

## **DIRECTOR'S RECOMMENDATION**

***Kerr-McGee Oil & Gas Onshore LP (KMOG), a subsidiary of Oxy USA Inc.), Operator Number 47120, Nelson Family OGD, OGD ID #481241, Form 2C #402725609, Form 2As #402770498 and #402770521, Form 2B #402792760, Docket #210900153***

Pursuant to Rule 306, the Director submits to the Commission this recommendation for the KMOG Nelson Family OGD located in Weld County.

## **BACKGROUND**

On October 1, 2021, KMOG filed a Form 2C, Oil and Gas Development Plan Certification, and all required components for an Oil and Gas Development Plan (OGDP) application with the Colorado Oil and Gas Conservation Commission (COGCC). Staff returned the two Form 2As to DRAFT status once for the applicant to make corrections prior to the Director determining the application was complete on December 16, 2021. Revisions were coordinated between Staff and the applicant throughout the technical review process. This Recommendation is based on information finalized in the two Form 2As, the Form 2B, and the hearing application as of March 14, 2022. No additional revisions will be made to the application prior to the Commission Hearing scheduled for March 23, 2022.

### **KMOG Nelson Family Proposed Development:**

The proposed OGD includes Application Lands in Weld County of approximately 2,810 acres in Township 5 North, Range 67 West: all of Sections 27, 28, and 33, and portions of Sections 29, 32 and 34. The setting is a suburban-to-rural area with mixed residential, recreational, and agricultural land uses. The two proposed surface locations are in unincorporated Weld County, and the OGD's mineral lands include the town of Miliken. The towns of Johnstown and Greeley are 1.5 miles to the southwest and 1.8 miles to the northeast of the mineral area, respectively.

KMOG proposes two new Oil and Gas Locations with wells and production: the Paul Nelson 25-29HZ Pad (Paul Nelson) and the Charlene Nelson 12-34HZ Pad (Charlene Nelson). These two Locations will have a combined total of 24 horizontal wells: 17 at Paul Nelson and 7 at Charlene Nelson. KMOG intends to pipe produced hydrocarbons off both Locations via a third party gathering system (no hydrocarbons will be stored on the locations) and produced water will be stored in tanks on location and transported off-location via trucks. Gas custody transfer will occur at the gas meter and oil custody transfer will occur at the LACT unit on each Location. KMOG has committed to connecting to a gas gathering system at both proposed locations.

The permanent production equipment planned for the Paul Nelson Location includes 17 pump jacks, 14 separators, 2 condensate maintenance tanks, 6 produced water storage tanks, 3 chemical totes, 3 air compressors, 3 meter/sales buildings, 2 communication towers, 2 VOC

combustors, 2 LACT units, and various other production equipment. Temporary equipment planned for completion operations includes twenty-six (26) 500-barrel tanks, 7 ECDs (Enclosed Combustion Devices), 3 purge flares (KMOG: temporary purge flares are utilized for safe commissioning of facilities and they will comply with Rules 903.c.(3).B and 903.c.(3).C. regarding venting and flaring during completions operations), and 2 electric generators.

The permanent production equipment planned for the Charlene Nelson Location includes 7 pump jacks, 6 separators, 1 condensate maintenance tank, 3 produced water storage tanks, 3 chemical totes, 1 VOC combustor, 1 air compressor, 1 meter/sales building, 1 communication tower, 1 LACT unit, and various other production equipment. Temporary equipment planned for completion operations includes eleven (11) 500-barrel tanks, 4 ECDs, 3 purge flares, and 2 electric generators.

KMOG has provided the following estimated timeline for construction through production of the two locations:

Paul Nelson

- Commence construction: Q2 2022
- Commence drilling: Q3 2022 (spud rig); Q3 2022 (production rig)
- Commence completions: Q3 2023
- Full production phase: Q3 2023

Charlene Nelson

- Commence construction: Q2 2022
- Commence drilling: Q2 2022 (spud rig); Q3 2022 (production rig)
- Commence completions: Q2 2023
- Full production phase: Q3 2023

**Surface Lands:**

The proposed Oil and Gas Locations are on Fee surface, with the Paul Nelson Pad located outside of the mineral development area and the Charlene Nelson Pad located inside the mineral development area. The Operator's right to construct is granted through a Surface Use Agreement (SUA) signed on July 9, 2017, that covers both proposed locations. The OGD locations require approximately 48.43 acres of total new surface disturbance as follows:

- Oil and Gas Location disturbance
  - Paul Nelson: 16.33 acres (approximately 9.23 acres for the Working Pad Surface (WPS)); interim reclamation will reduce the operational pad down to 5.75 acres
  - Charlene Nelson: 10.47 acres (approximately 5.05 acres for the WPS); interim reclamation will reduce the operational pad down to 2.66 acres
- Pipeline disturbance of 20.7 acres and Utility corridor disturbance of 1.75 acres (electricity);
- Combined access road disturbance of 0.93 acres.

**Mineral Lands and Development:**

KMOG proposes the following development of FEE and STATE minerals:

- The establishment of a single 2,760-acre Drilling and Spacing Unit (DSU) with the approval of this OGD application;
- 24 horizontal wells to produce oil and gas from the Niobrara, Fort Hays, Codell, Carlile, and Sharon Springs Formations.

**Financial Assurance:**

Staff confirmed that KMOG has a valid blanket plugging bond on record for all proposed oil and gas wells in this OGD, as well as a valid “excess inactive” plugging bond.

**COGCC Staff Analysis of Timing and Mineral Development:**

Staff asked KMOG about the gap between drilling and completions activities and if this would result in a single extended occupation or multiple occupations. KMOG informed COGCC that per their current anticipated schedule and required CPW timing limitations for Mule Deer Severe Winter Range High Priority Habitat (HPH) from December 1 to April 30, that approximately eight (Paul Pad) to nine (Charlene Pad) months will lapse between the release of the production rig and the start of completions on both pads. Due to this larger gap between operational phases, KMOG plans on removing the sound walls after drilling, and re-installing them for a second occupation prior to commencing completions.

Staff appreciates that KMOG is requesting a single large DSU for this OGD. The unit setbacks requested in the hearing application are appropriate and supported by Engineering testimony, and eliminate the need for individual wellbore spacing units.

**LOCAL GOVERNMENT PERMITTING AND PRE-APPLICATION CONSULTATIONS**

**Relevant Local and Proximate Governments:**

Weld County is the Relevant Local Government (RLG) for both proposed Locations. There are no other local governments within 2,000 feet of the Paul Nelson WPS. The Town of Milliken is within 2,000 feet of the Charlene Nelson WPS and is recognized as the Proximate Local Government.

**Pre-Application Consultation and Permitting with Weld County:**

On July 28, 2021, KMOG and Weld County held a pre-application consultation regarding Kerr McGee’s intent to submit applications for Weld County Oil and Gas Location Assessment (WOGLA) permits; COGCC Staff attended (See the “Consultation Summary” attachment on the Form 2As for details of the meeting.) KMOG submitted their WOGLA application to Weld County on August 12, 2021; Weld County subsequently approved WOGLA #1041WOGLA21-0014 permit for the proposed Paul Nelson 25-29HZ location and the WOGLA #1041WOGLA21-0015 permit for the proposed Charlene Nelson 12-34HZ location on December 16, 2021 (see “Approved Weld County Permit” attachments).

**Pre-Application Consultations with CPW:**

KMOG requested to meet with representatives from Colorado Parks and Wildlife (CPW) to conduct site visits to the proposed Oil and Gas Locations and discuss any potential operational or resource-related concerns that they may have with both locations being within Mule Deer Severe Winter Range High Priority Habitat (HPH) [Rule 1202.d.(3)] and both locations having chemical storage sited within 500 feet of wetlands [Rule 1202.a.(3)]. Additionally, the Paul Nelson location's area of disturbance (approximately 0.06 acres) falls within the Aquatic Native Species Conservation Waters 500' buffer [Rule 1202.c.(1).R]. One formal onsite was conducted on March 31, 2021 prior to application submittal. The lengthy CWP consultation process resulted in the following actions:

1. CPW waived the "no surface occupancy" requirement of Rule 1202.c.(1).R, pursuant to Rule 309.e.(5).D.i, and the Director granted an exception for the same;
2. CPW and KMOG agreed to an alternative method of compliance for daily inspections per Rule 309.e.(5).D.i.cc;
3. CPW provided a waiver for Rule 1202.a.(3) to allow KMOG to site chemical totes within 500' of a wetland; this waiver is not formally granted unless the Commission approves the Form 2A documenting this relief;
4. KMOG agreed to timing limitations during mule deer winter season;
5. KMOG agreed to pay direct impact habitat mitigation fees to CPW as required by Rule 1203.a.

See the Wildlife Resource Considerations section of this document for additional information.

**CDPHE Consultation:**

CDPHE did not consult with the Director during the normal consultation period specified by Rule 309.f.(2). However, CDPHE requested and was granted consultation with the Director on January 10, 2022. CDPHE provided their Consultation to COGCC on February 10, 2022. CDPHE included the comment that *"Additional conditions of approval (COAs) are necessary and reasonable to minimize adverse impacts from the Paul Nelson and Charlene Nelson Locations."* For both locations, CDPHE recommended nine (9) conditions of approval (COAs) to minimize impacts to air resources and public health and six (6) COAs to minimize impacts to water resources. KMOG responded in writing and provided BMPs to address certain CDPHE recommendations. See the COGCC Response to CDPHE Consultation (included in the Director's Recommendation) for details of CDPHE's recommendations, KMOG's responses, and the Director's responses.

**ADMINISTRATIVE CONSIDERATIONS****Lesser Impact Area Exemption Request Summary:**

KMOG requested from the Director a Lesser Impact Area Exemption pursuant to Rule 304.d for the "Geologic Hazards Plan" (Rule 304.c.(21)) for the Charlene Nelson pad location. Based on COGCC's review of information provided in the "Lesser Impact Area Exemption Request" attachment during the Form 2A 'Completeness Review', staff agreed that the potential for impact from a flood event would be low to nearly non-existent due to the distance from the floodplain to the Facility Working Pad Surface of over 400 feet and a difference in elevation of

approximately 12 feet between the edge of the floodplain (4752 feet msl) and the onsite production equipment (4764 feet msl). Therefore, the Director granted the Lesser Impact Area Exemption Request for this plan on December 14, 2021.

## **PUBLIC COMMENTS**

Pursuant to Rule 303.d.(1).A.ii, the public comment period was open for 30 days from December 16, 2021 through January 15, 2022. No public comments were received on the Charlene Nelson Form 2A #402770521. Six (6) public comments were received on the Paul Nelson Form 2A #402770498 via the public comment portal during the public comment period, and all were unique (no duplicates). The Director reviewed and considered all comments received from the public when evaluating the proposed OGD and in determining the Director's Recommendation. See the Public Comment Consideration Memo (included in the Director's Recommendation) for comment details, KMOG's responses, and the Director's response.

## **COGCC 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 SB 19-181 for the KMOG Nelson Family OGD.*

### **Alternative Location Analysis (ALA)**

#### **Paul Nelson 25-29HZ Location**

The proposed Paul Nelson Location meets the following Rule 304.b.(2).B criteria:

- 304.b.(2).B.i. The proposed Working Pad Surface is within 2,000 feet of 1 or more Residential Building Units or High Occupancy Building Units;
- 304.b.(2).B.v. The proposed Working Pad Surface is within a Floodplain;
- 304.b.(2).B.vii. The proposed Oil and Gas Location is within the boundaries of, or is immediately upgradient from, a mapped, visible, or field-verified wetland or riparian corridor; and
- 304.b.(2).B.viii. The proposed Oil and Gas Location is within High Priority Habitat and the Operator did not obtain a waiver from CPW through a pre-application consultation.

KMOG formally evaluated seven (7) technically feasible locations, including the proposed Paul Nelson 25-29HZ location. All seven locations are within 2,000 feet of RBUs. Neither the proposed location nor the six alternative locations avoid all potential receptors. After COGCC's initial review of these locations, Staff requested that KMOG review five additional nearby locations to determine if any of them could be suitable for development.

The proposed Paul Nelson Location is within 2,000 feet of 8 RBUs, within HPH for Mule Deer Severe Winter Range, within HPH for Native Aquatic Species Conservation Waters (within 500 feet of Ordinary High Water Mark (OHWM)), proximate to a wetland/riparian corridor, and is within the floodplain of the Big Thompson River. The nearest RBU is 938 feet east of the

proposed WPS; the next closest RBUs are 1,009 and 1,049 feet northwest, with four (4) RBUs between 1,318 to 1,628 feet to the north-northwest; and one (1) RBU being 1,670 feet to the southeast of the proposed WPS. This location is outside of the FEMA-designated floodplain, however, the 2020 preliminary floodplain updates place the revised floodplain edge into the facility portion of the proposed location.

Alternative Location 1 (AL1) is within 2,000 feet of 18 RBUs, where the nearest RBU is 633 feet to the south. It is also immediately upgradient from a wetland/riparian corridor, and is within the Town of Milliken on a parcel that was deeded to the Town with guidance that no development can occur as the parcel is slated for preservation and inclusion in a future trail system. A Use by Special Review (USR) permit would be required by the Town.

Alternative Location 2 (AL2) is within 1,000 to 2,000 feet of four (4) RBUs, is immediately upgradient from a wetland/riparian corridor, is within HPH for Mule Deer Severe Winter Range, and is west of fresh emergent wetlands. This location would not be able to reach the same minerals for development as the Paul Nelson, and would require one to two additional locations.

Alternative Location 3 (AL3) is within 500 to 1,000 feet of three (3) RBUs, the closest of which is 623 feet to the west, and 1,001 to 2,000 feet of two (2) RBUs; is immediately upgradient from a wetland/riparian corridor; is less than 2,000 feet of a municipal or county boundary; is 1,760 feet away from the Town of Milliken; is west and upgradient from a riparian corridor, a freshwater pond, and a mapped freshwater emergent wetland. Further, this location would have three RBUs within 1,000 feet, which is more than the proposed location, and require one or two additional locations.

Alternative Location 4 (AL4) is within 0 to 500 feet of two (2) RBUs, the closest of which is 312 feet to the southeast (surface owner and resident of this RBU discourages development at this location and is not amenable to a SUA), 500 to 1,000 feet of two (2) RBUs, and 1,001 to 2,000 feet of two (2) RBUs; is immediately upgradient from a wetland/riparian corridor, there are fresh emergent wetlands to the east of the location, and is within the Town of Milliken on a parcel that was deeded to the Town with guidance that no development can occur. Further, this location has two RBUs within 500 feet, whereas the proposed location has no RBUs within 500 feet'.

Alternative Location 6 (AL6) is within 1,001 to 2,000 feet of four (4) RBUs, the closest of which is 1,121 feet to the southeast, is within HPH associated with Bald Eagle Roost or Communal Roost, and within the half mile buffer of an Active Bald Eagle Nest Site. This location is included within the center of the proposed DSU, which would require two times the number of wells to be drilled, requiring a larger pad and increased surface disturbance.

Alternative Location 7 (AL7) is within 500 to 1,000 feet of two (2) RBUs, the closest of which is 504 feet to the north, and 1,001 to 2,000 feet of two (2) RBUs, is less than 2,000 feet of a municipal or county boundary (746 feet away from the Town of Milliken and 1,038 feet away from the City of Greeley). This alternative location was not supported by the Town of Milliken. The surface owner (who has indicated they would discourage development at this alternate

location) has a private airstrip near the location, which eliminates this location for safety concerns.

The following five additional locations were reviewed by KMOG as potential alternatives per Staff request:

Alternative Location NW/4 Sec28 (AL8) is within 2,000 feet of 6 to 8 RBUs, is immediately upgradient from a wetland/riparian corridor, there is a mapped freshwater emergent wetland in the center of this quarter. Further, this location would require another pad to reach all the minerals.

Alternative Location NE/4 Sec 29 (AL9) is within 2,000 feet 8 to 10 RBUs, the southwestern quarter of the northeastern quarter contains HPH associated with Mule Deer Severe Winter Range. Further, this location would require another pad.

Per KMOG's ALA Narrative attachment, Alternative Location W/2 Sec 26 (AL10) is covered under a Tier 1 Stay associated with SRC's proposed Comprehensive Development Plan (CDP) per COGCC Order 1-223 (docket #190400306) so KMOG did not consider this as a viable option and did not pursue additional evaluation. Staff recognizes that the Order includes that the Tier 1 Stay will be terminated upon the Commission making a decision on the CDP, or, eight months after the approval of the order (approval date May 21, 2019; termination date January 21, 2020), whichever is earlier. The SRC CDP application was transferred to PDC upon PDC's acquisition of SRC's oil and gas assets. Although the SRC CDP is no longer being considered by the Commission, PDC has submitted its "Guanella CAP" (docket #210200012), which largely supersedes SRC's prior CDP acreage and proposal, including the W/2 Sec 26. PDC's CAP application also has an approved COGCC Order granting a stay of all new OGDG applications within the CAP lands. So although KMOG's ALA narrative does not accurately describe the reason why this Alt Loc cannot be pursued, Staff finds that indeed an evaluation of this Alt Loc adds little value to the Nelson Family OGDG.

Alternative Location SE/4 Sec 22 (AL11) is within 2,000 feet of 4 or more RBUs, the proposed WPS is less than 2,000 feet of a municipal or county boundary, is directly adjacent to the Town of Milliken, and it is unknown whether the Town of Milliken would object or require an alternative location analysis. Further, this location would require two additional pads to capture the minerals.

Alternative Location SW/4 Sec 23 (AL12) is within 2,000 feet of 4 or more RBUs, the proposed WPS is less than 2,000 feet of a municipal or county boundary, is directly adjacent to the Town of Milliken and it is unknown whether the Town of Milliken would object or require an alternative location analysis. Further, this location would require two additional pads to capture the minerals.

#### **Charlene Nelson 12-34HZ**

The proposed Charlene Nelson Location meets the following Rule 304.b.(2).B criteria:

- 304.b.(2).B.i. The proposed Working Pad Surface is within 2,000 feet of 1 or more Residential Building Units or High Occupancy Building Units;
- 304.b.(2).B.v. The proposed Working Pad Surface is within a Floodplain;
- 304.b.(2).B.viii. The proposed Oil and Gas Location is within High Priority Habitat and the Operator did not obtain a waiver from CPW through a pre-application consultation.

KMOG formally evaluated four (4) technically feasible locations, including the proposed Charlene Nelson 25-29HZ location. All four locations are within 2,000 feet of RBUs. Neither the proposed location nor the three alternative locations avoid all potential receptors.

The proposed Charlene Nelson Location is within 2,000 feet of four (4) RBUs. The nearest RBU is 843 feet northwest of the proposed WPS; the next closest RBUs are 930 feet to the northwest and 1,256 and 1,884 feet north-northeast of the proposed WPS. It is also within HPH associated with Mule Deer Severe Winter Range.

Alternative Location 4 (AL4) has two RBUs within 500 feet (312 feet and 450 feet to the southwest) whereas the proposed location has no RBUs within 500 feet, and the surface owner and resident of the closest RBU discourages development at this location and is not amenable to a SUA. Further, this location would require one to two additional locations.

Alternative Location 5 (AL5) is within 500 to 1,000 feet of two RBUs, and 1,001-2,000 feet of five RBUs, the closest of which is 638 feet to the southwest. Based on conversations with the surface owner, KMOG believes that securing a surface use agreement at this location is not reasonably achievable.

Alternative Location 6 (AL6) is within 1,001 to 2,000 feet of four (4) RBUs, the closest of which is 1,121 feet to the southeast, is within HPH associated with Bald Eagle Roost or Communal Roost, and within the half mile buffer of an Active Bald Eagle Nest Site. Further, this location would require two times the number of wells to be drilled, requiring a larger pad and increased surface disturbance.

#### COGCC Staff Analysis of the ALAs:

Based on the ALA Datasheet and Narrative Summary (attached to the Form 2As), a desktop review of the setting and an onsite visit to both proposed locations and some of the alternatives on February 18, 2022, Staff has determined that the ALA demonstrates that the proposed Paul Nelson Location would present fewer potential adverse impacts than the alternatives analyzed. There are fewer RBUs within 2,000 feet of the WPS of the proposed Paul Nelson Location compared to the different combinations of alternative locations that would be necessary since more than one location would be required to access the same amount of minerals. Staff has also determined that the ALA demonstrates that the proposed Charlene Nelson Location would present fewer potential adverse impacts than the



alternatives analyzed. There are fewer RBUs within 2,000 feet of the WPS of the proposed Charlene Nelson Location compared to the other alternatives proposed.

There are no preferable, technically feasible alternative locations or combination of locations within or adjacent to the mineral development area that would more successfully avoid potential impacts to human, environmental, and wildlife receptors while minimizing surface disturbance.

Since receptors cannot be avoided, BMPs are necessary to minimize and/or mitigate the potential adverse impacts to public health, safety, welfare, the environment, and wildlife resources from the proposed Locations and the Oil and Gas operations associated with them.

### **Public Health, Safety, and Welfare Considerations**

Staff identified two interrelated concerns regarding public health, safety, and welfare in this proposed OGDG due to proximity to RBUs:

#### **The proposed WPSs are within 2,000 feet of existing RBUs:**

Staff's technical review of the Paul Nelson 25-29HZ Location identified eight (8) RBUs within 2,000 feet of the WPS, with the closest being 938 feet to the east (see the "Cultural Features Map" attached to the Form 2A for a depiction of the spatial relationship between the WPS and the 8 RBUs). There are no High Occupancy Building Units (HOBUs), School Facilities, or Child Care Centers within one mile of the proposed WPS.

Staff's technical review of the Charlene Nelson 25-29HZ Location identified four (4) RBUs within 2,000 feet of the WPS, with the nearest being 843 feet northwest of the proposed WPS (see the "Cultural Features Map" attached to the Form 2A for a depiction of the spatial relationship between the WPS and the 4 RBUs). There are no High Occupancy Building Units (HOBUs), School Facilities, or Child Care Centers within one mile of the proposed WPS.

The Locations are not within 2,000 feet of RBUs within a Disproportionately Impacted (DI) Community, and the Locations are not within DI Communities, therefore Community Outreach Plans are not required per Rule 304.c.(20). KMOG conducted outreach through mailings, phone calls, and door-to-door visits. KMOG voluntarily included information about their community outreach program as an attachment (see "Community Engagement Report") on the Form 2As. This document primarily restates that KMOG will comply with rule requirements for notification and will practice continued engagement with the RBU owners/tenants within 2,000 feet of the two locations, as well as stakeholders outside 2,000 feet if and when necessary.

In addition to the required WOGLA notices that were sent to RBU owners within 1000 feet of the proposed Oil and Gas Locations (OGLs), KMOG sent postcards to all eight RBU owners within 2000 feet of the Paul Nelson location and all four RBU owners within 2000 feet of the Charlene Nelson location in November 2021 indicating they were interested in developing these areas and requested a conversation. KMOG did not receive any responses from these postcards, but

did follow up with phone calls to all 12 RBU owners. Four of the 12 owners (two from each proposed well pad location) had discussions with the operator and no major concerns were noted during those conversations. In addition, KMOG is pursuing informed consent to fulfill Rule 604 requirements, but none have been executed to date. The scope and content of this community consultation is documented in the Form 2A attachments described above as well as the Weld County approved permits, also attached to the form 2As. KMOG has established a “stakeholder relations” email address and phone number, as well as the “Colorado Response Line” to receive questions, concerns, or complaints.

