PLANNING & DEVELOPMENT MEMORANDUM
#46-2021

DATE: Aug. 28, 2023

TO: Honorable Mayor Meredith Leighty and City Council Members

THROUGH: Heather Geyer, City Manager
Jason Loveland, Interim Deputy City Manager

FROM: Brook Svoboda, Director of Planning & Development
Eric Ensey, Senior Planner

SUBJECT: CR-115 – Kerr-McGee/Lizzy Pad Oil & Gas Permit Application

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PURPOSE

To consider CR-115, a resolution approving an Oil and Gas Permit application submitted by Kerr McGee Oil & Gas Onshore LP for the Lizzy Pad Oil and Gas Well Pad Site location in Section 36 in Weld County.

BACKGROUND

Kerr McGee Oil & Gas Onshore LP has applied for an Oil & Gas Permit in accordance with Section 11-3-6 of the City's Unified Development Ordinance (UDO). They are requesting approval of this permit to allow for the drilling of an oil and gas well site that would be 7.2 acres in area when completed. The attached Planning Commission staff memorandum references 9.88 acres, which is incorrect. The pad site would consist of 25 horizontal wells. The site is located on the northeast quadrant of Section 36 in Weld County.

Attachment 4 to this memorandum is the staff report prepared for the Aug. 1, 2023 Planning Commission public hearing on this item. It contains a detailed staff analysis for the proposed Oil & Gas Permit. The applicant's information is provided separately as Attachment 5. The staff analysis details staff's findings as it relates to each of the approval criteria outlined in Section 11-3-6(e)(1)(I) of the UDO. These are the criteria necessary to approve or deny any Oil & Gas Permit request.

The Planning Commission voted unanimously to recommend approval of the proposed Lizzy Pad Oil & Gas Permit, subject to four conditions. Attachment 3 is Planning Commission Resolution 2023-10 stipulating their recommendation and the conditions, which are presented below in Staff Recommendation.

NEXT STEPS

Should City Council approve the request, the applicant will have additional State permitting to obtain before they can construct the well. The applicant must receive approval of the necessary Oil & Gas Development Plan from the Energy & Carbon Commission. This hearing is scheduled for Aug. 30, 2023. Should the State's approval significantly alter the Oil & Gas Permit being considered with this application, then staff is recommending that this modified information be presented to City Council for further consideration. The applicant would need to obtain the necessary permits and approvals from the City's Public Works Department, North Metro Fire Rescue and SAFEbuilt, which provides building division services for Northglenn.

BUDGET/TIME IMPLICATIONS
There are no budget or time impacts to the City.

STAFF RECOMMENDATION
Staff recommends approval of CR-115, which includes the following conditions of approval as recommended by the Planning Commission:

1. All permitting required by the State of Colorado shall be obtained by the applicant prior to the start of operations.
2. If any of the State's review modifies the information contained in this Oil and Gas Permit, the permit would need to be updated. Any substantial modifications that might alter the intent of this permit would be required to be accepted by City Council.
3. Civil, grading, right-of-way, and building construction drawings shall be submitted for review and approved prior to commencing construction. Civil drawings shall include specifications for the private access drive in compliance with the requirements of Section 11-3-6(I) of the Northglenn Municipal Code.
4. A final as-built survey shall be submitted once the facility is constructed to verify the facility complies with the 1,000-foot setback from the property line of the City's Wastewater Treatment Plant.

STAFF REFERENCE
If Council Members have any questions, please contact Brook Svoboda, Director of Planning & Development, at bsvoboda@northglenn.org or 303.450.8937.

ATTACHMENTS
1. Staff Presentation
2. Applicant Presentation
3. Planning Commission Resolution
4. Planning Commission Staff Report
5. Lizzy Pad Oil & Gas Permit Application and Supporting Documentation

CR-115 – Kerr-McGee/Lizzy Pad Oil and Gas Permit Application

LIZZY PAD
OIL & GAS PERMIT

Eric Ensey
Senior Planner
303.450.8740
eensey@northglenn.org

City Council Meeting
Aug. 28, 2023

CITY OF Northglenn

PURPOSE

To consider CR-115, a resolution approving an Oil and Gas Permit application submitted by Kerr McGee Oil & Gas Onshore LP for the Lizzy Pad Oil and Gas Well Pad Site location in Section 36 in Weld County.

REQUEST

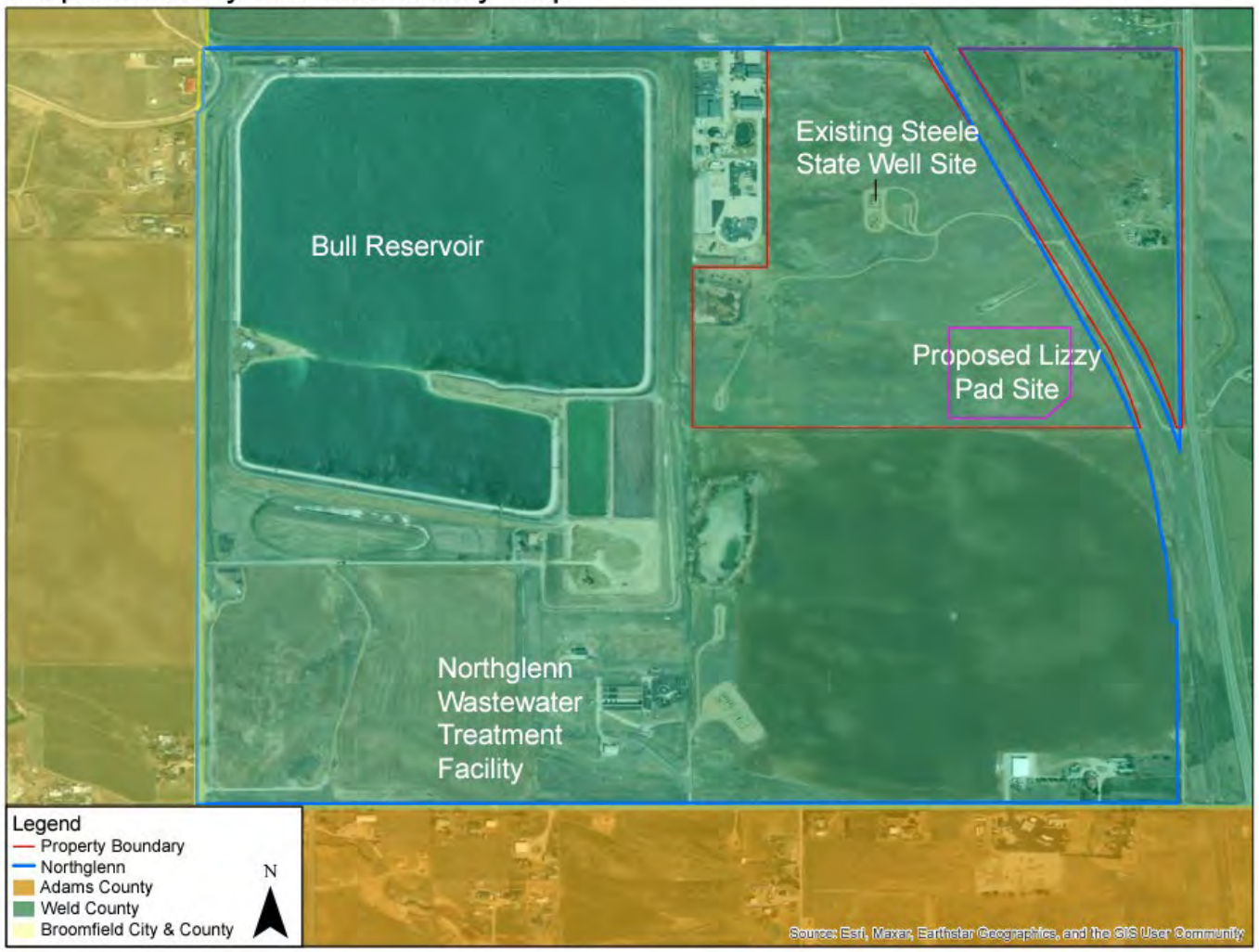
APPLICANT:
Kerr McGee Oil & Gas Onshore LP

REQUEST:
Consideration for an Oil & Gas Permit for the Lizzy Pad Well Site

LOCATION:
The site is located in Section 36 of Weld County

VICINITY MAP

Proposed Lizzy Pad Site Vicinty Map



SITE DATA

Site Data

Location	Property is in Section 36 of Weld County approximately ½ mile north of County Road 2 (E. 168th Ave.) and just west of County Road 13 (Colorado Blvd.).
Subdivision	Township 1 North, Range 68 West, 6th P.M S2NE Section 36, in the City of Northglenn, County of Weld, State of Colorado.
Zoning	The subject site is zoned Agricultural (AG).
Existing Land Use	Agriculture
Acreage	7.2 acres for the pad site. This pad site is part of an over-all 136 acre parcel of land owned by Anadarko (Kerr McGee).

Subject site is zoned AG – agricultural. Surrounding properties:

	Zoning	Land Use
North	(Weld County)	Unincorporated Weld County; oil well site and rural residential
South	AG (Agricultural)	Vacant agricultural land
East	(Weld County)	Agricultural/Rural Residential
West	PF (Public Facilities)	Northglenn Wastewater Treatment Reservoir (Bull Reservoir)

SITE CHARACTERISTICS

- The pad site is located in Section 36 of Weld County.
- Site is owned by Anadarko.
- The site is currently undeveloped, with an abandoned oil well pad (Steele State) approximately 500 feet from the proposed location of the well.
- All residential structures on the site have been removed and no residential structures are within 1,000 feet of the proposed pad site.
- The City's water treatment reservoir is located over 1,000 feet to the west.
- NMFR has a training facility northwest of the site.

NOTIFICATION

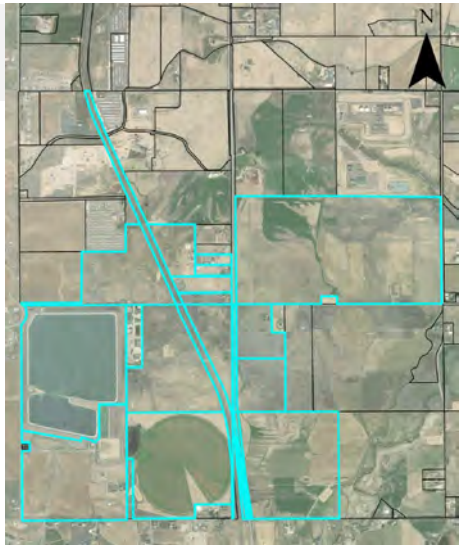
Notification was performed in accordance with the requirements of Section 11-6-3(e) of the Unified Development Ordinance (UDO) for public hearings:

A. Mailed notice sent to all property owners within 1,000 feet

B. Publication in the Northglenn-Thornton Sentinel 15 days prior

C. Public Hearing Notice signs posted on property 15 days prior to hearing

A



B

Public Notice

LEGAL NOTICE

CASE NUMBER: O&G-1-23

To Whom It May Concern:

You are hereby notified that **on Monday, August 28, 2023, at 6:00pm** in the Council Chambers of the City of Northglenn (11701 Community Center Dr.), a public hearing will be held with the Northglenn City Council on a request by the applicant, Kerr McGee Oil and Gas Onshore LP, for consideration of an Oil and Gas Permit to allow construction of an oil well pad and subsequent oil extraction on 19.29 acres and the well site Interim Reclamation being 7.13 acres. The site is located in Section 36 of Weld County approximately ½ mile north of County Road 2 (E. 168th Ave.) and just west of County Road 13 (Colorado Blvd.) in Weld County and is legally described as follows:

S2NE, SECTION 36, CITY OF NORTHGLENN, COUNTY OF WELD, STATE OF COLORADO.

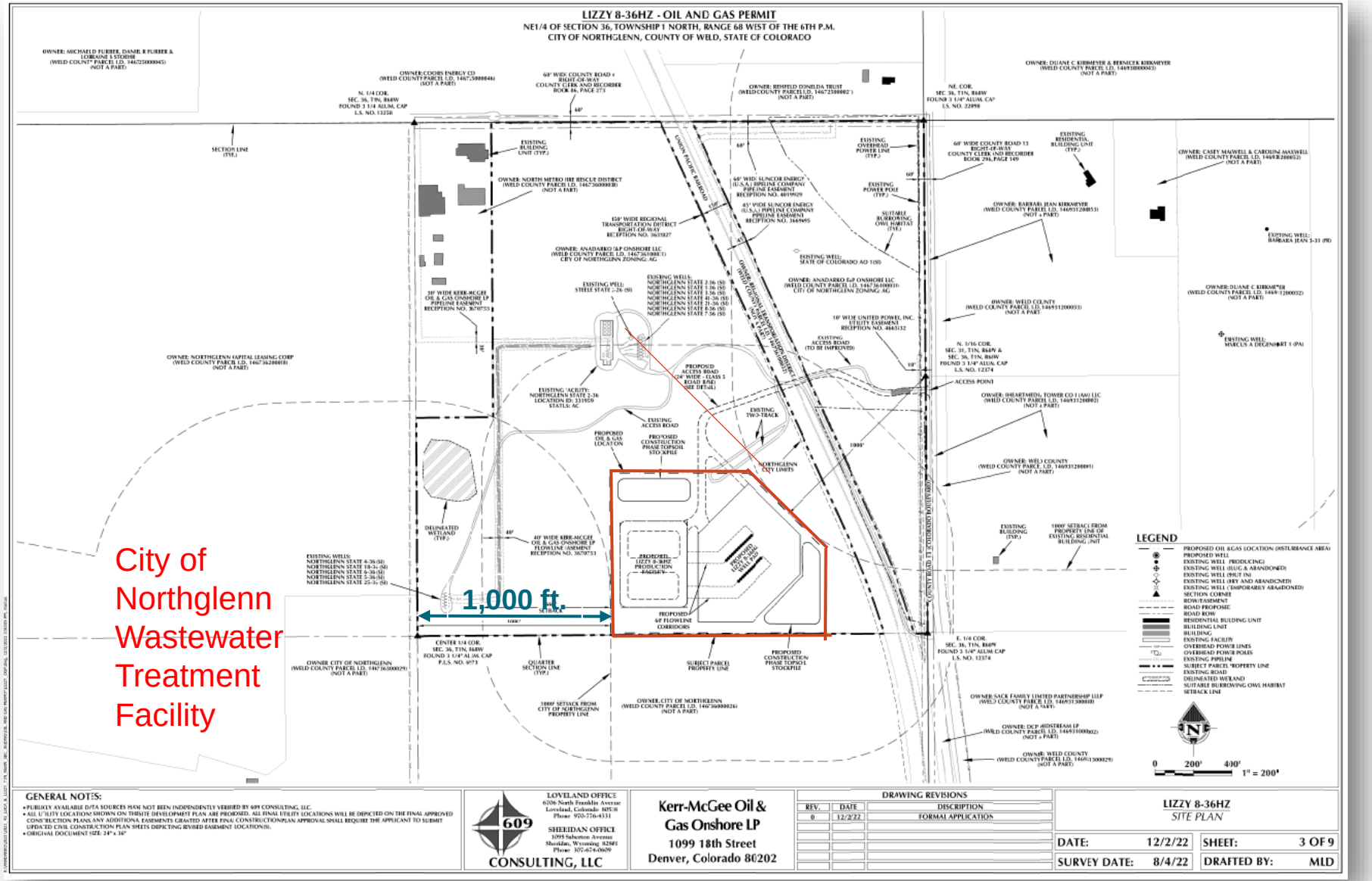
All interested parties may appear and be heard.

