR FEDERAL PRE-APPLICATION CONSULTATION

Complete this section for any pre-application consultation related to this proposed Oil and Gas Location that occurred prior to the submission of this Form 2A. If a pre-application Formal Consultation Process occurred, attach a Consultation Summary.

Did a pre-application Formal Consultation Process occur with the Relevant Local Government per Rule 301.f.(3)? Yes

Date of local government consultation: 08/31/2022

Did a pre-application Formal Consultation Process occur with the Federal land manager per Rule 301.f.(3)? No

Date of federal consultation:

Was an ALA that satisfies Rule 304.b.(2).C (or substantially equivalent information per Rule 304.e) developed during a federal or local government permit application process? If yes, attach the ALA to the Form 2A. No

ALA APPLICABILITY AND CRITERIA

Complete this section for any pre-application consultation related to this proposed Oil and Gas Location that occurred prior to the submission of this Form 2A. If a pre-application Formal Consultation Process occurred, attach a Consultation Summary.

Does the proposed Oil and Gas Location meet any of the criteria listed in Rule 304.b.(2)B? Yes

If YES, indicate by checking the box for every Rule 304.b.(2).B criterion met by this proposed Location, and attach an ALA. See Rule 304.b.(2).B.i-x for full text of criteria.

- [X] i. WPS < 2,000 feet from RBU/HOBU
- [ ] ii. WPS < 2,000 feet from School/Child Care Center
- [ ] iii. WPS < 1,500 feet from DOAA
- [ ] iv. WPS < 2,000 feet from jurisdictional boundary and PLG objects/requests ALA
- [ ] v. WPS within a Floodplain
- [ ] vi.aa. WPS within a surface water supply area
- [ ] vi.bb. WPS < 2,640 feet from Type III or GUDI well
- [X] vii. WPS within/immediately upgradient of wetland/riparian corridor
- [X] viii. WPS within HPH and CPW did not waive
- [ ] ix. Operator using Surface bond
- [ ] x. WPS < 2,000 feet from RBU/HOBU/School within a DIC

Is the proposed Oil and Gas Location within the exterior boundaries of the Southern Ute Indian Reservation, and the Tribe objects to the Location or requests an ALA? If YES, attach an ALA to the Form 2A. No

Operator requests the Director waive the ALA requirement per Rule 304.b.(2).A.i: [ ]

Provide an explanation for the waiver request, and attach supporting information (if necessary).

ALTERNATIVE LOCATIONS DASHBOARD

List every alternative location reviewed and included in the ALA. Provide a latitude and longitude for the approximate center of the alternative location, all Rule 304.b.(2).B Criteria met, if a variance would be required to permit the location, and a brief comment on the key points of the alternative location.

304.b.(2).B.i-x Criteria Met:

#	latitude	longitude	i	ii	iii	iv	v	vi	vii	viii	ix	x	Variance Required?	Comments
	40.195011	-104.874396	x						x					Sec 27: 3 RBUs with 2,000 feet of the working pad surface A Riverine corridor in the open area reduces the amount of available acreage The location would place the heels of the wellbores in the Longmont Fault, increasing operational risk 45% of the DSU would be left undeveloped without a second surface location This Location is located within crop land. KMOG attempts to avoid or minimize the impact to agriculture
	40.196461	-104.949765							x					Sec 25: The location is 1 foot north of an NWI mapped freshwater emergent wetland. Future housing development and school planned in this location. Approximately 1760 acres or 47% of the development could not be developed from this location without a second location. This alternative location is within cropland.
	40.183026	-104.893612												Sec 33: KMOG would not be able to fully develop 60% of the DSU without a second or potentially third location. This location is located within crop land. KMOG attempts to avoid or minimize the impact to agriculture which is important to both the landowners and the relevant local government, Weld County
	40.196033	-104.893711	x				x							Sec 28: Three RBUs with 2,000 feet of the working pad surface . Within a floodplain Approximately 1600 acres or 45% of the development could not be developed from this location without a second location. This Location is located within crop land. KMOG attempts to avoid or minimize the impact to agriculture which is important to both the landowners and the relevant local government, Weld County.

SURFACE & MINERAL OWNERSHIP

Surface Owner Info:

Name: Boedle Creek LLC Phone:

Address: 21671 S. 223rd Pl Fax:

Address: Email: dale@road13.com

City: Queen Creek State: AZ Zip: 85142

Surface Owner at this Oil and Gas Location: [X] Fee [ ] State [ ] Federal [ ] Indian

Check only one:

[ ] The Operator/Applicant is the surface owner.

[X] The Operator has a signed Surface Use Agreement for this Location – attach SUA.

[ ] All operations on this Oil & Gas Location will develop the minerals beneath the Location, and the surface owner owns the minerals beneath this Location and is committed to an oil and gas lease – attach lease map or provide lease description.

[ ] All operations on this Oil & Gas Location will develop the minerals beneath the Location, and the Operator intends to use a surface bond per Rule 703 to secure access to this Location – attach lease map or provide lease description.

Surface Owner protection Financial Assurance type: N/A Surety ID Number:

Mineral Owner beneath this Oil and Gas Location: [X] Fee [ ] State [ ] Federal [ ] Indian

Minerals beneath this Oil and Gas Location will be developed from or produced to this Oil and Gas Location: Yes

Lease description if necessary:

SITE EQUIPMENT LIST

Indicate the number and type of major equipment components planned for use on this Oil and Gas Location:

Wells	18	Oil Tanks	0	Condensate Tanks	1	Water Tanks	4	Buried Produced Water Vaults	0
Drilling Pits	0	Production Pits	0	Special Purpose Pits	0	Multi-Well Pits	0	Modular Large Volume Tank	1
Pump Jacks	18	Separators	5	Injection Pumps	0	Heater-Treaters	0	Gas Compressors	0
Gas or Diesel Motors	0	Electric Motors	0	Electric Generators	0	Fuel Tanks	0	LACT Unit	1
Dehydrator Units	0	Vapor Recovery Unit	0	VOC Combustor	1	Flare	0	Enclosed Combustion Devices	0
Meter/Sales Building	2	Pigging Station	0			Vapor Recovery Towers	0		

OTHER PERMANENT EQUIPMENT

Permanent Equipment Type	Number
FG Scrubbers	1
Communication Towers	1
E Houses	1
Air Compressors	1
Chemical Totes	4
Well Manifold	18
Electrical Boxes	2

OTHER TEMPORARY EQUIPMENT

Temporary Equipment Type	Number
Water Tanks	32
Enclosed Combustion Devices	7
Propane Tanks	1
Purge Flares	3
Generator	1

GAS GATHERING COMMITMENT

Operator commits to connecting to a gathering system by the Commencement of Production Operations? Yes

If the answer is NO, a Gas Capture Plan consistent with the requirements of Rule 903.e MUST be attached on the Plans tab.

FLOWLINE DESCRIPTION

Per Rule 304.b.(6), provide a description of all onsite and off-location oil, gas, and/or water flowlines.

Flowlines - 2""-3"" size (outside diameter), constructed of carbon steel.
Oil, gas and water pipelines will be used at this location. Water for completions operations will be brought to the location through temporary water lines using KMOG's Water on Demand system. The oil and gas pipelines will be constructed by a 3rd party midstream company.

CULTURAL DISTANCE AND DIRECTION

Provide the distance and direction to the nearest cultural feature as measured from the edge of the Working Pad Surface.

	Distance		Direction	Rule 604.b Conditions Satisfied (check all that apply): 604.b. (1)	604.b. (2)	604.b. (3)	Details of Condition(s)	604.b. (4)
Building:	1083	Feet	W					
Residential Building Unit (RBU):	1139	Feet	W	☐	☐	☐		X
High Occupancy Building Unit(HOBU)	5280	Feet	S	☐	☐	☐		☐
Designated Outside Activity Area:	5280	Feet	SW					
Public Road:	1782	Feet	W					
Above Ground Utility:	1718	Feet	W					
Railroad:	5280	Feet	W					
Property Line:	61	Feet	S					
School Facility:	5280	Feet	S					
Child Care Center:	5280	Feet	S					
Disproportionately Impacted (DI) Community:	5280	Feet	S					
RBU, HOBU, or School Facility within a DI Community.	5280	Feet	S	☐	☐	☐		☐

RULE 604.a.(2). EXCEPTION LOCATION REQUEST

☐ Operator requests an Exception Location Request from Rule 604.a.(2) [well is less than 150 feet from a property line]. Exception Location Request Letter and Waiver signed by offset Surface Owner(s) must be attached.

CULTURAL FEATURE INFORMATION REQUIRED BY RULE 304.b.(3).B.