Operator-proposed site-specific measures to address proximity to RBUs:

KMOG provided BMPs that address public health, safety and welfare considerations; Staff has reviewed those BMPs and included them on the Form 2A. A summary of KMOG’s relevant minimization and mitigation measures includes:

- 1) Safety: KMOG consulted with the Front Range Fire Rescue District. Site-specific Emergency Action Plans were approved by Weld County Office of Emergency Management and the Front Range Fire Rescue District on December 6, 2021 for both locations. The Locations will have remote shut in capability.
- 2) Emissions: KMOG has committed to a crude oil and gas gathering system; will minimize truck traffic by using temporary pipeline to deliver water for completions; will conduct LDAR/AVO inspections; and has a “tankless” location<sup>1</sup> with all hydrocarbon liquids and natural gas piped off location, which will also reduce truck traffic.
- 3) Noise: KMOG will install 32-foot-high sound walls with minimum STC-25 rating on the north, south, and east sides of the Paul Nelson well pad and on the northwest and northeast sides of the Charlene Nelson well pad during drilling and completions.
- 4) Lights: Lights will be pointed downward and angled away from off-site buildings. Sound walls will reduce off-site lighting trespass during pre-production phase. Minimal lighting during production phase will be used for acceptable safe operations.
- 5) Odor: KMOG will use Group III oil-based drilling fluids (zero VOC, low/negligible odor) and a mud chiller with the intent to lower the drilling fluid temperature as fluids are redeployed downhole during production drilling operations at both locations.
- 6) Dust: KMOG will use speed restrictions, restriction of construction activity during high-wind days, silica dust controls, regular road maintenance, and the use of fresh water or magnesium chloride for dust suppressant.
- 7) Air Monitoring: Air monitoring will be conducted according to CDPHE Regulation 7 during production drilling, completions and six months of production facility operations. Air monitoring reports will be submitted at the end of each month during monitoring activity to CDPHE, COGCC and local governments within 2000 feet.

**The applicant is requesting approval of the Location pursuant to Rule 604.b.(4):** Rule 604.b requires that no WPS will be located between 501 and 2,000 feet from a RBU unless one

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<sup>1</sup> Staff notes that “tankless” described by KMOG means there will be no oil stored in tanks on site. This is different from CDPHE’s definition of “tankless”, which means there will be no oil or produced water stored on site. Both the Paul Nelson and Charlene Nelson locations will have produced water storage.

of four conditions are satisfied. KMOG is asking the Commission to find that both of the proposed Locations, as sited within 2,000 feet of a combined total of 12 RBUs (8 RBUs Paul Nelson; 4 RBUs Charlene Nelson), and its submitted BMPs, will provide substantially equivalent protections per Rule 604.b.(4).

**COGCC Staff Analysis of Public Health, Safety and Welfare Considerations:**

COGCC Staff conducted a technical/desktop review of the application materials related to the proposed Location's siting and proximity to RBUs, and conducted an onsite visit to both proposed locations on February 18, 2022. Staff concludes that although the two Locations are within 2,000 feet of 12 RBUs (8 Paul Nelson and 4 Charlene Nelson), the proposed site-specific BMPs will reduce, minimize and/or mitigate many potential adverse impacts to public health, safety and welfare. The applicant's BMPs, which include administrative processes (coordination and permitting with relevant local and proximate governments), address nuisance conditions (noise, lighting, odors and dust), provide for general safety (emergency response and vapor controls), address acute and cumulative impacts to public health (emission controls, connecting to a pipeline), and promote welfare (communication with nearby building unit owners and tenants), if successfully implemented and maintained, will reduce, but not eliminate, adverse impacts to local residents.

Staff has determined that the dialogue established between KMOG and the RBU owners/tenants shows substantial engagement and agreement with the proposed location and operations. KMOG's Community Engagement Report states that all COGCC rules have and will continue to be adhered to regarding required outreach and notification. Based on these findings, Staff has determined that KMOG has provided sufficient opportunity for RBU owners to engage in this permitting process.

Regarding the applicant's request for Commission finding pursuant to Rule 604.b.(4), Staff finds that this OGD application meets all COGCC Rule requirements and is appropriate for Commission consideration.

## **Environmental Resource Considerations**

### **Water Resources:**

#### **Paul Nelson 25-29HZ Location**

The proposed WPS at this Oil and Gas Location lies within a Sensitive Area for water resources due to proximity to a domestic water well, the potential for shallow groundwater, proximity to surface water features, proximity to NWI-mapped wetlands, and siting within a floodplain. Depth to groundwater is estimated to be approximately 6 feet below ground surface (bgs) based on a nearby domestic water well (located 187 feet to the west-northwest in the crossgradient direction). There are two irrigation water ponds (43 feet to the west and 61 feet to the northwest) located crossgradient of the WPS. The Hill and Brush Irrigation Ditch (a man-made ditch conveying water from the Big Thompson River passing through a gate valve

approximately 4.5 miles to the northwest) is approximately 388 feet to the east and is crossgradient of the WPS. The Big Thompson River is located 421 feet downgradient to the southwest with associated wetlands. The current 100-year floodplain (effective 2016) of the Big Thompson River is located approximately 147 feet to the southwest. Since 2016, Weld County has been revising the extent of the current floodplain in this area and has estimated that the 100-year floodplain has moved further west (preliminary 2020) putting the edge of the floodplain approximately 381 feet to the southwest. A second revision extends the floodplain further to the north (preliminary 2020) putting the edge of the floodplain into the facility pad portion of this location. However, flood waters would need to rise over 10 feet in order to reach the production pad from the south. The Weld County revisions to the boundaries of the 100-year floodplain have yet to be adopted by FEMA.

### **Charlene Nelson 12-34HZ Location**

The proposed WPS at this Oil and Gas Location lies within a Sensitive Area for water resources due to the potential for shallow groundwater, proximity to surface water features, and proximity to field-identified wetlands. Depth to groundwater is estimated to be approximately 14 feet bgs based on a nearby domestic water well (located 720 feet to the southeast in the downgradient direction), which indicated a static water level of 30 feet bgs. There are two irrigation ditches (the Hill and Brush Ditch 16 feet to the northeast and an unnamed ditch 22 feet to the east) both located crossgradient and eventually downgradient of the WPS. The Big Thompson River is located 632 feet downgradient to the south with associated wetlands. The current 100-year floodplain (effective 2016) of the Big Thompson River is located approximately 420 feet to the south.

#### Site Specific Measures to Address Water Resources:

COGCC staff conducted a detailed technical review of the Hydrology Map, Layout Drawings, Dust Mitigation Plan, Flood Shut-In Plan, Stormwater Management Plan, Interim Reclamation Plan, Fluid Leak Detection Plan, Topsoil Protection Plan, and Geologic Hazard Plan to evaluate the potential for impacts to the nearest surface water features or from potential flood waters. These plans include site-specific BMPs for initial site construction and interim reclamation; fluid containment during drilling, completion, and production operations; equipment protection from flood waters; and administrative controls detailing inspections, maintenance, and testing. KMOG's construction plans for protection of surface water and groundwater resources at these Oil and Gas Locations include:

- 1) Paul Nelson perimeter controls will consist of a 1.5- to 2-foot compacted earthen perimeter berm and diversion ditch system around the entire WPS; the armored exterior diversion ditches will drain into one large sediment catchment basin with a 6-inch outlet pipe in the southwest corner of the well pad WPS; two culverts will be installed at the Weld County Road 15.5 access road crossing, will be reinforced with inlet and outlet protection to mitigate sediment transport and surface erosion, and will remain in place throughout the life of production for this location; and site degradation control measures that include grading, slope stabilization (seeding, mulching, surface roughening of the topsoil stockpile), straw wattles along the toe of all fill slopes, and the use of gravel and roadbase materials for surfacing of the WPS and access roads.
- 2) Charlene Nelson perimeter controls will consist of a diversion ditch system to divert

stormwater run-on and run-off throughout the location; the armored exterior diversion ditches will surround the entirety of the location to create continuous perimeter control and will drain to one sediment trap with a 6-inch outlet pipe in the southwest corner of the well pad WPS and a second sediment catchment basin in the southeast corner of the production facility pad WPS; two culverts will be installed at the northern location access point for this location, will be reinforced with inlet and outlet protection to mitigate sediment transport and surface erosion, and will remain in place throughout the life of production for this location; and site degradation control measures that include grading, slope stabilization (seeding, mulching, surface roughening of the topsoil stockpile), straw wattles along the toe of all fill slopes, and the use of gravel and roadbase materials for surfacing of the WPS and access roads.

- 3) These locations will be constructed with secondary containment with a geosynthetic lining to protect soil and water resources from leaks and spills during the drilling, completion and production phases.
- 4) Automation technology is used at both locations, including fluid level monitoring and high-level shut-offs, and electronic sensors to monitor sumps. All automation is monitored by 24-hours a days, 7 days a week.
- 5) Tank berms shall be constructed of steel rings with an engineered synthetic liner and designed to contain 150% of the capacity of the largest tank. Separator berms shall be constructed of steel rings. All berms will be visually checked regularly (14 days during construction, 28 days during production) to ensure proper working condition.
- 6) 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.
- 7) Site personnel will be trained in detecting, addressing, and containing spills that may occur on site.
- 8) Equipment and transfer lines will be monitored daily during well drilling and completion for signs of drips, leaks, or spills, which will be corrected promptly.

Additionally, KMOG has obtained a Weld County Floodplain Permit for the Paul Nelson location and will employ the following mitigation strategies to ensure the safety of the surrounding area in the event that a 100-year flood occurs:

- 1) Permanent tanks will be placed out of the floodplain (preliminary 2020) and protected from floodwaters by secondary containment consisting of steel rings with an engineered synthetic liner and designed to contain 150% of the capacity of the largest tank;
- 2) Separator berms shall be constructed of steel rings.
- 3) All berms will be visually checked regularly (14 days during construction, 28 days during production) to ensure proper working condition.
- 4) All oil and gas production facility equipment, including tank batteries, separators, ECDs, shall be anchored to resist flotation, collapse or lateral movement.
- 5) Submerged portions of meters, electric boxes, air compressors, and manifolds will be sealed, waterproofed, and anchored.
- 6) Any exposed electrical will be waterproofed and properly anchored to the wellheads.

- 7) The flowlines (3-inch Schedule 80 steel) will be buried an average of 4.0 feet below grade and will transfer the full well stream south to the proposed facility, parallel to the flow of the Big Thompson River.
- 8) Topsoil stored for final reclamation will be seeded in order to prevent erosion caused by wind, local storm runoff, and flooding of the Big Thompson River.

**COGCC Staff Analysis of Water Resource Considerations:**

COGCC Staff conducted a technical review to evaluate the potential for impact to the nearest surface water features. KMOG provided BMPs that reduce, minimize, or mitigate impacts to groundwater and surface water resources and the environment. The BMPs include engineering controls (construction and containment) and administrative controls (inspections and a leak detection plan).

Based on this information, Staff concludes that risk of contamination from this Oil and Gas Location to groundwater and downgradient surface waters will be minimized by the successful implementation of the proposed BMPs.

**Wildlife Resource Considerations**

Both proposed locations lie within Rule 1202.d.(3) Mule Deer Severe Winter Range (“density HPH”), and the Paul Nelson also lies within Rule 1202.c.(R) Cutthroat trout designated crucial habitat and native fish and other native aquatic species conservation waters (within 500 feet of OHWM). Both Locations will also have chemical storage within 500 feet of a wetland [prohibited without a CPW waiver per Rule 1202.a.(3)]. During KMOG’s consultation with CPW, alternative locations within or near the DSU were discussed, but it was determined that potential adverse impacts to wildlife could largely be addressed with BMPs and other measures, making the original Paul Nelson and Charlene Nelson proposed well pads KMOG’s preferred locations.

**Aquatic HPH Resources:**

Based on field conditions, the proposed Paul Nelson location falls within 324 feet of the OHWM for mapped Aquatic Native Species Conservation Waters habitat of the Big Thompson River. CPW asked if the Paul Nelson location could be moved to the east, outside of the aquatic buffer. The issue with moving the location further to the east was the setback from a Residential Building Unit (RBU). CPW reviewed KMOG’s Stormwater Management Plan (which described the location’s design and best management practices [BMPs] for surface water protection) and determined that the detailed stormwater and erosion control measures were sufficient to protect the Big Thompson River. Based on this, CPW waived the “no surface occupancy” requirement of Rule 1202.c.(1).R for proposed new surface disturbance within 300-500 feet of the OHWM, pursuant to Rule 309.e.(5).D.i. The Director concurred with CPW’s assessment, and similarly granted an exception to this Rule. The 309.e.(5).D.i waiver requires the addition of specific BMPs. One such BMP (309.e.(5).D.i.cc) requires the location to be inspected on a daily basis unless the approved Form 2A provides for a different inspection frequency or alternative method

of compliance. KMOG has indicated it will perform daily inspections at both locations during drilling and completion operations. During production, however, daily inspections will not occur, but weekly inspections will. In addition, the facility will be monitored remotely by KMOG's Integrated Operations Center (IOC) 24/7, and each location's production equipment will be monitored continuously utilizing leak detection sensors throughout the facility, wells, and flowlines. Based on this, CPW agreed to the revised BMP for daily inspections.

In addition, since KMOG proposes locating produced water storage tanks for both locations within 500 feet of wetlands and/or surface water features, KMOG requested, and received, a CPW waiver to Rule 1202.a.(3). CPW granted the waiver based on detailed stormwater and erosion control measures listed in the Stormwater Management Plans, and the fact that the proximate wetlands and surface water features are upgradient / crossgradient of the proposed tank batteries. This waiver is not formally granted unless the Commission approves the Form 2A documenting this relief.

#### **Mule Deer HPH Resources:**

The Paul Nelson and Charlene Nelson well pad locations are located within Mule Deer Severe Winter Range HPH and are subject to direct compensatory mitigation requirements or fees. The Paul Nelson is also subject to indirect mitigation fees per Rule 1203.d ("density rule"). In accordance with Rule 1203.a., KMOG has agreed to complete their compensatory mitigation obligation by paying CPW Habitat Mitigation Fees for impacts.

#### **Paul Nelson 25-29HZ Location**

The total proposed disturbance acreage for the Paul Nelson Location is approximately 16.33 acres, therefore this Location development is not subject to the flat direct impact mitigation fee of \$13,750. Short-term temporary impacts of 10.55 acres, at \$735/acre, equate to \$7,754.25; long-term permanent impacts of 5.78 acres (Well Pad, Facility Pad, and Access Roads combined), at \$5,295/acre, equate to \$30,605.10; for a total Direct Impact Habitat Mitigation Fee of \$38,359.35. In addition, the Wildlife Mitigation Plan attached to the Form 2A indicates that there are four existing active oil and gas locations within a square mile; the Paul Nelson would be the fifth, and is therefore subject to indirect mitigation. A fee of \$19,224.84 has been agreed upon by KMOG and CPW. These impact fees will be used by CPW to complete mitigation efforts on behalf of KMOG.

#### **Charlene Nelson 12-34HZ Location**

The total proposed disturbance acreage for the Charlene Nelson Location is approximately 10.41 acres and therefore is subject to the flat Direct Impact Habitat Mitigation Fee of \$13,750. There are already 5 or more active oil and gas locations within one square mile of the proposed location; indirect impact mitigation fees are not required. These direct impact fees will be used by CPW to complete mitigation efforts on behalf of KMOG.

In addition to the mitigation measures to be implemented by CPW, KMOG will commit to the following mitigation efforts specific to Mule Deer for both proposed Locations:

- 1) KMOG agreed to conduct all construction, drilling, and completion operations between May 1 and November 30 to avoid impacting the winter season.
- 2) KMOG will inform and educate all employees and contractors on wildlife conservation practices, including no harassment or feeding of wildlife.
- 3) Consolidate and centralize fluid collection and distribution facilities to minimize impact to wildlife.
- 4) Well telemetry equipment will be installed to minimize site visitation through remote monitoring of production operations.
- 5) Use wildlife-appropriate fencing (3- or 4-strand with a top strand maximum height of approximately 42 inches, and the lower smooth strand without barbs at a height of approximately 18 inches) where acceptable to the surface owner.
- 6) KMOG will quickly excavate, install and reclaim linear pipeline features that may impact mule deer movement and migration.

**COGCC Staff Analysis of Wildlife Resource Considerations:**

KMOG provided Wildlife Mitigation Plans that address the required compensatory mitigation since these Locations are within CPW-mapped Mule Deer Severe Winter Range HPH and the Paul Nelson location falls within CPW-mapped Aquatic Native Species Conservation Waters HPH. KMOG has agreed to pay direct and indirect impact habitat mitigation fees. CPW will use these funds to implement mitigation measures and/or habitat enhancement to offset potential wildlife impacts. KMOG commits to conducting construction, drilling, and completion operations outside of the Mule Deer winter season of December 1 to April 30.

CPW has waived the “no surface occupancy” requirement of Rule 1202.c.(1).R and 1202.a.(3) (no staging, refueling, or chemical storage areas within 500 feet of surface waters or wetlands).

Based on the proposed BMPs in the Wildlife Mitigation Plan that address wildlife protections, COGCC and CPW believe that potential impacts to wildlife resources or wildlife habitat will be mitigated sufficiently.

***DIRECTOR’S RECOMMENDATION:***

***The Director has obtained and fully reviewed all required and supplemental information necessary to evaluate the OGD’s proposed operation and its potential impacts on public health, safety, welfare, the environment and wildlife resources. Through this review, the Director has determined that this OGD complies with all applicable requirements of the Commission’s Rules and should be considered for approval by the Commission.***



## **COGCC PUBLIC COMMENT CONSIDERATION MEMO**

**KMOG Oil & Gas Onshore LP (KMOG, a subsidiary of Oxy USA Inc.),  
Nelson Family OGDG (OGDP ID #481241)**

*Pursuant to Rule 306.a.(3), the Director has prepared this Public Comment Consideration Memo as part of the Director's Recommendation.*

The Nelson Family Oil and Gas Development Plan (OGDP) received six (6) public comments during the public comment period, which was open from December 16, 2021 through January 15, 2022. pursuant to Rule 303.d. All 6 comments were submitted on the Paul Nelson Form 2A #402770498, via the public comment portal on the COGCC website, and all pertained to the proposed haul route past their residences, paving of county roads, dust impacts, and visual impacts. The Charlene Nelson Form 2A #402770521 did not receive any direct or specific public comments. Please see the full text of each comment below.

COGCC Staff reviewed and considered every public comment received and has prepared this memo to address the concerns cited. Staff has provided a response to each comment. KMOG has also provided responses to the comments and those responses are included in this document.

### **PAUL NELSON 25-29HZ FORM 2A PUBLIC COMMENTS**

#### **PUBLIC COMMENT #1: Paul Nelson 25-29HZ - 1/3/22**

***Comment:** Our property is directly opposite of the proposed Paul Nelson location. We are requesting WCR 15.5 to be paved in its entirety from WCR 17 all the way to East County Rd 18/Road 54. We have a cut flower farm that is adjacent to the road. During dry times, the road can be very dusty. We can see the clouds of dust floating over the fields and is worse during windy conditions. The estimated traffic total per day during construction is high. I imagine after construction there will still be a high number of trucks traversing the road daily. There is an existing well adjacent to Lakota Lake. Ingress and egress is via an easement that runs behind our house. We see an F150 truck or two and maybe an oil truck most days if not daily. I do not doubt there will be an exponential increase in traffic.*

*Other conditions we are requesting: an addition of berms and evergreens to block the view. The proposed location will consist of 17 wells. We would like the installation of berms and evergreens to assist with blocking the view of these wells. Our main living room window faces south and we would be looking directly at them.*

*Thank you very much. Dean and Becky Siskowski*

**COGCC Response:** COGCC Staff reviews permit applications in accordance with its mission to regulate the development and production of the natural resources of oil and gas in the State of Colorado in a manner that protects public health, safety, welfare, the environment and wildlife resources. Staff's technical review includes an evaluation of the applicant's proposed Best Management Practices (BMPs) as they pertain to all applicable requirements of the Commission's Rules.

The operator has submitted a Transportation Plan (reviewed by Weld County), a Dust Mitigation Plan consistent with the requirements of Rule 427.a., and several BMPs that address the newly revised haul route from the Paul Nelson location to the south, that no oil and gas traffic will be allowed to exit to the north of the location, avoiding most of the nearby Residential Building Units (RBUs), and dust mitigation measures including the use of speed restrictions, restriction of construction activity during high-wind days, silica dust controls, regular road maintenance, and the use of fresh water or magnesium chloride for dust suppressant. COGCC does not regulate local land use, zoning, or usage and maintenance of state or county public roads. KMOG will work with Weld County to determine the appropriate upgrades to portions of County Roads 15.5 and 52. COGCC relies on the operator to construct, upgrade, and maintain access roads and any existing public or private roads used during the life of the location to withstand the proposed numbers of vehicle trips.

All locations are subject to COGCC Rule 425 regarding visual mitigation of their oil and gas facilities. Additionally, due to the RBUs within 2,000 feet of the WPS, the applicant is seeking approval through Rule 604.b.(4), meaning the OGDG will be approved if “The Commission finds, after a hearing pursuant to Rule 510, that the proposed Oil and Gas Location and conditions of approval will provide substantially equivalent protections for public health, safety, welfare, the environment, and wildlife resources, including Disproportionately Impacted Communities”.

**KMOG Response:** We have had the opportunity to have many conversations with Mrs. Siskowski regarding her concerns. We have communicated both in person, over the phone, and through email. We greatly appreciate the feedback she provided regarding her concerns on traffic and interest in permanent visual mitigation.

In response to these concerns, we have modified the haul routes to reduce community impacts and increase safety. The traffic coming to and leaving the proposed Paul Nelson location will enter and exit to the south and utilize WCR 52. This route will avoid all stakeholders to the north of the proposed location including the Siskowski family.

Additionally, the roads have been, and continue to be, evaluated for condition and capacity to accommodate the temporary increase in traffic. Magnesium chloride will be applied to the portion of WCR 15.5 prior to construction to mitigate dust and will be monitored and reapplied as necessary.

Finally, additional signs will be added to reinforce haul routes for all drivers. A large sign will be posted at the entrance/exit of the proposed location stating no traffic to the north. A large sign will be placed at the north end of 15.5 near WCR 54 stating no oil field traffic. Pace cars and flaggers will be utilized for the rig moves. Contractors will be instructed not to use jake brakes.

KMOG understands that visual impacts are a focus for the community. We contracted with a third-party expert to create visual simulations to depict the proposed location when reclamation has been completed. Page two of the attached View Study represents what the Siskowski's will see from their southern property line. We have also posted the view study to our website [oxycoloradostakeholder.com](http://oxycoloradostakeholder.com) on the Project Updates page. We evaluated adding landscaping to screen the facility and wells further and have not incorporated it due to the dry climate, the availability of water, and operational considerations.

We strive to make our activities compatible with the surrounding community and use various techniques to protect the health, safety, welfare, the environment, and wildlife resources and reduce the impacts associated with development.

As always, at any point in time, the Stakeholder Relations team is available to answer questions, address concerns, and listen to feedback. Members of the team can be reached at 866.248.9577, [coloradostakeholder@oxy.com](mailto:coloradostakeholder@oxy.com) or through our website at [oxycoloradostakeholder.com](http://oxycoloradostakeholder.com). After hours the Integrated Operations center can be reached at 970.515.1500.