Rebecca Smith, Secretary
Northglenn Planning Commission
11701 Community Center Drive
Northglenn, CO 80233

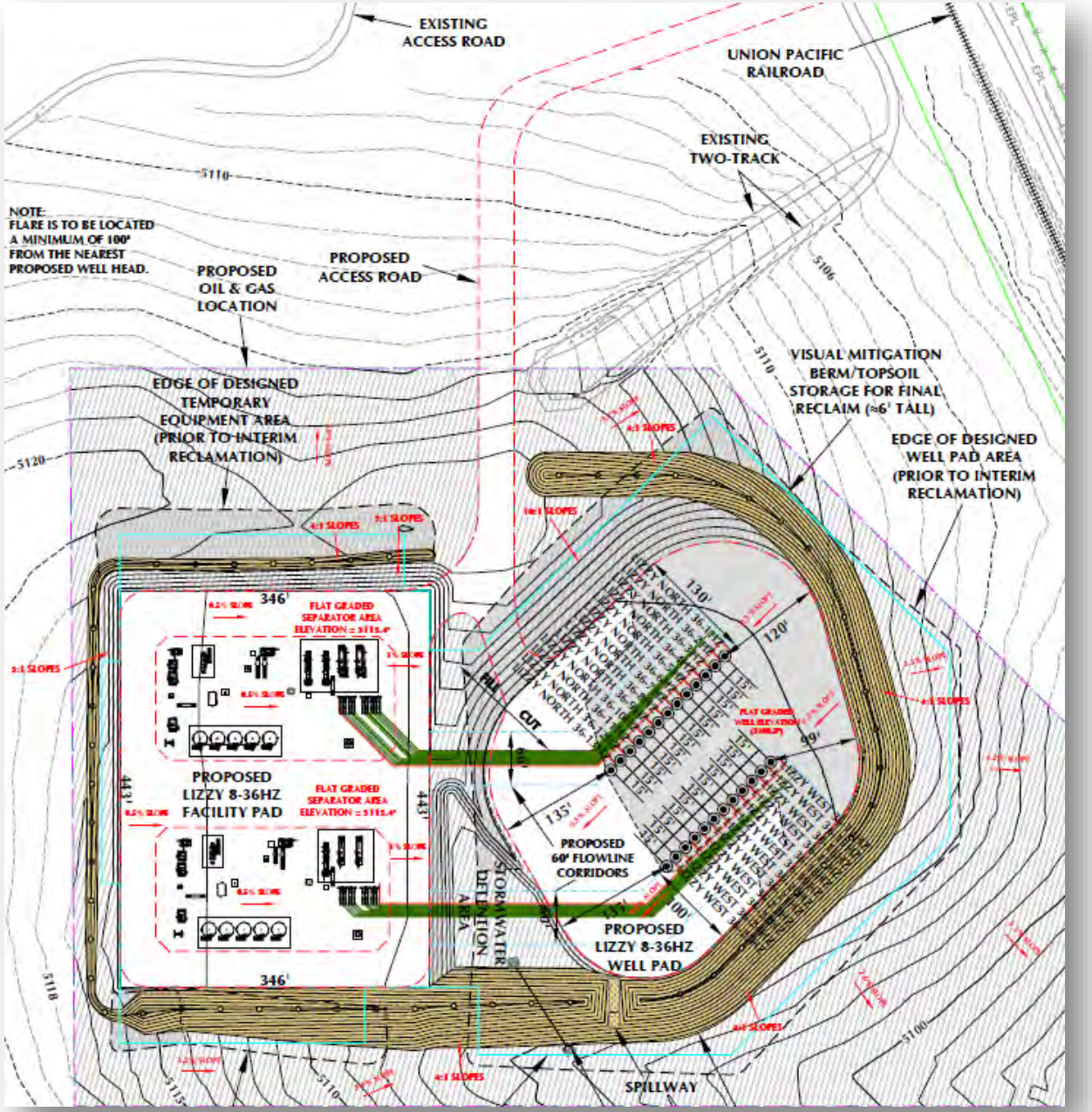
Legal Notice No. NTS2828
First Publication: August 10, 2023
Last Publication: August 10, 2023
Publisher: Northglenn-Thornton Sentinel

C

OVERALL SITE PLAN



WELL PAD SITE PLAN



ANALYSIS

City's Review Team

The City retained the services of Environmental Scientist Drezden Kinnaird, REM, with CGRS to assist in the technical review of this application.

- Provided expertise in the review of Oil & Gas Permits
- Especially for local governments

Referrals

- This document was referred out in accordance with code requirements:
  - Weld County – No comments
  - Adams County – No comments
  - Northglenn Police – Statement to Serve
  - NMFR – No comments

ANALYSIS

CONT'D

ECMC Permits

- **Operator seeking approval of an Oil and Gas Development Plan from the Energy & Carbon Management Commission (formerly the COGCC).**
  - Application deemed complete on May 12, 2023
  - Hearing set for Aug. 30, 2023

Land Use

- **The table of allowed uses in the UDO refers to "Oil & Gas Operations" in Section 11-3-6:**
  - Oil & Gas Operations are allowed in non-residential zone districts, including the AG zone district

- **Comprehensive Plan identifies this parcel as an "Area of Focus."**
  - Development or redevelopment is of importance
  - "Industrial/ Commercial" uses; oil production considered industrial

ANALYSIS

CONT'D

Access to the Site

- **Direct access from Weld CR-14 (Colorado Boulevard):**
  - ROW permit from Weld County received authorizing access and intersection improvements
- **UDO requires the access road to meet specific design requirements.**
  - Civil plans will need to be reviewed and approved by Public Works prior to authorizing construction

Site Visual Mitigation

- **Berms will be constructed around the east and south sides of the pad site.**
- **The site of the pad is internal to Section 36, and is not directly visible from any public ROW.**

ANALYSIS

CONT'D

Site Logistics and Drilling

- **There will be 25 oil and gas wells from one surface location.**
- **Pad construction time will be six weeks.**
- **Once constructed, the following are the phases of well operation:**
  - **Drilling** – Approximately 25 days, consists of drilling and cementing of casting pipes for each well
  - **Completions** – Consists of well preparation, fracture stimulation, and preparing the well for production sales
  - **Production** – After completion fleet has cleared the location, the wells are connected to production and gathering equipment; generally removed from this site via a pipeline; this phase may last around 30 years.
  - **Plugging** – Cementing of the well after production is complete and removal of flowlines
  - **Abandonment** – Remediation and reclamation of the well site

ANALYSIS

CONT'D

Drainage and Water Quality

- Public Works has reviewed the Stormwater Pollution and Prevention Plan and Erosion Control Plan and they meet City standards and specifications.

Utilities

- No City public utilities are required for the proposed well pad site.

RECOMMENDATIONS

Staff is recommending City Council approve the following:

- **CR-115 – Oil & Gas Permit for Kerr McGee Oil & Gas Onshore LP for the Lizzy Pad Site, subject to the following conditions:**
  1. All permitting required by the State of Colorado
  2. If any of the State's review modifies the Oil and Gas Permit, it will need to be updated. Any substantial modifications that might alter the intent of this permit will be required to be accepted by the City Council.
  3. Civil, grading, right-of-way, and building construction drawings shall be submitted for review and approved prior to commencing construction. Civil drawings shall include specification for the private access drive in compliance with the requirements of Section 11-3-6(I).
  4. A final as-built survey shall be submitted once the facility is constructed to verify the facility complies with the 1,000-foot setback from the property line of the Wastewater Treatment Plant.

APPROVAL CRITERIA

- Staff provided an analysis of these criteria in the Planning Commission staff memorandum (pages 5-7 of the document).
- Staff finds that the proposed Oil & Gas Permit is consistent with the approval criteria outlined in the UDO for Oil & Gas Permits and the Comprehensive Plan.
- In general, staff finds that the application includes all of the required information outlined in the code.
- Additionally, the proposed site location complies with all location criteria outlined in the code and is not within 1,000 feet of any platted residences, schools, day cares, or City-owned facilities.
- To the extent that the City has environmental regulations pertaining to Oil & Gas facilities, the proposal meets or exceeds those regulations.
- Further, the site will be subject to State environmental regulations and permitting requirements.

PLANNING COMMISSION REVIEW

- **The Planning Commission reviewed this application at their Aug. 1, 2023 meeting.**
- **Planning Commission voted unanimously to recommend approval of the Lizzy Pad Oil & Gas Permit to City Council, subject to four conditions.**
- **A resolution outlining the Planning Commission's recommendation for approval and conditions has been attached to the Council memorandum along with the staff report presented to the Commission for reference purposes. This staff report provides more complete discussion of the application as it relates to the UDO criteria for Oil & Gas Permits.**

CITY COUNCIL OPTIONS

1. **Approve the request, with or without conditions or stipulations;**

2. **Deny the request for reasons stated; or**

3. **Table the request for further consideration or more information.**

COUNCIL CONSIDERATIONS

Any conditions of approval will need to include the following considerations or factors outlined in Section 11-3-6(e)(1)(H):

a) Site-specific factors of the proposed new oil and gas location;

b) The extent the Best Management Practices can be used to prevent significant degradation of the health, safety, and welfare of area residents and the City;

c) The extent to which conditions of approval will promote the use of existing facilities and reduction of new of surface disturbance;

d) The extent to which legally accessible and technologically feasible alternative sites exist for the proposed new oil and gas location; and

e) The extent to which the proposed oil and gas location is within land used for residential, industrial, commercial, agricultural, or other purposes.

QUESTIONS?

CITY OF Northglenn

CITY OF NORTHGLENN
CITY COUNCIL

LIZZY OIL & GAS PERMIT (OGP)

AUGUST 28, 2023

KERR MCGEE OIL & GAS ONSHORE LP (KMOG)

Colorado Operations

- KMOG, a subsidiary of Oxy USA Inc., is one of the largest producers of oil and natural gas in Colorado
- In the past five years, we have drilled over 1,400 horizontal wells and plugged over 3,200 wells
- Our employees live in more than 80 communities along Colorado's Front Range

Zero Routine Flaring

- We have achieved zero routine flaring in our Colorado operations
- Zero Flaring is just a small part of the company's global commitment to reduce GHG emissions in our operations and more efficiently use valuable methane resources

Oxy Low Carbon Ventures (OLCV)

- Our OLCV subsidiary is leading the way in transformational and sustainable business models that use human-made CO_2 emissions in new ways. We bring over 50 years of carbon management expertise safely, securely, and permanently storing approximately 20 million metric tons of CO_2 annually.
- In Colorado, we have partnered with industry, national laboratories, and academia to drill twin high-temperature geothermal wells. We are also working on a Carbon Utilization and Storage Partnership grant with the Colorado School of Mines.

Partner of Choice

- We are committed to operating responsibly; providing safe, healthy and secure workplaces; protecting the environment; maintaining high ethical standards; upholding and promoting human rights; benefiting our stakeholders; and respecting cultural norms and values, everywhere we operate
- We are proud to be active in the communities where we operate and sponsor events like Weld County Food Bank, Habitat for Humanity, and Wish for Wheels

HOW DO WE PRODUCE OIL & NATURAL GAS?

DRILLING *5-7 days/well*

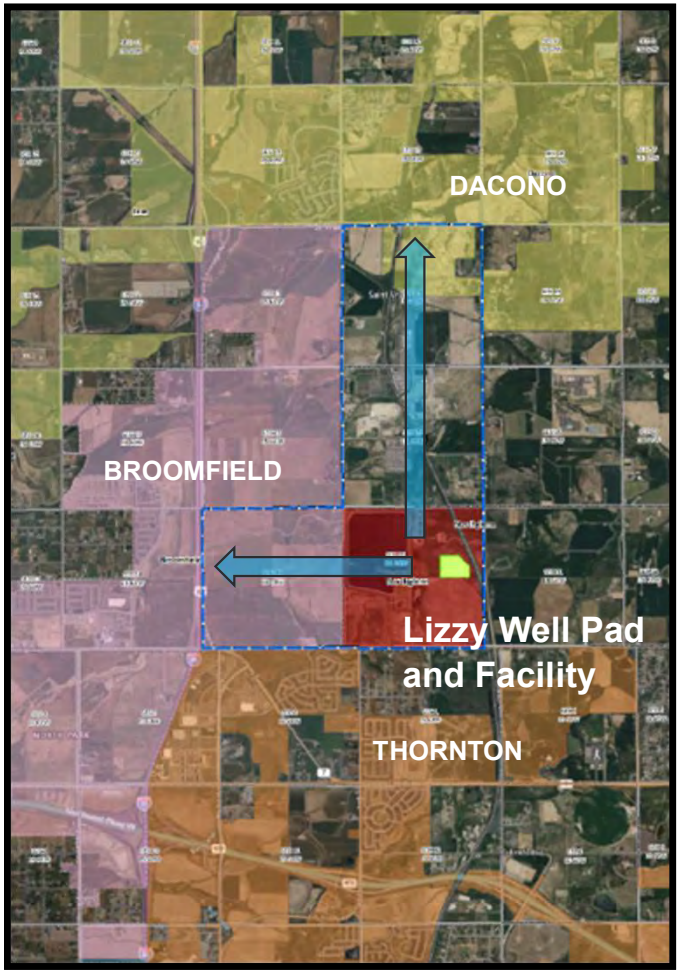
HYDRAULIC FRACTURING *5-8 days/well*

PRODUCING WELL *20+ years*

LIZZY OIL & GAS PERMIT - PERMITTING REQUIREMENTS

- Senate Bill 181 approved in 2019 - giving local governments oil and gas siting authority
- In 2019, the City of Northglenn adopted new O&G regulation, including Best Management Practices (BMPs), minimum setback requirements, and land use siting only in non-residential zoned districts
- KMOG has been meeting with the City of Northglenn since March 2022, which has consisted of 6 meetings, numerous calls and emails, to review the city's permit requirements
- KMOG comprehensive Oil & Gas Permit meets these minimum standards and, in many cases, exceeds those standards
- The Colorado Energy Carbon Management Commission (ECMC formerly known as COGCC) also regulates oil and gas - KMOG must obtain approval through the filing, review and approval of an Oil and Gas Development Plan (OGDP).
- Colorado Department of Health and Environment (CDPHE) – Air Monitoring Plan
- Weld County Public Works Department regulates access permitting onto Colorado Blvd. (WCR 13)