Provide the number of each Cultural feature identified within the following distances, as measured from the Working Pad Surface:

	0-500 feet	501-1,000 feet	1,001-2,000 feet
Building Units	0	0	3

Residential Building Units	0	0	2
High Occupancy Building Units	0	0	0
School Properties	0	0	0
School Facilities	0	0	0
Designated Outside Activity Areas	0	0	0

CONSTRUCTION

Size of disturbed area during construction in acres: 12.77

Size of location after interim reclamation in acres: 4.25

Estimated post-construction ground elevation: 4820

DRILLING PROGRAM

Will a closed-loop drilling system be used? Yes

Is H2S gas reasonably expected to be encountered during drilling operations at concentrations greater than or equal to 100 ppm? No If YES, attach H2S Drilling Operations Plan.

Will salt sections be encountered during drilling: No

Will salt based (>15,000 ppm Cl) drilling fluids be used? No

Will oil based drilling fluids be used? Yes

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Method: Commercial Disposal

Cutting Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

PLEASE SEE ATTACHED WASTE MANAGEMENT PLAN
Multiple E&P waste management facilities are used - they are outlined in the Waste Management Plan

Beneficial reuse or land application plan submitted? Yes

Reuse Facility ID: or Document Number:

Centralized E&P Waste Management Facility ID, if applicable: 456644

CURRENT LAND USE

Current Land Use: check all that apply per Rule 304.b.(9).

Crop Land: [X] Irrigated [ ] Non-Irrigated [ ] Conservation Reserve Program (CRP)

Non-Crop Land: [ ] Rangeland [ ] Forestry [ ] Recreation [ ] Other

Subdivided: [ ] Industrial [ ] Commercial [ ] Residential

Describe the current land use:

AGRICULTURE

Describe the Relevant Local Government's land use or zoning designation:

AGRICULTURE

Describe any applicable Federal land use designation:

N/A

FINAL LAND USE

Final Land Use: check all that apply per Rule 304.b.(9).

Crop Land: [X] Irrigated [ ] Non-Irrigated [ ] Conservation Reserve Program (CRP)

Non-Crop Land: ☐ Rangeland ☐ Forestry ☐ Recreation ☐ Other

Subdivided: ☐ Industrial ☐ Commercial ☐ Residential

REFERENCE AREA INFORMATION

If Final Land Use includes Non-Crop Land (as checked above), the following information is required:

Describe landowner's designated final land use(s):

AGRICULTURE

Reference Area Latitude: _____ Reference Area Latitude: _____

Provide a list of plant communities and dominant vegetation found in the Reference Area.

< No row provided >

Noxious weeds present: _____

SOILS

List all soil map units that occur within the maximum extent of the proposed Oil and Gas Location. Attach the National Resource Conservation Service (NRCS) report showing the "Map Unit Description" listing the typical vertical soil profile(s). This data is to be used when segregating topsoil.

The required information can be obtained from the NRCS website at https://www.nrcs.usda.gov/wps/portal/nrcs/surveylist/soils/survey/state/ or from the COGCC website GIS Online map page. Instructions are provided within the COGCC website help section.

NRCS Map Unit Name: 24-Fort Collins loam, 0 to 3 percent slopes

NRCS Map Unit Name: 50-Otero sandy loam 0 to 1 percent slopes

NRCS Map Unit Name: 68-Ustic Torriorthents, moderately steep

GROUNDWATER AND WATER WELL INFORMATION

Provide the distance and direction, as measured from the Working Pad Surface, to the nearest:

water well: 984 Feet N

Spring or Seep: 5280 Feet N

Estimated depth to shallowest groundwater that can be encountered at this Oil and Gas Location: 23 Feet

Basis for estimated depth to and description of shallowest groundwater occurrence:

SB00306732BCB1 Water level - 7.26'
(4805.02-7.26= 4797.76)
4820.1-4797.76 = 22.5
Rounded to 23'

SURFACE WATER AND WETLANDS

Provide the distance and direction to the nearest downgradient surface Waters of the State, as defined 28 Feet W

in the 100-Series Rules, measured from the Working Pad Surface:

If less than 2,640 feet, is the Waters of the State identified above within 15 stream miles upstream of a Public Water System intake? No

Provide the distance and direction to the nearest downgradient wetland, measured from the Working Pad Surface: 28 Feet W

Provide a description of the nearest downgradient surface Waters of the State:

DELINEATED WETLAND

If the proposed Oil and Gas Location is within a Rule 411.a Surface Water Supply Area buffer zone, select the buffer zone type: _____

Public Water System Administrator - Contact Name _____ Email _____

If the proposed Oil and Gas Location is within a Rule 411.b GUDI/Type III buffer zone, select the buffer zone type: _____

Public Water System Administrator - Contact Name _____ Email _____

Is a U.S. Army Corps of Engineers Section 404 permit required for the proposed Oil and Gas Location, access road, or associated pipeline corridor? No

If a U.S. Army Corps of Engineers Section 404 permit is required, provide the permit status, and permit number if available:

Is the Location within a Floodplain? No Floodplain Data Sources Reviewed (check all that apply):

[X] Federal (FEMA) [ ] State [X] County [ ] Local

[ ] Other

Does this proposed Oil and Gas Location lie within a Sensitive Area for water resources, as defined in the 100-Series Rules? Yes

CONSULTATION, WAIVERS, AND EXCEPTIONS

When Rule 309.e.(2) Consultation must occur, check all that apply:

[X] This location is included in a Wildlife Mitigation Plan

[ ] This Oil and Gas Location or associated new access road, utility, or pipeline corridor falls within federally designated critical habitat or an area with a known occurrence for a federal or Colorado threatened or endangered species. Provide description in Comments section of Submit tab.

[ ] This Oil and Gas Location or associated new access road, utility, or pipeline corridor falls within an existing conservation easement established wholly or partly for wildlife habitat. Provide description in Comments section of Submit tab.

When Rule 309.e.(3) Consultation is not required, check all that apply:

[ ] This Oil and Gas Location has been included in a previously approved, applicable Wildlife Protection Plan.

[ ] This Oil and Gas Location has been included in a previously approved, applicable Wildlife Mitigation Plan.

[ ] This Oil and Gas Location has been included in a previously approved, applicable conservation plan.

Pre-application Consultation:

[X] A pre-application consultation with CPW, regarding this Oil and Gas Location, occurred on: 02/08/2023

CPW Waivers and Exceptions (check all that apply and attach all CPW waivers to this Form 2A):

[ ] The applicant has obtained a Rule 304.b.(2).B.viii CPW waiver for the requirement to complete an ALA.

[ ] The applicant has obtained a Rule 309.e.(2).G CPW waiver and consultation is not required.

[ ] The applicant has obtained a Rule 309.e.(5).D.i CPW waiver and is requesting an exception from Rule 1202.c.(1).R.

[ ] The applicant has obtained a Rule 309.e.(5).D.ii CPW waiver and is requesting an exception from Rule 1202.c.(1).S.

[ ] The applicant has obtained a Rule 309.e.(5).D.iii CPW waiver of Rule 1202.c.(1).T.

☐ The applicant has obtained a Rule 309.e.(5).D.iv CPW waiver and is requesting an exception from Rule 1202.c.(1) in accordance with an approved CAP.

☐ The applicant has obtained a Rule 1202.a CPW waiver.

☐ The applicant has obtained a Rule 1202.b CPW waiver.

☐ In accordance with Rule 1203.a.(3), the applicant requests an exception from compensatory mitigation

Rule(s): _____

HIGH PRIORITY HABITAT AND COMPENSATORY MITIGATION

This Oil and Gas Location, associated access roads, utility, or Pipeline corridor falls wholly or partially within the following High Priority Habitats (Note: dropdown options are abbreviated - see Rule 1202 for full rule text):

High Priority Habitat (list all that apply)	Oil and Gas Location	Access Road	Utility or Pipeline Corridor
1202.d.(3) - Mule deer migration & winter	x	x	x

The following questions are for Oil and Gas Locations that cause the density to exceed one Oil and Gas Location per square mile in Rule 1202.d High Priority Habitat:

Direct Impacts:

Is Compensatory Mitigation required per Rule 1203.a for this Oil and Gas Location? Yes

Is a Compensatory Mitigation Plan proposed to address direct impacts for this Oil and Gas Location? No

Have all Compensatory Mitigation Plans been approved for this Location? No

If not, what is the current status of each Plan?

N/A

Is a Compensatory Mitigation Fee proposed for this Oil and Gas Location? Yes

Direct impact habitat mitigation fee amount: $ 13750

Indirect Impacts:

Is Compensatory Mitigation required per Rule 1203.d for this Oil and Gas Location? No

Is a Compensatory Mitigation Plan proposed to address indirect impacts for this Oil and Gas Location? No

Have all Compensatory Mitigation Plans been approved for this Location? No

If not, what is the current status of each Plan?

N/A

Is a Compensatory Mitigation Fee proposed for this Oil and Gas Location? No

Indirect impact habitat mitigation fee amount: $ 0

Operator Proposed Wildlife BMPs

No	Target Species	BMP Type	Description
1	MULE DEER & ELK	Wildlife - Minimization	If new oil and gas operations must occur within CPW-mapped mule deer and elk severe winter range and/or winter concentration areas, the operator agrees to conduct new oil and gas operations outside the time period from December 1 through April 30.