**PUBLIC COMMENT #2: Paul and Charlene Nelson proposed location - 1/9/22**

***Comment:*** *Our family owns the land across the street from the proposed Nelson location. We have 5 single family buildable lots in our PUD and 40 acres of land in a conservation easement. The Big Thompson River runs through the property and we have a pond. We are requesting that CR 15 1/2 from CR 54 to CR 52 be paved and CR 52 from CR 17 to CR 15 1/2 be paved. Each of these roads dead-end at the river. Paving the roads that lead to and from the Nelson location will significantly reduce the dust pollution that increased traffic from the new oil and gas location will bring. In addition, we would like to see berms and evergreens surrounding the location to help preserve the beauty and rural aspect of our location. Your consideration and assistance are greatly appreciated! Thank you. Barry and Nicole Schroeder.*

**COGCC Response:** COGCC does not regulate local land use, zoning, or usage and maintenance of state or county public roads. KMOG will work with Weld County to determine the appropriate upgrades to portions of County Roads 15.5 and 52. COGCC relies on the operator to construct, upgrade, and maintain access roads and any existing public or private roads to be used during the life of the location to withstand the proposed numbers of vehicle trips.

All locations are subject to COGCC Rule 425 regarding visual mitigation of their oil and gas facilities.

**KMOG Response:** Please refer to KMOG Response Comment #1. In addition, the haul route will no longer pass along the east side of the Schroeder properties. We also sent the visual study to the Schroeders and welcome their feedback. Page three of the attached View Study provides a representation of what the Schroeders will see from their southern property line.

**PUBLIC COMMENT #3: Paul Nelson 25-29HZ - 1/10/22**

***Comment:*** *Our property is located directly north of the proposed drill site. We are concerned with the amount of dust that will be generated from all of the truck traffic. We would like to see CR 15 1/2 paved from CR 54 to CR 17, or at least oiled and graded on a regular basis to keep the dust to a minimum. Another concern is the noise of the trucks, especially when drivers use/misuse their Jake brake. We do not look forward to the noise that will be generated from numerous trucks passing by our house on a regular basis. Speed limits need to be in place and enforced.*

*This drill site will be directly in our line of sight as we look south out our living room and patio windows. I would like to see some trees planted and berms installed to help block the sight of*

*the wells. I didn't move to a rural area to look out my window and see well heads.*

*Thank you,  
Eric and Cindy Smith*

**COGCC Response:** See COGCC Response to Public Comment #2.

**KMOG Response:** Please refer to KMOG Response Comment #1. In addition, the haul route will no longer pass by the Smith property. We also sent the visual study to the Smiths, which includes a representation on page two of what the proposed location would look like if the Smith house was approximately 700' closer to the proposed location.

**PUBLIC COMMENT #4: Paul Nelson 25-29HZ - 1/10/22**

**Comment:** *We request that County Rd 15 1/2 be bladed, maintained and dust control provided on a regular basis by spraying mag chloride prior to the start of construction. Once construction is completed, we would like a permanent paving from the beginning of County Rd 15 1/2 at WCR 54 all the way to WCR 52 including eastward to WCR 17.*

*In addition, we are requesting a maximum speed limit of 35 mph during and after construction. We would like a permanent sign indicating the speed limit to be installed.*

*We'd also like to request that berms and evergreens be installed to help with improving the views.*

*Thank you for your concern, Gordon and Debra Kimmer*

**COGCC Response:** See COGCC Response to Public Comment #2.

**KMOG Response:** Please refer to KMOG Response Comment #1. In addition, the haul route will no longer pass to the east of the Kimmer property. We also sent the visual study to the Kimmers, which includes a representation on page two of what the proposed location would look like if the Kimmer house was approximately 700' closer to the proposed location.

**PUBLIC COMMENT #5: Paul Nelson 25-29HZ - 1/11/22**

**Comment:** *My property is located just across the road and to the North of the Paul Nelson site. With this construction will come high levels of traffic during, and after, completion. That being said, I am concerned about the amount of dust that will be generated. I am requesting that CR 15 1/2 to WCR 54 to CR 17 be paved to cut down on the dust. Some sort of traffic enforcement would also be appreciated, as this is my home and speed and noise that come with large trucks are a concern. One of the reasons I love my locations is the natural beauty and solitude. I would also like to request that trees be planted and berms be installed to block the well site. Thank you for your consideration, it is much appreciated. Loretta Meza*

**COGCC Response:** See COGCC Response to Public Comment #2.

**KMOG Response:** Please refer to KMOG Response Comment #1. In addition, the haul route

will no longer pass by the Meza property. We also sent the visual study to the Ms. Meza, which includes a representation on page two of what the proposed location would look like if the Meza house was approximately 700' closer to the proposed location.

**PUBLIC COMMENT #6: Paul Nelson 25-29HZ - 1/13/22**

***Comment:*** *Our property is directly across County Road 15 1/2 from the Paul Nelson site. As part of the requirement of the PUD with Weld County, we were required to pave the road into the PUD. It is a continuing nuisance to drive from the property on pavement only to get to the county road which is gravel. We do not currently reside on the property, but plan to do so in the next year. We request that additional dust mitigation measures be undertaken during the construction period and that CR15 1/2 from CR54 to CR52 be paved and CR52 from CR17 to CR151/2 be paved following completion of construction. In addition, we would like to see the installation of berms and evergreens surrounding the location to preserve the scenic and rural nature of the location. Thank you. John Gosney and Eleanor Dean*

**COGCC Response:** See COGCC Response to Public Comment #2.

**KMOG Response:** Please refer to KMOG Response Comment #1. We have modified the haul route so that trucks enter and exit to the south minimizing the portion that could impact Gosney/Dean properties. We also sent a visual study to the Gosney/Dean family, which includes a representation on page four of what the proposed location would look like from one of the Gosney/Dean properties.

## **COGCC RESPONSE TO CDPHE CONSULTATION**

***KMOG Oil & Gas Onshore LP (KMOG, a subsidiary of Oxy USA Inc.),  
Nelson Family OGDG (OGDP ID #481241)***

The Director made her Completeness Determination on the Nelson Family OGDG on December 16, 2021. The Colorado Department of Public Health and Environment (CDPHE) initiated consultation on January 10, 2022 for both locations; the consultation period was extended beyond the standard 45 days to accommodate CDPHE's review of ongoing revisions to the application.

CDPHE Staff reviewed the Paul Nelson and Charlene Nelson Form 2As and associated Form 2B for the Nelson Family OGDG with a primary focus on potential public health concerns, and provided their Consultation Recommendations document to COGCC and Kerr McGee on February 10, 2022. For both locations, CDPHE recommended a total of fifteen (15) Conditions of Approval (COAs) to minimize impacts to air resources and public health (nine [9] COAs) and water resources (six [6] COAs) (please see "CDPHE Consultation" attached to the Form 2A for the full report). The COAs were recommended by CDPHE because they determined there was *"a heightened potential for adverse impacts to public health and the environment."* KMOG responded in writing, as well as by revising some of their proposed Best Management Practices (BMPs) on the Form 2As. Please see the "Operator CDPHE Response Summary, February 28, 2022" attached to the Form 2A for KMOG's full response.

COGCC Staff prepared this Consultation Consideration Memo after reviewing and considering both CDPHE's recommendations and KMOG's response. This Memo summarizes Staff's technical analysis of all 15 CDPHE recommendations pursuant to Rule 309.f.(3). Ultimately, however, it is the Commission's decision whether to approve, deny, or stay the OGDG pending more information based on any of these recommendations or other issues identified by the Commission.

### **COA #1 - ELECTRIFICATION:** Operator will use electric drill rigs

**KMOG Response to COA #1:** In accordance with CDPHE's Weld Oil and Gas Location Assessment (WOGLA) referral KMOG has had conversations with the sole power company in the area, Poudre Valley Rural Electric Association (PVREA), regarding upgrading power lines to the three megawatts needed to power a drilling rig. A lengthy evaluation would be required by PVREA prior to any possible construction start. The construction timeframe is expected to be multi-month based on significant infrastructure improvements and upgrades that would be required. PVREA's recommendation is that this upgrade is not feasible, both based on the timeline and resources required to upgrade the power grid in this area that would only be utilized for 4 months. In its WOGLA referral for both Nelson Family OGDG Locations, CDPHE said "If electrically powered alternatives are not available for a particular function, CDPHE recommends that drill rigs and hydraulic fracturing pumps be fueled by natural gas. If natural gas-powered engines are not feasible, then CDPHE recommends that diesel powered engines perform at Tier 3 or 4 standards defined in 40 CFR Part 89, or better." It is KMOG's standard

practice to use drilling rigs that utilize natural gas. These drilling rigs have extremely low emissions compared to traditional diesel-powered engines. In an effort to provide additional information on the use of natural gas-powered drilling rigs, KMOG believes that it is important for the CDPHE to understand that there are benefits to the utilization of natural gas rigs. KMOG's standard practice is to use natural gas to power its drilling rigs because of the benefits natural gas provides when compared to traditional diesel power generation. Some of these benefits including emissions reductions are:

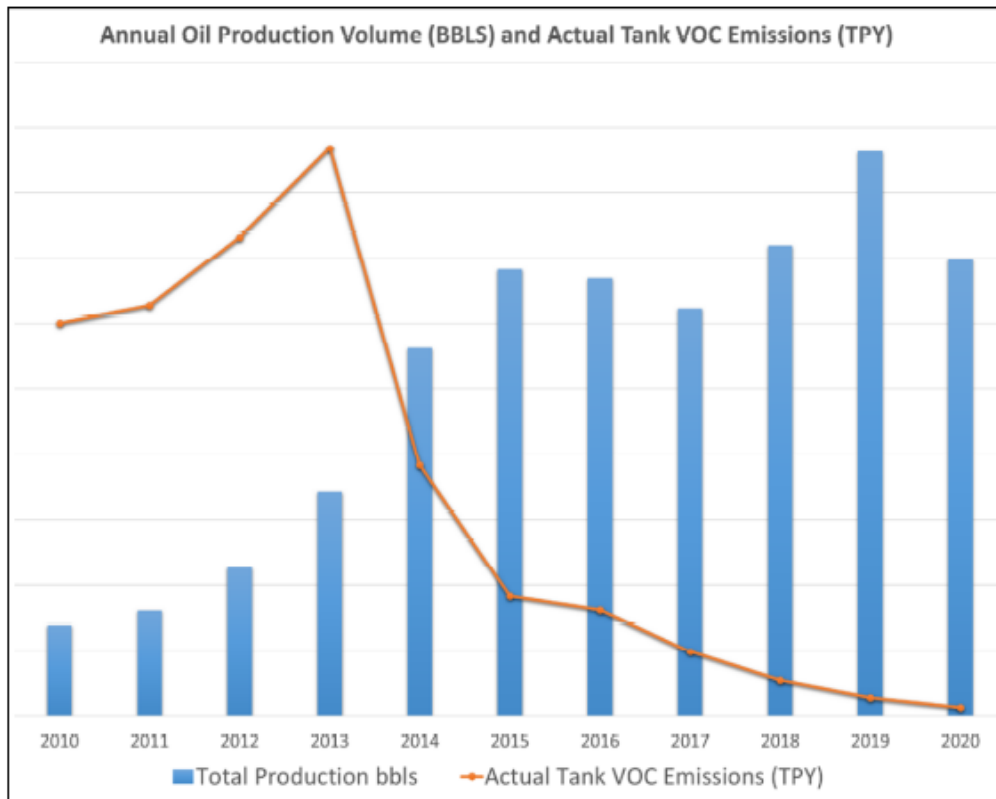
- Natural gas produces 30% less CO<sub>2</sub> compared to diesel.
- Natural gas reduces Nitrogen Oxide (smog/ozone pollution) by 75% compared to diesel.
- Particulate matter is reduced by 90%.
- Sulfur oxides are reduced by 50%.
- Natural gas generators do not rely on the utility company's fuel source, which is partially generated by coal power plants.

KMOG believes that the use of natural gas to power drilling rigs will enable KMOG to drill up to 24 wells in under a four-month period which will expedite the time spent on the Nelson Family OGDG Locations and provide the least disturbance to the surrounding residents. If electricity is required at this location the expected timeline for this development will be significantly delayed. KMOG cannot commit to utilizing an electric powered rig at these locations because upgrading the power lines to the needed wattage for an electric powered drilling rig is not feasible. KMOG does commit to the CDPHE's recommended alternative to utilize a natural gas-powered drilling rig on the Nelson pads.

**COGCC Response to COA #1:** Although COGCC Staff supports the concept of using line power for electric drilling rigs instead of traditional diesel-powered rigs, COGCC Staff does not support the recommended COA for this OGDG application. COGCC cannot compel an operator to participate in, nor compel a third party entity to provide, a particular technology, like electricity, that may not reasonably or adequately be available. It is unclear that KMOG could comply with such a condition (if applied) due to circumstances under the control of the power provider. COGCC also recognizes the improvements KMOG has made to their planned drilling rig over traditional drilling rigs in the basin by using a natural gas powered rig in combination with a Battery Energy Storage System.

**COA #2 - TANKLESS DESIGN:** Operator will not store produced water or hydrocarbon liquids in storage tanks on site (other than a maintenance tank possibly used for well unloading or other maintenance activities).

**KMOG Response to COA #2:** KMOG utilizes tankless design for its facilities in the DJ Basin and will do so on the Nelson Family OGDG Locations. The first version of the KMOG tankless design was commissioned in 2013 and has drastically reduced emissions in our day-to-day operations and reduced our overall footprint on location. From the graph below you can see that KMOG made significant emissions reductions in the DJ Basin while growing our production because of our tankless design.



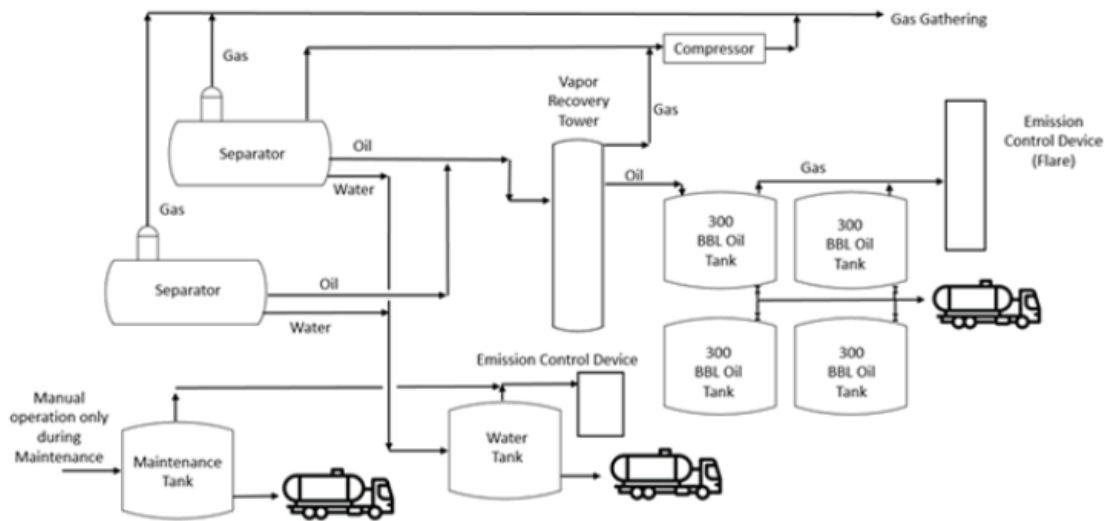
The term tankless has been used for the design to designate that we have no oil storage on site eliminating a significant amount of equipment and emissions. There are many benefits to this design including but not limited to:

- Oil and gas will be piped off location eliminating all truck traffic associated with moving hydrocarbons.
- At these locations piping oil will eliminate 72,315 truck trips.
- No oil storage on site which also eliminates the flares associated with oil tanks.
- No vapor recovery tower and low-profile tanks lowering the overall height of the facility.
- High pressure design eliminates all compressors from site lowering our noise during daily operations.

The diagram below is KMOG's original tanked design used for horizontal wells. The wells flowed from the wellhead, through an underground flowline to the separator. From the separator the gas is transported via pipeline to third party, the oil commingles with other separators and enters the vapor recovery tower, and the water commingles to the water tanks. From the vapor recovery tower, the oil flows to storage tanks and the gas is compressed and transported via pipeline to third party. The oil is stored in storage tanks and is transported using oil trucks. The gas vapors from the oil tanks are sent to an enclosed combustion device ("ECD").

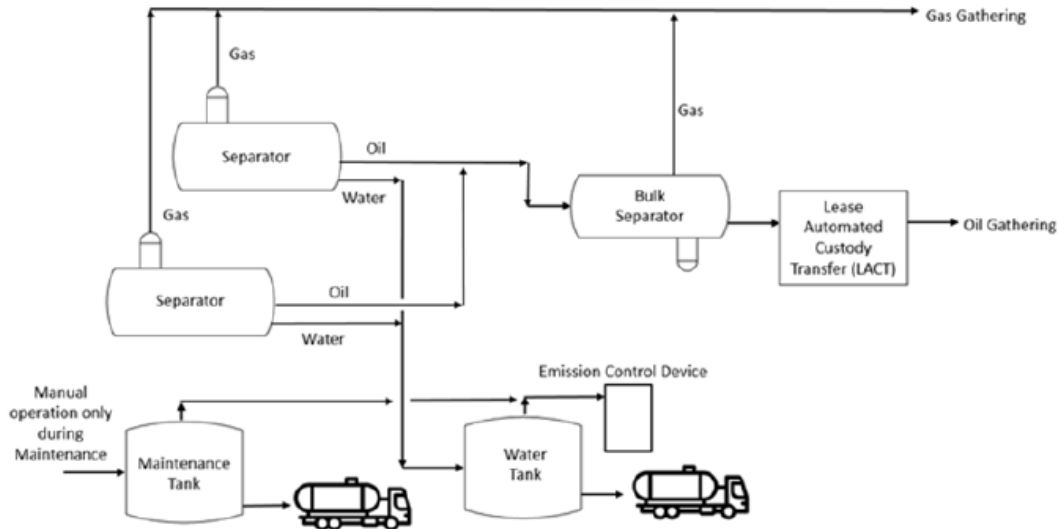


## Tanked Design



The diagram below shows KMOG's current high pressure tankless design. Hydrocarbons from the wells flow from the wellhead, through the underground flowline to the separator. From the separator the gas is transported via pipeline to third party gathering, the oil is commingled with oil from other separators and enters the bulk separator, and the water is sent to the water tanks. Since the bulk separator is maintained at a high pressure, compressors (vapor recovery units ("VRUs")) are not necessary as no oil is dropped to a low enough pressure to require them. All of the gas associated with the oil is sent down the pipeline. The oil from the bulk separator is transported via pipeline to a third party eliminating the need for oil trucks. When the water arrives at the water tanks there is very little entrained gas and the emissions from the water tanks are controlled using an ECD. ECDs are quieter than VRUs and since KMOG implemented their use noise related stakeholder complaints have significantly decreased. The maintenance tank(s) has piping attached to many pieces of equipment with closed valves and locks which are only removed during maintenance activities.

## Tankless Design



There will be two condensate tanks at the Paul Nelson Location and one condensate tank at the Charlene Nelson Location, that will only be used during maintenance operations. These tanks are not 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 events the tanks are utilized, it is standard KMOG practice to empty maintenance tanks within 24 hours to minimize emissions. The maintenance tanks are equipped with monitoring devices that report data such as pressure and level and can be monitored from KMOG's Integrated Operations Center (IOC) in Platteville. The maintenance tanks are attached to the overall tank vapor recovery piping that goes to the ECD. If any vapors are recovered, then they are sent to the ECD and not released to the atmosphere. Maintenance activities that send fluids to the maintenance tanks are recorded and emissions are quantified, reported, and permitted according to requirements in CDPHE Regulation 3 and Regulation 7. The maintenance tank is required to safely perform maintenance activities when deemed necessary. These are infrequent and not part of the normal operation of the facility. As described above, KMOG will have six (6) permanent water storage tanks on the Paul Nelson Location and three (3) permanent water storage tanks on the Charlene Nelson Location. The tanks will be controlled with an ECD. Tank emissions monitoring systems will be in place, which means that tank pressures will be continuously recorded, and the location will 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 our LDAR program. This team performs routine forward looking infrared ("FLIR") and audio visual olfactory ("AVO") inspections to make sure equipment is working per design and in a manner safe for the environment. 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.

KMOG recognizes that truck traffic associated with produced water hauling does impact road use during the initial peak production period. KMOG has considered the possibility of piping water from the Nelson Family OGDG Locations to the nearest disposal site. The ability to transport water via pipeline is contingent on acquiring right-of-way (ROW) or licenses from numerous parties and thus there are no guarantees of success. This would require 13.75 miles of right of way, which would create over 83 acres of disturbance. Forty-two of the acres disturbed would be agricultural land. Three miles (18 acres) of disturbance would likely be in a prospective gravel mining area. Approximately six miles (36 acres) of the anticipated ROW disturbance would be in high priority habitat (HPH). Three miles (18 acres) of the potential ROW would be in the floodplain. Securing ROW would require multiple contracts and impact over 20 RBUs. Creating a pipeline in this area would require boring beneath four railroad crossings, Highway 85, two rivers, multiple ditches, and numerous county roads. Union Pacific Railroad requires a railroad crossing permit, approval of which generally takes six to nine months. The Union Pacific Railroad permit includes an insurance application and a secondary contract with the railroads inspectors that are required to be onsite during construction.

If KMOG were able to acquire ROW, the impacts associated with creating a produced water pipeline would include hundreds of truck trips, noise and dust from heavy construction equipment, including two excavators, three bulldozers, one backhoe and one connection machine. Due to the numerous bores that would need to be drilled under railroad crossings and waterways there will be additional construction traffic associated with boring equipment and sand transportation. The construction would require between two to three months and would not be able to start until over one year into the future.

Water tanks would still be required on the Nelson Family OGDG Locations given that the third-party disposal site is not designed to handle high pressure water stream directly from our separator process stream. KMOG estimates piping produced water would remove 7,003 truck trips primarily during the first six months and rapidly declining over the following two years. After initial production, the rate of water production falls to nearly nothing for the remainder of the life of the facility. As a standard practice, KMOG has also implemented the pipelined Water on Demand system which will eliminate 75,300 truck trips at the Nelson Family OGDG Locations during completions activities. Through the use of the water on demand system and pipelines for oil, KMOG has reduced the number of truck trips associated with the movement of water and hydrocarbons by 95%.

Based on KMOG's progressive tankless design and inability to pipeline produced water, KMOG requests that this COA be rescinded.

**COGCC Response to COA #2:** Although COGCC Staff supports the concept of using “tankless” operations instead of traditional tank batteries on locations, COGCC Staff does not support the recommended COA for this OGDG application. COGCC Staff agrees that “tankless” operations significantly reduce the adverse impacts associated with storing and transporting produced liquids via trucks and should be pursued whenever feasible.