LIZZY 8-36HZ PROJECT OVERVIEW



- Location - west of Colorado Blvd. between CR 2 and 4;

  S/2 NE/4 Section 36, T1N R68W;
- Proposing 25 wells and one production facility; 13 north & 12 west bound horizontal wells, 2-mile lateral wells
- Capturing ~2,560 mineral acres with this proposed development
- Disturbance Area – Construction Phase 19.29 acres
- Interim Reclamation Area – Production Phase – 7.13 acres
- KMOG/OXY owns the property (surface)

NORTHGLENN REVIEW CRITERIA

Unified Development Ordinance
Article 3
Use Regulation
Section 11-3-6 (e) (1) (I) (i)
Criteria a) through i)

NORTHGLENN REVIEW CRITERIA

a) The requirements of subsection 11-3-6(d)(1) and this Article are met

Initial Application and Authorization - ***Complete***

b) The site plan for the well site complies with the requirements of subsection 11-3-6(d)(3)(A)

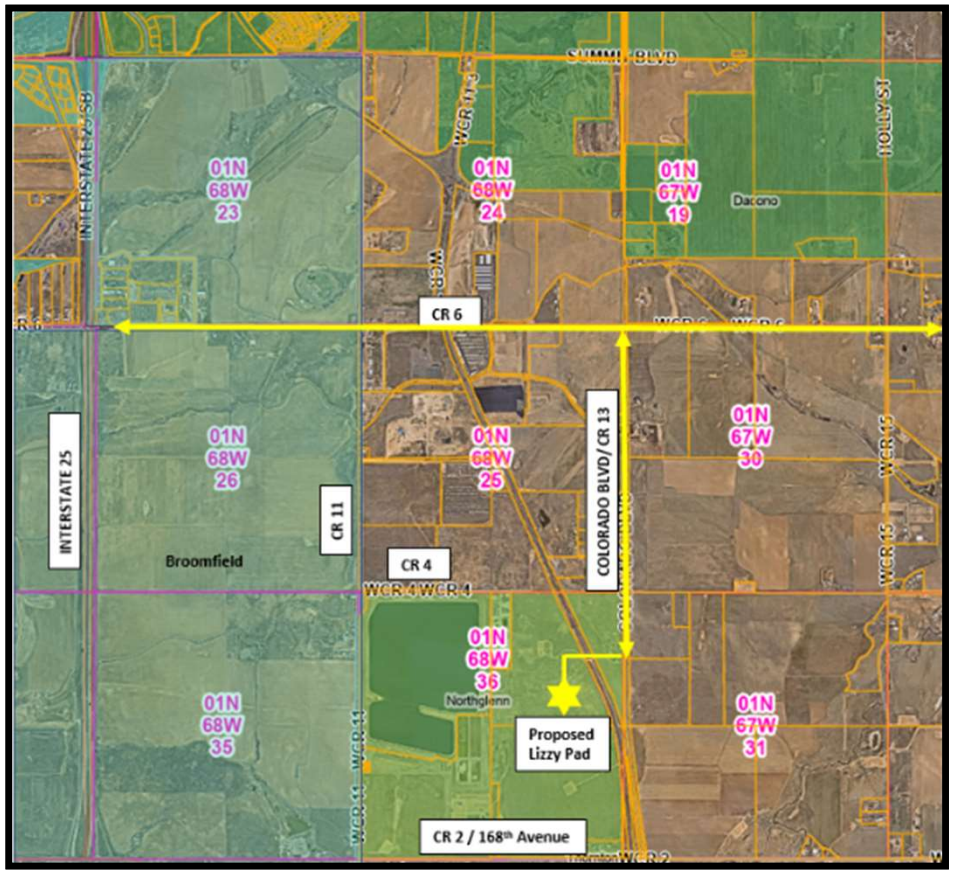
Site Plan prepared per the code requirements - ***Complete***

NORTHGLENN REVIEW CRITERIA

c) The requirements of subsection 11-3-6 (d)(3)(B) are met

Traffic Control Plan - ***Complete***

- *Primary traffic access to this well site will be off Weld County Road 13 (Colorado Blvd.) with any truck traffic associated with the well site to come from Weld County Road 6 to the north. WCR 13 is not in the Northglenn city limits; truck traffic will be directed away from the Northglenn City Limits*
- *Right-of-way and access permits have been obtained from Weld County*



NORTHGLENN REVIEW CRITERIA

d) The written narrative complies with the requirements of subsection 11-3-6(d)(3)(C) -
*Written Narrative per the code requirements – **Complete** including the following 18 Plans*

- *Operating Plan*
- *Emergency Action Plan (EAP)*
- *Transportation and Traffic Control Plan*
- *Nuisance Prevention Plan – Noise, Light and Odor Mitigation Plans*
- *Electrification Plan*
- *Air Quality Mitigation Plan*
- *Waste Management Plan*
- *Hazardous Material Management Plan*
- *Water Quality Monitoring Plan*
- *Spill Prevention, Control and Countermeasures Plan (SPCC)*
- *Stormwater Pollution Prevention and Erosion Control Plan*
- *Interim Reclamation Plan*
- *Visual Mitigation Plan – included in the Site Plan package*
- *Preliminary Drainage and Erosion Control Plan*
- *Dust Mitigation Plan*
- *Site Security Plan*
- *Risk Management Plan*
- *Wildlife Protection Plan*

NORTHGLENN REVIEW CRITERIA

e) The application complies with the location restrictions provided in subsection 11-3-6(p) unless a waiver is obtained.

*Location and Distance Requirements Zoning - **Complete***

- *The well site meets the 1,000 foot the setback requirements from platted residences, schools (existing or proposed) state licensed day care or city owned facilities.*
- *The site is at least 1,000 feet from the Northglenn Wastewater Treatment Facility to the west*

NORTHGLENN REVIEW CRITERIA

f) When applicable, the application complies with the provisions for wildlife mitigation procedures provided in subsection 11-3-6(q)

Wildlife Protection Plan was prepared per the code– ***Complete***

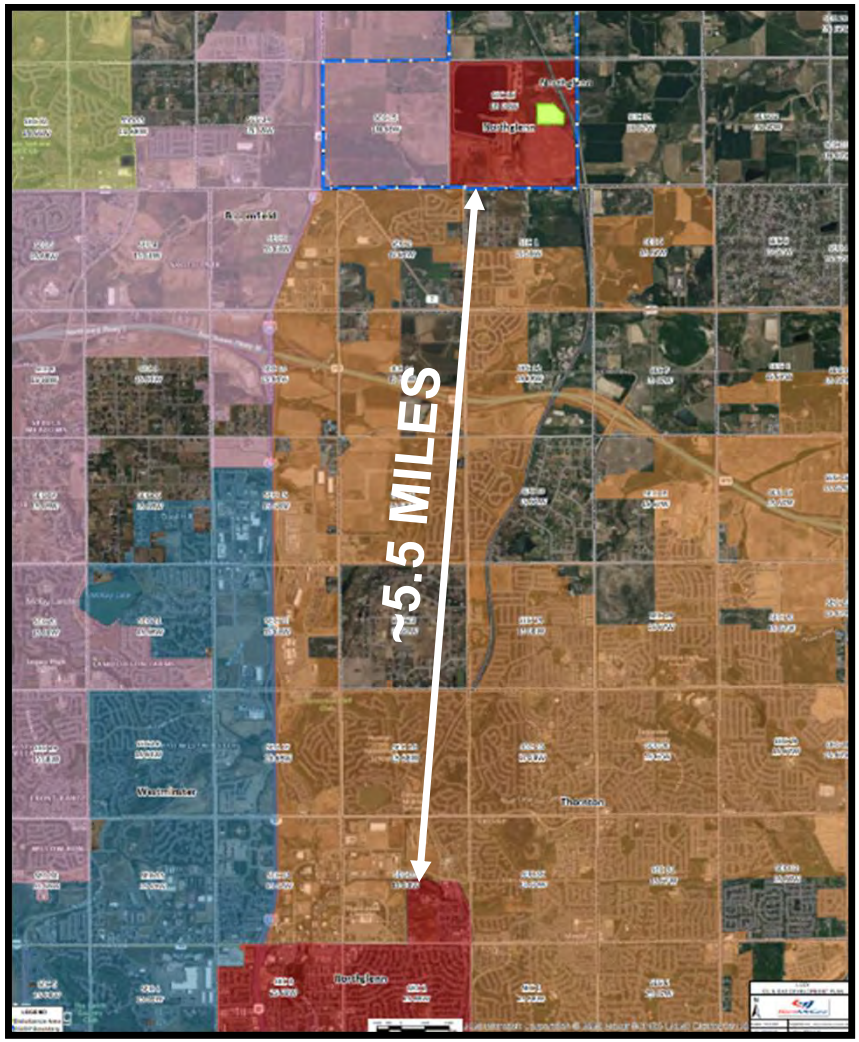
- *Based on environmental surveys completed by a third-party environmental consultant in 2021 and 2022 this site is outside High Priority Habitat for wildlife as defined by Colorado Energy and Carbon Management Commission (ECMC) and recognized and supported by the Colorado Parks and Wildlife (CPW)*
- *Therefore, no mitigaiton is needed*

NORTHGLENN REVIEW CRITERIA

g) The proposed facility will not result in a substantial or undue adverse effect on adjacent property, the character of the neighborhood, traffic conditions, parking, public improvements, either as they presently exist or as they may exist in the future

The Lizzy site will not result in substantial or undue adverse effects

- *The existing property currently contains oil and gas land uses (wells and production facilities)*
- *The adjacent property is the Northglenn Wastewater Treatment Facility and North Metro Fire Complex*
- *Traffic will be directed north on Colorado Blvd. away from Northglenn*
- *After initial construction phase the Lizzy site will be relatively passive for the life of the wells (20+ years)*
- *While this site is in "Section 36" within the in the Northglenn City limits this location is 5.5 miles north from the heart of the City and adverse impacts to the character of the neighborhood will not occur*



NORTHGLENN REVIEW CRITERIA

h) Conformance with the City of Northglenn Comprehensive Plan or other local planning documents.

- *The Northglenn Comprehensive Plan designates this area as future Industrial and Commercial land uses – Oil and gas is considered industrial therefore, in compliance with the Northglenn Comprehensive Plan*

i) The proposed use will not significantly degrade the environment or public health, safety and welfare

- *KMOG deploys industry leading best management practices which are protective of the public heath, safety and welfare*
- *Northglenn BMPs that were adopted in 2019 have been carefully reviewed and the Lizzy Oil and Gas Permit submittal meets or exceeds these BMPs (7 categories including over 250 specific BMPs)*
- *Colorado has the most highly regulated oil and gas permitting and operational requirements in the country and we are proud to say we are leaders in the state, with many enhanced standard practices which we would like to share with you next*

INDUSTRY LEADING BEST MANAGEMENT PRACTICES

Water-on-Demand Pipeline System (WOD)

KMOG has over 180 miles of underground pipeline that stretch the length of the 20 by 30-mile field to transport water for completion operations, (removing estimated 120,000 truck trips)

Integrated Operations Center (IOC)

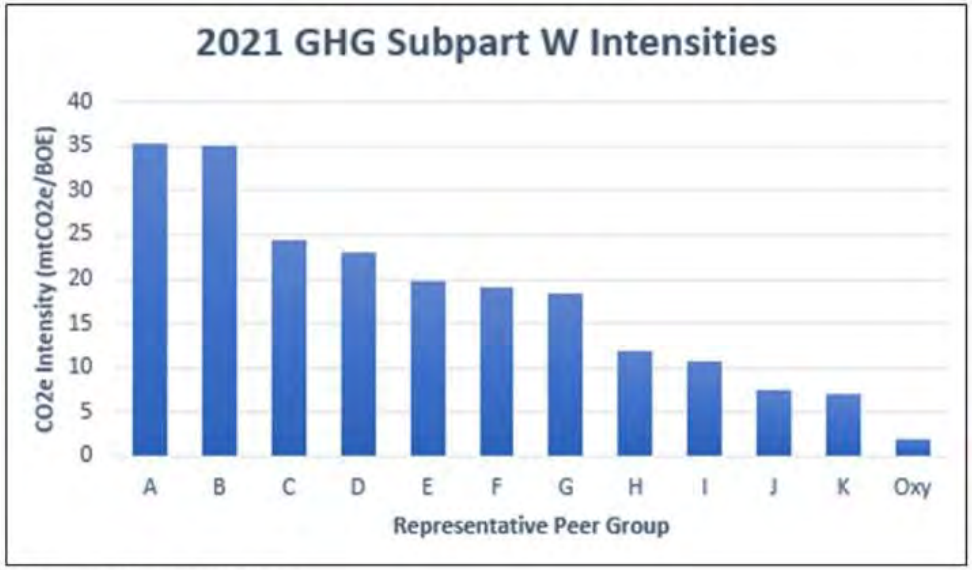
A 24-hour center provides real-time monitoring and remote operation capabilities for most wells, water tanks, and facilities avoiding traffic, dust and emission. From the IOC, personnel can turn wells and equipment on and off, measure tank levels, verify pressures and temperatures

Noise Mitigations

Utilize upgraded drilling rig with noise-reducing features and quiet completion technology during hydraulic fracturing

Lowest Emissions Intensity

KMOG has the lowest emissions inventory intensity of any oil and gas operator in the DJ Basin and has already met the CDPHE Regulation 22 - 2030 target



*From EPA FLIGHT data

INDUSTRY LEADING BEST MANAGEMENT PRACTICES

Drilling Odor and Emission Reduction Practices
Group III drilling mud and closed loop system

Zero routine flaring in all Colorado Operations - Zero Flaring is just a small part of the company's global commitment to reduce GHG emissions in our operations and more efficiently use valuable methane resources