CPW Proposed Wildlife BMPs

No BMP

AIR QUALITY MONITORING PROGRAM

Will the Operator install and administer an air quality monitoring program at this Location? Yes

Operator Proposed BMPs

No	BMP Target	CDPHE Recommendation	COGCC Action
	Air		
	Description	Operator will use lease automated custody transfer (LACT) system to remove/reduce the need for truck loadout	
	CDPHE Comment		
	Water		
	Description	Dust suppression: Operator will not use produced water or other process fluids for dust suppression	
	CDPHE Comment		
	Water		
	Description	Documentation / stormwater management plan: If it is infeasible to install or repair a control measure immediately after discovering a deficiency, operator will document and keep on record in the stormwater management plan: (a) a description of why it is infeasible to initiate the installation or repair immediately; and (b) a schedule for installing or repairing the control measure and returning it to an effective operating condition as soon as possible.	
	CDPHE Comment		
	Air		
	Description	Odor mitigation: operator will cover trucks transporting drill cuttings	
	CDPHE Comment		
	Air		
	Description	Electrification: Operator will use electric equipment and devices (e.g. vapor recovery units or VRUs, fans, etc.) to minimize combustion sources on site (if yes, operator will provide a list outlining which equipment and devices will be electrified)	
	CDPHE Comment		
	Air		
	Description	Odor mitigation: operator will use a squeegee or other device to remove drilling fluids from pipes as they exit the wellbore	
	CDPHE Comment		
	PFAS		
	Description	If PFAS-containing foam is used at a location: operator will properly capture and dispose of PFAS-contaminated soil and fire and flush water	
	CDPHE Comment		
	Air		
	Description	Venting/Flaring: Operator will control emergency flaring with an enclosed combustor with a destruction efficiency of 98% or better	
	CDPHE Comment		
	Air		
	Description	Operator will implement a "hybrid production flowack method" or "modern production flowback method" (unlike the conventional or legacy flowback method, which uses temporary equipment to separate the oil, natural gas and water, the "hybrid-production flowback method" or "modern production flowback method" eliminates tanks by routing the oil, natural gas and water directly to permanent production equipment)	
	CDPHE Comment		
	Water		

	Description	Down gradient controls: Operator will install adequate down gradient controls if they can not have a control at the source	
	CDPHE Comment		
	Air		
	Description	Operator will implement ambient air quality monitoring on site	
	CDPHE Comment		
	PFAS		
	Description		
	CDPHE Comment		
	Water		
	Description	CPGCC permit will incorporate other agency water quality protection plans by reference as applicable (e.g. stormwater management plan)	
	CDPHE Comment		
	Air		
	Description	Ozone mitigation on forecasted high ozone days: operator will eliminate use of VOC paints and solvents	
	CDPHE Comment		
	Air		
	Description	Engines: Operator will use tier IV or better engines for hydraulic fracturing	
	CDPHE Comment		
	PFAS		
	Description	If PFAS-containing foam is used at a location: operator will properly characterize the site to determine the level, nature and exent of contamination	
	CDPHE Comment		
	Air		
	Description	Operator will use non-emitting pneumatic controllers	
	CDPHE Comment		
	Air		
	Description	Operator will properly maintain vehicles and equipment	
	CDPHE Comment		
	Air		
	Description	Ozone mitigation on forecasted high ozone days: operator will minimize vehicle and engine idling	
	CDPHE Comment		
	Water		
	Description	Stream crossing and Road Construction: Operator will ensure that control measures are designed, installed and adequately sized in accordance with good engineering, hydrologic and pollution control practices	
	CDPHE Comment		
	Air		
	Description	Tankless design: Operator will not store hydrocarbon liquids in storage tanks on site (other than a maintenance tank possibly used for well unloading or other maintenance activities).	
	CDPHE Comment		
	Air		
	Description	Venting/Flaring: Operator will control bradenhead/casinghead venting	

	CDPHE Comment		
	Water		
	Description	Vehicle fueling: Operator will ensure that a fueling contractor is present during the entire fueling process to prevent overfilling, leaks and drips from improper connections	
	CDPHE Comment		
	Air		
	Description	Pipelines: Operator will shut in the facility to reduce the need for flaring if the pipeline is unavailable	
	CDPHE Comment		
	Air		
	Description	Odor mitigation: Operator will ensure that all drilling fluid is removed from pipes before storage	
	CDPHE Comment		
	Water		
	Description	Vehicle fueling: Operator will refuel vehicles only on impervious surfaces and never during storm events	
	CDPHE Comment		
	Waste		
	Description	Operator will properly characterize and dispose of all waste (i.e. the specific landfill/waste disposal location allows for acceptance of the waste stream)	
	CDPHE Comment		
	PFAS		
	Description	If PFAS-containing foam is used at a location: operator will perform appropriate soil and water sampling to determine whether additional characterization is necessary and inform the need for and extent of interim or permanent remedial actions	
	CDPHE Comment		
	Water		
	Description	Operator will use Modular Large Volume Storage Tanks	
	CDPHE Comment		
	Water		
	Description	Outfall locations: Outlet protection should be used when a conveyance discharges onto a disturbed area where there is potential for accelerated erosion due to concentrated flow. Outlet protection should be provided where the velocity at the culvert outlet exceeds the maximum permissible velocity of the material in the receiving channel.	
	CDPHE Comment		
	Air		
	Description	Pipelines: Operator will have adequate and committed pipeline take away capacity for all produced gas and oil	
	CDPHE Comment		
	PFAS		
	Description	Operator will coordinate with nearby fire district(s) to evaluate whether PFAS-free foam can provide the required performance for the specific hazard	
	CDPHE Comment		
	Air		
	Description	Pipelines: Operator will use pipelines to transport water for hydraulic fracturing to and from location	
	CDPHE Comment		
	Air		

	Description	Venting/Flaring: Operator will not flare or vent gas during completion or flowback, except in upset or emergency conditions, or with prior written approval from the Director for necessary maintenance operations	
	CDPHE Comment		
	Waste		
	Description	Operator will properly test for and dispose of TENORM	
	CDPHE Comment		

CDPHE Proposed COAs OR BMPs

No BMP

PLANS

Total Plans Uploaded: 16

- [ ] (1) Emergency Spill Response Program consistent with the requirements of Rules 411.a.(4).B, 411.b.(5).B, & 602.j
- [X] (2) Noise Mitigation Plan consistent with the requirements of Rule 423.a
- [X] (3) Light Mitigation Plan consistent with the requirements of Rule 424.a
- [X] (4) Odor Mitigation Plan consistent with the requirements of Rule 426.a
- [X] (5) Dust Mitigation Plan consistent with the requirements of Rule 427.a
- [X] (6) Transportation Plan
- [X] (7) Operations Safety Management Program consistent with the requirements of Rule 602.d
- [X] (8) Emergency Response Plan consistent with the requirements of Rule 602.j
- [ ] (9) Flood Shut-In Plan consistent with the requirements of Rule 421.b.(1)
- [ ] (10) Hydrogen Sulfide Drilling Operations Plan consistent with the requirements of Rule 612.d
- [X] (11) Waste Management Plan consistent with the requirements of Rule 905.a.(4)
- [ ] (12) Gas Capture Plan consistent with the requirements of Rule 903.e
- [X] (13) Fluid Leak Detection Plan
- [X] (14) Topsoil Protection Plan consistent with the requirements of Rule 1002.c
- [X] (15) Stormwater Management Plan consistent with the requirements of Rule 1002.f
- [X] (16) Interim Reclamation Plan consistent with the requirements of Rule 1003
- [X] (17) Wildlife Plan consistent with the requirements of Rule 1201
- [X] (18) Water Plan
- [X] (19) Cumulative Impacts Plan
- [ ] (20) Community Outreach Plan
- [X] (21) Geologic Hazard Plan

VARIANCE REQUESTS

Check all that apply:

- [ ] This proposed Oil and Gas Location requires the approval of a Rule 502.a variance from COGCC Rule or Commission Order number: _____

ALL exceptions and variances require attached Request Letter(s). Refer to applicable rule for additional required attachments (e.g. waivers, certifications, SUAs).

RULE 304.d LESSER IMPACT AREA EXEMPTION REQUESTS

Check the boxes below for all Exemptions being requested. Lesser Impact Area Exemption Request must be attached, and will include all requested exemptions.