COGCC Staff also notes the confusion over the term “tankless”. CDPHE defines tankless in their recommendation as “*no permanent oil or produced water storage on location*”, while the KMOG definition of ‘tankless’ refers to only “*no oil storage on location*”. KMOG provided the following BMP to address this CDPHE recommendation:

- *“KMOG will utilize its tankless design (no oil storage tanks will be placed on-site) for its facilities at both locations.”*

**COA #3 - VAPOR RECOVERY UNITS:** Operator will use vapor recovery units (VRUs) to capture and route storage vessel gas to a pipeline.

**KMOG Response to COA #3:** VRUs are compressors that are not necessary on KMOG locations. KMOG has concerns with this recommended COA because, relative to its peers, not only does KMOG have the lowest emissions footprint in the DJ Basin, but its operations also currently meet 2030 intensity targets set in the CDPHE’s recently adopted Regulation 22. This significant threshold is a direct result of KMOG’s tankless system described above which avoids oil storage tanks. KMOG has specifically designed its facilities to remove VRUs because all the process vessels are designed to hold higher pressures so that hydrocarbons can be transported via pipelines. In an effort to balance emissions and other stakeholder concerns, KMOG has found that designing systems to operate without VRUs has several benefits which, include but are not limited to, (i) less emission risk with reduced maintenance activity, (ii) smaller surface footprints can be achieved due to less equipment, and (iii) noise reduction. The bulk of noise complaints received for KMOG’s tanked design were a result of VRUs. Since upgrading our facilities to remove the VRUs, the number of noise complaints has been drastically reduced.

Since all oil tanks with higher flash gas volumes have been removed from the design of KMOG’s facilities, the water tanks alone do not create the volume of gas that would require a VRU. The maintenance tanks and water tanks that will be used on the Nelson Family OGD Location use burner controls and advanced automation to meet COGCC regulations and KMOG maintains that ECDs can properly handle the small volumes of gas created by produced water within the applicable COGCC and CDPHE guidelines. Enclosed combustion testing and parametric monitoring requirements were just added to Regulation 7 during the December 2021 Air Quality Control Commission (AQCC) rulemaking. The Nelson Family OGD Location facilities will fall under the new facility requirements of Regulation 7 Part D II.B.2 and will require periodic testing and parametric monitoring upon start-up to ensure that the control device is achieving proper destruction efficiency of emissions. Finally, VRUs increase noise impacts, create emissions where they may be otherwise prevented and require extra space on an oil and gas location thereby reducing the surface disturbance. Based on the foregoing information and KMOG’s progressive tankless facilities, KMOG requests that the CDPHE rescind its recommendation for this COA.

**COGCC Response to COA #3:** Although COGCC Staff supports the concept of using VRUs to control tank emissions, COGCC Staff does not support the recommended COA for this OGD

application. COGCC Staff acknowledges that the produced water tanks will generate relatively small amounts of gas, but also acknowledge that the planned enclosed combustion devices for the tanks are a reasonable design to minimize emissions. It is not clear that adding or substituting VRUs into the planned system will further reduce impacts considering the negligible amounts of gas anticipated from the produced water tanks and the additional impacts associated with additional maintenance, noise, and surface impacts.

**COA #4 - PIPELINES:** Operator will shut in the facility to reduce the need for flaring if the pipeline is unavailable.

**KMOG Response to COA #4:** This is standard practice at all KMOG DJ Basin Oil and Gas Locations. In fact, KMOG's facilities are specifically designed so that flaring of associated gas is not possible. KMOG expressly commits that it will shut in the facility to reduce the need for flaring if the pipeline becomes unavailable, however, due to the fact that the COGCC Rule already prohibits flaring, KMOG does not believe that a COA or BMP is necessary in this instance. Finally, pursuant to Rule 903, it is KMOG's understanding that flaring is no longer allowed in the State of Colorado after January 15, 2022 except in certain situations allowed by Rule 903 or through the Rule 502 variance process.

**COGCC Response to COA #4:** Although COGCC Staff supports, and COGCC Rule 903 requires, a prohibition on flaring during production operations, Staff prefers to address this through KMOG's voluntary use of a BMP rather than a COA. KMOG provided the following BMP on each Form 2A that covered both flaring during production operations and the requirement to receive Director approval for any venting or flaring during completions operations:

- *"Closed Loop Completions System (Green Completions): Test separators and associated flow lines, sand traps and emission control systems shall be installed on-site to accommodate closed loop 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. Operator will minimize emissions throughout the completion operations and will comply with both rules 903.c.(3).B and 903.c.(3).C."*

Additionally, on the Form 2As KMOG indicated that they are committed to connecting to a gas gathering system by the commencement of production operations. KMOG has provided a BMP to address the recommendation, which eliminates the need for an additional COA.

**COA #5 - ENHANCED NOTIFICATIONS:** Operator will provide notice containing a detailed description of the process and anticipated timeline of each phase of development to nearby community members and at the very least, homes within 2,000 feet.

**KMOG Response to COA #5:** It is standard practice for KMOG to provide the requested enhanced notice containing a detailed description of the process and anticipated timeline of each phase of development to homes within 2,000 feet. This enhanced notice was sent to property owners and RBUs within 2,000 feet of the Nelson Family OGD locations on December 21, 2021. Additional forthcoming individual mailings and notices include pad construction notice, move-in rig-up notice, well completions notice. These will also be posted to

the KMOG stakeholder website (oxycoloradostakeholder.com) in addition to monthly air monitoring summaries. This information is provided as part of the Nelson Family OGDG Community Engagement Report. Please see the attached Nelson Family OGDG Community Engagement Report.

KMOG is a leader in communication and has a great strength in its stakeholder relations team that is a resource solely dedicated to addressing the concerns of nearby residents. The stakeholder relations team meets regularly with residents and proactively shares information about operations, including detailed descriptions of work, timelines, and health, safety, and environmental data. KMOG also has a stakeholder website (oxycoloradostakeholder.com) where critical information regarding the Nelson Family OGDG Locations is, and will continue to be, posted specifically for public use.

In addition to the required COGCC OGDG completeness notifications KMOG has contacted nearby stakeholders regarding the Nelson Family OGDG Locations multiple times including: an introduction postcard to Oxy/KMOG, individual phone calls to stakeholders, invitations for a community meeting to be held on February 23, 2022, a fifteen (15) page information packet sent in December 2021. The KMOG stakeholder team met with two stakeholders at their homes to listen to their feedback and answer their questions. Operational changes were made that resolved their concerns about visual mitigation, traffic, and dust. In February 2022, KMOG reached out to the remaining Residential Building Unit Owners within 2,000 feet of the Nelson Family OGDG Locations by going door-to-door for conversations. Unfortunately, there was only one stakeholder interested in attending the proposed neighborhood meeting of the 32 residents and landowners invited. The meeting was therefore cancelled in lieu of personalized conversations. The presentation that would have been shared at the community meeting is posted on the stakeholder website.

Overall, KMOG has provided enhanced notification to the nearby stakeholders through a proposed virtual neighborhood meeting, over 50 individual contacts with stakeholders in the area. To date, KMOG has sent four different mailings of more than 250 individual mailings have been sent including introductory postcards, invitations to meetings, and completeness notifications. Based on the foregoing information, KMOG will submit the following BMP in lieu of a COA "KMOG will provide enhanced notification to RBU owners within 2,000 feet that includes a description of the process and anticipated timeline of each phase."

Based on the foregoing information, KMOG requests that the CDPHE rescind its recommendation for this COA.

**COGCC Response to COA #5:** Although COGCC Staff supports the concept of enhanced notifications to homes within 2,000 feet of a proposed location, Staff prefers to address this through KMOG's voluntary use of a BMP rather than a COA. Based on the Community Engagement Report provided by KMOG that describes its community engagement, provides examples of the different community engagement materials and site specific outreach, and includes a log of all the interactions with the various stakeholders around the proposed

Locations, COGCC Staff concluded KMOG has satisfied the intent of the recommended COA. KMOG also provided the following BMP to address this recommendation:

- *“KMOG will continue to engage in enhanced notifications to Residential Building Units within 2,000 feet of the Paul Nelson and Charlene Nelson Locations.”*

KMOG has provided a BMP and additional community outreach information to address the recommendation, which eliminates the need for an additional COA.

**COA #6 - ODOR MITIGATION:** Operator will use zero VOC (group III, low/negligible odor) drilling mud.

**KMOG Response to COA #6:** KMOG has submitted the following as a BMP at these Locations: “KMOG will use Group III drilling fluids (zero VOC, negligible odor) during production drilling operations at the Nelson Family OGDG Locations. As a result of using a Group III drilling fluid, the use of an odor neutralizer product during production drilling operations should not be necessary.”

**COGCC Response to COA #6:** COGCC Staff supports the use of Group III oil-based drilling fluids and prefers to address this through KMOG’s voluntary use of a BMP rather than a COA. KMOG provided a BMP to address the recommendation, which eliminates the need for an additional COA.

**COA #7 - ODOR MITIGATION:** Operator will use a chiller to cool drilling fluid as it is piped through the recirculation system before routing to the suction tanks.

**KMOG Response to COA #7:** KMOG will submit the following BMP in response to the CDPHE consultation: “KMOG will use a mud chiller with the intent to lower the drilling fluid temperature as fluids are redeployed downhole. Mud chillers will be installed downstream of the shale shakers.” Given its use of group III drilling fluids, KMOG questions the need for and the efficacy of this mitigation measure. Chillers are intended to limit the release of odors by cooling the drilling mud, thereby limiting breakout of VOCs. Due to KMOG’s commitment to utilizing group III drilling fluids at the Nelson Family OGDG Locations, the use of a chiller to cool drilling fluids is not necessary as the drilling fluids will have no VOCs and negligible odor.

**COGCC Response to COA #7:** COGCC Staff supports the use of chillers to reduce odors from drilling fluids and prefers to address this through KMOG’s voluntary use of a BMP rather than a COA. KMOG has provided a BMP to address the recommendation, which eliminates the need for an additional COA.

**COA #8 - ODOR MITIGATION:** Operator will cover trucks transporting drill cuttings.

**KMOG Response to COA #8:** KMOG will agree to include this recommended COA as a BMP on the Nelson Family OGDG Locations Form 2As. “KMOG will cover trucks transporting

cuttings.” KMOG covers all of its trucks that contain cuttings but takes additional steps prior to transportation to further reduce potential odors and to eliminate other risks. All drill cuttings on location are run through centrifugal dryers on location prior to transport to the landfill. The centrifugal driers remove most of the residual drilling fluid from the cuttings. Additionally, as Group III drilling fluids will be used at these locations which is considered odorless. The remnant drilling fluid on cuttings during transport will therefore be odorless as well.

**COGCC Response to COA #8:** COGCC Staff supports the use of covered trucks to reduce odors from cuttings and potential flying debris and prefers to address this through KMOG’s voluntary use of a BMP rather than a COA. KMOG has provided a BMP to address the recommendation, which eliminates the need for an additional COA.

**COA #9 - OZONE MITIGATION MEASURES:** Operator will implement ozone mitigation measures as feasible on forecasted Ozone Action Days.

**KMOG Response to COA #9:** KMOG will agree to this COA so long as the language of “as feasible” remains in the recommendation. KMOG already voluntarily participates in Ozone Action Days and has done so for approximately five years. Rather than have this request placed on the permit as a COA, KMOG will submit the following BMP: “On Ozone Action days KMOG will implement the following mitigation measures as is feasible on forecasted Ozone Action Days: Operator will minimize vehicle and engine idling; Operator will reduce truck traffic and worker traffic; Operator will postpone the refueling of vehicles; Operator will postpone construction activities; Operator will reschedule non-essential operational activities such as pigging, well unloading and tank cleaning; Operator will postpone flowback if emissions cannot be adequately captured.”

On Ozone Action Days, a notification is sent to all KMOG operations personnel. The notification requests that all groups take the necessary actions to safely minimize emissions. A few examples of these actions are the delay of well unloading, delay of well work which results in gas venting, minimization of loadout activities and hauling, limiting driving, idling, and refueling and consolidating activities that cause emissions but cannot be delayed. Activities that cannot be delayed, such as draining sand traps at new locations, are performed in the early morning hours to minimize emissions during peak ozone forming hours. Fluid management programs are in place for well work activities which prevent hydrocarbons from flowing to the surface and reduce potential emissions.

**COGCC Response to COA #9:** COGCC supports mitigation measures on Ozone Action Days and prefers to address this through KMOG’s voluntary use of BMPs rather than a COA. KMOG has provided a BMP to address the recommendation, which eliminates the need for an additional COA.

**COA #10 - 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.



**KMOG Response to COA #10:** KMOG has submitted a Fluid Leak Detection plan that outlines the strong BMPs in place surrounding fueling and fluid transfers. All KMOG personnel performing any fueling procedures must complete “Eyes-On” fluid transfer training to be qualified to perform transfers on location. All fueling and fluid transfers require two crew members that are dedicated to the task from start to finish of the operation. Their sole focus is on the transfer. No fluid transfer will occur during crew change. Crew members conducting the fluid transfer will not leave the area until transfer operations are completed. Appropriate secondary containment will be utilized when equipment maintenance is conducted on location. Personnel must verify that the tank capacity is capable of handling estimated volumes prior to operations start. 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. Personnel will walk all lines and confirm valve alignment before starting the transfer and immediately after beginning the transfer to confirm there are no leaks.

KMOG will submit the following BMP in lieu of a COA: “KMOG will ensure that a fueling contractor who has completed the required “Eyes-On” training is present during the entire fueling process.”

**COGCC Response to COA #10:** COGCC Staff supports the use of a fueling contractor during the entire fueling process and prefers to address this through KMOG’s voluntary use of a BMP rather than a COA. KMOG has provided a BMP to address the recommendation, which eliminates the need for an additional COA.

**COA #11 - 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.

**KMOG Response to COA #11:** Throughout the life of the facility, inspections occur regularly and after every storm, the resulting findings are reported to the IOC immediately. It is KMOG’s standard practice to include all details regarding corrective actions in an internal management system. These are tracked from assignment through completion of the tasks, including scheduling. Records including any potential inability to repair the deficiency immediately would be included in the recording of the event.

KMOG will submit the following BMP in lieu of a COA: “KMOG will document any deficiencies in stormwater control measures, keep a record of said deficiencies. If it is infeasible to initiate repairs immediately the reason will be noted and timing for the scheduled repair will be included in internal documentation.”

**COGCC Response to COA #11:** Although COGCC Staff supports the idea of documenting why it is infeasible to initiate a repair immediately, or providing a schedule for repairing a control measure, Staff prefers to address this through KMOG's voluntary use of a BMP rather than a COA. KMOG has provided a BMP to address the recommendation, which eliminates the need for an additional COA.

**COA #12 - OPERATOR WILL NOT USE FRACTURING FLUIDS WHICH CONTAIN PFAS.**

**KMOG Response to COA #12:** KMOG does not use PFAS anywhere in its operations. KMOG recognizes the risks associated with PFAS and commits to not using PFAS on the Nelson Family OGD locations. KMOG will agree to include "Operator will not use fracturing fluids which contain PFAS." as a BMP.

**COGCC Response to COA #12:** COGCC Staff supports restricting or eliminating the use of PFAS and prefers to address this through KMOG's voluntary use of a BMP rather than a COA. KMOG has provided a BMP to address the recommendation, which eliminates the need for an additional COA.

**COA #13 - IF PFAS-CONTAINING FIREFIGHTING FOAM IS USED AT A LOCATION BY THE OPERATOR, THEN OPERATOR WILL PROPERLY CHARACTERIZE THE SITE TO DETERMINE THE LEVEL, NATURE AND EXTENT OF CONTAMINATION.**

**KMOG Response to COA #13:** In addition to not using PFAS anywhere in its operations, KMOG is proactively working with fire departments through the Colorado Preparedness and Response Network (CPRN) to discourage the use of PFAS containing firefighting foams. However, KMOG recognizes that some external agencies still have foams that contain PFAS. KMOG will agree to include the following as a BMP: "If PFAS-containing firefighting foam is used at a location, the operator will work with outside agencies to properly characterize the site to determine the level, nature and extent of contamination." KMOG will commit to working directly with the emergency responders that may be required to utilize any available foam for fire-fighting purposes on locations. KMOG will conduct the necessary characterization of the site to determine the level, nature and extent of contamination.

**COGCC Response to COA #13:** COGCC Staff supports working with fire departments to discourage the use of PFAS containing firefighting foams and prefers to address this through KMOG's voluntary use of a BMP rather than a COA. KMOG has provided a BMP to address the recommendation, which eliminates the need for an additional COA.

**COA #14 - IF PFAS-CONTAINING FIREFIGHTING FOAM IS USED AT A LOCATION BY THE OPERATOR, THEN 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.**

**KMOG Response to COA #14:** KMOG does not use PFAS anywhere in its operations. KMOG is proactively working with fire departments through the CPRN to discourage the use of PFAS containing firefighting foams. However, KMOG recognizes that some external agencies still have foams that contain PFAS. KMOG will agree to include the following as a BMP: “If PFAS-containing firefighting foam is used at a location, the 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.” KMOG will work directly with the emergency responders that may be required to utilize any available foam for firefighting purposes on locations. KMOG will work with the external agency to 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. KMOG will conduct the necessary and appropriate remediation and disposal activities to ensure that the clean-up of the PFAS occurs in an expedited manner and is reported to the COGCC and Weld County as appropriate.

**COGCC Response to COA #14:** COGCC Staff supports the operator committing to soil and water sampling to determine impacts if PFAS-containing firefighting foam is used and prefers to address this through KMOG’s voluntary use of a BMP rather than a COA. KMOG has provided a BMP to address the recommendation, which eliminates the need for an additional COA.

**COA #15 - IF PFAS-CONTAINING FIREFIGHTING FOAM IS USED AT A LOCATION BY THE OPERATOR, THEN OPERATOR WILL PROPERLY CAPTURE AND DISPOSE OF PFAS CONTAMINATED SOIL AND FIRE AND FLUSH WATER.**

**KMOG Response to COA #15:** KMOG is proactively working with fire departments through the CPRN to discourage the use of PFAS containing firefighting foams. However, KMOG recognizes that some external agencies still have foams that contain PFAS. KMOG will agree to include the following as a BMP: “If PFAS-containing firefighting foam is used at a location, the operator will work with the external agency to properly capture and dispose of PFAS-contaminated soil and fire and flush water.” KMOG will work directly with the emergency responders to conduct the necessary and appropriate remediation and disposal activities to ensure that the clean-up of the PFAS occurs in an expedited manner and is reported to the COGCC and Weld County as appropriate.

**COGCC Response to COA #15:** COGCC Staff supports the operator remediating PFAS-containing firefighting foam contaminated soil and water and prefers to address this through KMOG’s voluntary use of a BMP rather than a COA. KMOG has provided a BMP to address the recommendation, which eliminates the need for an additional COA.

**COGCC CONCLUSION**

In the Consultation Recommendation document provided by CDPHE for the proposed KMOG Paul Nelson and Charlene Nelson Locations, CDPHE indicated that, due to a heightened potential for adverse impacts, CDPHE recommends that COGCC include several COAs on the Form 2As for both locations to minimize impacts to air resources / public health and water

resources. COGCC appreciates and values the partnership and consultation provided by CDPHE for the proposed KMOG Nelson Family Oil and Gas Locations. Based on the analysis provided above, COGCC has addressed each recommendation in one of two ways: (1) by implementing those recommendations through KMOG-provided BMPs that are achievable and reflect reasonable, necessary reductions in potential impacts; or (2) recommending not to implement those COAs that are not feasible or that create unintended safety concerns. COGCC Staff's finding in its Director's Recommendation – that this OGD application complies with the Commission's Rules and should be approved by the Commission pursuant to Rule 604.b.(4) – is unchanged.

FORM  
2A

Rev  
01/21

State of Colorado  
Oil and Gas Conservation Commission

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



Document Number:

402770498

Date Received:

10/01/2021

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:

☒ 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
210900153		

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

- ☒ Plugging and Abandonment Bond Surety ID (Rule 706): 20010124 ☐ Gas Facility Surety ID (Rule 711): \_\_\_\_\_
- ☐ Waste Management Surety ID (Rule 704): \_\_\_\_\_

LOCATION IDENTIFICATION

Name: PAUL NELSON Number: 25-29HZ

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: NWSE Section: 29 Township: 5N Range: 67W Meridian: 6 Ground Elevation: 4786

Latitude: 40.368439 Longitude: -104.915654

GPS Quality Value: 1.9 Type of GPS Quality Value: PDOP Date of Measurement: 07/14/2021

## 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: 08/12/2021

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

Status/disposition date: 12/16/2021

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: Jason Maxey Contact Phone: 970-400-3635

Contact Email: jmaxey@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.

< No row provided >

## 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:

WOGLA was submitted for this location on August 12, 2021.  
Weld County Pre-Application meeting summary attached (Consultation Summary).  
Weld County Permit OGLA 1041WOGLA21-0014 approved on December 16, 2021.

## 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: 07/28/2021

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.

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> i. WPS < 2,000 feet from RBU/HOBU                                   | <input type="checkbox"/> vi.aa. WPS within a surface water supply area                                  |
| <input type="checkbox"/> ii. WPS < 2,000 feet from School/Child Care Center                             | <input type="checkbox"/> vi.bb. WPS < 2,640 feet from Type III or GUDI well                             |
| <input type="checkbox"/> iii. WPS < 1,500 feet from DOAA  | <input checked="" type="checkbox"/> vii. WPS within/immediately upgradient of wetland/riparian corridor |
| <input type="checkbox"/> iv. WPS < 2,000 feet from jurisdictional boundary and PLG objects/requests ALA | <input checked="" type="checkbox"/> viii. WPS within HPH and CPW did not waive                          |
| <input checked="" type="checkbox"/> v. WPS within a Floodplain  | <input type="checkbox"/> ix. Operator using Surface bond  |
|   | <input type="checkbox"/> 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
1	40.367642	-104.881727	x						x					AL1: Within 2,000' of 18 RBUs Upgradient from a mapped wetland dedicated to use as a trail no development allowed upgradient from fresh emergent wetlands
2	40.364921	-104.905993	x						x	x				AL2: Within 2,000' of 4 RBUS within HPH - Mule Deer Severe Winter Range Would require 2x the number of wells and increased pads and surface impacts upgradient from fresh emergent wetlands
3	40.374916	-104.893425	x						x					AL3: Within 2,000' of 5 RBUS within a center pivot Would require 2x the number of wells and increased pads and surface impacts upgradient from fresh emergent wetlands
4	40.357751	-104.920137	x						x					AL4: Within 312' of surface owners home who discourages development at this location. upgradient from fresh emergent wetlands
5	40.358696	-104.891762	x							x				AL6: Within 1/2 mile of an active Bald Eagle Nest 4 RBUs within 2000' Would require 2x the number of wells and increased pads and surface impacts
6	40.374761	-104.871349	x											AL7: 4 RBUs within 2000' - nearest 504' Under USR for an airstrip with Weld County Would require additional surface locations to develop the same amount of minerals

## SURFACE & MINERAL OWNERSHIP

Surface Owner Info:



Name: NELSON FAMILY LLCPhone: 970-397-9357Address: 7831 COUNTY ROAD 52Fax: NA

Address: \_\_\_\_\_

Email: earltreat@gmail.comCity: MILLIKEN State: CO Zip: 80543-9615Surface Owner at this Oil and Gas Location: ☒ Fee ☐ State ☐ Federal ☐ IndianCheck only one: ☐ 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: ☐ Fee ☐ State ☐ Federal ☐ IndianMinerals 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	<u>17</u>	Oil Tanks	<u>0</u>	Condensate Tanks	<u>2</u>	Water Tanks	<u>6</u>	Buried Produced Water Vaults	<u>0</u>
Drilling Pits	<u>0</u>	Production Pits	<u>0</u>	Special Purpose Pits	<u>0</u>	Multi-Well Pits	<u>0</u>	Modular Large Volume Tank	<u>0</u>
Pump Jacks	<u>17</u>	Separators	<u>14</u>	Injection Pumps	<u>0</u>	Heater-Treaters	<u>0</u>	Gas Compressors	<u>0</u>
Gas or Diesel Motors	<u>0</u>	Electric Motors	<u>0</u>	Electric Generators	<u>0</u>	Fuel Tanks	<u>0</u>	LACT Unit	<u>2</u>
Dehydrator Units	<u>0</u>	Vapor Recovery Unit	<u>0</u>	VOC Combustor	<u>2</u>	Flare	<u>0</u>	Enclosed Combustion Devices	<u>0</u>
Meter/Sales Building	<u>3</u>	Pigging Station	<u>0</u>			Vapor Recovery Towers	<u>0</u>		

**OTHER PERMANENT EQUIPMENT**

Permanent Equipment Type	Number
COMM TOWERS	<u>2</u>
E HOUSE	<u>2</u>
CHEMICAL TOTE	<u>3</u>
AIR COMPRESSORS	<u>3</u>

**OTHER TEMPORARY EQUIPMENT**

Temporary Equipment Type	Number
ENCLOSED COMBUSTION DEVICE	7
ENCLOSED COMBUSTION DEVICE (RIG)	1
WATER TANKS (RIG)	2
PROPANE TANK	1
PURGE FLARE	3
WATER TANKS	26
ELECTRIC GENERATORS	2

## 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.**

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. Flowlines will flow to the production facility location. During production, flow direction in the flowlines is from the wellhead to the production facility. The outside diameter of flowlines is typically 2"-3". Flowlines will be constructed from carbon steel pipe, buried, and will equal the distance between the well heads and the production facility.