Stakeholder Relations Team - A resource dedicated to communities since 2014. We seek feedback and learn from stakeholders to tailor our operations. We are committed to transparency and sharing information about our operations. Provide updates on project on our website

LIZZY BMPS

Electrification Plan

- KMOG will use an electric production drilling rig and the production facility will be powered from electricity supplied by United Power
- This electric drilling rig reduces noise and emission associate with traditional operations

Compatible Surrounding / Future Uses

- Located adjacent to the Northglenn Wastewater Treatment Facility and the North Metro Fire Rescue District Complex
- Northglenn's Comprehensive Plan – commercial and industrial uses
- Located over 2,000 feet from residential units, High Priority Habitat for Wildlife, and school property/facilites

Visual Mitigation / Screening

- Construction Phase – 32 ft. tall
- Production Phase: Decorative black steel fence
- Production Phase: 6 ft. tall berm

Safety

Locking system requested by the North Metro Fire District

Air Modeling

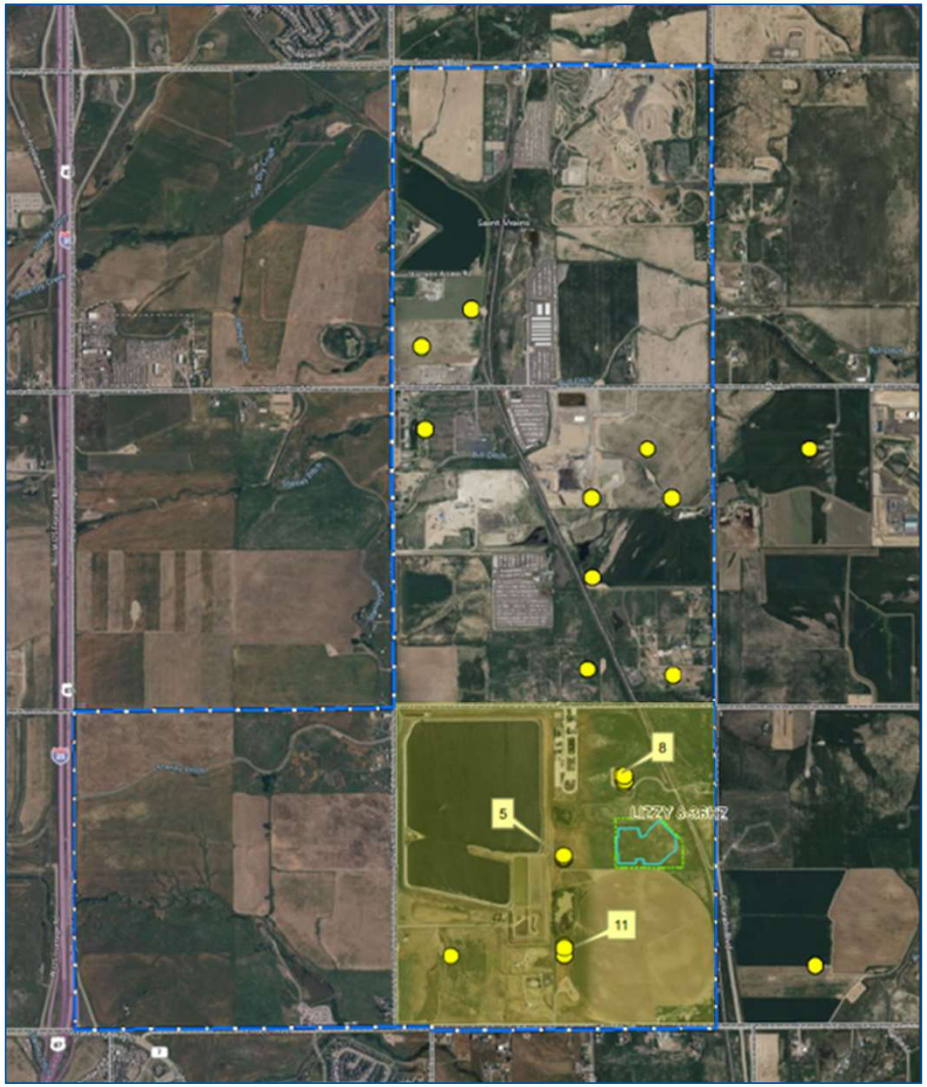
Demonstrate through air modeling that operation will be compliant with ambient air quality standards and health guidance values

LIZZY BMPS

Decommissioning of Existing Oil and Gas Wells and Facilities

- KMOG will retire (plug and abandon - P&A) 36 wells and 8 production facilities as part of this new development, 25 of these wells are in the City of Northglenn limits

- This work will include the reclamation of 15.2 acres. The proposed Lizzy site will be approximately 7.2 acres, for a net overall reduction of oil and gas development of 8 acres



PHASES OF OPERATIONS &TIMELINE

- **Pad Construction ~4 weeks**
  - September 2023 (19.29 acres)
- **Surface Drilling ~3-4 weeks**
- **Horizontal Drilling ~18-26 weeks**
- **Well Completions ~14 – 16 weeks**
- **Facility Construction ~12 weeks**
- **Interim Reclamation ~4 weeks**
  - 7.13 acres
  - Plan to complete construction phase in the summer of 2025

Schedule provided is an estimate and subject to changes based on various conditions including rig availability and economic condition.

THANK YOU

Developed in 2014, our Stakeholder Relations team is a dedicated resource for community members.

Stakeholder Relations
1099 18th Street, #700 Floor,
Denver, CO 80202
Coloradostakeholder@oxy.com
www.OxyColoradoStakeholder.com

Oxy Integrated Operations Center (IOC)
970.515.1500
Real-time monitoring of wells, water tanks, and production facilities
24 hours a day, 365 days a year

KMOG/OXY SUBJECT MATTER EXPERTS

Kris Honas – Drilling Manger
Cory Altenburg – Completions Manager
Chad Schlichtemeier / Carissa Krey – HSE Team - Air specialist
Stephanie Madrid – Stakeholder Relation Team
Joseph Riemer – HSE – Specializing wildlife and reclamation
Julia Eichenberger – Facility Design Engineer
Justin Nelson – Construction Team - managing noise/light mitigations
Anthony Radar – Surface Land negotiator
Andy Lytle – Regulatory Manager
Danielle Piernot – Director of Regulatory for the Rockies

RESOLUTION 2023-10
NORTHGLENN PLANNING COMMISSION

A RESOLUTION PROVIDING A FAVORABLE RECOMMENDATION TO THE CITY COUNCIL FOR APPROVAL OF AN OIL AND GAS PERMIT FOR THE LIZZY PAD WELL SITE LEGALLY DESCRIBED AS TOWNSHIP 1 NORTH, RANGE 68 WEST, 6TH P.M. S2NE SECTION 36, IN THE CITY OF NORTHGLENN, COUNTY OF WELD, STATE OF COLORADO.

WHEREAS, Section11-3-6(e)(1)(l) of the Northglenn Municipal Code requires that the Northglenn Planning Commission review and make recommendation to the City Council of any application for an Oil and Gas Permit; and

WHEREAS, the Northglenn Planning Commission therefore desires to make its recommendations to the City Council as required by law; and

WHEREAS, the Planning Commission has found that the application satisfies the applicable criteria for an Oil and Gas Permit under 11-3-6(e)(1)(l)(i) for purposes of approving the proposed Lizzy Pad Well Site.

BE IT RESOLVED BY THE PLANNING COMMISSION OF THE CITY OF NORTHGLENN, COLORADO, THAT:

Section 1. The City of Northglenn Planning Commission hereby provides a favorable recommendation to the City Council for an Oil and Gas Permit for the Lizzy Pad Well Site applied for by Kerr McGee Onshore LP. The Planning Commission's recommendation is subject to the following conditions:

1. All permitting required by the State of Colorado.
2. If any of the state's review modifies the information contained in this Oil and Gas Permit, the permit will need to be updated. Any substantial modifications that might alter the intent of this permit will be required to be accepted by the City Council.
3. Civil, grading, right-of-way, and building construction drawings shall be submitted for review and approved prior to commencing construction. Civil drawings shall include specifications for the private access drive in compliance with the requirements of Section 11-3-6(l).
4. A final as-built survey shall be submitted once the facility is constructed to verify the facility complies with the 1,000-foot setback from the property line of the city's wastewater treatment facility.

DATED this 1st day of August 2023

Sonia Di Carlo
Planning Commission Chair

ATTEST:

Rebecca Smith, AICP
Secretary

Planning & Development
11701 Community Center Drive
Northglenn, CO 80233
P: 303-450-8739
F: 303-450-8708
northglenn.org

ATTACHMENT 4

PLANNING AND DEVELOPMENT DEPARTMENT

MEMORANDUM

DATE: August 1, 2023

TO: Planning Commission

FROM: Eric Ensey, Senior Planner

THROUGH: Becky Smith, Planning Manager
Brook Svoboda, Director of Planning and Development

SUBJECT: Case #O&G-1-23 Lizzy Pad Oil and Gas Permit (Kerr McGee Oil & Gas Onshore LP)

REQUEST

The applicant, Kerr McGee Oil & Gas Onshore LP, is seeking approval of an Oil and Gas Permit for the siting of an oil well pad on 9.88 acres located in Section 36 of Weld County.

RECOMMENDATION

Staff Recommendation:

Staff recommends the Planning Commission recommend approval of the Oil and Gas Permit for the proposed oil well pad and extraction. Staff is recommending the following conditions of approval for the Planning Commission's consideration of the Major Site Plan:

1. All permitting required by the State of Colorado.
2. If any of the state's review modifies the information contained in this Oil and Gas Permit, the permit will need to be updated. Any substantial modifications that might alter the intent of this permit will be required to be accepted by the City Council.
3. Civil, grading, right-of-way, and building construction drawings shall be submitted for review and approved prior to commencing construction. Civil drawings shall include specifications for the private access drive in compliance with the requirements of Section 11-3-6(I).

Recommended Motions:

The following is a recommended motion for the proposed Oil and Gas Permit:
"I move to approve Resolution 23-10, approving an Oil and Gas Permit for Kerr McGee Oil and Gas Onshore LP, subject to the conditions outlined therein."

DISCUSSION

Background

Regulations
The regulation pertaining to Oil and Gas Permits are located in Chapter 11 of the Northglenn Municipal Code, specifically Section 11-3-6 of the Unified Development Ordinance. The regulations can be accessed here: http://municode.northglenn.org/ch11/content_11-3.html#11-3-6.

Application Submittal Requirement and Filing Fees
Section 11-3-6(d) outlines application submittal requirements for new oil and gas operations. The following is a summary list of those requirements:

- Application form and authorization
- Fees and financial assurances
- Substantive application, including site plan, traffic control plan, and a written description of the project

Attachment C includes the complete application submitted by the applicant containing all of the information required above and all other plans required in this Article.

Site Data

Location	Property is in Section 36 of Weld County approximately ½ mile north of County Road 2 (E. 168th Ave.) and just west of County Road 13 (Colorado Blvd.).
Subdivision	Township 1 North, Range 68 West, 6th P.M S2NE Section 36, in the City of Northglenn, County of Weld, State of Colorado.
Zoning	The subject site is zoned Agricultural (AG).
Existing Land Use	Agriculture
Acreage	9.88 acres for the pad site. This pad site is part of an over-all 136 acre parcel of land owned by Anadarko (Kerr McGee).

Characteristics of the Site (see Attachment A for an Aerial Vicinity Map)

- The pad site is location in Section 36 of Weld County.
- The site is currently undeveloped.
- The city's water treatment pond (Bull Reservoir) is located 1,000 ft. to the west of the pad site.
- North Metro Fire Rescue has a training facility northwest of the pad site.
- There is an existing oil well on the site located approximately 500 ft. north of the proposed pad site; operated by Steele State.

Zoning and Surrounding Land Uses (see Attachment B for a Zoning Map of the Vicinity)

The following table summarizes the zoning and land uses for the properties surrounding this entire property containing the site:

	Zoning	Land Use
North	(Weld County)	Unincorporated Weld County; oil well site and rural residential
South	AG (Agricultural)	Vacant agricultural land
East	(Weld County)	Agricultural/Rural Residential
West	PF (Public Facilities)	Northglenn Wastewater Treatment Reservoir (Bull Reservoir)

Notification Requirements

Notification for this application was conducted in accordance with the requirements of Section 11-3-6 (e) of the UDO establishes the notification process for Oil and Gas Permits. Notice of the public hearing was published in the Northglenn-Thornton Sentinel at least 15 days prior to the public hearing. Additionally, a mailed notice was sent to all property owners within 1,000 feet of the property, and a sign was posted at least 15 days prior to the public hearing.

ANALYSIS

The following sections include an analysis of various topics related to the application being presented to the Commission. The proposed development was reviewed in accordance with applicable section of Chapter 11 of the Municipal Code – The Unified Development Ordinance (UDO), and the Northglenn Comprehensive Plan.

City's Review Team.

The city retained the services of Drezden Kinnaird, REM, Environmental Scientist, with CGRS. Attachment B includes the resume for Ms. Kinnaird. Staff brought Ms. Kinnaird on to provide expertise in the review of oil and gas permits, as these are not applications typically reviewed in Northglenn. Ms. Kinnaird assists local municipalities in review of this type of application.

Referrals

Section 11-3-6(e)(1)(D) indicates that referrals be sent out to a variety of referral agencies, including: Adams County, the Police Department, and the Fire District. Because the proposed well pad site is located in Weld County, the city also sent a referral to them. Neither county agency responded to the referral at the time of the Planning Commission hearing. North Metro Fire District did not have any issues with the project and the applicant had worked directly with them as part of their emergency preparedness planning. Additionally, the city's Police Department submitted a letter to the applicant a "will serve" letter in the event of an emergency.

ECMC (formerly COGCC) Permits.

The operator is concurrently seeking approval of an Oil and Gas Development Plan (OGDP) from the Energy & Carbon Management Commission (ECMC), formerly known as the Colorado Oil & Gas Conservation Commission (COGCC). The OGDP application was submitted to COGCC on 12/08/2022 and passed the completeness determination on 05/12/2023. Following completeness determination, ECMC Permitting & Engineering Staff are to conduct a technical review of the application. Once the application is reviewed by Staff, the Director will provide a recommendation. A hearing is tentatively scheduled for 08/30/2023 (OGDP Docket No. 221200350 KMOG Lizzy). ECMC is aware that the city regulates the siting of Oil and Gas

Locations with respect to this location and that a siting permit application has been submitted to the city.