- ☐ 304.b.(1). Local Government Siting Information
- ☐ 304.b.(2). Alternative Location Analysis
- ☐ 304.b.(3). Cultural Distances
- ☐ 304.b.(4). Location Pictures
- ☐ 304.b.(5). Site Equipment List
- ☐ 304.b.(6). Flowline Descriptions
- ☐ 304.b.(7). Drawings
- ☐ 304.b.(8). Geographic Information System (GIS) Data
- ☐ 304.b.(9). Land Use Description
- ☐ 304.b.(10). NRCS Map Unit Description
- ☐ 304.b.(11). Best Management Practices
- ☐ 304.b.(12). Surface Owner Information
- ☐ 304.b.(13). Proximate Local Government
- ☐ 304.b.(14). Wetlands
- ☐ 304.b.(15). Schools and Child Care Centers
- ☐ 304.c.(1). Emergency Spill Response Program
- ☐ 304.c.(2). Noise Mitigation Plan
- ☐ 304.c.(3). Light Mitigation Plan
- ☐ 304.c.(4). Odor Mitigation Plan
- ☐ 304.c.(5). Dust Mitigation Plan
- ☐ 304.c.(6). Transportation Plan
- ☐ 304.c.(7). Operations Safety Management Program
- ☐ 304.c.(8). Emergency Response Plan
- ☐ 304.c.(9). Flood Shut-In Plan
- ☐ 304.c.(10). Hydrogen Sulfide Drilling Operations Plan
- ☐ 304.c.(11). Waste Management Plan
- ☐ 304.c.(12). Gas Capture Plan
- ☐ 304.c.(13). Fluid Leak Detection Plan
- ☐ 304.c.(14). Topsoil Protection Plan
- ☐ 304.c.(15). Stormwater Management Plan
- ☐ 304.c.(16). Interim Reclamation Plan
- ☐ 304.c.(17). Wildlife Plan
- ☐ 304.c.(18). Water Plan
- ☐ 304.c.(19). Cumulative Impacts Plan
- ☐ 304.c.(20). Community Outreach Plan
- ☐ 304.c.(21). Geologic Hazard Plan

OPERATOR COMMENTS AND SUBMITTAL

Comments

A Weld County 1041 WOGLA will be submitted in association with this pad.
This location is not proposed within 2,000 feet of a Residential Building Unit High Occupancy Building Unit, or School Facility located within a Disproportionately Impacted Community, a Rule 304.c.(20) Community Outreach Plan is not required. KMOG's "Community Consultation Plan" attached as "Other" is intended to provide supplemental information regarding efforts on community outreach and communication.
The attached EAP will be submitted to the Weld County Office of Emergency Management. Once the plan is approved a signed copy will be sent to the ECMC OGLA staff.
KMOG`s general Air Monitoring Plan has been approved by the CDPHE and is attached to the 2B. A site-specific Air Monitoring Plan for this location will be submitted to the ECMC and CDPHE for approval of air monitor locations prior to operations.
Flowlines: Flow lines will flow to the production facility location. During production, flow direction in the flow lines is from the wellhead to the production facility. Flow lines will be constructed from steel pipe, buried, and will equal the distance between the well heads and the production facility.
Gas custody transfer will occur at the custody transfer meter located on the proposed production facility location. Oil custody transfer will occur at the LACT Unit located on the proposed production facility location.
Gas lift lines are also occasionally installed (one per well) from the well head to the production facility. During operation flow direction in the gas lift lines will be from the production facility to the well head. The size of the gas lift lines is typically 2". Gas lift lines will be constructed from steel pipe, buried, and will equal the distance between the well heads and the tank battery.
Air Supply Lines: Compressed air supply lines will also be installed from the well head to the production facility. During operation flow direction in the supply lines will be from the production facility to the well head. The size of the supply lines is typically 1". Supply lines will be constructed from steel pipe, buried, and will equal the distance between the well heads and the production facility.
KMOG held a pre-submission consultation with CDPHE on 7/11/23. The BMPs KMOG has committed to on the CDPHE Consult Tab were discussed at that consultation but are subject to change during the formal consultation that will occur after the OGDP has passed completeness.
KMOG is proposing one 25,000 BBL MVLT for this location for use during completions – 36 feet tall with a 70 foot diameter. The proposed manufacturer and vendor is Shalestone Resources. The MLVT is approximately 1,456 feet from the nearest RBU and is a temporary piece of equipment (on location for approximately 2 months). Please see the Operator BMP tab for further information.

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.
Signed: _____ Date: 09/13/2023 Email: rachel_friedman@oxy.com

Print Name: Rachel Friedman Title: Geological Advisor

Based on the information provided herein, this Oil and Gas Location Assessment complies with COGCC Rules, applicable orders, and SB 19-181 and is hereby approved.

COGCC Approved: _____ **Director of COGCC** Date: _____

Conditions Of Approval

All representations, stipulations and conditions of approval stated in this Form 2A for this location shall constitute representations, stipulations and conditions of approval for any and all subsequent operations on the location unless this Form 2A is modified by Sundry Notice, Form 4 or an Amended Form 2A.

COA Type	Description
0 COA	

Best Management Practices

No	BMP/COA Type	Description
1	General Housekeeping	All loadlines shall be bullplugged or capped. `
2	General Housekeeping	During drilling, completions, and facility construction, human waste and septic from temporary buildings will be stored in tanks. These tanks will be emptied via vacuum truck for disposal. Temporary portable restrooms will also be available for workers during this phase. Good housekeeping measures for these include regular servicing and inspections. Temporary portable restrooms will be staked to the ground to prevent from tipping over.`

3	General Housekeeping	Wastes will be stored in containers or on lined containment that are chosen for compatibility and checked periodically for leaks or integrity problems. Examples of containment include but are not limited to 3-sided steel tanks, steel tanks, lined containment, plastic totes, drums, etc.`
4	General Housekeeping	Light: Construction Phase: • During construction of all phases, KMOG will only conduct day light operation and there will be no nighttime operations that require lighting. • Exterior lighting shall be directed away from residential and other sensitive areas or shielded from said areas to eliminate glare. Light spillage beyond the perimeter of the well site shall be minimized. • Bulbs shall be fully shielded to prevent light emissions above a horizontal plane drawn from the bottom of each fixture. Drilling: Derrick mast lighting in Section 6.1 is facing horizontally to provide adequate lighting for safe operation. • Lighting is angled to mitigate the amount of light leaving the location boundary, and away from surrounding off site buildings. • Lighting within the Drilling area has been reduced to provide a minimum acceptable value for safe operation. • Light masts are automatically switched off/on based on lighting sensors. • Lights are switched off when not required. • Low power (63 W) LED lights are used for the drill rig. Completions and Flowback Phases: • KMOG will utilize LED fixtures to reduce skyglow. • KMOG will position all lights to point in a downward direction where vertical lighting is not required. Where it is required, lights are angled in a vertical direction to provide task lighting for safety and operations involving personnel. • Lighting is angled to mitigate the amount of light leaving the location boundary, and away from surrounding off site buildings. • Lighting within the Completion and Flowback areas have been reduced to provide a minimum acceptable value for safe operation. • Light masts are automatically switched off/on based on lighting sensors. • Lights are switched off when not required Production Phase: • KMOG will utilize LED fixtures to reduce skyglow. • KMOG will position all lights to point in a downward direction, in order to mitigate light leaving the location boundary. • Lighting within the Production areas have been reduced to provide a minimum acceptable value for safe operation`
5	Wildlife	An environmental assessment will be conducted immediately prior to pad construction, drilling, and completion operations. `
6	Wildlife	Location construction will occur outside the winter season (December 1 to April 30) in order to minimize impacts on the Mule Deer Severe Winter Range.`
7	Wildlife	KMOG will survey for nesting raptors if project activities start between February 1 and August 15. For ground disturbances beginning between March 15 and August 31, 2023, the full three-survey CPW protocol will be completed no more than 7 days prior to the start of work. KMOG has agreed to comply with seasonal stipulations associated with severe winter range, therefore pre-production activities will not occur between December 1 and May 1. Migration Corridor impacts are based on surface density limitations of one pad per square mile and less than one linear mile of routes per square mile. CPW recommends an indirect impacts mitigation fee if this cannot be achieved. Associated with the Rademacher development, KMOG will reclaim 15.75 more acres than it disturbs in the area by reclaiming 49 wells and 10 facilities therefore no mitigation fees are required, and the development will lead to habitat de-fragmentation in the area.`
8	Storm Water/Erosion Control	KMOG will conduct stormwater inspections immediately after storm eventfor active construction locations. 72 hr window is allowed for idle construction locations. `
9	Storm Water/Erosion Control	KMOG will conduct weekly stormwater inspections during normal operations and post-precipitation or melt response. `
10	Storm Water/Erosion Control	A spillway and/or outlet are designed to capture sediment transported in surface runoff and slowly release flows to allow time for settling of sediment prior to discharge from the location. Spillway and/or outlet will be installed concurrently with the facility diversion berm. A spillway/outlet will be installed in the southern and southwestern portions of the facility pad berm for Rademacher 14-30HZ during interim reclamation. All spillways and outlets will remain in-place until final reclamation activities are complete.`