## CULTURAL DISTANCE AND DIRECTION

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

				Rule 604.b Conditions Satisfied (check all that apply):			Details of Condition(s)	604.b. (4)
	Distance		Direction	604.b. (1)	604.b. (2)	604.b. (3)		
Building:	31 Feet		N					
Residential Building Unit (RBU):	938 Feet		E	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/>
High Occupancy Building Unit(HOBU)	5280 Feet		S	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
Designated Outside Activity Area:	5280 Feet		SW					
Public Road:	44 Feet		W					
Above Ground Utility:	89 Feet		W					
Railroad:	87 Feet		SW					
Property Line:	36 Feet		SW					
School Facility:	5280 Feet		S					
Child Care Center:	5280 Feet		S					
Disproportionately Impacted (DI) Community:	5280 Feet		NW					
RBU, HOBU, or School Facility within a DI Community.	5280 Feet		NW	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>

## 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	<u>0</u>	<u>1</u>	<u>7</u>
Residential Building Units	<u>0</u>	<u>1</u>	<u>7</u>
High Occupancy Building Units	<u>0</u>	<u>0</u>	<u>0</u>
School Properties	<u>0</u>	<u>0</u>	<u>0</u>
School Facilities	<u>0</u>	<u>0</u>	<u>0</u>
Designated Outside Activity Areas	<u>0</u>	<u>0</u>	<u>0</u>

## CONSTRUCTION

Size of disturbed area during construction in acres: 16.30

Size of location after interim reclamation in acres: 5.75

Estimated post-construction ground elevation: 4785

## 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

Beneficial reuse or land application plan submitted? No

Reuse Facility ID: \_\_\_\_\_ or Document Number: \_\_\_\_\_

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

## 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

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

AGRICULTURE

Describe any applicable Federal land use designation:

NA

## 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):

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: 31-Kim loam, 0-1 percent slopes

NRCS Map Unit Name: 54-Paoli loam, 0 to 1 percent slopes

NRCS Map Unit Name: 32—Kim loam, 1 to 3 percent slopes

## GROUNDWATER AND WATER WELL INFORMATION

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

water well: 187 Feet W

Spring or Seep: 5280 Feet N

Estimated depth to shallowest groundwater that can be encountered at this Oil and Gas Location: 6 Feet

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

Groundwater monitoring holes were drilled to a depth of 8' at various locations within and around the proposed oil and gas location. The shallowest depth groundwater was encountered was 6'

## SURFACE WATER AND WETLANDS

Provide the distance and direction to the nearest downgradient surface Waters of the State, as defined 23 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: 67 Feet W

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

Cottonwood-willow riparian forest along the Big Thompson River is dominated by plains cottonwood (*Populus deltoides*) with scattered willows (*Salix* sp.) on banks. The Big Thompson River is a perennial stream with a streambed width of approximately 25-35 feet.

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? Yes Floodplain Data Sources Reviewed (check all that apply):

☒ Federal (FEMA) ☐ State ☒ 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: 03/31/2021

**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
1202.c.(1).R - Cutthroat trout habitat and others	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?

NA

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

Direct impact habitat mitigation fee amount: \$ 38359.35

### Indirect Impacts:

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

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?

NA

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

Indirect impact habitat mitigation fee amount: \$ 19224.84

## 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.
2	MULE DEER & ELK	Wildlife - Avoidance	The operator agrees to reclaim mule deer and elk habitats with CPW-identified native shrubs, grasses, and forbs appropriate to the ecological site disturbed.
3	BALD EAGLE	Wildlife - Avoidance	The operator will preclude new oil and gas operations within 0.25 miles of any CPW-mapped active bald eagle nest site.
4	BALD EAGLE	Wildlife - Minimization	Prior to commencement of oil and gas operations, the operator agrees to survey suitable nesting habitat within 0.5 mile of the proposed activity for active bald eagle nests.
5	BALD EAGLE	Wildlife - Minimization	The operator and its contractors agree to restrict well site visitations to no more than once per day, and to portions of the day between 10:00 a.m. and 2:00 p.m. between November 15 to March 15 within 0.5 miles of a CPW-mapped bald eagle winter night roost.
6	AQUATIC SPECIES/AMPHIBIANS	Wildlife - Minimization	"The operator agrees to, when working in waters of the State of Colorado, disinfect heavy equipment, hand tools, boots and any other equipment that was previously used in a river, stream, lake, pond, or wetland prior to moving the equipment to another water body. The disinfection practice should follow this outline:
7	AQUATIC SPECIES/AMPHIBIANS	Wildlife - Minimization	The operator agrees to preclude the use of low water crossings.
8	AQUATIC SPECIES/AMPHIBIANS	Wildlife - Minimization	The operator agrees to avoid changes to water quality and quantity.
9	AQUATIC SPECIES/AMPHIBIANS	Wildlife - Minimization	The operator agrees to, when working in waters of the State of Colorado, drain all water and remove all visible mud, plants, and organisms from boats, trailers and equipment followed by a thorough scrubbing with water (140 degrees Fahrenheit); complete drying; and then disinfection using the Green Solutions High Dilution Disinfectant 256.
10	AQUATIC SPECIES/AMPHIBIANS	Wildlife - Minimization	Contain Flowback and Stimulation Fluids in Tanks that are placed on a Working Pad Surface in an area with downgradient perimeter berming
11	AQUATIC SPECIES/AMPHIBIANS	Wildlife - Minimization	Construct lined berms or other lined containment devices pursuant to Rule 603.o around any new crude oil, condensate, and produced water storage Tanks that are installed after January 15, 2021
12	AQUATIC SPECIES/AMPHIBIANS	Wildlife - Minimization	Inspect the Oil and Location on a daily basis, unless the approved Form 2A provides for different inspection frequency or alternative method of compliance. CPW has approved the use of our remote monitoring capabilities in lieu of daily inspections during the production phase. KMOG will inspect the location weekly during the production phase of the location.
13	AQUATIC SPECIES/AMPHIBIANS	Wildlife - Minimization	Maintain adequate Spill response equipment at the Oil and Gas Location during drilling and completion operations
14	AQUATIC SPECIES/AMPHIBIANS	Wildlife - Minimization	Not construct or utilize any Pits, except that Operators may continue to utilize existing Pits that were properly permitted, constructed, operated, and maintained in compliance prior to January 15, 2021

### 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
1	Air		
	Description	Pipelines: Operator will have adequate and committed pipeline take away capacity for all produced gas and oil	
	CDPHE Comment		
2	Air		
	Description	Operator will implement ambient air quality monitoring on site	
	CDPHE Comment		
3	Water		
	Description	Dust suppression: Operator will not use produced water or other process fluids for dust suppression	
	CDPHE Comment		
4	Water		
	Description	Stormwater inspections: Operator will conduct stormwater inspections immediately after storm event	
	CDPHE Comment		
5	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		
6	Air		
	Description	Operator will properly maintain vehicles and equipment	
	CDPHE Comment		
7	Air		
	Description	Operator will use lease automated custody transfer (LACT) system to reduce the need for truck loadout	
	CDPHE Comment		
8	Air		
	Description	Operator will use non-emitting pneumatic controllers	
	CDPHE Comment		

### CDPHE Proposed COAs OR BMPs

No BMP

## PLANS

Total Plans Uploaded: 17

- ☐ (1) Emergency Spill Response Program consistent with the requirements of Rules 411.a.(4).B, 411.b.(5).B, & 602.j
- ☒ (2) Noise Mitigation Plan consistent with the requirements of Rule 423.a
- ☒ (3) Light Mitigation Plan consistent with the requirements of Rule 424.a
- ☒ (4) Odor Mitigation Plan consistent with the requirements of Rule 426.a
- ☒ (5) Dust Mitigation Plan consistent with the requirements of Rule 427.a
- ☒ (6) Transportation Plan



- ☒ (7) Operations Safety Management Program consistent with the requirements of Rule 602.d
- ☒ (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
- ☒ (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
- ☒ (13) Fluid Leak Detection Plan
- ☒ (14) Topsoil Protection Plan consistent with the requirements of Rule 1002.c
- ☒ (15) Stormwater Management Plan consistent with the requirements of Rule 1002.f
- ☒ (16) Interim Reclamation Plan consistent with the requirements of Rule 1003
- ☒ (17) Wildlife Plan consistent with the requirements of Rule 1201
- ☒ (18) Water Plan
- ☒ (19) Cumulative Impacts Plan
- ☐ (20) Community Outreach Plan
- ☒ (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.

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

## OPERATOR COMMENTS AND SUBMITTAL

Comments

- Please direct correspondence regarding this location to Rachel Friedman rachel\_friedman@oxy.com or 720.929.6564
- A 1041 WOGLA will be submitted in association with this location
- Weld County Pre-Application meeting summary attached as "Consultation Summary".
- The Operator will use remote monitoring in lieu of daily inspections during the production phase of the location and commits to weekly in person inspections of the location
- The compensatory mitigation fee for Rule 1203.d is still being determined by CPW they have provided a range of \$14,418.63 to \$19,224.84
- The attached EAP will be submitted to the Front Range Fire Rescue. 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
- Temporary above ground polyethylene water pipelines (diameter 10" - 12" with a 60 BPM capacity) will deliver water to location operations from larger trunk lines for completions operations
- Flowlines will flow to the production facility location. During production, flow direction in the flow lines is from the wellhead to the production facility. The size of flowlines is typically 2". 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 occurs at the custody transfer meter located on the proposed production facility location. Oil custody transfer occurs at the LACT Unit located on the proposed production facility location. Two 500 barrel skid-mounted tanks will be temporarily placed onsite for use of the pre-spud rig only. One tank will store water and the other will store water-based mud. A temporary ECD may be utilized during drilling
- 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
- 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
- 26 temporary 500 BBL skid-mounted frac tanks will be utilized during flowback and initially for produced water. 4 temporary ECDs and temporary tanks will be on location for 9 - 12 months and will be removed as water production declines. A temporary generator may be placed on location if needed and would be in place until electric power is available. Temporary purge flares may be placed on location for up to 60 days. A temporary 500-gallon propane tank will be used on location to provide fuel gas during facility equipment startup
- Gas custody transfer occurs at the custody transfer meter on the proposed production facility location. Oil custody transfer occurs at the LACT Unit on the proposed production facility location
- Two temp 500 BBL tanks for pre-spud rig

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.

Signed: \_\_\_\_\_ Date: 10/01/2021 Email: djregulatory@oxy.com

Print Name: Rachel Friedman Title: Geologist Staff Sr.

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.

### **Condition of Approval**

#### **COA Type**

#### **Description**

0 COA	

### **Best Management Practices**

No BMP/COA Type	Description
1 Planning	<ul style="list-style-type: none"> <li>• Operator will utilize existing roads from CR 17 to CR 52 to CR 15.5 for the Paul Nelson Pad; KMOG will create a short road off of CR 15.5 to access the location for drilling, completions, and production operations, including maintenance equipment. The road will be upgraded as needed and maintained to accommodate for emergency vehicle access.</li> <li>• KMOG held Surface Impact Planning (SIP) meetings for this location. These meetings are attended by KMOG internal teams. This is a multi-disciplinary team including construction, operations, facilities, EHS, stakeholder relations, regulatory, surface land and mitigation. The team reviews potential impacts to the surrounding residents, identify and plan for necessary mitigations, and identify BMPs that should be included in the pad development moving forward. The team reviews noise, odor, lights, traffic, haul routes, rig orientation and visual mitigation and any input we have received from surrounding communities either from response line calls or community meetings, relative to our operations. The purpose of the meeting is to proactively identify potential concerns, exhaust possible options and provide best in class solutions in order to have compatible operations.</li> <li>• KMOG will properly maintain vehicles and equipment.</li> </ul>
2 Planning	<p>Floodplain and Location Protection:</p> <ul style="list-style-type: none"> <li>• KMOG shall ensure that the site remains in compliance with FEMA, Colorado Water Conservation Board, and Weld County floodplain regulations (Chapter 23, Article XI) at all times.</li> <li>• All oil and gas production facilities including tank batteries shall be anchored to resist flotation, collapse or lateral movement. Oil and gas production facilities shall be elevated, flood proofed, or flood vented as appropriate. Typical anchoring systems include, but are not limited to, cables over the tanks that are tied to an anchor rod, bolting to a concrete pad, and/or pouring concrete into a tank to provide enough weight to prevent flotation.</li> <li>• If fill material is to be used in the floodplain, a registered Colorado Professional Engineer shall certify that the fill material is designed to withstand the erosional forces associated with the base flood.</li> <li>• Outside storage of floatable materials associated with non-agricultural uses shall not be allowed. Materials that are not floatable can be stored outside provided that a floodplain development permit is obtained.</li> <li>• KMOG shall ensure that all proposed or existing structures will or do meet the minimum setback and offset requirements for the zone district in which the property is located.</li> <li>• The well pad and associated production facilities shall be oriented parallel to flood flows within the floodplain to minimize the obstruction of the water flows.</li> <li>• Fencing around the well pad shall be of an open rail design to prevent the accumulation of debris during a flood event. The fence must allow flood water to rise and recede without being impeded.</li> <li>• Any future placement of fill within the FEMA defined 100-year floodplain shall obtain a Flood Hazard Development Permit prior to the placement of fill.</li> <li>• Any development on this parcel within the FEMA defined floodplain shall not cause a rise in the Base Flood Elevation (BFE) on adjacent or upstream properties or structures.</li> <li>• Photographic evidence of the tank anchoring shall be provided to the Weld County Department of Planning Services.</li> <li>• If there are pipes entering and/or exiting the meter shed or separator additional anchoring may not be required if the equipment is located in the flood fringe. If the equipment is located in a floodway, it will need to be anchored.</li> <li>• The VOC burner is required to be bolted to the pad or anchored in another manner.</li> <li>• Storage structures and other buildings at a well pad are required to be flood proofed.</li> <li>• All electrical equipment is required to be elevated a minimum of 1 foot above the BFE or 4 feet above the ground if the BFE is undetermined. The BFE, if determined, shall be identified on site by a clear visible marking and shall be available at the time of electrical inspection or an elevation certificate will be required.</li> <li>• A Building Permit for oil and gas equipment and electrical shall be submitted to the Weld County Building Inspection Department prior to setting equipment.</li> </ul>

3	Community Outreach and Notification	<ul style="list-style-type: none"> <li>• KMOG sent notice to surface owners within 1,000 feet of the surface locations that KMOG has submitted a 1041-WOGLA permit for both locations.</li> <li>• KMOG has and will continue to offer to meet with individuals and groups that have additional questions about the projects.</li> <li>• KMOG will continue to engage with all owners and tenants within 2,000 feet of the WPS prior to local and state public hearings.</li> <li>• KMOG will post all notices and project updates on the following website: <a href="http://www.oxycoloradostakeholder.com">www.oxycoloradostakeholder.com</a></li> <li>• Continue to engage with stakeholders to provide development updates and to answer questions or discuss concerns</li> <li>• In addition to required notices, KMOG frequently sends courtesy notices to owners and tenants to ensure they have the most up to date information about our operations. Throughout the lifecycle of the wells our Stakeholder Relations team is available to assist the community and can be reached at 866.248.9577 or <a href="mailto:ColoradoStakeholder@oxy.com">ColoradoStakeholder@oxy.com</a> Monday through Friday. Our 24- hour Integrated Operations Center can also be reached at 970.515.1500.</li> </ul>	
4	Traffic control	<ul style="list-style-type: none"> <li>• KMOG currently plans to use the water-on-demand system on this location which is a network of over 180 miles of underground pipelines that stretches the length of the 20-mile by 30-mile field to source and transport water to completions crews. This system eliminates more than 2,000 truck trips per day, also reducing associated concerns of traffic, noise, emissions and dust.</li> <li>• The operator will obtain access permits from Weld County.</li> <li>• At the Paul Nelson 25-29HZ Location the operator will implement a traffic control plan prior to the commencement of operations.</li> <li>• All new well sites are remotely monitored 24 hours a day, seven day a week by representatives in KMOG's Integrated Operations Center (IOC). This monitoring also helps reduce traffic to well sites. From the IOC, KMOG personnel can turn wells and equipment on and off, measure tank levels, verify pressures and temperatures. This remote monitoring reduces daily traffic to the location.</li> </ul>	
5	General Housekeeping	<ul style="list-style-type: none"> <li>• A commercial size trash bin for removing debris will be located on site. This bin will be for use by all parties affiliated with the operations. Upon completion of operations, the commercial trash bin will be removed from the location and disposed of in an appropriate manner.</li> <li>• 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.</li> <li>• All specific wastes will have a detailed Safety Data Sheet available which includes information such as the properties of the wastes; the physical, health, and environmental health hazards; protective measures; and safety precautions for handling, storing, and transporting the chemical.</li> <li>• The proper personal protective equipment will always be worn when handling waste. Employees will refer to the Safety Data Sheet for additional information.</li> <li>• Good housekeeping measures will be implemented in the operating area and to ensure safety and environmental well-being.</li> <li>• Wastes will be segregated and stored according to its waste type.</li> <li>• When feasible, wastes will be recycled, re-used, or treated onsite. As a best management practice fluids are generally re-used from location to location if possible. No onsite treatment or recycling is planned onsite for the Paul Nelson 25-29HZ Well Pad and Facility. In the event, that onsite treatment or recycling is feasible, a written management plan will be submitted to the Director for approval on a Form 4.</li> </ul>	

6	Wildlife	<ul style="list-style-type: none"> <li>• Pad construction, drilling, and completion operations will be limited to the seven months between May 1 and November 30 of each year.</li> <li>• Kerr-McGee will inform and educate all employees and contractors on wildlife conservation practices, including no harassment or feeding of wildlife.</li> <li>• Consolidate and centralize fluid collection and distribution facilities to minimize impact to wildlife.</li> <li>• Well telemetry equipment will be installed to minimize site visitation through remote monitoring of production operations.</li> <li>• Use wildlife-appropriate fencing (3- or 4-strand with a top strand maximum height of approximately 42 inches, and the lower smooth strand without barbs at a height of approximately 18 inches) where acceptable to the surface owner.</li> <li>• Kerr-McGee will quickly excavate, install and reclaim linear pipeline features that may impact mule deer movement and migration.</li> </ul>	
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7	Storm Water/Erosion Control	<ul style="list-style-type: none"> <li>• Structural control measures are established to reduce erosion and site degradation, and to minimize or mitigate off-site sediment transport in a manner effective for development and operation of an oil and gas location.</li> <li>• Measures for stormwater, erosion and sediment control will be accomplished through a combination of construction techniques, structural and non-structural controls, vegetation and re- vegetation, administrative controls, and good housekeeping practices.</li> <li>• A vehicle tracking control (VTC) system to mitigate off-site sediment migration from vehicle traffic onto WCR 15.5 will be installed at the primary access for Paul Nelson 25 -29HZ prior to commencement of surface disturbing activities and remain in place until interim reclamation activities are complete.</li> <li>• 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.</li> <li>• Spillway and/or outlet will be installed concurrently with the facility diversion ditch and berm, and prior to commencement of surface disturbing activities.</li> <li>• A temporary spillway/outlet will be installed in the western &amp; southwestern segments of the facility ditch and berm for Paul Nelson 25-29HZ.</li> <li>• All spillways and outlets will remain in-place until interim reclamation activities are complete.</li> <li>• A diversion ditch and berm will be implemented to divert stormwater run-on &amp; run-off throughout Paul Nelson 25-29HZ to a designated outlet structure(s) prior surface disturbing activities and will surround the entirety of the location to create continuous perimeter control.</li> <li>• A diversion ditch and berm will serve as a continuous perimeter control for the location that will remain in-place until interim reclamation activities are complete.</li> <li>• Culverts will be installed at the Weld County Road 15 1/2 access road crossing for Paul Nelson 25-29HZ. Culverts will be evaluated at the time of construction and installed as needed.</li> <li>• Seed and mulch are utilized in disturbed areas to establish stabilization through vegetative cover.</li> <li>• 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.</li> <li>• Seed and mulch will be installed on all disturbed areas no longer utilized for construction, and on all topsoil stockpiles which will remain on Paul Nelson 25-29HZ for use during interim and final reclamation. Anticipated topsoil stockpiles will be situated along the southern and eastern perimeters of the well pad.</li> <li>• Seed and mulch will be disturbed and re-applied during topsoil application and final reclamation practices.</li> <li>• 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.</li> <li>• After construction is completed, inspections shall be conducted every 30 days and continue until all reclaimed areas have achieved a cover of 70% the pre-construction reference vegetation (final stabilization).</li> <li>• Findings, inspection records and site maps are documented electronically and available within 24 hours of any inspection. All inspection records are stored for a minimum of three years after the location has achieved final stabilization.</li> <li>• KMOG will document any deficiencies in control measures, keep a record of said deficiencies. If, in the case it is infeasible to initiate repairs immediately the reason will be noted and timing for the scheduled repair will be included in internal documentation.</li> </ul>	
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8	Material Handling and Spill Prevention	<p>Water Resource Protection:</p> <ul style="list-style-type: none"> <li>• During operations, all fluid containing equipment is inspected daily.</li> <li>• KMOG protects water resources by carefully choosing the location and orientation of our pad, utilizing drainage control measures, and proper grading techniques.</li> <li>• KMOG segregates topsoil in order to protect soil resources.</li> <li>• Enhanced soil compaction minimizes absorption and downward migration of fluids in the event of an incidental spill.</li> <li>• Liners are installed under the production facility equipment during the production phase.</li> <li>• Both prior to, and after drilling and completion operations, KMOG contracts with a third-party professional to perform water sampling from water wells near the location to establish existing conditions, and the post-development samples verify our operations are safe.</li> <li>• To prevent fluid leaks, temporary produced water storage tanks are designed, constructed, and maintained in accordance with the following portions of the National Fire Protection Association (NFPA) Code 30 (2008 version): <ul style="list-style-type: none"> <li>o Tanks are built to engineering standards using noncombustible materials, with relief device sizing based on API 2000 standards.</li> <li>o Tanks are inspected and maintained while in use.</li> <li>o The only pipes within the containment are related to the temporary tanks (i.e. no external piping is co-located within the containment), and firefighting equipment is, likewise, not stored within the containment area.</li> </ul> </li> <li>• The temporary produced water storage tanks are staged on a geosynthetic liner and surrounded by a steel berm.</li> <li>• Earthen berms enclose an area sufficient to provide secondary containment for 150% of the volume of the largest single tank and are sufficiently impervious to contain spilled or released material.</li> <li>• Berms and the liner are inspected at the same time as stormwater inspections. During non-active, but while under construction, site inspections will occur every 14 days. During completions operations, all fluid containing equipment is inspected daily. When the location is on production, site inspections will occur every 28 days.</li> <li>• Automation technology will be utilized at this facility to monitor fluid levels on 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.</li> <li>• KMOG will use Group III drilling fluids (zero VOC, negligible odor) during production drilling operations at the Nelson Family OGDG Locations. As a result of using a Group III drilling fluid, the use of an odor neutralizer product during production drilling operations should not be necessary.</li> </ul>	
9	Material Handling and Spill Prevention	<p>Fluid Leak Detection:</p> <ul style="list-style-type: none"> <li>• KMOG will ensure that a fueling contractor who has completed the required "Eyes-On" training is present during the entire fueling process.</li> <li>• Two drilling and/or completions crew members required and dedicated for all fluid transfers (no exceptions) from start to finish of the operation. Their sole focus is on the transfer. No fluid transfer will occur during crew change. Crew members conducting the fluid transfer will not leave the area until transfer operations completed.</li> <li>• Tanks (along with auxiliary equipment installed in tanks) will be inspected prior to use and replaced/repared if damaged.</li> <li>• During rig up, hoses and lines will be properly assembled, all bolts properly made up and gaskets installed (when applicable).</li> <li>• Appropriate secondary containment will be utilized when equipment maintenance is conducted on location.</li> <li>• Contractors will maintain an updated copy of their SPCC plan on location and its personnel will be trained accordingly.</li> <li>• Tanks will be labeled (signs, magnets, etc.) indicating the contents of the tank.</li> <li>• Verify tank capacity is capable of handling estimated volumes prior to operations start.</li> <li>• Tanks will have hatches, valves and bull plugs secured prior to transfers.</li> <li>• Shut down transfer pump and close supply valve when transfer or circulation is completed. Ensure fluids cannot enter holding tank through gravity feedback.</li> <li>• 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.</li> <li>• During operations, all fluid containing equipment is inspected daily.</li> <li>• Walk all lines and confirm valve alignment before starting the transfer.</li> </ul>	