Land Use
The city's Table of Allowed Uses in Article 3 of the UDO, refers "Oil and Gas Operations" to Section 11-3-6, which contains the regulation for Oil and Gas Operations. Section 11-3-6(p) allows for well sites to be located in non-residential zone districts, including the AG (Agricultural) district. The location of the pad site is within a parcel of land zoned AG.

The city's Comprehensive Plan identifies this parcel of land as an "Area of Focus," meaning these represent development or redevelopment area of unique importance to the city. This parcel is identified for future "Industrial/Commercial" uses. However, the Comprehensive Plan doesn't go into more specifics than that as to this particular uses. However, generally speaking oil production is generally considered an industrial use.

Access to the Site.
The well pad site being proposed will take direct access from Weld County Road 13 (Colorado Boulevard). The application includes a Right-of-Way Permit from Weld County authorizing access and intersection improvements for the access road.

Section 11-3-6(l) of the city's Oil and Gas Regulations has specific requirements for the proposed access road. The proposed access road will need to comply with these requirements. Staff will require separate civil plans to be reviewed and approved by the city's Public Works Department prior to the city authorizing construction on the site that shows compliance with these standards.

Site Visual Mitigation.
The applicant is proposing to construct berms around the east and south sides of the pad site to mitigate any visual impact from the nearest roadways, those being CR-13 (Colorado Blvd.) to the east and CR-2 (E. 168th Ave.) to the south. There are photosimulations included in their application that show the visual mitigation provided by those berms.

Site Logistics and Drilling.
The application indicates that this site is intended to horizontally drill 25 oil and gas wells from one surface location. The initial pad construction is expected to take approximately six weeks. Following pad construction, the site logistics can be broken down into the following stages: Drilling, completions, production, plugging and abandonment, and reclamation.

Drilling operations are expected to take approximately six to nine months (under normal circumstances). After the location has been prepared, a drilling rig will move onto location to drill the surface intervals of the wells and cement the surface pipe to protect ground water. This process will take approximately one day per well under normal circumstances, subsequently a 25 well pad will take 25 days to complete initial surface drilling operations including cementing the surface casing pipes. Cement is placed in the space between the casing and the wall of the hole. The cement anchors the casing, provides increased burst resistance, and contains the fracturing and produced fluids. The cement is also designed to special criteria. The cement is then allowed to cure and subsequently the rig is moved off location. At this point the drilling phase is complete.

Upon the conclusion of production drilling operations, and as dictated by operational schedules, the well pad is then prepped for completions operations. These completion operations consist of

well preparation, fracture stimulation, and preparing the well for production to sales. The fracture stimulation operation is conducted to stimulate the flow of hydrocarbons from the targeted geologic formation to the wellbore and up to the wellhead. Fracture stimulation consists of pumping a water and sand mixture into the wellbore at a high pressure and flow rate. At the end of the fracture stimulation operation, the well is prepared for long-term production. A coiled tubing unit is utilized to mill the plugs set in the wellbore to isolate the stimulation stages and to clean out the wellbore. Production tubing is installed to direct the flow of hydrocarbons inside the wellbore to the wellhead at surface.

The production phase may overlap the completion phase. After the completion fleet has cleared the location, the wells are connected to production and gathering equipment. When a well is completed for production, all disturbed areas no longer needed will be restored and revegetated as soon as practicable. The production phase may last around 30 years. Oil and gas produced during the production phase will be removed from the site via pipeline.

Plugging and abandonment is the cementing of a well and removal of its associated equipment. This also includes the removal of flowlines after all the wells on the pad are plugged and the remediation and reclamation of the well site.

Drainage and Water Quality.
The Public Works Department has reviewed the Stormwater Pollution Prevention and Erosion Control Plan prepared for the application.

Utilities.
No city public utilities are required for the proposed well site.

APPROVAL CRITERIA

Applicable Approval Code Provisions.

The following sections of the code should be considered with the review of this application.

- Section 11-3-6 of the UDO (Oil and Gas Operations)

Criteria Analysis.

Section 11-3-6 (e)(1)(I) outlines the review criteria to be used by the Planning Commission in consideration of an Oil and Gas Permit. A brief staff analysis is provided for each criteria:

Criteria:	**Staff Analysis:**
a) The requirements of subsection 11-3-6(d)(1) and this Article are met.	This subsection refers to the “Initial Application Form and Authorization.” This section requires specific information about the applicant and operator, location of the property, and information on the mineral lease. The applicant’s information included in Attachment C contains all of the information required in this Article.
b) The site plan for the well site complies with the requirements of subsection 11-3-6(d)(3)(A).	This subsection refers to the “Site Plan” required as part of the applicant’s submittal. There are a number of different specific requirements outlined in this subsection that are to be included in as part of the site plan for the proposed well site, including but not limited

	to layout of the proposed site, surrounding utilities and structure, any easements or right-of-way, etc. Staff has reviewed the site plan and found that it complies with all of the requirements of this subsection.
c) The requirements of subsection 11-3-6(d)(3)(B) are met.	This subsection refers to the "Traffic Control Plan" for the site. The applicant indicates that primary traffic access to this well site will be off of Weld County Road 13 (Colorado Blvd.) with any truck traffic associated with the well site to come from Weld County Road 6 to the north, and not access Weld County Road 2 (E. 168th Avenue) in front of the waste water treatment plant. The applicant has provided a right-of-way permit from Weld County authorizing access to CR-13. In this case there is not direct access to a CDOT roadway, so no CDOT permit is necessary.
d) The written narrative complies with the requirements of subsection 11-3-6(d)(3)(C).	This subsection refers to the "Written Narrative" provided by the applicant. There are a number of different plans required in this subsection to be included as part of the application, including but not limited to, the following: Emergency Response Plan, Nuisance Prevention Plan, Air Quality Mitigation Plan, Hazardous Material Management Plan, Water Quality Monitoring Plan, Stormwater Plan, Visual Mitigation Plan, etc. All of these plans have been included in the application and are complete.
e) The application complies with the location restrictions provided in subsection 11-3-6(p) unless a waiver is obtained.	This subsection outlines specific location and distance requirements for well sites. The zoning of the property is AG (Agricultural), which is a permitted locational zone district identified in the code. Additionally, the code does not permit a well site to be within 1,000 ft. from any platted residences, schools (existing or proposed), state licensed day cares, or city-owned facilities. Staff has reviewed the proposed site plan and determined that the proposed well does not impact any of those stated distance stipulations. The site is at least 1,000 ft. from the city's wastewater treatment reservoir. The applicant also purchased a property that had a residential structure on it and removed all structures from that property.
f) When applicable, the application complies with the provisions for wildlife mitigation procedures provided in subsection 11-3-6(q).	The applicant has submitted the required Wildlife Protection Plan as required by the code.
g) The proposed facility will not result in a substantial or undue adverse effect on adjacent property, the character of the	The proposed well pad site has met or exceeded the requirements outlined in the city's Oil and Gas Regulations. The proposal will not result in an adverse effect on the surrounding properties. The existing site

	neighborhood, traffic conditions, parking, public improvements, either as they presently exist or as they may exist in the future.	already contains an oil well pad site operated by State Steele.
h)	Conformance with the City of Northglenn Comprehensive Plan or other local planning documents.	The proposed well pad site would be consistent with the "Industrial/Commercial" land use identified in the city's Future Land Use Map for this site, as the proposed use is industrial in nature.
i)	The proposed use will not significantly degrade the environment or public health, safety and welfare.	The proposed well pad site as proposed is consistent with all of the various plan requirements outlined in the city's Oil and Gas Regulations. To the extent that the city has environmental regulations, the proposal meets or exceeds those regulations. Also, as a condition of approval, this site will be subject to any State of Colorado environmental regulations and permitting requirements.

ADMINISTRATION

Possible Actions by the Planning Commission.

The Planning Commission is not the final approval authority for the review of an Oil and Gas Permit, as City Council will be the approval authority. The Commission's recommendation will be forward to the City Council for their consideration. The Commission's options for recommendation are as follows:

1. Recommend approval of the request, with or without conditions or stipulations;
2. Recommend denial of the request for reasons stated; or
3. Table the request for further consideration or additional information.

Should the Commission desire to include conditions of approval to the application, the following considerations and factors, as outlined in Section 11-3-6(e)(1)(H)(ii), must be considered in order to include a condition:

(a) Site-specific factors of the proposed new oil and gas location;
(b) The extent the Best Management Practices can be used to prevent significant degradation of the health, safety, and welfare of area residents and the City of Northglenn;
(c) The extent to which conditions of approval will promote the use of existing facilities and reduction of new surface disturbance;
(d) The extent to which legally accessible and technologically feasible alternative sites exist for the proposed new oil and gas location; and
(e) The extent to which the proposed oil and gas location is within land used for residential, industrial, commercial, agricultural, or other purposes.

Next Steps.

The Planning Commission is a recommendation body in the review of Oil and Gas Permits. City Council is the final authority review body and will ultimately approve or deny the application. Civil Plans will be required to be reviewed and approved by the city's Public Works Department. Any permitting required by the Building Code or Fire Code will be required to be obtained prior to any construction commencing.

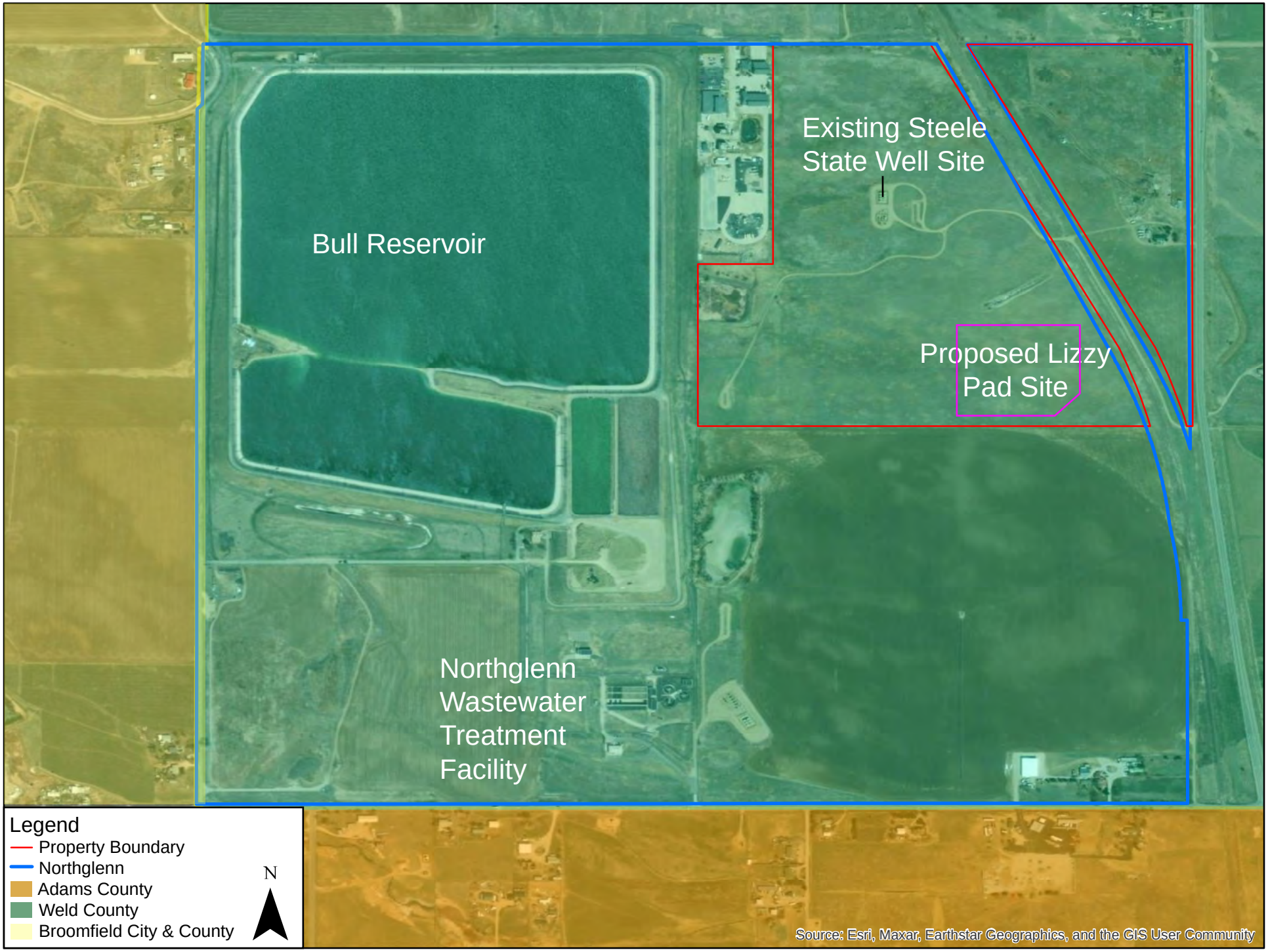
Because this is a use regulated by the State of Colorado, the applicant will also be required to submit any necessary permitting required by the state. This permit would re conditioned on

ATTACHMENTS

Attachment A – Aerial Vicinity Map
Attachment B – Drezden Kinnaird, CGRS Resume
Attachment C – Lizzy Pad Complete Application

Proposed Lizzy Pad Site Vicinity Map

Attachment A



DREZDEN KINNAIRD

dkinnaird@cgrs.com

INTRODUCTION

Drezden Kinnaird is a Project Manager at the CGRS Fort Collins, Colorado office with experience in environmental management systems. Drezden leads a multidisciplinary team that delivers a variety of environmental compliance, consulting, inspection, and reporting solutions for upstream, midstream, and downstream petroleum industry operators; class II UIC disposal facilities; municipalities; data centers, and other businesses/organizations throughout Colorado and Wyoming.

SPECIALIZATION

- General regulatory compliance consulting and multimedia environmental management.
- Liaising for local governments and oil and gas operators along the I-25 corridor in Colorado where a complex interface exists between the competing interests of residential development and oil and gas development.
- Stakeholder participation and technical consulting on behalf of upstream and downstream petroleum industry operators and municipalities.
- Colorado Regulation 7 (5 CCR 1001-9) consulting and compliance. Air quality permitting in accordance with New Source Review and Prevention of Significant Deterioration standards, permit condition compliance, recordkeeping, and reporting.