11	Storm Water/Erosion Control	Culverts will be installed at the southeastern access off the well pad and facility pad, as well as along the western portion of the access road for Rademacher 14-30HZ intersecting with Weld County Road 13. Culverts will be evaluated at the time of construction and installed as needed.`
12	Storm Water/Erosion Control	A berm will be installed around the southern and southwestern edges of the Rademacher 14- 30HZ facility pad to divert stormwater run-on & run-off to a designated outlet structure This BMP will be installed during construction disturbance reduction, and prior to removal of construction perimeter controls. ? Diversion ditch and berm will remain in-place until final reclamation activities commence. During construction, inspections shall be conducted every 14 days, and after a major precipitation or melt event, which has the potential to cause surface runoff. For sites earthwork and construction is completed, but final stabilization is not achieved due to vegetative cover, inspections shall be conducted every 30 days and exclude precipitation or melt event response. Inspections will continue until all reclaimed areas have achieved a cover of 70% the pre-construction reference vegetation (i.e. final stabilization).`
13	Material Handling and Spill Prevention	KMOG will recycle 100 percent of liquid and slurry non-produced E&P wastes streams from drilling and well preparations to offset freshwater use in completion operations. `
14	Material Handling and Spill Prevention	Automation technology will be utilized at this facility. This technology includes the use of fluid level monitoring for the tanks and produced water sumps, high-level shut offs, and electronic sensors to monitor the interstitial space of double-walled produced water sumps. All automation is monitored by Kerr-McGee's Integrated Operations Center (IOC), which is manned 24 hours per day, 7 days per week.`
15	Material Handling and Spill Prevention	The temporary produced water storage tanks will be staged on a geosynthetic liner and surrounded by an earthen berm. The berms will enclose an area sufficient to provide secondary containment for 150% of the volume of the largest single tank and will be sufficiently impervious to contain spilled or released material. Berms and the liner and all secondary containment devices will be inspected at the same time as stormwater inspections, with personnel on location, daily inspections will occur. During non-active, but while under construction, site inspections will occur every 14 days.`
16	Material Handling and Spill Prevention	Berm Construction: A geosynthetic liner will be laid under the permanent tanks on this location and a metal containment will be constructed. Secondary containment devices will be constructed around crude oil, condensate, and produced water storage tanks and will enclose an area sufficient to contain and provide secondary containment for150% of the largest single tank. Secondary containment devices will be inspected at the same time as stormwater inspections, with personnel on location, daily inspections will occur. During non-active, but while under construction, site inspections will occur every 14 days. When construction is completed and the Location is on production, site inspections will occur every 28 days. b. Automation technology will be utilized at this facility. This technology includes the use of fluid level monitoring for the tanks and produced water sumps, high-level shut offs, and electronic sensors to monitor the interstitial space of double-walled produced water sumps. All automation is monitored by Kerr-McGee's Integrated Operations Center (IOC), which is manned 24 hours per day, 7 days per week. c. Field Inspections include the following: Field-Constructed Above Ground Containers; Secondary Containment Structures; Shop-Built Containers; Generators / Fuel Tanks and associated secondary containment; Pressure Vessels (separators, heater treaters, pigging stations); Portable Containers and all Manifolded Piping; Onsite and Offsite Pipelines (flowlines, production piping, gathering lines) Field Drainage Systems (oil traps, sumps, or skimmers); and Additional equipment used during separation, storage, containment, or transferring of produced fluids.`
17	Dust control	Access roads are not paved, they are constructed with a minimum of four - inches of gravel road base`

18	Dust control	KMOG will proactively deploy fresh water to suppress dust along access road to well pad/ facility during all phases of pre-production operations ? Speed limits will be reduced to 10 mph on access road and 5 mph once vehicles reach well pad/ facility. Access roads and Vehicle Tracking Control will receive maintenance as needed throughout operations ? In the event of high winds that generate dust that cannot be mitigated with an application of water, KMOG will shut down construction operations During the Completions phase, KMOG will utilize a fully enclosed sand containerized proppant delivery system that eliminates the use of pneumatic transfer on location. This methodology Kerr-McGee Oil & Gas Onshore LP (KMOG) Dust Mitigation Plan – Rademacher 14-30HZ 3 utilizes a gravity choke feed system that reduces dust significantly. The dust levels from this system are minimal and below Occupational Safety and Health Administration (OSHA) permissible exposure limit which eliminates the need for additional Personal Protective Equipment (PPE)`
19	Construction	KMOG will extend an existing access road off of the intersection of CR 28 and Colorado Blvd. to access the location for drilling, completions, and production operations, including maintenance of equipment. The road will be properly constructed and maintained to accommodate for emergency vehicle access. `
20	Construction	KMOG will only construct during day light and there will be no nighttime operations that require lighting. `
21	Noise mitigation	• Prior to commencement of drilling and completion activities, a partial-perimeter, engineered sound wall consisting of approximately 1,340 linear feet of 32-foot-tall, STC32 wall, and 100 linear feet of 24-foot-tall STC43 wall will be installed around the edge of the well pad to reduce noise levels at the critical receptor points. The total sound wall footage is broken down as below: o 640 linear feet on the north edge of the well pad o 480 linear feet on the west edge of the well pad o 320 linear feet on the south edge of the well pad. • Throughout the duration of pre-production operations and any construction lasting longer than 24 hours, KMOG will conduct continuous noise monitoring at the ambient monitoring locations. KMOG will utilize a low noise completions fleet for all completions operations`
22	Emissions mitigation	All storage tanks used for active production rig drilling operations, used in lieu of pits, will contain pit level monitors with Electronic Drilling Recorders (EDR). KMG uses EDRs with pit level monitor(s) and alarm(s) for production rigs. Basic level gauges will be used on tanks associated with the surface rig. `
23	Emissions mitigation	Temporary ECD(s) will be utilized to mitigate releases of emissions from temporary produced water storage tanks for the duration which the tanks are on location and being used. `
24	Emissions mitigation	KMOG will shut in production when pipeline is not available. `
25	Emissions mitigation	Ozone mitigation on forecasted high ozone days: KMOG will postpone the refueling of vehicles as feasible given the number of ozone action days, the operations ongoing at the time, and safety considerations. `
26	Emissions mitigation	Ozone mitigation on forecasted high ozone days: KMOG will suspend or delay the use of fossil fuel powered ancillary equipment as feasible given the number of ozone action days, the operations ongoing at the time, and safety considerations. `
27	Emissions mitigation	Ozone mitigation on forecasted high ozone days: KMOG will postpone construction activities as feasible given the number of ozone action days, the operations ongoing at the time, and safety considerations. `

28	Emissions mitigation	Ozone mitigation on forecasted high ozone days: KMOG will reschedule non-essential operational activities such as pigging, well unloading and tank cleaning as feasible given the number of ozone action days, the operations ongoing at the time, and safety considerations. `
29	Emissions mitigation	KMOG will have permanent water storage tanks on the Rademacher location. The tanks will be controlled with VOC combustors. Tank emissions monitoring systems will be in place, which means that tank pressures will be continuously recorded, and the location will be shut in if tank pressures start to approach the pressure at which relief devices would vent emissions to the atmosphere. Therefore, the possibility of venting from tanks is eliminated. The tank components and control device will be on preventative maintenance schedules to ensure device integrity and minimize the potential for leaks/failure. The tanks (and entire facility) will have Leak Detection and Repair (LDAR) surveys completed. KMOG has a dedicated emissions team that conducts the LDAR program. This team performs weekly audio visual and olfactory (AVO) inspections to make sure equipment is working per design and in a manner safe for the environment. The entire facility will be inspected to ensure that there are not any leaks that can be detected using hearing, sight, or smell. If a leak is found it is reported to the state, repaired and reinspected with a FLIR camera to confirm the repair has been completed. Facilities will also be inspected for gas leaks at least monthly using an infrared camera. KMOG maintains the IOC where facilities are monitored and can be shut in remotely if a leak is suspected.`
30	Emissions mitigation	There will be maintenance tanks at the Rademacher Location, that will only be used during maintenance operations. The maintenance tanks are not used as part of normal operation and are only used to manually flow to the tanks for activities such as equipment blowdowns for maintenance or well unloading. In the event the tanks are utilized, it is standard KMOG practice to empty maintenance tanks within 24 hours in order to minimize emissions. The maintenance tanks are equipped with monitoring devices that report data such as temperature, pressure and fluid level and can be monitored from KMOG's IOC in Platteville. The maintenance tanks are attached to the tank vapor recovery piping that goes to the Enclosed Combustion Device (ECD). If any vapors are recovered, then they are sent to the ECD and not released into the atmosphere.`
31	Odor mitigation	drilling: All oil-based drilling fluids will be built using a Group III base oil with negligible aromatic content and PAH less than 0.001% so that it does not emit odor during all production drilling operations. • The Group III base oil will be utilized in a closed loop drilling fluid system and eliminate odor at the shakers, transfer tank, active/reserve tanks, and cuttings in collection tanks and during transport. • All drill cuttings are processed through centrifugal dryers to remove residual oil-based drilling fluid not removed by shale shakers. • All tubulars pulled out of the hole will be wiped prior to being racked in the derrick or laid down. • Cuttings storage time on location will be minimized prior to transport to local landfills. • New drilling fluid will be built using transfer line outlets located below tank fluid level to minimize splashing/agitation. New fluid will only be built using Group III base oils.`
32	Drilling/Completion Operations	Test separators and associated flow lines, sand traps and emission control systems? shall be installed on-site to accommodate completions techniques. When commercial? quantities of salable quality gas are achieved at each well, the gas shall be? immediately directed to a sales line or shut in and conserved. If a sales line is? unavailable or other conditions prevent placing the gas into a sales line, KMOG shall? not produce the wells. KMOG agrees to comply with both Rules 903.c.(3).B. and 903.c.(3).C.? `
33	Drilling/Completion Operations	Guy line anchors will not be used. Base Beams will be used to stabilize the rig and removed after drilling. `
34	Drilling/Completion Operations	Rig power will be supplied by two natural gas engines with a battery energy storage system and an automated engine management system. As necessary, a diesel generator will be used to supplement additional power during the highest demand portions of the wells.`