		<ul style="list-style-type: none"> <li>• Walk the lines as soon as the transfer starts to confirm no leaks.</li> <li>• All personnel on location on behalf of KMOG are trained in Auditory, Visual, Olfactory monitoring (AVO) techniques. All personnel are empowered with 'Stop Work Authority' and to report any leaks immediately.</li> <li>• During completions operations, 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; all piping is pressure tested and inspected for leaks prior to flowback; 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 operations.</li> <li>• During production operations, automation technology will be utilized at this facility, which 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 KMOG's Integrated Operations Center (IOC), which is manned 24 hours per day, 7 days per week.</li> <li>• All storage tanks used for active drilling operations (in lieu of pits) 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 are used on tanks utilized for the surface rig.</li> <li>• KMOG will utilize its tankless design for its facilities at the Paul Nelson and Charlene Nelson locations; the term tankless has been used for the design to designate that no oil storage will occur on-site.</li> <li>• Temporary produced water storage tanks will be designed, constructed, and maintained in accordance with the following portions of the National Fire Protection Association (NFPA) Code 30 (2008 version): <ul style="list-style-type: none"> <li>o Tanks are built to engineering standards using noncombustible materials, with relief device sizing based on API 2000 standards.</li> <li>o Tanks are inspected and maintained while in use.</li> <li>o The only pipes within the containment are related to the temporary tanks (i.e. no external piping is co-located within the containment), and firefighting equipment is, likewise, not stored within the containment area.</li> </ul> </li> <li>• 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.</li> <li>• During completions: Monitor pressure responses and containment to identify potential leaks. Lines will be walked continuously throughout operations (between stages) to identify potential leaks. 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. Hourly walk-throughs and pressure measurements recorded during flowback operations for leak detection.</li> </ul>	
10	Material Handling and Spill Prevention	<p>PFAS</p> <ul style="list-style-type: none"> <li>• Operator will not use fracturing fluids which contain PFAS.</li> <li>• If PFAS-containing firefighting foam is used at a location, the operator will work with outside agencies to properly characterize the site to determine the level, nature and extent of contamination.</li> <li>• If PFAS-containing firefighting foam is used at a location, the 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.</li> <li>• If PFAS-containing firefighting foam is used at a location, the operator will work with the external agency to properly capture and dispose of PFAS-contaminated soil and fire and flush water.</li> </ul>	

11	Dust control	<ul style="list-style-type: none"> <li>• KMOG will proactively deploy fresh water to suppress dust along access road to well pad/ facility during all phases of pre-production operations.</li> <li>• Speed limits will be reduced to 10 mph on access road and 5 mph once vehicles reach well pad/ facility.</li> <li>• Access roads and Vehicle Tracking Control will receive maintenance as needed throughout operations.</li> <li>• In the event of high winds that generate dust that cannot be mitigated with an application of water, KMOG will shut down construction operations.</li> <li>• KMOG will coordinate with Weld County to apply magnesium chloride on WCR 15.5 between WCR 54 and WCR 52 (1 mile) and on WCR 52 between WCR 15.5 and WCR 17 (0.5 miles).</li> </ul>
12	Construction	<ul style="list-style-type: none"> <li>• The completed well pad locations will be surrounded with a fence and gate with adequate lock to restrict access to authorized personnel only. Kerr-McGee personnel will monitor the well sites upon completion of the wells. Authorized representatives and/or Kerr-McGee personnel shall be on-site during drilling and completion operations.</li> <li>• Operator will only conduct day light operations during construction and there will be no nighttime operations that require lighting.</li> <li>• Guy line anchors will not be used. Base Beams will be used to stabilize the rig and removed after drilling.</li> <li>• KMOG will utilize its tankless design (no oil storage tanks will be placed on-site) for its facilities at both locations.</li> </ul>
13	Noise mitigation	<ul style="list-style-type: none"> <li>• The operator has conducted an ambient noise survey to document noise levels around the site.</li> <li>• Paul Nelson: The operator will install Perimeter mitigation includes 32-foot-high sound wall with minimum STC-25 rating installed on the north, south, and east sides of the pad during drilling and completions.</li> <li>• A quiet completions fleet will be utilized during operations.</li> <li>• Any operations involving the use of a drilling rig, workover rig, or fracturing and any equipment used in the drilling, completion or production of a well are subject to and will comply with the noise regulations set forth by COGCC Rule 423.</li> </ul>

14	Emissions mitigation	<ul style="list-style-type: none"> <li>• During drilling: KMOG will use natural gas engines instead of tier II diesel generators.</li> <li>• During Completions: KMOG uses a green completions fleet and a closed loop system.</li> <li>• During flowback: Fluids will flow through separation equipment where the gas will be collected through a gas gathering line instead of vented or burned.</li> <li>• During Production: KMOG uses production facilities that have been designed to eliminate most emission sources.</li> <li>• Oil will be gathered and sent via pipeline to a stabilization facility, rather than stored on location where it could cause emissions. This gathering system also reduces the number of vehicles visiting the location.</li> <li>• KMOG uses air actuated pneumatic devices rather than natural gas actuated devices.</li> <li>• There will be no flaring of associated sales gas.</li> <li>• There will be no compressor engines on location.</li> <li>• Produced water can contain entrained gas, KMOG equips water storage tanks with combustion devices with a 98% destruction efficiency. If the pilot for the combustor goes out the location will be remotely shut in.</li> <li>• 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.</li> <li>• Test separators and associated flow lines, sand traps and emission control systems shall be installed on-site to accommodate green 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.</li> <li>• Produced water can contain entrained gas, KMOG equips water storage tanks with combustion devices with a 98% destruction efficiency. If the pilot for the combustor goes out the location will be remotely shut in.</li> <li>• Air compressors will be utilized to operate instruments and control valves, thereby eliminating any venting of natural gas and greenhouse gases</li> <li>• 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.</li> <li>• On Ozone Action days KMOG will implement the following mitigation measures as is feasible on forecasted Ozone Action Days: Operator will minimize vehicle and engine idling; Operator will reduce truck traffic and worker traffic; Operator will postpone the refueling of vehicles; Operator will postpone construction activities; Operator will reschedule non-essential operational activities such as pigging, well unloading and tank cleaning; Operator will postpone flowback if emissions cannot be adequately captured.</li> <li>• Operator will use lease automated custody transfer (LACT) system to reduce the need for truck loadout.</li> </ul>	
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15	Odor mitigation	<ul style="list-style-type: none"> <li>• KMOG will use Group III drilling fluids (zero VOC, negligible odor) during production drilling operations at the Nelson Family OGDG Locations. As a result of using a Group III drilling fluid, the use of an odor neutralizer product during production drilling operations should not be necessary.</li> <li>• KMOG will use a mud chiller with the intent to lower the drilling fluid temperature as fluids are redeployed downhole. Mud chillers will be installed downstream of the shale shakers.</li> <li>• All cuttings on location will be dried using centrifugal dryers to ensure only trace amounts of drilling fluid remain on the dry cuttings. .</li> <li>• KMOG will cover trucks transporting cuttings.</li> <li>• Drill pipe and any other tubular pulled out of the hole are wiped down before being racked in the derrick or laid down on location.</li> <li>• Base oil used to build new drilling fluid is transferred through a line outlet run to the bottom of the mix tank to minimize agitation (splashing) and reduce potential to create odor.</li> <li>• During flowback and well completions, utilize closed-loop green completion techniques to the maximum extent practicable to minimize emissions and the flaring of natural gas.</li> <li>• Cuttings storage time on location will be minimized prior to transport to local landfills.</li> <li>• KMOG utilizes a hydraulic fracturing fleet has Tier IV diesel engines which reduces emission relative to Tier II or Tier II Dual Fuel. KMOG also utilizes Diesel Exhaust Fluid additives with engines.</li> <li>• Produced oil, gas, and water are sent directly to the permanent facility during flowback phase. This eliminates on pad storage and associated water hauling. Therefore, eliminating odor sources.</li> <li>• KMOG uses pipelines to transport hydrocarbons (oil &amp; gas) from the production facility eliminating odors that could occur during truck loading.</li> <li>• Production facilities are inspected regularly by KMOG to make sure the equipment is working properly and necessary maintenance is performed, to reduce potential odors. KMOG incorporates Audio, Visual, Olfactory (AVO) observations at production facility inspections.</li> <li>• 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).</li> <li>• KMOG remotely monitors production facilities, this reduces traffic onto production facilities which may create odors from truck traffic.</li> </ul>	
16	Drilling/Completion Operations	<ul style="list-style-type: none"> <li>• To the extent possible, LED fixtures are used to reduce skyglow. This is based on the calculated results of the relative impact versus traditional lighting methods using DOE Skyglow comparison tool PNNL-SA-138348. (Pre-Production and Production Phase)</li> <li>• All lights have been positioned 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. (Pre-Production and Production Phase)</li> <li>• A closed loop system will be implemented during drilling.</li> <li>• KMOG will use Group III drilling fluids (zero VOC, negligible odor) during production drilling operations at the Nelson Family OGDG Locations. As a result of using a Group III drilling fluid, the use of an odor neutralizer product during production drilling operations should not be necessary.</li> <li>• KMOG will use pipelines to transport water for hydraulic fracturing to location.</li> </ul>	

17	Interim Reclamation	<p>Topsoil Protection</p> <ul style="list-style-type: none"> <li>• During Construction Phase: 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.</li> <li>• During Construction Phase: Track packing all topsoil stockpiles will occur to prevent erosion from stormwater and wind, as well as provide temporary stabilization.</li> <li>• During Construction Phase: Seeding and crimped straw mulch will be applied to prevent erosion and soil loss from stormwater and wind.</li> <li>• During Construction Phase: Vegetation establishment through seeding efforts will promote soil health and maintain carbon exchange.</li> <li>• During Construction Phase: Weed control will occur seasonally and as needed to hinder the spread of weeds throughout the topsoil stockpile(s) and help native grass establishment.</li> <li>• During Drilling Phase: 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.</li> <li>• During Drilling Phase: Track packing all topsoil stockpiles will occur to prevent erosion from stormwater and wind, as well as provide temporary stabilization.</li> <li>• During Drilling Phase: Seeding and crimped straw mulch will be applied to prevent erosion and soil loss from stormwater and wind.</li> <li>• During Drilling Phase: Vegetation establishment through seeding efforts will promote soil health and maintain carbon exchange.</li> <li>• During Drilling Phase: Weed control will occur seasonally and as needed to hinder the spread of weeds throughout the topsoil stockpile(s) and help native grass establishment.</li> <li>• During Production Phase: Vegetation establishment through seeding efforts will promote soil health and maintain carbon exchange.</li> <li>• During Production Phase: Weed control will occur seasonally and as needed to hinder the spread of weeds throughout the topsoil stockpile(s) and help native grass establishment.</li> </ul>
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18	Interim Reclamation	<ul style="list-style-type: none"> <li>• A diversion ditch and berm surrounding the entirety of the location will be installed prior surface disturbing activities to divert stormwater run-on &amp; run-off throughout the location to designated outlet structure(s). This will create continuous permitter control and remain in place until interim reclamation activities are complete.</li> <li>• As needed, the operator will install a temporary spillway and/or outlet, 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(s) and/or outlet(s) will be installed concurrently with the facility diversion ditch and berm prior to commencement of surface disturbing activities and remain in-place until interim reclamation activities are complete.</li> <li>• As needed, the operator will install properly sized culverts to move water under roads or crossings or to direct flow to a designated endpoint(s) that will be reinforced with inlet and outlet protection to mitigate sediment transport and surface erosion. Any installed culverts will remain in place throughout the productive life of the facility and removed during final reclamation.</li> <li>• As needed, the operator will install Inlet / outlet protection to filter runoff and remove sediment prior to commencement of surface disturbing activities and will remain in place throughout the productive life of the facility and removed during final reclamation.</li> <li>• Once surface disturbing activities are complete, the operator will use seeding and mulch to establish stabilization of disturbed areas through vegetative cover. 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 &amp; mulch will be installed on all disturbed areas no longer utilized for construction, and on all topsoil stockpiles which will remain on location for use during interim and final reclamation. Seed and mulch will be disturbed and re-applied during topsoil application and final reclamation practices.</li> <li>• Pre-existing vegetation cover will only be removed where necessary for the operation of construction and development.</li> <li>• Trees will only be cut or trimmed to facilitate clearing, grading and safe installation of the location.</li> <li>• Vegetative buffers will be preserved to the greatest extent practicable for construction and development.</li> <li>• Housekeeping practices including routine inspections, regular cleaning, site and equipment organization and maintenance, and appropriate chemical storage will be implemented to prevent sediment, trash and toxic or hazardous substances from entering surface waters or impacting soils.</li> </ul>	
19	Final Reclamation	<ul style="list-style-type: none"> <li>• Well Site Cleared: 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.</li> <li>• Identification of Plugged and Abandoned Wells: Once the wells have been plugged and abandoned, Kerr-McGee will identify the location of the wellbores with permanent monuments that will detail the well names, API number, and location.</li> </ul>	

Total: 19 comment(s)

## Attachment List

<u>Att Doc Num</u>	<u>Name</u>
2121005	APPROVED WELD COUNTY PERMIT - KMG, PAUL NELSON PAD
2121008	CPW WAIVER
2121009	CDPHE CONSULTATION
2121010	ALTERNATIVE LOCATION ANALYSIS MAPS
2121020	APPROVED WELD COUNTY FLOODPLAIN PERMIT, PAUL NELSON PAD
2121029	KERR-McGEE PUBLIC COMMENT RESPONSE, FEBRUARY 25, 2022
2121031	COMMUNITY ENGAGEMENT REPORT
2121036	GEOLOGIC HAZARD MAP
2121038	ALA NARRATIVE SUMMARY
2121043	OPERATOR CDPHE RESPONSE SUMMARY, FEBRUARY 28, 2022
402770498	FORM 2A SUBMITTED
402817187	SURFACE AGRMT/SURETY
402817234	LOCATION DRAWING
402817255	ALA DATASHEET
402817258	OIL AND GAS LOCATION GIS SHP
402817283	CULTURAL FEATURES MAP
402817293	DIRECTIONAL WELL PLAT
402817297	HYDROLOGY MAP
402817300	PRELIMINARY PROCESS FLOW DIAGRAMS
402828414	CPW WAIVER
402872154	CPW CONSULTATION
402882192	NRCS MAP UNIT DESC
402882273	ACCESS ROAD MAP
402882337	LOCATION PICTURES
402882447	LAYOUT DRAWING
402887832	RELATED LOCATION AND FLOWLINE MAP
402890744	WILDLIFE HABITAT DRAWING
402890836	ALA NARRATIVE SUMMARY
402897026	CONSULTATION SUMMARY

Total Attach: 29 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Final Review	The Director has determined that the OGD 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.	03/15/2022
Final Review	The Director reviewed CPW's waiver of the No Surface Occupancy requirement of Rule 1202.c.(1).R - Cutthroat trout designated crucial habitat and native fish and other native aquatic species conservation waters - for new ground disturbance within 300-500 feet of the OHWM, and has granted an exception per Rule 309.e.(5).D.	03/14/2022
LGD	<p>Weld County LGD Jason Maxey submitted a formal comment to this Form 2A on January 12, 2022 during the public comment period. That comment was inadvertently deleted through a technical glitch of the Webforms system and could not be retrieved. Mr. Maxey was notified, and provided a close facsimile of his original comment to staff on March 14, 2022. His comment is copied/pasted here:</p> <p>-----</p> <p>The Weld County Oil and Gas Energy Department (OGED) submits the following comments:</p> <p>1. The Kerr-McGee (KMG) Paul Nelson 25-29HZ location was reviewed and processed</p>	03/14/2022

	<p>under Weld County Code, ORD2020-12.</p> <p>2. Case number 1041WOGLA21-0014 has been assigned to this location. All files associated with the processing and review of this permit are accessible through the Weld County E-Permit center. If there are questions relating to the ability to access these files, please call the OGED office at 970-400-3580.</p> <p>3. On July 28, 2021 a pre-application meeting with KMG, OGED, COGCC, CPW, and Weld County Planning Department was held.</p> <p>4. KMG submitted their 1041 WOGLA Application to OGED on October 25, 2021.</p> <p>5. The application was found to be complete and compliant with Weld County Code, ORD2020-12.</p> <p>6. A 1041 WOGLA hearing was held on December 16, 2021.</p> <p>7. The OGED Hearing Officer considered testimony at the 1041 WOGLA hearing, and subsequently approved 1041WOGLA21-0014.</p> <p>8. The final order was recorded with the Weld County Clerk and Recorder (reception no. 4787137) on December 21, 2021.</p> <p>9. The final order was noticed in the Greeley Tribune on December 25, 2021. Approval and publication of KMG's application creates a vested property right pursuant of Article 68 of Title 24, C.R.S.</p> <p>10. Multiple requirements of KMG were stipulated in the final order, which can be found on Weld County's E-Permit Center at <a href="http://www.weldgov.com">www.weldgov.com</a>.</p> <p>11. The approved Weld County 1041 WOGLA Permit, and KMG's commitment to best management practices outlined in the application, will protect the health, safety, security and general welfare of the present and future residents of Weld County, while also protecting both the environment and wildlife.</p> <p>12. 1041WOGLA21-0014 Permit is valid for 3 years or can be extended upon request and review.</p> <p>13. Weld County Department of Public Works has reviewed and approved a haul route utilizing County Road 15 ½ and County Road 52 for this location. Both County Roads are maintained by Weld County, and dust mitigation is a requirement. Traffic enforcement of County Roads is the responsibility of Weld County Sheriff's Office.</p> <p>14. Weld County Code addresses visual impact mitigation requirements and the approved permit meets all code requirements. No public comments were received regarding visual impacts during the WOGLA process.</p> <p>15. Mr. and Mrs. Siskowski were noticed parties as part of the 1041 WOGLA Application process and did not submit comments or concerns.</p> <p>16. Mr. and Mrs. Shroeder were noticed parties as part of the 1041 WOGLA Application process and did not submit comments or concerns.</p> <p>17. Due to the fact that KMG has completed the 1041 WOGLA Application process, and that a final order has been issued, recorded and legally published, Weld County has no additional concerns with the pending COGCC permit, and would recommend approval.</p>		
Final Review	Per the Wildlife Mitigation Plan and CPW Consultation, this location's disturbed area falls within 1202.c.(1).R native fish and other native aquatic species conservation waters HPH (within ~324' of the Ordinary High Water Mark OHWM). Added this additional HPH on the Wildlife tab and corrected checkbox from Rule 1202.c.(1).T to Rule 1202.c.(1).R.	03/12/2022	
OGLA	Placed the following Best Management Practices (selected from the submitted plans and supplemental BMPs submitted by Kerr-McGee) on the Form 2A: planning, general housekeeping, traffic control, wildlife protection, stormwater/erosion control, material handling and spill prevention, dust control, construction, noise mitigation, emissions mitigation, odor mitigation, drilling/completion operations, interim reclamation, and final reclamation.	03/01/2022	
OGLA	Based on technical review, attached revised Noise Mitigation Plan, Odor Mitigation Plan, Transportation Plan, Emergency Response Plan, Cumulative Impacts Plan, Geologic Hazard Map, Community Engagement Report, ALA Narrative Summary, Kerr-McGee's Public Comment Response document, and Kerr-McGee's Response to CDPHE's Consultation document.	02/28/2022	
OGLA	Operator conferred with COGCC staff and Colorado AAG Staff on September 16, 2021 regarding the request for Rule 223 Confidential Information status of the Paul Nelson 25-29HZ Pad and Charlene Nelson 12-34HZ Pad Water Plans. The un-redacted plan was reviewed in the meeting and Staff verified that it qualifies pursuant to COGCC Rules. The operator attached the redacted plan to the Form 2As and provided the un-redacted version to Staff.	02/22/2022	
OGLA	The Paul Nelson 25-29HZ and Charlene Nelson 12-34HZ locations were onsite by COGCC and Kerr-McGee on February 18, 2022.	02/18/2022	



OGLA	<p>December 16, 2021: The Director has determined this OGD application is complete. Form pushed to IN PROCESS.</p> <p>October 29, 2021: Finished initial "Completeness Review". Provided the operator with a spreadsheet that details issues identified and provides comments for making revisions and corrections to the attachments and plans. Form 2A #402770521 has been sent back to 'DRAFT'.</p> <p>October 22, 2021: Initiated Completeness Review.</p>	02/08/2022
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Total: 9 comment(s)