REPRESENTATIVE EXPERIENCE

- Nine years of experience providing full-service regulatory compliance consulting for oil and gas production operations and class II UIC injection facilities in Colorado.
  - Estimation of hydrocarbon emissions for hundreds of individual emissions sources using advanced calculation methods and modeling. Submittal of necessary reports and permit applications, tracking permitting requirements, and maintaining regulatory compliance.
  - Implementation of new air quality regulations and reporting requirements for oil and gas facilities and gasoline dispensing stations. Review of internal and external programs, adjusting processes accordingly to ensure compliance. Advocating for client's interests during industry stakeholder processes when taking part in APCD and COGCC stakeholder processes.
  - Management of multiple groundwater monitoring programs, from monitoring well installation and groundwater sampling activities to interpretation of analytical results and submittal of technical reports.
  - Collection, analysis, interpretation, and input of data for complex reports and projects related to overall environmental regulatory compliance for oil and gas facilities in Colorado and Wyoming. Ensure compliance continuity during multiple large-scale oil and gas divestitures and acquisitions across the DJ Basin.
- Fiveyears of experience in oil and gas consulting for local governments along the Front Range.
  - Guiding municipal staff members to develop clear and effective regulatory requirements for oil and gas operations.
  - Supplying technical guidance for proposed multi-well pad development and operator agreements.
  - Customizing site inspection services to fit the complex compliance assurance needs and budgetary restraints for local governments.
  - Verification of compliance for oil and gas sites located within municipal jurisdiction.
  - Tracking operator's response to and subsequent cleanup of spills and releases occurring within relevant local government boundaries.

EDUCATION	Bachelor of Science in Environmental Science and Technology with Minor in Environmental Pollution Control and Monitoring from Colorado Mesa University Certificate in Geographic Information Systems (GIS) from Colorado Mesa University

YEARS OF EXPERIENCE	Total (Environmental Consulting) 10 years CGRS Corporate Employee 9 years
REGISTRATION/ CERTIFICATION	▪ Registered Environmental Manger – National Registry of Environmental Professionals ▪ Health and Safety Certifications o 40-Hour HAZWOPER, 8-Hour OSHA Annual Refresher o First Aid/CPR o Safeland USA
ADDITIONAL TRAINING AND PARTICIPATION	▪ Member of Rocky Mountain Environmental Health and Safety Peer Group and Colorado Environmental Management Society ▪ Member of Colorado Oil and Gas Association Air Quality Subcommittee and Colorado Oil and Gas Association Environmental, Health, Safety, and Regulatory (EHSR) Subcommittee ▪ Air Pollution Training Institute - NOX Control, RICE, GHG, Title V ▪ Bryan Research & Engineering, Inc. – ProMax Oil & Gas Processing ▪ COGA – Industry Ambassador Series ▪ Energy & Environment - Oil & Gas Education for Local Government ▪ ESRI Virtual Campus – Geographic Information Systems (GIS), Global Positioning Systems (GPS), and Remote Sensing ▪ Stormwater ONE - Stormwater Management ▪ CDPHE Stormwater Workshop for Construction Activities ▪ Actively involved in environmental regulatory stakeholder and rulemaking processes including AQCC Regulation 3, 7, and 22 ▪ Active participation in COGCC workgroup for calculation of emissions from produced water pits
REGULATORY EXPERIENCE	▪ Colorado Department of Public Health and Environment (CDPHE): Air Pollution Control Division (APCD), Colorado Division of Water Resources (DWR) ▪ Colorado Oil and Gas Conservation Commission (COGCC) ▪ Environmental Protection Agency (EPA) ▪ Local government regulations including Town of Erie, City of Thornton, City of Northglenn, Town of Keenesburg, Weld County, Boulder County, Larimer County ▪ Occupational Safety and Health Administration (OSHA) ▪ United States Department of Transportation (USDOT)

ATTACHMENT 5

Oil and Gas Permit Application
City of Northglenn

Proposed Oil & Gas Wells

Lizzy 8-36HZ
Well Pad and Production Facility
(25 Wells on 1 Pad)

Township 1 North, Range 68 West, 6th P.M.
S2NE Section 36
Northglenn, Colorado

APPLICANT:

Kerr-McGee Oil & Gas Onshore LP
1099 18th Street
Denver, Colorado 80202

February 2023
Revised: June 14, 2023
Re-formated: July 21, 2023

1. APPLICATION FORM

Planning & Development
11701 Community Center Drive
Northglenn, CO 80233
P: 303-450-8739
F: 303-450-8708
northglenn.org

OIL AND GAS PERMIT
Application

PROJECT INFORMATION

Site Address: TBD

Legal Description (if recorded by plat shall also be identified by subdivision name and block and lot numbers:
S2NE, Section 36 1N 68W

Well Name: Lizzy 8-36HZ Pad

OIL AND GAS OPERATOR

Name: Kerr McGee Oil and Gas Onshore LP
Company (if applicable):
Address: 1099 18th Street, Suite 700
City: Denver State: CO Zip: 80602
Phone: 720-929-6907 Email: shayelyn_marshall@oxy.com

DESIGNATED CONTACT FOR NOTICES (ON BEHALF OF PROVIDER)

Name: Shayelyn Marshall
Company (if applicable): Kerr McGee Oil and Gas Onshore LP
Address: 1099 18th Street, Suite 700
City: Denver State: CO Zip: 80602
Phone: 720-929-6907 Email: shayelyn_marshall@oxy.com

DESIGNATED PERSON/FIRM TO PREPARE APPLICATION AND DOCUMENTS (FOR PROVIDER)

Name: Same as above
Company (if applicable):
Address:
City: State: Zip:
Phone: Email:

Planning & Development
11701 Community Center Drive
Northglenn, CO 80233
P: 303-450-8739
F: 303-450-8708
northglenn.org

OIL AND GAS PERMIT
Application

MINERAL LESSEE'S INFORMATION

Name: Please see lease in Section 5.12.
Company (if applicable): _____
Address: _____
City: _____ State: _____ Zip: _____
Phone: _____ Email: _____

SURFACE OWNERS INFORMATION

Name: Anthony Rader
Company (if applicable): Anadarko Oil and Gas Onshore LP
Address: 1099 18th Street, Suite 700
City: Denver State: CO Zip: 80602
Phone: 720-929-3033 Email: Anthony_rader@oxy.com

SUPERVISORY AUTHORITY FOR OPERATION SITE

Name: Integrated Operations Center
Company (if applicable): _____
Address: 501 N. Division Blvd
City: Platteville State: CO Zip: 80651
24- Hour Emergency Phone: 970-515-1500 Email: wattenbergioc@oxy.com

OWNER(S) & AGENT CERTIFICATION

I hereby depose and state under the penalties of perjury that all statements, proposals and/or plans submitted with/or contained in this application are true and correct and the application is complete to the best of my knowledge and belief.

Agent's Signature: Shaylyn Marshall Date: 2/6/23

Owner(s)' Signature(s): _____ Date: _____

STAFF USE ONLY:
Zoning: _____ ☐ Approved ☐ Denied
By: _____ Date: _____

Date Application Received:

2. FEES AND FINANCIAL ASSURANCES

The $10,000 application fee will be paid by credit card once the application is submitted.

The Cost Reimbursement Agreement was signed, and a check was provided to the city prior to the pre-application meeting.

Prior to the commencement of any work, the appropriate insurances and financial assurances will be provided to the City per Section 11-3-6(d)(2).

3. SITE PLAN

KOMG will comply with all location setbacks in Section 11-3-6(p) and Section 11-2-15 of the Unified Development Ordinance (UDO). Please see the notes below and Site Plan attached for more information.

(1) Well Sites may only be located within the non-residential zoning districts of Industrial (IN), Public Facilities (PF,) and Agricultural (AG) without obtaining a Waiver.

- The Lizzy 8-36HZ pad is located within the Agricultural zone per the City's Zoning Map.

(2) Well Sites proposed within City limits shall be at least 1,000 feet from the property line of any existing or platted residences, schools, Future School Facilities, state licensed daycares, or city-owned facilities unless a Waiver is obtained.

- The Lizzy 8-36HZ pad is located at least 1,000 feet from the property line of any existing or platted residences, schools, Future School Facilities, state licensed daycares, or city-owned facilities.

(3) Violation of any federal, state or local laws or regulations shall be a violation of this Section.
(4) The well and tank battery shall comply with all applicable federal, state and local laws and regulations when located in a floodway or a 100-year floodplain area.
(5) All equipment at production sites located within a 100-year floodplain shall be anchored as necessary to prevent flotation, lateral movement or collapse or shall be surrounded by a berm with a top elevation at least one foot above the level of a 100-year flood.
(6) Any activity or equipment at any well site within a 100-year floodplain shall comply with applicable City Floodplain Regulations and the Federal Emergency Management Act and shall not endanger the eligibility of residents of the City to obtain federal flood insurance.

- The Lizzy 8-36HZ pad is not located within the floodway or 100-year floodplain.

LIZZY 8-36HZ - OIL AND GAS PERMIT
NE1/4 OF SECTION 36, TOWNSHIP 1 NORTH, RANGE 68 WEST OF THE 6TH P.M.
CITY OF NORTHGLENN, COUNTY OF WELD, STATE OF COLORADO

APPROVAL BLOCK

ALL WORK SHALL BE CONSTRUCTED TO CITY OF NORTHGLENN DESIGN STANDARDS AND CONSTRUCTION SPECIFICATIONS. THIS DRAWING HAS BEEN REVIEWED AND FOUND TO BE IN GENERAL COMPLIANCE WITH THESE STANDARDS AND SPECIFICATIONS AND OTHER CITY REQUIREMENTS. THE ENGINEERING DESIGN AND CONCEPT REMAINS THE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER WHOSE STAMP AND SIGNATURE APPEAR HEREON.

APPROVED BY THE CITY COUNCIL OF THE CITY OF NORTHGLENN, COLORADO THIS DAY OF _____,20___ BY RESOLUTION No. _____.

_____ _____
MAYOR *ATTEST:CITY CLERK*

ACCEPTANCE BLOCK AND NOTARY

_____
OWNER

STATE OF COLORADO)
)SS
COUNTY OF WELD)

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS ___ DAY OF ,20___ BY _____.

WITNESS MY HAND AND OFFICIAL SEAL

_____
NOTARY PUBLIC

_____
MY COMMISSION EXPIRES

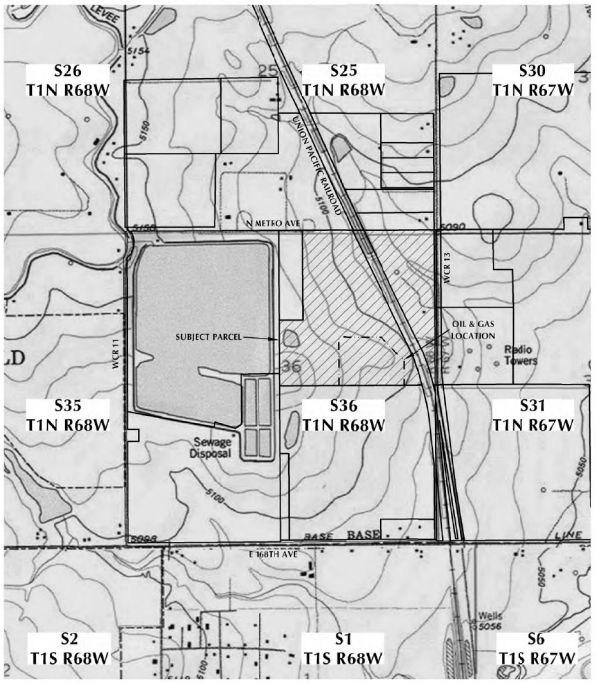
CITY COUNCIL APPROVAL CERTIFICATE
THE LIZZY 8-36HZ OIL AND GAS PERMIT WAS APPROVED AND ACCEPTED BY RESOLUTION NO. _____, PASSED AND ADOPTED AT A MEETING OF THE CITY COUNCIL OF NORTHGLENN, COLORADO, HELD ON THE _____ DAY OF _____, 20___.

_____
MAYOR

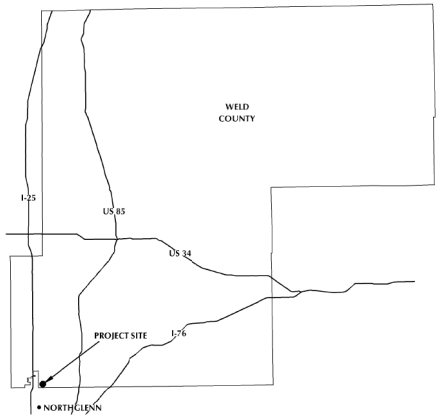
ATTEST_____
CITY CLERK

CONTACTS:

PROPERTY OWNER:	**ANADARKO E&P ONSHORE, LLC** **1099 18TH STREET, SUITE 700** **DENVER, CO 80202-1907** **(720) 929-6000**
APPLICANT/OPERATOR:	**KERR-MCGEE OIL & GAS ONSHORE LP** **1099 18TH STREET** **DENVER, CO 80202-1918** **(720) 929-6000**
ENGINEER/CONSULTANT:	**609 CONSULTING, LLC** **1095 SABERTON AVENUE** **SHERIDAN, WY 82801** **(307) 674-0609**



VICINITY MAP
1" = 1000'



LOCATION MAP
NOT TO SCALE

LAND USE INFORMATION:

ZONING:	**AG**
LAND USE:	**AGRICULTURE**
PARCEL ID #:	**146736100031**
LIZZY 8-36HZ WELL PAD & FACILITY:	
PAD PROPOSED OIL & GAS LOCATION:	**19.29 ACRES**
PERMANENT DISTURBANCE ACREAGE:	**7.13 ACRES**

SHEET INDEX

USE BY SPECIAL REVIEW	
SHEET NO.	SHEET NAME
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SHEET-5	PRODUCTION PHASE GRADING AND UTILITY PLAN
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SHEET-7	DETAILS AND GENERAL DESIGN NOTES
SHEET-8	PERMANENT VISUAL MITIGATION PLAN
SHEET-9	PERMANENT VISUAL MITIGATION PLAN

GENERAL NOTES:
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- ORIGINAL DOCUMENT SIZE: 24" x 36"

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6706 North Franklin Avenue
Loveland, Colorado 80538
Phone 970-776-4331
SHERIDAN OFFICE
1095 Saberton Avenue
Sheridan, Wyoming 82801
Phone 307-674-0609