35	Drilling/Completion Operations	KMOG is proposing one 25,000 BBL MVLT for this location for use during completions – 36 feet tall with a 70 foot diameter. The proposed manufacturer and vendor is Shalestone Resources. The MLVT is approximately 1,456 feet from the nearest RBU and is a temporary piece of equipment (on location for approximately 2 months). The MLVT will be in compliance with the following COGCC safety setbacks. 1. Seventy-five (75) feet from a wellhead, fired vessel, heater-treater, or a compressor with a rating of 200 horsepower or more; 2. Fifty (50) feet from a separator, well test unit, or other non-fired equipment. 3. Signs shall be posted on each MLVT to indicate that the contents are fresh water and that no E&P waste fluids are allowed. Location and additional signage shall conform to Rule 210. 4. MLVTs will be operated with a minimum of 1 foot freeboard at all times. 5. Access to the tanks shall be limited to operational personnel. 6. Construction and installation of the tank structure, liner and sub-grade shall meet or exceed the manufacturer specifications. 7. KMOG follows manufacturers Standard Operating Procedures (SOPs) and will provide these SOPs upon request to the COGCC. 8. KMOG will conduct daily, visual inspections of the exterior wall and general area for any integrity deficiencies before, during, and after filling the MLVTs. If deficiencies are noted, KMOG will repair them as soon as practicable. Records of repairs will be maintained per Rule 205. 9. KMOG will follow pre-construction risk assessment measures to address safety concerns and minimize environmental impacts and property damage in the unlikely event of a MLVT release. 10. In the event of a catastrophic MLVT failure, KMOG shall notify the COGCC as soon as practicable but not more than 24 hours after discovery, submit a Form 22-Accident Report within 10 days after discovery, conduct a root cause analysis´ and provide same to COGCC on a Form 4-Sundry Notice within 30 days of the failure. 11. All MLVT liner seams shall be welded and tested in accordance with applicable ASTM international standards. Any repairs to liners shall be made using acceptable practices and applicable standards. 12. The MLVT shall be constructed and operated in accordance with a design package certified and sealed by a Licensed Professional Engineer either in Colorado or the state where the MLVT was designed or manufactured. 13. KMOG hereby certifies to the Director that the MLVT at this location will be designed and implemented consistent with the Colorado Oil and Gas Conservation Commission policy dated June 13, 2014. `

36	Drilling/Completion Operations	The following are BMPs agreed on by the Operator as an outcome of the CDPHE consultation: • Operator will properly maintain vehicles and equipment • Operator will use non-emitting pneumatic controllers • Operator will use Tier IV or equivalent engines, such as NG Tier II w/ battery assist, (or better) for drilling (dual-fuel engines are not considered equivalent) • Operator will use Tier IV or equivalent engines, such as NG Tier II w/ battery assist, (or better) for hydraulic fracturing (dual-fuel engines are not considered equivalent) • Operator will use electric equipment and devices (e.g. vapor recovery units or VRUs, fans, etc.) to minimize combustion sources on site (if yes, operator will provide a list outlining which equipment and devices will be electrified) • Operator will use service providers who utilize at least 50% Tier IV or equivalent engines, such as NG Tier II w/ battery assist, (or better) for nonroad construction equipment (dual-fuel engines are not considered equivalent) • Operator will not store hydrocarbon liquids in permanent storage tanks on site (other than a maintenance tank possibly used for well unloading or other maintenance activities) • Operator will implement a "hybrid or modern" production flowack method (eliminates tanks by routing the oil, natural gas and water directly to permanent production equipment) • Operator will use pipelines to transport water used for hydraulic fracturing to location • Operator will have adequate and committed pipeline takeaway capacity for all produced gas and oil • Operator will shut in the facility to reduce the need for flaring if the pipeline is unavailable • Operator will use lease automatic custody transfer (LACT) system to remove/reduce the need for truck loadout • Operator will use OGP Group III drilling fluid • Operator will cover trucks transporting drill cuttings • Operator will use a squeegee or other device to remove drilling fluids from pipes as they exit the wellbore • Operator will ensure that all drilling fluid is removed from pipes before storage • Ozone mitigation on forecasted high ozone days: operator will eliminate use of VOC paints and solvents • Ozone mitigation on forecasted high ozone days: operator will minimize vehicle and engine idling • Ozone mitigation on forecasted high ozone days: operator will reduce truck traffic and worker traffic • Ozone mitigation on forecasted high ozone days: operator will postpone the refueling of vehicles • Ozone mitigation on forecasted high ozone days: operator will suspend or delay the use of non-essential fossil fuel powered ancillary equipment • Ozone mitigation on forecasted high ozone days: operator will adjust construction schedules to postpone non-essential construction activity, including but not limited to temporary tank removals and cleaning on ozone action days • Ozone mitigation on forecasted high ozone days: operator will send notification to all operational staff requesting that where possible, they delay all non-essential operational activity (such as pigging, well unloading and tank cleaning) on ozone action days • Operator will use Modular Large Volume Storage Tanks • Operator will not use fracturing fluids which contain PFAS compounds • Operator will continue to participate in the Colorado Preparedness Resources Network (CPRN)CPRN, which has a non-PFAS foam location identification to be sure, in an emergency, that non-PFAS foam will be available • Operator will coordinate with nearby fire district(s) to evaluate whether PFAS-free foam can provide the required performance for the specific hazard • If PFAS-containing foam is used at a location: operator will properly characterize the site to determine the level, nature and extent of contamination • If PFAS-containing foam is used at a location: operator will perform appropriate soil and water sampling to determine whether additional characterization is necessary and inform the need for and extent of interim or permanent remedial actions • If PFAS-containing foam is used at a location: operator will properly capture and dispose of PFAS-contaminated soil and fire and flush water`

37	Interim Reclamation	The completed wellsite will be surrounded with a fence and gate with adequate lock to restrict access to authorized personnel only. KMOG personnel will monitor the wellsite upon completion of the wells. Authorized representatives and/or KMOG personnel shall be on-site during drilling and completions operations. `
38	Interim Reclamation	Interim reclamation: After topsoil re-distribution, the interim reclamation area shall be cross ripped to a depth of eighteen inches with an agricultural ripper/subsoiler; however, this depth may be adjusted in rocky or shallow soils. Chiseling/ripping will be performed at the minimum depth of topsoil. Cultipacking or disking may be required to reduce soil clod size. Ripping with construction style shanks, for the purpose of surface ridge roughness as a stormwater BMP, is only allowed to a six-inch depth, and will be maintained following any precipitation or surface erosion which has the potential to compromise the BMP.`
39	Interim Reclamation	Topsoil will be managed during construction by a combination of site-specific erosion and sediment control measures including: a temporary diversion ditch & berm around the entire location to manage run-on and run-off; short term management of topsoil will include track packing to prevent wind and water erosion, long term management includes seeding with a native seed mix and crimping straw mulch for erosion control and water retention; vegetation establishment on stockpiles and weed control will reduce erosion as well as maintain microbial activity; during the construction phase topsoil will be stockpiled ~12 feet tall and with a 3:1 slope north of the well pad to minimize erosion potential. Topsoil managed during interim and production phases will be maintained with BMPs including seeding with a native seed mix and crimped straw mulch; weed monitoring; the long-term topsoil stockpile will be ~6 feet tall at a 4:1 slope west of the facility pad and ~3 feet tall at a 5:1 slope on the north and south sides of the well pad to maintain microbial activity for an extended time. Inspections will review all control measures / BMPs implemented, their status, and whether repair or replacement is needed, including weed maintenance when necessary. Maintenance and repair will be completed as soon as practicable, immediately in most cases.`
40	Final Reclamation	The wellsite will be cleared of all non-essential equipment within ninety (90) days after all wells associated with the pad have been plugged and abandoned. `
41	Final Reclamation	Once the wells have been plugged and abandoned, KMOG will identify the location of the wellbores with permanent monuments that will detail the well names and date of plugging. `

Total: 41 comment(s)