## Public Comments

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

<u>No.</u>	<u>Comment</u>	<u>Comment Date</u>
1	<p>Our property is directly opposite of the proposed Paul Nelson location. We are requesting WCR 15.5 to be paved in its entirety from WCR 17 all the way to East County Rd 18/Road 54. We have a cut flower farm that is adjacent to the road. During dry times, the road can be very dusty. We can see the clouds of dust floating over the fields and is worse during windy conditions. The estimated traffic total per day during construction is high. I imagine after construction there will still be a high number of trucks traversing the road daily. There is an existing well adjacent to Lakota Lake. Ingress and egress is via an easement that runs behind our house. We see an F150 truck or two and maybe an oil truck most days if not daily. I do not doubt there will be an exponential increase in traffic.</p> <p>Other conditions we are requesting: an addition of berms and evergreens to block the view. The proposed location will consist of 17 wells. We would like the installation of berms and evergreens to assist with blocking the view of these wells. Our main living room window faces south and we would be looking directly at them.</p> <p>Thank you very much. Dean and Becky Siskowski</p>	01/03/2022
2	<p>Our family owns the land across the street from the proposed Nelson location. We have 5 single family buildable lots in our PUD and 40 acres of land in a conservation easement. The Big Thompson River runs through the property and we have a pond. We are requesting that CR 15 1/2 from CR 54 to CR 52 be paved and CR 52 from CR 17 to CR 15 1/2 be paved. Each of these roads dead-end at the river. Paving the roads that lead to and from the Nelson location will significantly reduce the dust pollution that increased traffic from the new oil and gas location will bring. In addition, we would like to see berms and evergreens surrounding the location to help preserve the beauty and rural aspect of our location. Your consideration and assistance are greatly appreciated! Thank you. Barry and Nicole Schroeder</p>	01/09/2022
3	<p>We request that County Rd 15 1/2 be bladed, maintained and dust control provided on a regular basis by spraying mag chloride prior to the start of construction. Once construction is completed, we would like a permanent paving from the beginning of County Rd 15 1/2 at WCR 54 all the way to WCR 52 including eastward to WCR 17.</p> <p>In addition, we are requesting a maximum speed limit of 35 mph during and after construction. We would like a permanent sign indicating the speed limit to be installed.</p> <p>We'd also like to request that berms and evergreens be installed to help with improving the views.</p> <p>Thank you for your concern, Gordon and Debra Kimmer</p>	01/10/2022
4	<p>Our property is located directly north of the proposed drill site. We are concerned with the amount of dust that will be generated from all of the truck traffic. We would like to see CR 15 1/2 paved from CR 54 to CR 17, or at least oiled and graded on a regular basis to keep the dust to a minimum. Another concern is the noise of the trucks, especially when drivers use/ misuse their jake brake. We do not look forward to the noise that will be generated from numerous trucks passing by our house on a regular basis. Speed limits need to be in place and enforced.</p> <p>This drill site will be directly in our line of sight as we look south out our living room and patio windows. I would like to see some trees planted and berms installed to help block the sight of the wells. I didn't move to a rural area to look out my window and see well heads.</p> <p>Thank you,</p> <p>Eric and Cindy Smith</p>	01/10/2022
5	<p>My property is located just across the road and to the North of the Paul Nelson site. With this construction will come high levels of traffic during, and after, completion. That being said, I am concerned about the amount of dust that will be generated. I am requesting that CR 15 1/2 to WCR 54 to CR 17 be paved to cut down on the dust. Some sort of traffic enforcement would also be appreciated, as this is my home and speed and noise that come with large trucks are a concern. One of the reasons I love my locations is the natural beauty and solitude. I would also like to request that trees be planted and berms be installed to block the well site. Thank you for your consideration, it is much appreciated. Loretta Meza</p>	01/11/2022

6	<p>Our property is directly across County Road 15 1/2 from the Paul Nelson site. As part of the requirement of the PUD with Weld County, we were required to pave the road into the PUD. It is a continuing nuisance to drive from the property on pavement only to get to the county road which is gravel. We do not currently reside on the property, but plan to do so in the next year. We request that additional dust mitigation measures be undertaken during the construction period and that CR15 1/2 from CR54 to CR52 be paved and CR52 from CR17 to CR151/2 be paved following completion of construction. In addition, we would like to see the installation of berms and evergreens surrounding the location to preserve the scenic and rural nature of the location. Thank you. John Gosney and Eleanor Dean</p>	01/13/2022
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Total: 6 comment(s)

State of Colorado  
Oil and Gas Conservation Commission1120 Lincoln Street, Suite 801, Denver, Colorado 80203  
Phone: (303) 894-2100 Fax: (303) 894-2109

Document Number:

402770521

Date Received:

10/01/2021

## 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:

☒ 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
210900153		

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

&lt;No existing OGDP number provided&gt;

## 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

- ☒ Plugging and Abandonment Bond Surety ID (Rule 706): 20010124    ☐ Gas Facility Surety ID (Rule 711): \_\_\_\_\_
- ☐ Waste Management Surety ID (Rule 704): \_\_\_\_\_

## LOCATION IDENTIFICATION

Name: CHARLENE NELSON Number: 12-34HZ

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: NWSW Section: 34 Township: 5N Range: 67W Meridian: 6 Ground Elevation: 4767Latitude: 40.353402 Longitude: -104.884802GPS Quality Value: 1.5 Type of GPS Quality Value: PDOP Date of Measurement: 09/13/2021

## 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: 08/12/2021

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

Status/disposition date: 12/16/2021

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: Jason Maxey Contact Phone: 970-400-3580

Contact Email: jmaxey@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		Milliken	Pepper McClenahan	970-660-5046	pmcclenahan@millikenc o.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:

WOGLA was submitted for this location on August 12, 2021.  
Weld County Pre-Application meeting summary attached (Consultation Summary).  
Weld County Permit OGLA 1041WOGLA21-0015 approved on December 16, 2021.

## 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: 07/28/2021

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.

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> i. WPS < 2,000 feet from RBU/HOBUE                                  | <input type="checkbox"/> vi.aa. WPS within a surface water supply area                                  |
| <input type="checkbox"/> ii. WPS < 2,000 feet from School/Child Care Center                             | <input type="checkbox"/> vi.bb. WPS < 2,640 feet from Type III or GUDI well                             |
| <input type="checkbox"/> iii. WPS < 1,500 feet from DOAA  | <input checked="" type="checkbox"/> vii. WPS within/immediately upgradient of wetland/riparian corridor |
| <input type="checkbox"/> iv. WPS < 2,000 feet from jurisdictional boundary and PLG objects/requests ALA | <input checked="" type="checkbox"/> viii. WPS within HPH and CPW did not waive                          |
| <input type="checkbox"/> v. WPS within a Floodplain   | <input type="checkbox"/> ix. Operator using Surface bond  |
|   | <input type="checkbox"/> x. WPS < 2,000 feet from RBU/HOBUE/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
1	40.357751	-104.920137	x											AL4: Within 2000' of 6 RBUs. 2 are less than 500' Owner of nearest home discourages development of this pad
2	40.353390	-104.915396	x						x					AL5: Within 2000' of 7 RBUs . In center pivot for crops KMOG attempts to avoid when possible, unless encouraged by surface owner.
3	40.358696	-104.891762	x							x				AL6: Within 2,000' of 4 RBUs. Within 1/2 mile buffer of active Bald Eagle Nest

## SURFACE & MINERAL OWNERSHIP

Surface Owner Info:

Name: Nelson Family LLC

Phone: 970-397-9357

Address: 9000 COUNTY ROAD 52

Fax: \_\_\_\_\_

Address: \_\_\_\_\_

Email: earltreat@gmail.com

City: Milliken State: CO Zip: 80543-9615

Surface Owner at this Oil and Gas Location: ☒ Fee ☐ State ☐ Federal ☐ Indian

Check only one:

☐ 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: ☒ 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 7

Oil Tanks 0

Condensate Tanks 1

Water Tanks 3

Buried Produced Water Vaults 0

Drilling Pits	0	Production Pits	0	Special Purpose Pits	0	Multi-Well Pits	0	Modular Large Volume Tank	0
Pump Jacks	7	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	0	VOC Combustor	1	Flare	0	Enclosed Combustion Devices	0
Meter/Sales Building	1	Pigging Station	0	Vapor Recovery Towers	0				

## OTHER PERMANENT EQUIPMENT

Permanent Equipment Type	Number
E-House	1
Air Compressor	1
Chemical tote	3
Communication tower	1

## OTHER TEMPORARY EQUIPMENT

Temporary Equipment Type	Number
Enclosed Combustion Devices (Rig)	1
Water Tanks	11
Enclosed Combustion Devices	4
Fuel Tanks - Temporary Propane	1
Electric Generators	2
Purge Flare	3
Water Tanks (Rig)	2

## 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.

See comments for further description.

## CULTURAL DISTANCE AND DIRECTION

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

				Rule 604.b Conditions Satisfied (check all that apply):					
	Distance		Direction	604.b. (1)	604.b. (2)	604.b. (3)	Details of Condition(s)	604.b. (4)	
Building:	293 Feet		NW						
Residential Building Unit (RBU):	843 Feet		NW	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/>	
High Occupancy Building Unit(HOBU)	5280 Feet		SW	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Designated Outside Activity Area:	5280 Feet		SW						
Public Road:	2023 Feet		N						
Above Ground Utility:	841 Feet		NW						



Railroad:	<u>150</u> Feet	<u>NE</u>				
Property Line:	<u>736</u> Feet	<u>N</u>				
School Facility:	<u>5280</u> Feet	<u>SW</u>				
Child Care Center:	<u>5280</u> Feet	<u>SW</u>				
Disproportionately Impacted (DI) Community:	<u>5280</u> Feet	<u>SE</u>				
RBU, HOBUS, or School Facility within a DI Community:	<u>5280</u> Feet	<u>SE</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### 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:

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

#### CONSTRUCTION

Size of disturbed area during construction in acres: 10.47

Size of location after interim reclamation in acres: 2.66

Estimated post-construction ground elevation: 4766

#### 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.

Beneficial reuse or land application plan submitted? No

Reuse Facility ID: \_\_\_\_\_ or Document Number: \_\_\_\_\_

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

## 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

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

Agriculture

Describe any applicable Federal land use designation:

NA

## 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):

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: 3265—Kim loam, 1 to 3 percent slopes

NRCS Map Unit Name: 65—Thedalund loam, 3 to 9 percent slopes

NRCS Map Unit Name: \_\_\_\_\_

## GROUNDWATER AND WATER WELL INFORMATION

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

water well: 716 Feet SE

Spring or Seep: 5280 Feet N

Estimated depth to shallowest groundwater that can be encountered at this Oil and Gas Location: 14 Feet

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

Nearby water well - Static Water Level: 30'  
12891-R SWL: 30' 716' SE Elevation 4782'  
Location Elevation =4766'  
SWL calc: 4782 -30 = 4752  
4766-4752 = 14'

## SURFACE WATER AND WETLANDS

Provide the distance and direction to the nearest downgradient surface Waters of the State, as defined 16 Feet NE

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: 40 Feet S

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

The manmade Hill and Brush Ditch is the nearest Surface Water of the State. This is a man-made ditch conveying water from the Big Thompson River passing through a gate valve approximately 4.5 miles to the northwest. There is wetland development in this 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):

☒ Federal (FEMA) ☐ State ☒ 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 03/31/2021 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):

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? Yes

Have all Compensatory Mitigation Plans been approved for this Location? Yes

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

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?

This Location is in an area exceeding five Active Locations per square mile. Consequently, Rule 1203.d.(3).B. requirements for compensatory mitigation of indirect impacts do not apply.

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

Indirect impact habitat mitigation fee amount: \$

**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.
2	BALD EAGLE	Wildlife - Avoidance	The operator will preclude new oil and gas operations within 0.25 miles of any CPW-mapped active bald eagle nest site.
3	BALD EAGLE	Wildlife - Minimization	If an occupied nest is found closer to the location than the currently mapped nest that is 850 feet from the 0.5 mile buffer, no permitted or authorized human activities will occur within 0.5-mile of an active nest during the nesting season, roughly December 1 to July 31.
4	BALD EAGLE	Wildlife - Minimization	The operator will preclude oil and gas operations within 0.25 miles of winter night roost or communal roost site between November 15 and March 15, if there is NOT direct line of sight to the proposed operations. If there IS a direct line of sight to the activity, then no permitted or authorized human activities within 0.50-mile of winter night roost or communal roost site from November 15 to March 15 will be allowed.

**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: 15

- ☐ (1) Emergency Spill Response Program consistent with the requirements of Rules 411.a.(4).B, 411.b.(5).B, & 602.j
- ☒ (2) Noise Mitigation Plan consistent with the requirements of Rule 423.a
- ☒ (3) Light Mitigation Plan consistent with the requirements of Rule 424.a
- ☒ (4) Odor Mitigation Plan consistent with the requirements of Rule 426.a
- ☒ (5) Dust Mitigation Plan consistent with the requirements of Rule 427.a
- ☒ (6) Transportation Plan
- ☒ (7) Operations Safety Management Program consistent with the requirements of Rule 602.d
- ☒ (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
- ☒ (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
- ☒ (13) Fluid Leak Detection Plan
- ☒ (14) Topsoil Protection Plan consistent with the requirements of Rule 1002.c
- ☒ (15) Stormwater Management Plan consistent with the requirements of Rule 1002.f
- ☒ (16) Interim Reclamation Plan consistent with the requirements of Rule 1003
- ☒ (17) Wildlife Plan consistent with the requirements of Rule 1201
- ☒ (18) Water Plan
- ☒ (19) Cumulative Impacts Plan
- ☐ (20) Community Outreach Plan
- ☐ (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.

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

## **OPERATOR COMMENTS AND SUBMITTAL**

Comments

- Please direct correspondence regarding this location to Rachel Friedman rachel\_friedman@oxy.com or 720.929.6564
- A 1041 WOGLA will be submitted in association with this location
- Weld County Pre-Application meeting summary attached as "Other"
- The Town of Milliken is a proximate local government for the Charlene Nelson 12-34HZ location
- The alternative locations for the proposed Charlene Nelson 12-34HZ pad are listed as #4, #5 and #6 in the ALA narrative, maps (attachment "Other") and template.
- Brandon Marete with CPW has waived daily inspections associated with this location during the production phase see attached email labeled other
  - The attached EAP will be submitted to the Front Range Fire Rescue. 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
- Temporary above ground polyethylene water pipelines (diameter 10" - 12" with a 60 BPM capacity) will deliver water to location operations from larger trunk lines for completions operations
- Flowlines will flow to the production facility location. During production, flow direction in the flow lines is from the wellhead to the production facility. The size of flowlines is typically 2". 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 occurs at the custody transfer meter located on the proposed production facility location. Oil custody transfer occurs at the LACT Unit located on the proposed production facility location. Two 500 barrel skid-mounted tanks will be temporarily placed onsite for use of the pre-spud rig only. One tank will store water and the other will store water-based mud. A temporary ECD may be utilized during drilling
- 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
- 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
- 11 temporary 500 BBL skid-mounted frac tanks will be utilized during flowback and initially for produced water. 4 temporary ECDs and temporary tanks will be on location for 9 - 12 months and will be removed as water production declines. A temporary generator may be placed on location if needed and would be in place until electric power is available. Temporary purge flares may be placed on location for up to 60 days. A temporary 500-gallon propane tank will be used on location to provide fuel gas during facility equipment startup
- Gas custody transfer occurs at the custody transfer meter on the proposed production facility location. Oil custody transfer occurs at the LACT Unit on the proposed production facility location
- Two 500 barrel skid-mounted tanks will be temporarily placed onsite for use of the pre-spud rig only. One tank will store water and the other will store water-based mud. A temporary ECD may be utilized during drilling

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.

Signed: \_\_\_\_\_ Date: 10/01/2021 Email: djregulatory@oxy.com

Print Name: Rachel Friedman Title: Geologist Staff Sr.

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.**

### **Condition of Approval**

#### **COA Type**

#### **Description**

0 COA	
-------	--

### **Best Management Practices**



No	BMP/COA Type	Description
1	Planning	<ul style="list-style-type: none"> <li>• Operator will utilize existing roads from CR 52 for the Charlene Nelson Pad; KMOG will utilize an existing road adjacent to the Union Pacific Railroad that the surface owners utilize to access their property for drilling, completions, and production operations, including maintenance equipment. The road will be upgraded as needed and maintained to accommodate for emergency vehicle access.</li> <li>• KMOG held Surface Impact Planning (SIP) meetings for this location. These meetings are attended by KMOG internal teams. This is a multi-disciplinary team including construction, operations, facilities, EHS, stakeholder relations, regulatory, surface land and mitigation. The team reviews potential impacts to the surrounding residents, identify and plan for necessary mitigations, and identify BMPs that should be included in the pad development moving forward. The team reviews noise, odor, lights, traffic, haul routes, rig orientation and visual mitigation and any input we have received from surrounding communities either from response line calls or community meetings, relative to our operations. The purpose of the meeting is to proactively identify potential concerns, exhaust possible options and provide best in class solutions in order to have compatible operations.</li> <li>• KMOG will properly maintain vehicles and equipment.</li> </ul>
2	Community Outreach and Notification	<ul style="list-style-type: none"> <li>• KMOG sent notice to surface owners within 1,000 feet of the surface locations that KMOG has submitted a 1041-WOGLA permit for both locations.</li> <li>• KMOG has and will continue to offer to meet with individuals and groups that have additional questions about the projects.</li> <li>• KMOG will continue to engage with all owners and tenants within 2,000 feet of the WPS prior to local and state public hearings.</li> <li>• KMOG will post all notices and project updates on the following website: <a href="http://www.oxycoloradostakeholder.com">www.oxycoloradostakeholder.com</a></li> <li>• Continue to engage with stakeholders to provide development updates and to answer questions or discuss concerns</li> <li>• In addition to required notices, KMOG frequently sends courtesy notices to owners and tenants to ensure they have the most up to date information about our operations. Throughout the lifecycle of the wells our Stakeholder Relations team is available to assist the community and can be reached at 866.248.9577 or <a href="mailto:ColoradoStakeholder@oxy.com">ColoradoStakeholder@oxy.com</a> Monday through Friday. Our 24- hour Integrated Operations Center can also be reached at 970.515.1500.</li> </ul>
3	Traffic control	<ul style="list-style-type: none"> <li>• KMOG currently plans to use the water-on-demand system on this location which is a network of over 180 miles of underground pipelines that stretches the length of the 20-mile by 30-mile field to source and transport water to completions crews. This system eliminates more than 2,000 truck trips per day, also reducing associated concerns of traffic, noise, emissions and dust.</li> <li>• The operator will obtain access permits from Weld County.</li> <li>• At the Paul Nelson 25-29HZ Location the operator will implement a traffic control plan prior to the commencement of operations.</li> <li>• All new well sites are remotely monitored 24 hours a day, seven day a week by representatives in KMOG's Integrated Operations Center (IOC). This monitoring also helps reduce traffic to well sites. From the IOC, KMOG personnel can turn wells and equipment on and off, measure tank levels, verify pressures and temperatures. This remote monitoring reduces daily traffic to the location.</li> </ul>

4	General Housekeeping	<ul style="list-style-type: none"> <li>• A commercial size trash bin for removing debris will be located on site. This bin will be for use by all parties affiliated with the operations. Upon completion of operations, the commercial trash bin will be removed from the location and disposed of in an appropriate manner.</li> <li>• 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.</li> <li>• All specific wastes will have a detailed Safety Data Sheet available which includes information such as the properties of the wastes; the physical, health, and environmental health hazards; protective measures; and safety precautions for handling, storing, and transporting the chemical.</li> <li>• The proper personal protective equipment will always be worn when handling waste. Employees will refer to the Safety Data Sheet for additional information.</li> <li>• Good housekeeping measures will be implemented in the operating area and to ensure safety and environmental well-being.</li> <li>• Wastes will be segregated and stored according to its waste type.</li> <li>• When feasible, wastes will be recycled, re-used, or treated onsite. As a best management practice fluids are generally re-used from location to location if possible. No onsite treatment or recycling is planned onsite for the Paul Nelson 25-29HZ Well Pad and Facility. In the event, that onsite treatment or recycling is feasible, a written management plan will be submitted to the Director for approval on a Form 4.</li> </ul>	
5	Wildlife	<ul style="list-style-type: none"> <li>• Pad construction, drilling, and completion operations will be limited to the seven months between May 1 and November 30 of each year.</li> <li>• Kerr-McGee will inform and educate all employees and contractors on wildlife conservation practices, including no harassment or feeding of wildlife.</li> <li>• Consolidate and centralize fluid collection and distribution facilities to minimize impact to wildlife.</li> <li>• Well telemetry equipment will be installed to minimize site visitation through remote monitoring of production operations.</li> <li>• Use wildlife-appropriate fencing (3- or 4-strand with a top strand maximum height of approximately 42 inches, and the lower smooth strand without barbs at a height of approximately 18 inches) where acceptable to the surface owner.</li> <li>• Kerr-McGee will quickly excavate, install and reclaim linear pipeline features that may impact mule deer movement and migration.</li> </ul>	