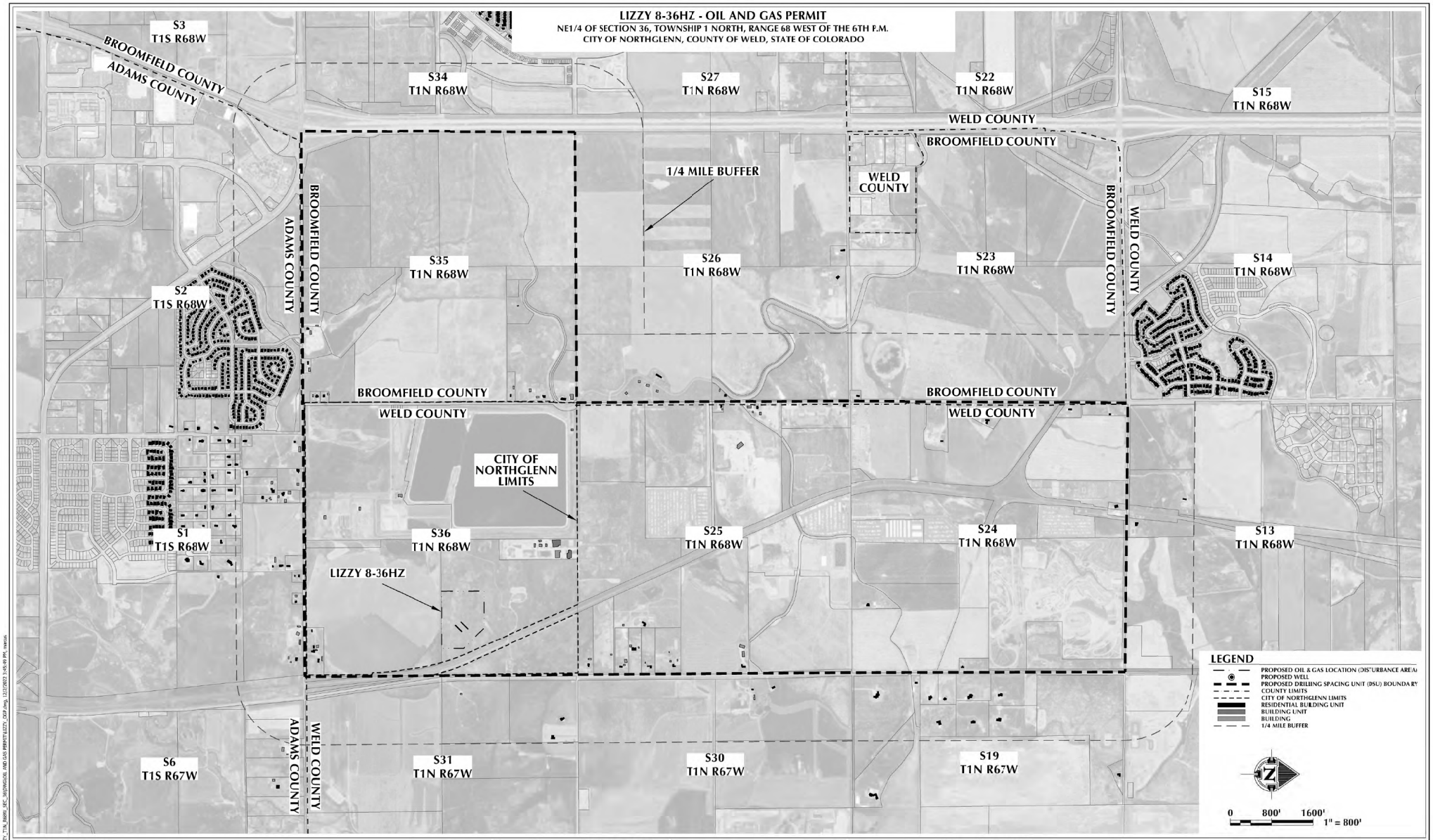
Kerr-McGee Oil & Gas Onshore LP
1099 18th Street
Denver, Colorado 80202

DRAWING REVISIONS		
REV.	DATE	DESCRIPTION
0	12/2/22	FORMAL APPLICATION

LIZZY 8-36HZ
COVER SHEET

DATE:	**12/2/22**	**SHEET:**	**1 OF 9**
SURVEY DATE:	**8/4/22**	**DRAFTED BY:**	**MLD**

K:\ANDARKO\2021\2021-41 LIZZY 8_ LIZZY_T1N, R68W, SEC. 36\DWG\OIL AND GAS PERMIT\LIZZY_OGP_COVER.dwg, 12/2/2022 3:53:49 PM, rnorris



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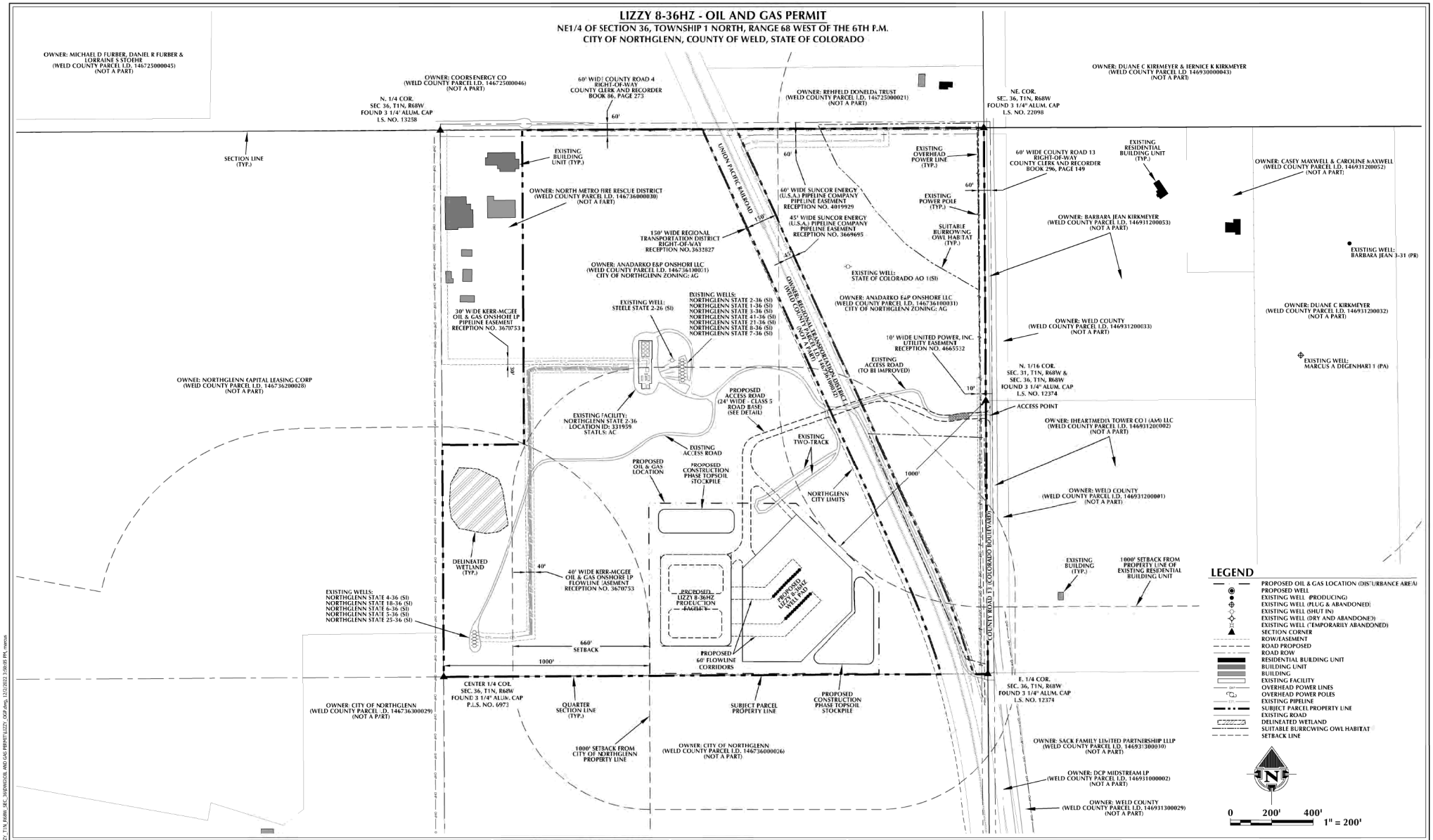
LIZZY 8-36HZ
SITE ANALYSIS MAP

DATE:	12/2/22	SHEET:	2 OF 9
SURVEY DATE:	8/4/22	DRAFTED BY:	MLD



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LIZZY 8-36HZ
SITE PLAN

DATE:	12/2/22	SHEET:	3 OF 9
SURVEY DATE:	8/4/22	DRAFTED BY:	MLD

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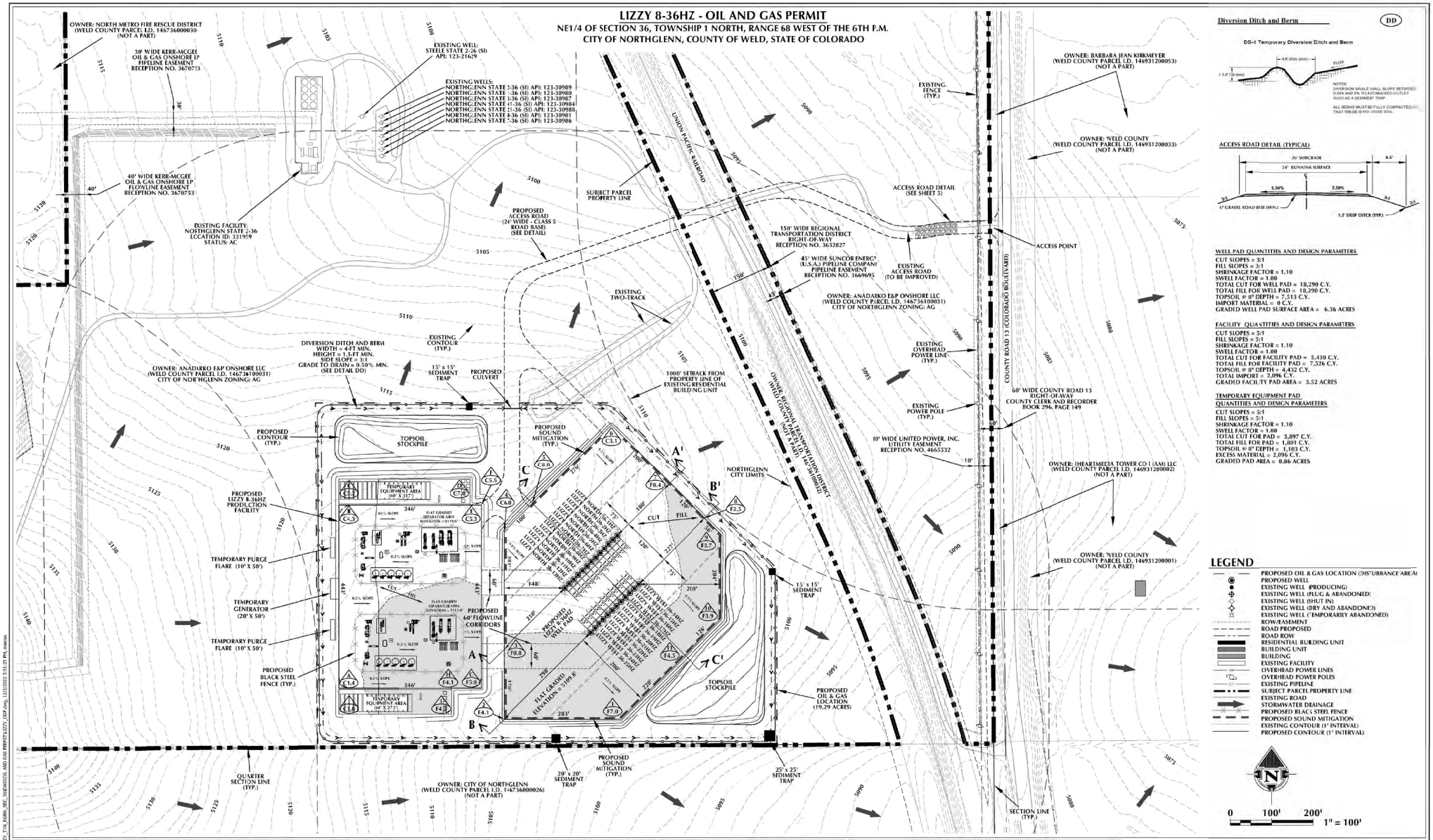

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LIZZY 8-36HZ
CONSTRUCTION PHASE GRADING AND UTILITY PLAN

DATE:	12/2/22	SHEET:	4 OF 9
SURVEY DATE:	8/4/22	DRAFTED BY:	MLD

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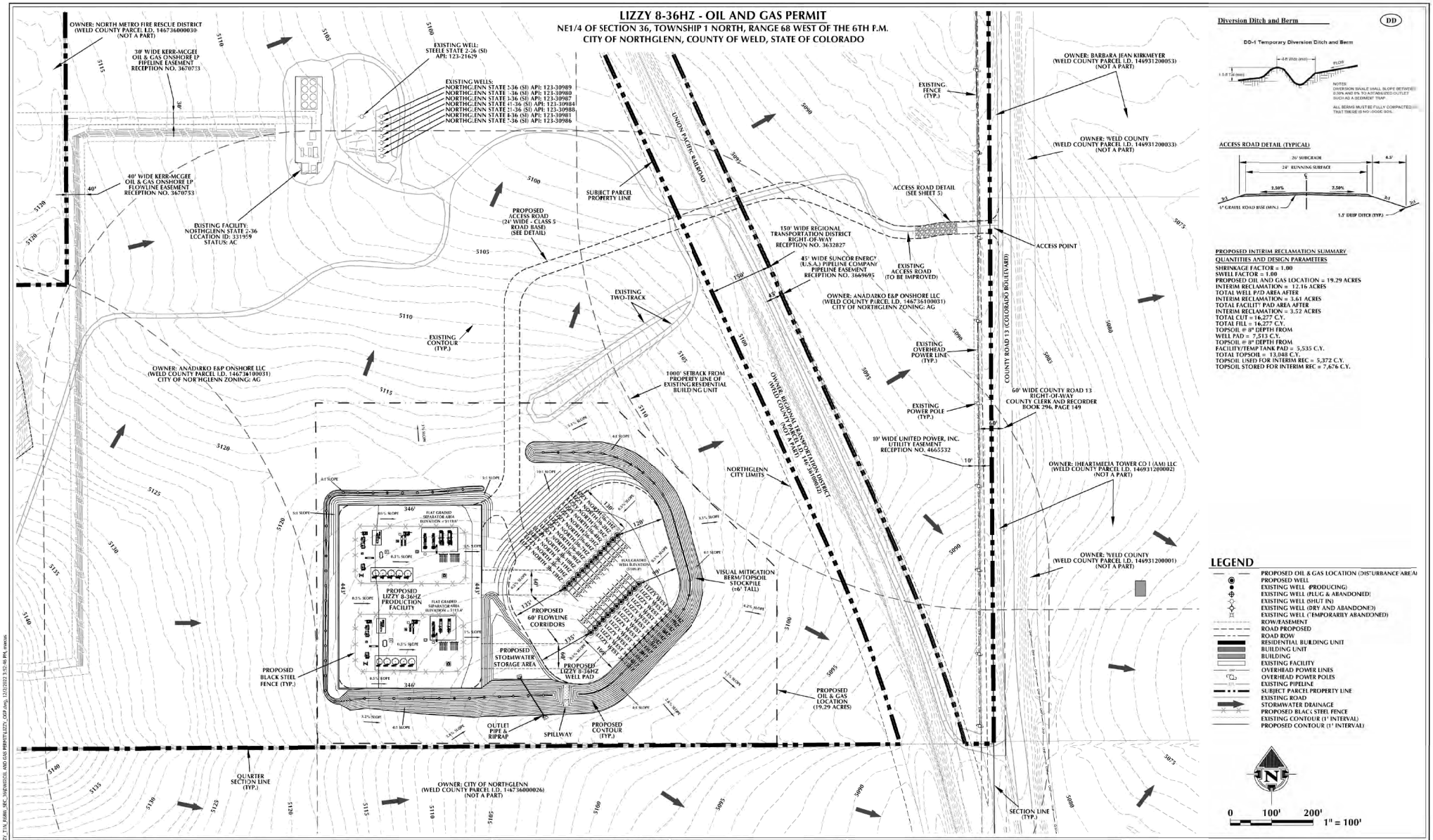