Attachment List

Att Doc Num	Name
21316817	GEOLOGIC HAZARD MAP
21316818	LAYOUT DRAWING
21316819	CORRESPONDENCE
21316821	CDPHE CONSULTATION
21316825	LOCAL GOVERNMENT PERMIT
21316826	OTHER
21316827	OTHER
21316828	OTHER
403278425	FORM 2A SUBMITTED
403495464	ACCESS ROAD MAP
403495468	HYDROLOGY MAP
403495469	LOCATION DRAWING
403495470	LOCATION PICTURES
403495472	LOCATION PICTURES
403495496	NRCS MAP UNIT DESC
403495501	DIRECTIONAL WELL PLAT
403495572	CPW WAIVER
403495579	CULTURAL FEATURES MAP
403495584	LGD CONSULTATION
403496215	WILDLIFE HABITAT DRAWING
403496615	CPW CONSULTATION
403505914	PRELIMINARY PROCESS FLOW DIAGRAMS
403522197	SURFACE AGRMT/SURETY
403522198	NRCS MAP UNIT DESC
403522199	OTHER
403522201	OIL AND GAS LOCATION GIS SHP
403522519	ALA NARRATIVE SUMMARY
403614719	ALA DATASHEET
403614824	LOCAL/FED FINAL PERMIT DECISION
403614825	LOCAL/FED FINAL PERMIT DECISION
403627664	RELATED LOCATION AND FLOWLINE MAP

Total Attach: 31 Files

General Comments

User Group	Comment	Comment Date
OGLA	The Director has determined that the OGDP application that this Form is a component of meets all requirements of Rule 306.a. The Director's Recommendation has been attached to the Form 2A.	02/22/2024
OGLA	Through a google-chat on 2/21/24, CPW informed ECMC that the CPW consultation information would be provided by CPW through a comment on the Form 2A and not through a formal letter or email. The CPW liaison provided the comments on the Form 2A on 2/21/2024. Replaced Wildlife plan with revised plan based on CPW consultation and attached wildlife habitat acreage disturbance drawing.	02/22/2024
CPW	CPW's Wildlife Consultation Summary BACKGROUND The purpose of this Wildlife Consultation Summary is to give ECMC's Commissioners and staff, and interested stakeholders insight into CPW's consultation history, and the resultant wildlife recommendations and conclusions regarding Kerr McGee's (KMOG) Sprout Oil & Gas Development Plan (OGDP). This OGDP is comprised of three nearby locations (Alfalfa, Clover, and Rademacher). CPW'S WMP CONCLUSION CPW-NE approves KMOG's Wildlife Mitigation Plan (WMP) for the Rademacher location. CPW's wildlife and High Priority Habitat (HPH) concerns have been resolved through KMOG's efforts to avoid, minimize, and mitigate their remaining unavoidable adverse impacts. CPW does not have any unresolved wildlife concerns, or objections, with this OGDP application. SUMMARY Only the Rademacher pad is located within the CPW-mapped HPH; hence, this location will be the primary location discussed in this Summary. The HPHs intersected by the Rademacher pad include the 2022 and 2023 Mule Deer Severe Winter Range (SWR) and Migration Corridor, which are ECMC Rule 1202.d habitats. These HPH intersects require KMOG to complete a WMP per Rule 1201 for both locations. CPW has consulted on these locations since August 2022. SITE CONTEXT The proposed Sprout OGDP is located near Firestone, specifically on the eastern side of town for the Alfalfa and Clover locations, and on the northern side of town for the Rademacher location. The Rademacher location is located southeast of State Highway 66 [AKA Weld County Road (WCR) 30], and Colorado Blvd [AKA WCR 13], specifically in T3N, R67W, S30, SESW. The Alfalfa pad is located in T2N, R67W, S20, SENE; while the Clover pad is located in T2N, R67W, S29, NWNE. CPW'S UNDERSTANDING OF THIS OGDP The proposed Rademacher location consists of eighteen (18) wells and a production facility. The total surface disturbance area of the pad will be approximately 12.27 acres. The anticipated start date is May 1, 2024. KMOG will avoid construction of this pad, drilling, and completion activities during the mule deer winter season (Dec. 1 to April 30). The Rademacher Pad plus access road will have 6.95 acres of temporary (3.02 acres) and permanent (3.93 acres) impacts within the two mule deer HPHs (2023 maps). All three locations were received by ECMC on 9/13/23, which means they are technically subject to the 2022 maps (since the 2023 HPH maps were eventually effective starting 11/30/23). However, given the uncertainty of the 2023 HPH hearing date, KMOG proactively chose to submit under the 2023 HPH layers. The 2022 and 2023 HPH impacted layers are the same for the Mule Deer Migration Corridor. The 2023 HPH layer for Mule Deer SWR is significantly less when compared to the 2022 layer. But when the Mule Deer SWR acres are combined with the Mule Deer Migration Corridor layers, both disturbance totals are within roughly an acre of each other, and both are less than 11.0 acres. That means that KMOG's eventual payment of $13,750 to CPW would be the same if they are subject to the 2022 or 2023 maps (CPW appreciates their proactive approach to using the 2023 maps). KMOG will have pipeline takeaway for both oil and natural gas, but have truck takeaway for the produced water. KMOG estimates that the initial high flow period during the first	02/21/2024

	two winter seasons will be five (5) trucks per day for the Rademacher location (vs. per well at the Rademacher location) before it drops to the average of two (2) trucks per day. There will be four produced water tanks and one maintenance tank. There will be no upstream flowline disturbances that will occur outside these areas. A sound wall is proposed for 320 feet of the south/HPH-facing side of the Rademacher location Working Pad Surface (roughly 550 feet wide from west to east). A 1202.a.(3) waiver was required only for the Rademacher location. The Rademacher location only proposes fencing (chain link)just around wellheads outside of HPH.	

CPW	(CPW Comment 2/3) A very small portion of the proposed haul route is located within the Mule Deer SWR. The eastern ~45% of the haul route is located within the HPH for Mule Deer Migration Corridor, while the western ~55% half is not within a mapped HPH. WILDLIFE CONSULTATION HISTORY While CPW & KMOG had many discussions regarding this location, this list highlights key dates in 2022-2024. 8/16/22 - CPW received a Weld [County] Oil and Gas Location Assessment (WOGLA) pre-application meeting notice for 8/31/22 for three locations - Salazar, Rademacher, and Brighton pads. CPW was unable to attend, but the County encouraged KMOG to keep communicating with CPW. 12/27/22 - KMOG initially reached out to CPW to begin pre-consultation. 1/24/23 - CPW received a WOGLA pre-application meeting notice for 2/1/23 for the Alfalfa and Clover pads. 2/8/23 - CPW attends a site visit at the Rademacher location with KMOG and ECMC Commissioner Cross. 2/27/23 - KMOG sent CPW a Notice of Intent to Submit 1041 WOGLA. 6/19/23 - KMOG requested a 1202.a.(3) wetlands waiver from CPW since there are wetlands 300 feet away from the Rademacher's chemical storage units. Based on the stormwater prevention measures and since the wetlands are not mapped as an HPH for Aquatic Native Species, CPW sent a signed waiver on 6/28/23. 9/14/23 - CPW received a WOGLA application from the County. CPW responded to the WOGLA application on 9/26/23 about the two deer HPHs, and a recommendation for KMOG to maintain "the riparian corridor to allow for the migration corridor to the maximum extent practicable during and after construction." 12/28/23 CPW received the ECMC's approved Form 2C for this OGDP. 1/30/24 - CPW had a formal consultation call with ECMC and KMOG and received the Rademacher WMP. 2/14/24 - CPW received the revised WMP with the corrected direct mitigation fees and timing stipulation. 2/21/24 - CPW approves their Wildlife Task for the Rademacher location in ECMC's Webform System. HPH ASSESSMENTS CPW appreciates that Alfalfa and Clover are sited outside any 2022 or 2023 HPHs. The Rademacher pad is not located in a 1202.c No Surface Occupancy Habitat, but the pad and access roads partially intersect the 1202.d Density Habitats for Mule Deer SWR and Migration Corridor, which require the evaluation of direct impacts. The Rademacher site visit revealed the wintering habitat is available and accessible to wintering mule deer, even though some nearby existing wells are nearby. Since the Rademacher pad will have direct impacts less than 11.0 acres of permanent and temporary habitat disturbances from the road and pad, KMOG chose to pay CPW $13,750.00. The Rademacher Pad is not the first active location within a square mile. Furthermore, this pad is located within the red ">5 active locations per square mile" layer, which means this area has a reduced use for mule deer and does not require the evaluation of indirect impacts and, thus, indirect mitigation. CPW's WILDLIFE AND HPH CONCERNS During the WOGLA pre-app call, CPW noted that while the Alfalfa and Clover Locations were not within High Priority Habitat, there is the potential for nesting Burrowing Owls in the prairie dog colony in/near the Alfalfa location, and nesting Red-tailed Hawks in the mature trees near the Clover location. KMOG is planning to conduct these surveys. CPW also voiced concerns about potential spills getting to the nearby Coal Ridge Ditch (not mapped as an aquatic HPH), but was not concerned about impacts to Firestone Lake, which is located two miles to the west and is designated as HPH (Aquatic Sportfish Management Water). KMOG did not need a 1202.a.(3) wetlands waiver since their chemical storage areas are more than 500 feet from that ditch or the playa to the northwest, and they have adequate stormwater BMPs.	02/21/2024
CPW	(CPW Comment 3/3) When discussing alternative locations outside of HPH, KMOG informed us that this pad is surrounded by a NORAD fiber optic line and wetlands to the south, a different landowner	02/21/2024