6	Storm Water/Erosion Control	<ul style="list-style-type: none"> <li>• Measures for stormwater, erosion and sediment control will be accomplished through a combination of construction techniques, structural and non-structural controls, vegetation and re- vegetation, administrative controls, and good housekeeping practices.</li> <li>• Structural control measures are established to reduce erosion and site degradation, and to minimize or mitigate off-site sediment transport in a manner effective for development and operation of an oil and gas location.</li> <li>• A vehicle tracking control (VTC) system to mitigate off-site sediment migration from vehicle traffic onto paved surfaces will be installed at the primary access for Charlene Nelson 12-34HZ, which is in the northeastern portion of development for both the well pad and facility pad. The access road adjoins / intersects Weld County Road 52, approximately 0.75 miles north of the location.</li> <li>• 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.</li> <li>• Spillway and/or outlet will be installed concurrently with the facility diversion ditch and berm, and prior to commencement of surface disturbing activities.</li> <li>• A temporary spillway/outlet will be installed in the south-central and southeastern segments of the facility ditch and berm for Charlene Nelson 12-34HZ.</li> <li>• All spillways and outlets will remain in-place until interim reclamation activities are complete.</li> <li>• A diversion ditch and berm will serve as a continuous perimeter control for the location, will be implemented to divert stormwater run-on &amp; run-off throughout Charlene Nelson 12-34HZ 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 and remain in place until interim reclamation activities are complete.</li> <li>• Culverts will be installed at the northern access point for Charlene Nelson 12-34HZ. Any Culverts installed will be reinforced with inlet and outlet protection to mitigate sediment transport and surface erosion and will remain in place throughout the life of production for Charlene Nelson 12- 34HZ and removed during final reclamation.</li> <li>• Seed and mulch are utilized all disturbed areas no longer utilized for construction and on all topsoil stockpiles 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.</li> <li>• 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.</li> <li>• After construction is completed, inspections shall be conducted every 30 days and continue until all reclaimed areas have achieved a cover of 70% the pre-construction reference vegetation (final stabilization). Findings, inspection records and site maps are documented electronically and available within 24 hours of any inspection and stored for a minimum of three years after the location has achieved final stabilization.</li> <li>• KMOG will document any deficiencies in control measures, keep a record of said deficiencies. If, in the case it is infeasible to initiate repairs immediately the reason will be noted and timing for the scheduled repair will be included in internal documentation.</li> </ul>	
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7	Material Handling and Spill Prevention	<p>Water Resource Protection:</p> <ul style="list-style-type: none"> <li>• During operations, all fluid containing equipment is inspected daily.</li> <li>• KMOG protects water resources by carefully choosing the location and orientation of our pad, utilizing drainage control measures, and proper grading techniques.</li> <li>• KMOG segregates topsoil in order to protect soil resources.</li> <li>• Enhanced soil compaction minimizes absorption and downward migration of fluids in the event of an incidental spill.</li> <li>• Liners are installed under the production facility equipment during the production phase.</li> <li>• Both prior to, and after drilling and completion operations, KMOG contracts with a third-party professional to perform water sampling from water wells near the location to establish existing conditions, and the post-development samples verify our operations are safe.</li> <li>• To prevent fluid leaks, temporary produced water storage tanks are designed, constructed, and maintained in accordance with the following portions of the National Fire Protection Association (NFPA) Code 30 (2008 version): <ul style="list-style-type: none"> <li>o Tanks are built to engineering standards using noncombustible materials, with relief device sizing based on API 2000 standards.</li> <li>o Tanks are inspected and maintained while in use.</li> <li>o The only pipes within the containment are related to the temporary tanks (i.e. no external piping is co-located within the containment), and firefighting equipment is, likewise, not stored within the containment area.</li> </ul> </li> <li>• The temporary produced water storage tanks are staged on a geosynthetic liner and surrounded by a steel berm.</li> <li>• Earthen berms enclose an area sufficient to provide secondary containment for 150% of the volume of the largest single tank and are sufficiently impervious to contain spilled or released material.</li> <li>• Berms and the liner are inspected at the same time as stormwater inspections. During non-active, but while under construction, site inspections will occur every 14 days. During completions operations, all fluid containing equipment is inspected daily. When the location is on production, site inspections will occur every 28 days.</li> <li>• Automation technology will be utilized at this facility to monitor fluid levels on 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.</li> <li>• KMOG will use Group III drilling fluids (zero VOC, negligible odor) during production drilling operations at the Nelson Family OGDG Locations. As a result of using a Group III drilling fluid, the use of an odor neutralizer product during production drilling operations should not be necessary.</li> </ul>	
8	Material Handling and Spill Prevention	<p>Fluid Leak Detection:</p> <ul style="list-style-type: none"> <li>• KMOG will ensure that a fueling contractor who has completed the required "Eyes-On" training is present during the entire fueling process.</li> <li>• Two drilling and/or completions crew members required and dedicated for all fluid transfers (no exceptions) from start to finish of the operation. Their sole focus is on the transfer. No fluid transfer will occur during crew change. Crew members conducting the fluid transfer will not leave the area until transfer operations completed.</li> <li>• Tanks (along with auxiliary equipment installed in tanks) will be inspected prior to use and replaced/repared if damaged.</li> <li>• During rig up, hoses and lines will be properly assembled, all bolts properly made up and gaskets installed (when applicable).</li> <li>• Appropriate secondary containment will be utilized when equipment maintenance is conducted on location.</li> <li>• Contractors will maintain an updated copy of their SPCC plan on location and its personnel will be trained accordingly.</li> <li>• Tanks will be labeled (signs, magnets, etc.) indicating the contents of the tank.</li> <li>• Verify tank capacity is capable of handling estimated volumes prior to operations start.</li> <li>• Tanks will have hatches, valves and bull plugs secured prior to transfers.</li> <li>• Shut down transfer pump and close supply valve when transfer or circulation is completed. Ensure fluids cannot enter holding tank through gravity feedback.</li> <li>• 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.</li> <li>• During operations, all fluid containing equipment is inspected daily.</li> <li>• Walk all lines and confirm valve alignment before starting the transfer.</li> </ul>	

		<ul style="list-style-type: none"> <li>• Walk the lines as soon as the transfer starts to confirm no leaks.</li> <li>• All personnel on location on behalf of KMOG are trained in Auditory, Visual, Olfactory monitoring (AVO) techniques. All personnel are empowered with 'Stop Work Authority' and to report any leaks immediately.</li> <li>• During completions operations, 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; all piping is pressure tested and inspected for leaks prior to flowback; 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 operations.</li> <li>• During production operations, automation technology will be utilized at this facility, which 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 KMOG's Integrated Operations Center (IOC), which is manned 24 hours per day, 7 days per week.</li> <li>• All storage tanks used for active drilling operations (in lieu of pits) 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 are used on tanks utilized for the surface rig.</li> <li>• KMOG will utilize its tankless design for its facilities at the Paul Nelson and Charlene Nelson locations; the term tankless has been used for the design to designate that no oil storage will occur on-site.</li> <li>• Temporary produced water storage tanks will be designed, constructed, and maintained in accordance with the following portions of the National Fire Protection Association (NFPA) Code 30 (2008 version): <ul style="list-style-type: none"> <li>o Tanks are built to engineering standards using noncombustible materials, with relief device sizing based on API 2000 standards.</li> <li>o Tanks are inspected and maintained while in use.</li> <li>o The only pipes within the containment are related to the temporary tanks (i.e. no external piping is co-located within the containment), and firefighting equipment is, likewise, not stored within the containment area.</li> </ul> </li> <li>• 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.</li> <li>• During completions: Monitor pressure responses and containment to identify potential leaks. Lines will be walked continuously throughout operations (between stages) to identify potential leaks. 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. Hourly walk-throughs and pressure measurements recorded during flowback operations for leak detection.</li> </ul>	
9	Material Handling and Spill Prevention	<p>PFAS</p> <ul style="list-style-type: none"> <li>• Operator will not use fracturing fluids which contain PFAS</li> <li>• If PFAS-containing firefighting foam is used at a location, the operator will work with outside agencies to properly characterize the site to determine the level, nature and extent of contamination.</li> <li>• If PFAS-containing firefighting foam is used at a location, the 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.</li> <li>• If PFAS-containing firefighting foam is used at a location, the operator will work with the external agency to properly capture and dispose of PFAS-contaminated soil and fire and flush water.</li> </ul>	

10	Dust control	<ul style="list-style-type: none"> <li>• KMOG will proactively deploy fresh water to suppress dust along access road to well pad/ facility during all phases of pre-production operations.</li> <li>• Speed limits will be reduced to 10 mph on access road and 5 mph once vehicles reach well pad/ facility.</li> <li>• Access roads and Vehicle Tracking Control will receive maintenance as needed throughout operations.</li> <li>• In the event of high winds that generate dust that cannot be mitigated with an application of water, KMOG will shut down construction operations.</li> <li>• KMOG will coordinate with Weld County to apply magnesium chloride on WCR 15.5 between WCR 54 and WCR 52 (1 mile) and on WCR 52 between WCR 15.5 and WCR 17 (0.5 miles).</li> </ul>
11	Construction	<ul style="list-style-type: none"> <li>• The completed well pad locations will be surrounded with a fence and gate with adequate lock to restrict access to authorized personnel only. Kerr-McGee personnel will monitor the well sites upon completion of the wells. Authorized representatives and/or Kerr-McGee personnel shall be on-site during drilling and completion operations.</li> <li>• Operator will only conduct day light operations during construction and there will be no nighttime operations that require lighting.</li> <li>• Guy line anchors will not be used. Base Beams will be used to stabilize the rig and removed after drilling.</li> <li>• KMOG will utilize its tankless design (no oil storage tanks will be placed on-site) for its facilities at both locations.</li> </ul>
12	Noise mitigation	<ul style="list-style-type: none"> <li>• The operator has conducted an ambient noise survey to document noise levels around the site.</li> <li>• Paul Nelson: The operator will install Perimeter mitigation includes 32-foot-high sound wall with minimum STC-25 rating installed on the north, south, and east sides of the pad during drilling and completions.</li> <li>• A quiet completions fleet will be utilized during operations.</li> <li>• Any operations involving the use of a drilling rig, workover rig, or fracturing and any equipment used in the drilling, completion or production of a well are subject to and will comply with the noise regulations set forth by COGCC Rule 423.</li> </ul>

13	Emissions mitigation	<ul style="list-style-type: none"> <li>• During drilling: KMOG will use natural gas engines instead of tier II diesel generators.</li> <li>• During Completions: KMOG uses a green completions fleet and a closed loop system.</li> <li>• During flowback: Fluids will flow through separation equipment where the gas will be collected through a gas gathering line instead of vented or burned.</li> <li>• During Production: KMOG uses production facilities that have been designed to eliminate most emission sources.</li> <li>• Oil will be gathered and sent via pipeline to a stabilization facility, rather than stored on location where it could cause emissions. This gathering system also reduces the number of vehicles visiting the location.</li> <li>• KMOG uses air actuated pneumatic devices rather than natural gas actuated devices.</li> <li>• There will be no flaring of associated sales gas.</li> <li>• There will be no compressor engines on location.</li> <li>• Produced water can contain entrained gas, KMOG equips water storage tanks with combustion devices with a 98% destruction efficiency. If the pilot for the combustor goes out the location will be remotely shut in.</li> <li>• 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.</li> <li>• Test separators and associated flow lines, sand traps and emission control systems shall be installed on-site to accommodate green 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.</li> <li>• Produced water can contain entrained gas, KMOG equips water storage tanks with combustion devices with a 98% destruction efficiency. If the pilot for the combustor goes out the location will be remotely shut in.</li> <li>• Air compressors will be utilized to operate instruments and control valves, thereby eliminating any venting of natural gas and greenhouse gases</li> <li>• 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.</li> <li>• On Ozone Action days KMOG will implement the following mitigation measures as is feasible on forecasted Ozone Action Days: Operator will minimize vehicle and engine idling; Operator will reduce truck traffic and worker traffic; Operator will postpone the refueling of vehicles; Operator will postpone construction activities; Operator will reschedule non-essential operational activities such as pigging, well unloading and tank cleaning; Operator will postpone flowback if emissions cannot be adequately captured.</li> <li>• Operator will use lease automated custody transfer (LACT) system to reduce the need for truck loadout.</li> </ul>	
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14	Odor mitigation	<ul style="list-style-type: none"> <li>• KMOG will use Group III drilling fluids (zero VOC, negligible odor) during production drilling operations at the Nelson Family OGDG Locations. As a result of using a Group III drilling fluid, the use of an odor neutralizer product during production drilling operations should not be necessary.</li> <li>• KMOG will use a mud chiller with the intent to lower the drilling fluid temperature as fluids are redeployed downhole. Mud chillers will be installed downstream of the shale shakers.</li> <li>• All cuttings on location will be dried using centrifugal dryers to ensure only trace amounts of drilling fluid remain on the dry cuttings. .</li> <li>• KMOG will cover trucks transporting cuttings.</li> <li>• Drill pipe and any other tubular pulled out of the hole are wiped down before being racked in the derrick or laid down on location.</li> <li>• Base oil used to build new drilling fluid is transferred through a line outlet run to the bottom of the mix tank to minimize agitation (splashing) and reduce potential to create odor.</li> <li>• During flowback and well completions, utilize closed-loop green completion techniques to the maximum extent practicable to minimize emissions and the flaring of natural gas.</li> <li>• Cuttings storage time on location will be minimized prior to transport to local landfills.</li> <li>• KMOG utilizes a hydraulic fracturing fleet has Tier IV diesel engines which reduces emission relative to Tier II or Tier II Dual Fuel. KMOG also utilizes Diesel Exhaust Fluid additives with engines.</li> <li>• Produced oil, gas, and water are sent directly to the permanent facility during flowback phase. This eliminates on pad storage and associated water hauling. Therefore, eliminating odor sources.</li> <li>• KMOG uses pipelines to transport hydrocarbons (oil &amp; gas) from the production facility eliminating odors that could occur during truck loading.</li> <li>• Production facilities are inspected regularly by KMOG to make sure the equipment is working properly and necessary maintenance is performed, to reduce potential odors. KMOG incorporates Audio, Visual, Olfactory (AVO) observations at production facility inspections.</li> <li>• 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).</li> <li>• KMOG remotely monitors production facilities, this reduces traffic onto production facilities which may create odors from truck traffic.</li> </ul>	
15	Drilling/Completion Operations	<ul style="list-style-type: none"> <li>• To the extent possible, LED fixtures are used to reduce skyglow. This is based on the calculated results of the relative impact versus traditional lighting methods using DOE Skyglow comparison tool PNNL-SA-138348. (Pre-Production and Production Phase)</li> <li>• All lights have been positioned 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. (Pre-Production and Production Phase)</li> <li>• A closed loop system will be implemented during drilling.</li> <li>• KMOG will use Group III drilling fluids (zero VOC, negligible odor) during production drilling operations at the Nelson Family OGDG Locations. As a result of using a Group III drilling fluid, the use of an odor neutralizer product during production drilling operations should not be necessary.</li> <li>• KMOG will use pipelines to transport water for hydraulic fracturing to location.</li> </ul>	



16	Interim Reclamation	<p>Topsoil Protection</p> <ul style="list-style-type: none"> <li>• During Construction Phase: 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.</li> <li>• During Construction Phase: Track packing all topsoil stockpiles will occur to prevent erosion from stormwater and wind, as well as provide temporary stabilization.</li> <li>• During Construction Phase: Seeding and crimped straw mulch will be applied to prevent erosion and soil loss from stormwater and wind.</li> <li>• During Construction Phase: Vegetation establishment through seeding efforts will promote soil health and maintain carbon exchange.</li> <li>• During Construction Phase: Weed control will occur seasonally and as needed to hinder the spread of weeds throughout the topsoil stockpile(s) and help native grass establishment.</li> <li>• During Drilling Phase: 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.</li> <li>• During Drilling Phase: Track packing all topsoil stockpiles will occur to prevent erosion from stormwater and wind, as well as provide temporary stabilization.</li> <li>• During Drilling Phase: Seeding and crimped straw mulch will be applied to prevent erosion and soil loss from stormwater and wind.</li> <li>• During Drilling Phase: Vegetation establishment through seeding efforts will promote soil health and maintain carbon exchange.</li> <li>• During Drilling Phase: Weed control will occur seasonally and as needed to hinder the spread of weeds throughout the topsoil stockpile(s) and help native grass establishment.</li> <li>• During Production Phase: Vegetation establishment through seeding efforts will promote soil health and maintain carbon exchange.</li> <li>• During Production Phase: Weed control will occur seasonally and as needed to hinder the spread of weeds throughout the topsoil stockpile(s) and help native grass establishment.</li> </ul>	
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17	Interim Reclamation	<ul style="list-style-type: none"> <li>• A diversion ditch and berm surrounding the entirety of the location will be installed prior surface disturbing activities to divert stormwater run-on &amp; run-off throughout the location to designated outlet structure(s). This will create continuous permitter control and remain in place until interim reclamation activities are complete.</li> <li>• As needed, the operator will install a temporary spillway and/or outlet, 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(s) and/or outlet(s) will be installed concurrently with the facility diversion ditch and berm prior to commencement of surface disturbing activities and remain in-place until interim reclamation activities are complete.</li> <li>• As needed, the operator will install properly sized culverts to move water under roads or crossings or to direct flow to a designated endpoint(s) that will be reinforced with inlet and outlet protection to mitigate sediment transport and surface erosion. Any installed culverts will remain in place throughout the productive life of the facility and removed during final reclamation.</li> <li>• As needed, the operator will install Inlet / outlet protection to filter runoff and remove sediment prior to commencement of surface disturbing activities and will remain in place throughout the productive life of the facility and removed during final reclamation.</li> <li>• Once surface disturbing activities are complete, the operator will use seeding and mulch to establish stabilization of disturbed areas through vegetative cover. 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 &amp; mulch will be installed on all disturbed areas no longer utilized for construction, and on all topsoil stockpiles which will remain on location for use during interim and final reclamation. Seed and mulch will be disturbed and re-applied during topsoil application and final reclamation practices.</li> <li>• Pre-existing vegetation cover will only be removed where necessary for the operation of construction and development.</li> <li>• Trees will only be cut or trimmed to facilitate clearing, grading and safe installation of the location.</li> <li>• Vegetative buffers will be preserved to the greatest extent practicable for construction and development.</li> <li>• Housekeeping practices including routine inspections, regular cleaning, site and equipment organization and maintenance, and appropriate chemical storage will be implemented to prevent sediment, trash and toxic or hazardous substances from entering surface waters or impacting soils.</li> </ul>	
18	Final Reclamation	<ul style="list-style-type: none"> <li>• Well Site Cleared: 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.</li> <li>• Identification of Plugged and Abandoned Wells: Once the wells have been plugged and abandoned, Kerr-McGee will identify the location of the wellbores with permanent monuments that will detail the well names, API number, and location.</li> </ul>	

Total: 18 comment(s)

## Attachment List

<u>Att Doc Num</u>	<u>Name</u>
2121006	APPROVED WELD COUNTY PERMIT - KMG, CHARLENE NELSON PAD
2121009	CDPHE CONSULTATION
2121010	ALTERNATIVE LOCATION ANALYSIS MAPS
2121028	CPW WAIVER
2121031	COMMUNITY ENGAGEMENT REPORT
2121037	GEOLOGIC HAZARD MAP
2121043	OPERATOR CDPHE RESPONSE SUMMARY, FEBRUARY 28, 2022
402770521	FORM 2A SUBMITTED
402817315	LOCATION DRAWING
402817316	SURFACE AGRMT/SURETY
402817317	ALA DATASHEET
402817318	CULTURAL FEATURES MAP
402817319	DIRECTIONAL WELL PLAT
402817320	HYDROLOGY MAP
402817322	PRELIMINARY PROCESS FLOW DIAGRAMS
402819420	CONSULTATION SUMMARY
402828234	CPW WAIVER
402881863	CPW CONSULTATION
402881872	NRCS MAP UNIT DESC
402881884	ACCESS ROAD MAP
402882344	LOCATION PICTURES
402882418	LAYOUT DRAWING
402885741	LOCATION AND WORKING PAD GIS SHP
402887835	RELATED LOCATION AND FLOWLINE MAP
402890754	WILDLIFE HABITAT DRAWING
402890820	ALA NARRATIVE SUMMARY
402896845	LESSER IMPACT AREA EXEMPTION REQUEST

Total Attach: 27 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Final Review	The Director has determined that the OGD 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.	03/15/2022
Final Review	Hydrology Map and CPW Waiver attachment (doc# 2121028) both indicate a wetland present at approximately 40 feet from the WPS. Based on this, the distance to nearest wetland was corrected on the Water Resources tab from 535' to 40'.	03/15/2022
LGD	<p>Weld County LGD Jason Maxey submitted a formal comment to this Form 2A on January 12, 2022 during the public comment period. That comment was inadvertently deleted through a technical glitch of the Webforms system and could not be retrieved. Mr. Maxey was notified, and provided a close facsimile of his original comment to staff on March 14, 2022. His comment is copied/pasted here:</p> <p>-----</p> <p>The Weld County Oil and Gas Energy Department (OGED) submits the following comments:</p> <ol style="list-style-type: none"> <li>1. The Kerr-McGee (KMG) Charlene Nelson 12-34HZ location was reviewed and processed under Weld County Code, ORD2020-12.</li> <li>2. Case number 1041WOGLA21-0015 has been assigned to this location. All files associated with the processing and review of this permit are accessible through the Weld</li> </ol>	03/14/2022

	<p>County E-Permit center. If there are questions relating to the ability to access these files, please call the OGED office at 970-400-3580.</p> <p>3. On July 28, 2021 a pre-application meeting with KMG, OGED, COGCC, CPW, and Weld County Planning Department was held.</p> <p>4. KMG submitted their 1041 WOGLA Application to OGED on October 25, 2021.</p> <p>5. The application was found to be complete and compliant with Weld County Code, ORD2020-12.</p> <p>6. A 1041 WOGLA hearing was held on December 16, 2021.</p> <p>7. The OGED Hearing Officer considered testimony at the 1041 WOGLA hearing, and subsequently approved 1041WOGLA21-0015.</p> <p>8. The final order was recorded with the Weld County Clerk and Recorder (reception no. 4789814) on December 30, 2021, and was noticed in the Greeley Tribune on January 5, 2022. Approval and publication of KMG's application creates a vested property right pursuant of Article 68 of Title 24, C.R.S.</p> <p>9. Multiple requirements of KMG were stipulated in the final order, which can be found on Weld County's E-Permit Center at <a href="http://www.weldgov.com">www.weldgov.com</a>.</p> <p>10. The approved Weld County 1041 WOGLA Permit, and KMG's commitment to best management practices outlined in the application, will protect the health, safety, security and general welfare of the present and future residents of Weld County, while also protecting both the environment and wildlife.</p> <p>11. 1041WOGLA21-0015 Permit is valid for 3 years or can be extended upon request and review.</p> <p>12. Due to the fact that KMG has completed the 1041 WOGLA Application process, and that a final order has been issued, recorded and legally published, Weld County has no additional concerns with the pending COGCC permit, and would recommend approval.</p>	
OGLA	Placed the following Best Management Practices (selected from the submitted plans and supplemental BMPs submitted by Kerr-McGee) on the Form 2A: planning, general housekeeping, traffic control, wildlife protection, stormwater/erosion control, material handling and spill prevention, dust control, construction, noise mitigation, emissions mitigation, odor mitigation, drilling/completion operations, interim reclamation, and final reclamation.	03/01/2022
OGLA	Based on technical review, attached revised Noise Mitigation Plan, Odor Mitigation Plan, Emergency Response Plan, Topsoil Protection Plan, Wildlife Mitigation Plan, Cumulative Impacts Plan, Geologic Hazard Map, Community Engagement Report, CPW Waiver for 1202.a.(3)., and Kerr-McGee's Response to CDPHE's Consultation.	02/28/2022
OGLA	Operator conferred with COGCC staff and Colorado AAG Staff on September 16, 2021 regarding the request for Rule 223 Confidential Information status of the Paul Nelson 25-29HZ Pad and Charlene Nelson 12-34HZ Pad Water Plans. The un-redacted plan was reviewed in the meeting and Staff verified that it qualifies pursuant to COGCC Rules. The operator attached the redacted plan to the Form 2As and provided the un-redacted version to Staff.	02/22/2022
OGLA	The Paul Nelson 25-29HZ and Charlene Nelson 12-34HZ locations were onsite by COGCC and Kerr-McGee on February 18, 2022.	02/18/2022
OGLA	The Director has determined this OGD application is complete. Form pushed to IN PROCESS.	12/16/2021
OGLA	Lesser Impact Area exemption requested from Rule 304.c.(21) Geologic Hazard Plan requirement. The potential geologic hazards identified within one mile of the proposed location are not present at the proposed location. The nearby potential hazards are addressed by best management practices and are not expected to impact the proposed development. Exemption request was granted by the Director on 12/13/2021.	12/14/2021
OGLA	Finished initial 'Completeness Review'. Provided the operator with a spreadsheet that details issues identified and provides comments for making revisions and corrections to the attachments and plans. Form 2A #402770521 has been sent back to 'DRAFT'.	10/29/2021
OGLA	Initiated Completeness Review.	10/22/2021

Total: 11 comment(s)

### **Public Comments**

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