	to the east, and a natural gas pipeline and water line on the north side. CPW continued by asking about moving the entire site outside of the HPHs and away from the buried utility lines, but stated Residential Building Unit (RBU) buffers would have been impacted, hence why it's pushed to the southeast corner of this parcel. CPW further asked about flip-flopping the equipment and topsoil stockpile, and KMOG responded by trying to keep the equipment as far from RBUs as possible. Even though these HPHs are still proposed to be impacted, CPW's wildlife and HPH concerns were resolved through KMOG's below efforts to avoid, minimize, and mitigate their remaining unavoidable adverse impacts. AVOIDANCE, MINIMIZATION & MITIGATION MEASURES AND RESOLUTIONS The Avoidance Measures that KMOG proactively included were to locate two of these three locations outside of HPHs. Furthermore, for the Rademacher site, KMOG will avoid site pad construction, drilling, and completions during the Mule Deer winter season (December 1 to April 30). Minimization Measures that KMOG included as a result of CPW consultation was siting the majority of the wells and access road are located outside of HPH. Also, KMOG will have as minimal fencing as possible, and where fencing does need to occur, will be wildlife-friendly fencing. KMOG will use CPW's Mule Deer Seed Mix for revegetation (with landowner approval), and will develop a noxious weed management plan. Per Rule 1202.a.(8), KMOG will survey for songbirds before site pad construction, should it occur between April 1 to August 31. The Mitigation Measures that KMOG included as a result of CPW consultation was choosing to pay CPW (vs. mitigating with acres impacted) $13,750.00 for direct impacts for the Rademacher location. These combined avoidance and minimization measures should allow wintering Mule Deer to continue to use this HPH, though likely at a lower rate since its located in a high density for oil and gas locations. KMOG's remaining unavoidable impacts will be mitigated through direct fees paid to CPW as a forthcoming CPW-determined Mule Deer mitigation project. Taken together, these actions are necessary to ensure that impacts to wildlife resources are effectively avoided, minimized, and mitigated based on this development proposal. ********** ECMC's Form 2A Document Numbers for these locations are as follows: Rademacher - 403278425 Alfalfa - 403278400 Clover - 403278417	
OGLA	Operator provided the approved local permit - attached to the Form 2A and updated the local government tab. Attached response to public comments as "OTHER" doc 21316827 and Executive Summary as "OTHER" doc 21316826. CDPHE Consultation occurred on 1/22/2024. The BMPs from the consultation have been added to the Operator BMP section of this Form 2A and the consultation letter is attached.	02/16/2024
OGLA	Public comment period for this location is 30-days. A technology glitch initially assigned 45 days for public comment ending on 2/11/24. The date has been updated to be 30 days post the OGDP considered Complete on 12/28/2023 for the public comment to end on 1/27/2024. This location is in HPH with 60-days for CPW consultation.	01/09/2024
OGLA	Check the 309.e.(2) box on the 2A has the location is in HPH. Inform CPW for the consultation and task date. Inform CDPHE the location is in the 8-hour ozone area. CDPHE requested a consultation for the proposed location and OGDP.	01/08/2024
OGLA	The Director has determined this OGDP application is complete. Form pushed to IN PROCESS.	12/28/2023
OGLA	Attached Completeness spreadsheet as correspondence doc no 21316819	12/28/2023
OGLA	The Conditions of Approval (COA) and Best Management Practices (BMPs) on the Form 2A and the Final Order are the final enforceable permit conditions for this Oil and Gas Location. Any plan or attachment that contains information or language that is contrary to or less protective than ECMC rules or the COAs and BMPs on the Form 2A or Final Order does not relieve the operator from compliance with the applied COAs, BMPs or any ECMC rules.	12/27/2023

OGLA	At the time of Completeness review, the Wildlife mitigation compensatory mitigation between the plan and the 2A doe not match. Wildlife mitigation costs will be updated in the Form 2A to match the finalized numbers by CPW while the form is In Process. Replaced Geologic Hazard Plan and map and equipment list. per email and phone correspondence with the Operator.	12/27/2023
OGLA	Completeness review - return to draft	12/01/2023

Total: 13 comment(s)

Public Comments

The following comments were provided by members of the public and were considered during the technical review of this application.

No.	Comment	Comment Date
1	As a Colorado resident and mineral right owner within the Sprout development project, I support Kerr-McGee's efforts in the Rademacher plan. I respectfully request approval of this permit application.	01/22/2024
2	Transcribed from hand delivered letter per stakeholder preference: January 22, 2024 Julie Murphy, Director Colorado Energy & Carbon Management Commission (formerly known as the Colorado Oil and Gas Conservation Commission) 1120 Lincoln Street Suite 801 Denver, Colorado 80203 Re: Sprout OGDP Application Dear Director Murphy, In the matter of the application submitted by Kerr-McGee O&G for the Sprout development plan, I have thoroughly read through the application, corresponding documents, the ECMC rules and regulations. I have followed the policies and statutes closely for a number of years and I appreciate and understand the significance of this development in the Wattenberg Field. I respectfully ask you to take the following into consideration: W.E. Russell established the Russell Coal Company in 1913. He had come from Scotland, arriving in Denver in 1889 and is considered a well respected Colorado Pioneer. He owned the Emerson/Russell Mine from 1913-1947. The land remained in the family until recent years, but in that time, the ranch was cared for and respected, including but not limited to the below surface mineral resources. Enormous contributions to Colorado and the development of local communities have been provided by generations of this ancestral family of Colorado pioneers. Not only was W. Russell President of the Russell Coal company, he was also former President of the Denver Chamber of Commerce. His extended family was commissioned by the State of Colorado to construct the Colorado State Capital Building, the Cheeseman Dam and many landmark buildings & structures in Colorado, many in downtown Denver that still stand today. Generations of the family, Colorado natives, have honorably & humbly held positions of public service and have passed on a continued sense of pride & responsibility in supporting the stability, strength, economics & appreciation for the state of Colorado. Their care and consideration for the safety and wellbeing of the communities they lived and worked in throughout Colorado is notable and their contributions in Weld County is equally important. So much of that continues and is driven by the respect and values that began with a family of Colorado pioneers and continues to this day. They are good values with relevance in this project. Mr. Russell provided the resources needed for Colorado families to heat their homes with the contributions he could provide. In 1970-1971 the original Oil, Gas & Mineral leases were signed. Those leases, an important part of the history of the ranch in Weld County, are still in place today and held by family and Kerr-McGee. They too are part of County, State and family history. In examining the Sprout Development Plan and the care and consideration of all interests, public health, safety, welfare, the environment and wildlife resources, I strongly believe this development not only is consistent with the love and respect this pioneer family considered important when it was in their care, but I believe they would appreciate and take pride in the advances in technology, commitment to the environment and to their vision of providing resources for the local community and State of Colorado. From contributing to the State's GDP, intelligently using science and technology by providing a resource to heat homes, as well as much needed tax revenues into the State & local funds as a solution to budget needs, jobs & local economic benefits, this permit application has far reaching benefits. I respect the due diligence of Kerr-McGee/Oxy, their commitment to meeting and exceeding every	01/24/2024

	expectation, rule and regulation, their consideration of community needs and the value Kerr-McGee places on being one of, if not, the BEST operator in the State of Colorado, with their attention to detail, safety & responsibly commitments in transitioning from old, outdated wells, to new industry advancements in construction, development, operations, safety & reclamation, all meeting the Colorado's statutes and mineral owners expectations. All phases of this energy development provides a reasonable solution and confidence this is a good plan for Colorado. These are important Colorado natural resources. I and others consider Kerr-McGee to be leading in smart, scientifically driven, environmental advances and production technology, a highly respected operator that brings full integrity and transparency with this application. The work they do on and off the field is appreciated. I hope you agree this application and supporting documents is evidence of proof that satisfies the requirements. I strongly support the owners who legally own these resources and have a legal right to develop them, as has historically been the case with precedence here. Many of them are the descendants of hard working visionaries, Colorado pioneers, who settled in Colorado on this ranch. I believe there is an important historical value in this project, with these multi-generational mineral right owners and Kerr McGee leading the way in this transition. I respectfully request you grant full approval of the Sprout (Clover, Alfalfa & Rademacher) permit application and development plan. It is an exciting time to advance this important new science and technology in Colorado and allow Sprout to proceed with support and approval from ECMC. Sincerely, Maureen T. Hartman 1651 Adams Street Denver, CO 80206	

Total: 2 comment(s)