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LIZZY 8-36HZ
PRODUCTION PHASE GRADING AND UTILITY PLAN

DATE:	12/2/22	SHEET:	5 OF 9
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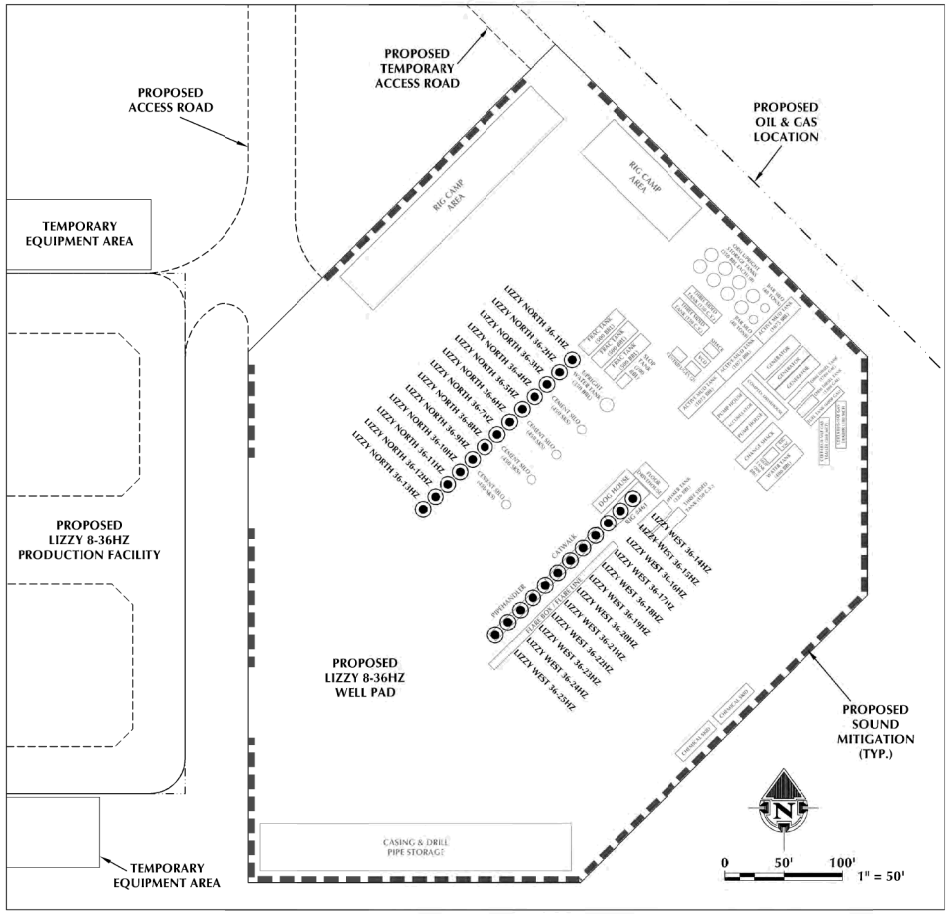
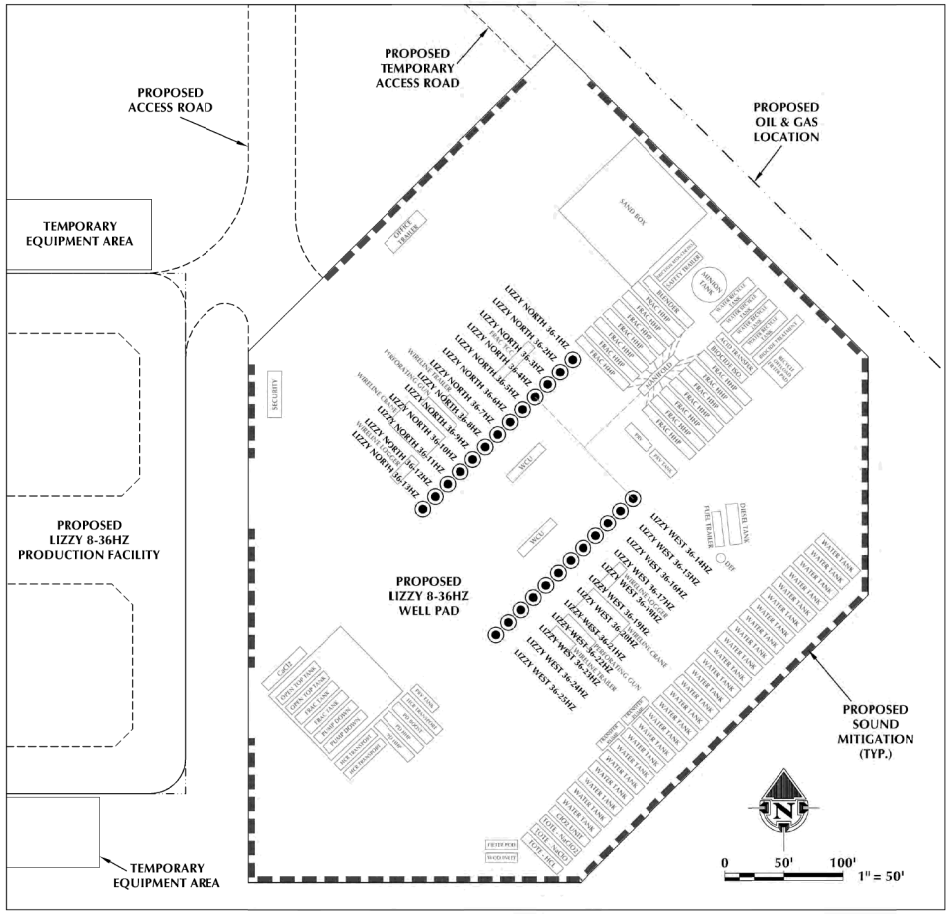
LIZZY 8-36HZ - OIL AND GAS PERMIT

NE1/4 OF SECTION 36, TOWNSHIP 1 NORTH, RANGE 68 WEST OF THE 6TH P.M.
CITY OF NORTHGLENN, COUNTY OF WELD, STATE OF COLORADO



DRILLING EQUIPMENT LAYOUT
SCALE: 1"=50'



COMPLETIONS EQUIPMENT LAYOUT
SCALE: 1"=50'

GENERAL NOTES:
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LIZZY 8-36HZ
DRILLING AND COMPLETIONS LAYOUTS

DATE:	12/2/22	SHEET:	6 OF 9
SURVEY DATE:	8/4/22	DRAFTED BY:	MLD

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LIZZY 8-36HZ - OIL AND GAS PERMIT

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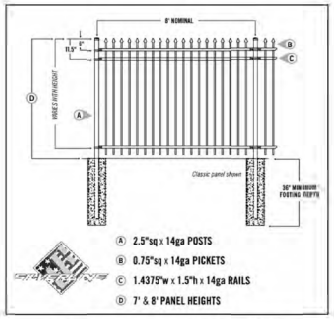
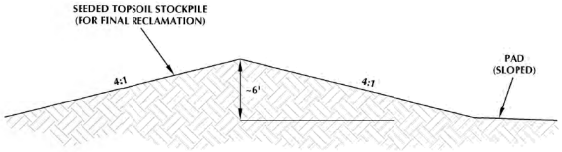
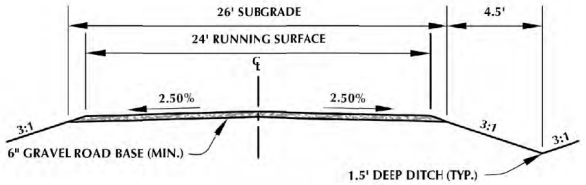


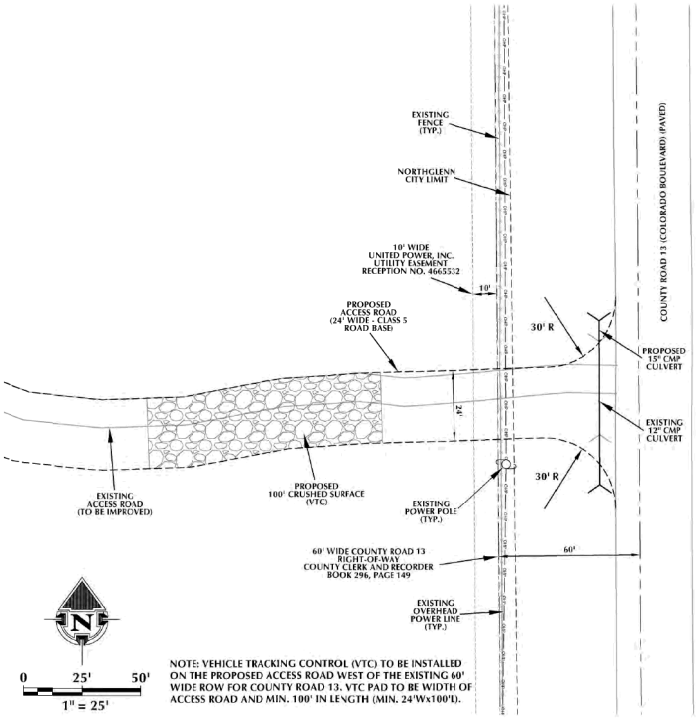
TYPICAL FENCE - BLACK STEEL FENCE, IMPASSE BY AMERISTAR OR EQUIVALENT DETAIL (NOT TO SCALE)



TOPSOIL BERM DETAIL (TYPICAL)
(NOT TO SCALE)



ACCESS ROAD DETAIL (TYPICAL)
(NOT TO SCALE)



ACCESS ROAD DETAIL

GENERAL DESIGN NOTES

1. DESIGN SPEED UTILIZED FOR THE .IZZY 8-36HZ PROPOSED ACCESS RCAD CONTAINED WITHIN THE PLANS IS 25 MPH, UNLESS OTHERWISE SPECIFIED.
2. PRIOR TO ANY CONSTRUCTION OR EARTHWORK, CONTRACTOR WILL BE RESPONSIBLE TO CALL FOR LOCATES (811 OR 1-800-922-1987).
3. MINIMUM COVER FOR CORRUGATED METAL FIPE CULVERTS IS 12 INCHES OR HALF THE DIAMETER OF THE CULVERT, WHICHEVER IS GREATER.
4. TOPSOIL WILL BE STRIPPED AND PLACED AT EDGES OF DISTURBANCE BOUNDARY AND THEN SPREAD EVENLY FROM THE DISTURBANCE BOUNDARY TO THE EDGE OF FINISHED ROADBEDS ON GRAVEL SURFACED ROADS.
5. AFTER TOPSOIL IS SPREAD, TOPSOIL WILL BE RESEEDED WITH AN APPROVED SEED MIXTURE.
6. FILL MATERIAL IN ROAD EMBANKMENTS SHALL BE PLACED IN 6 TO 12 INCH LIFTS AND COMPACTED USING MOBILE EQUIPMENT. FILL MATERIAL SHALL BE COMPACTED TO 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY.
7. ROADWAYS WILL BE COVERED WITH A MINIMUM OF 6 INCHES OF CLASS 5 ROAD BASE.
8. ACCESS ROADS SHALL BE CONSTRUCTED WITH AN ALL-WEATHER SURFACE THAT CAN SUPPORT AN 80,000-LB FIRE APPARATUS. MAXIMUM GRADE OF ROADWAY SHALL NOT EXCEED 10%. THE ANGLE OF APPROACH AND DEPARTURE FOR ANY ROADWAY SHALL NOT EXCEED 8 DEGREES.
9. ACCESS ROAD WILL BE CONSTRUCTED AT A MINIMUM 24 FEET WIDE AS PER PLAN WITH A MINIMUM 13.5 FEET OF OVERHEAD CLEARANCE.

GENERAL NOTES:
• ORIGINAL DOCUMENT SIZE: 24" x 36"

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LIZZY 8-36HZ
DETAILS AND GENERAL DESIGN NOTES

DATE:	12/2/22	SHEET:	7 OF 9
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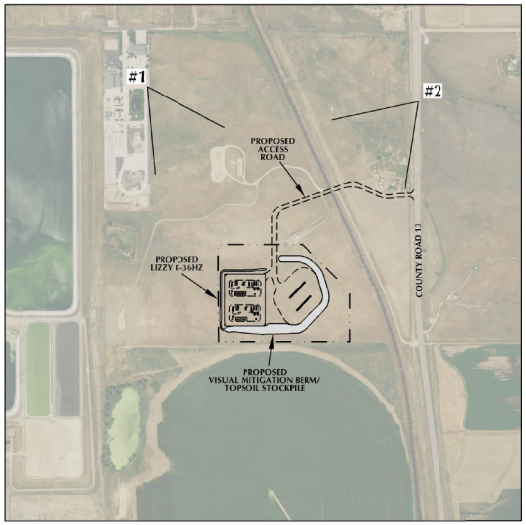
LIZZY 8-36HZ - OIL AND GAS PERMIT

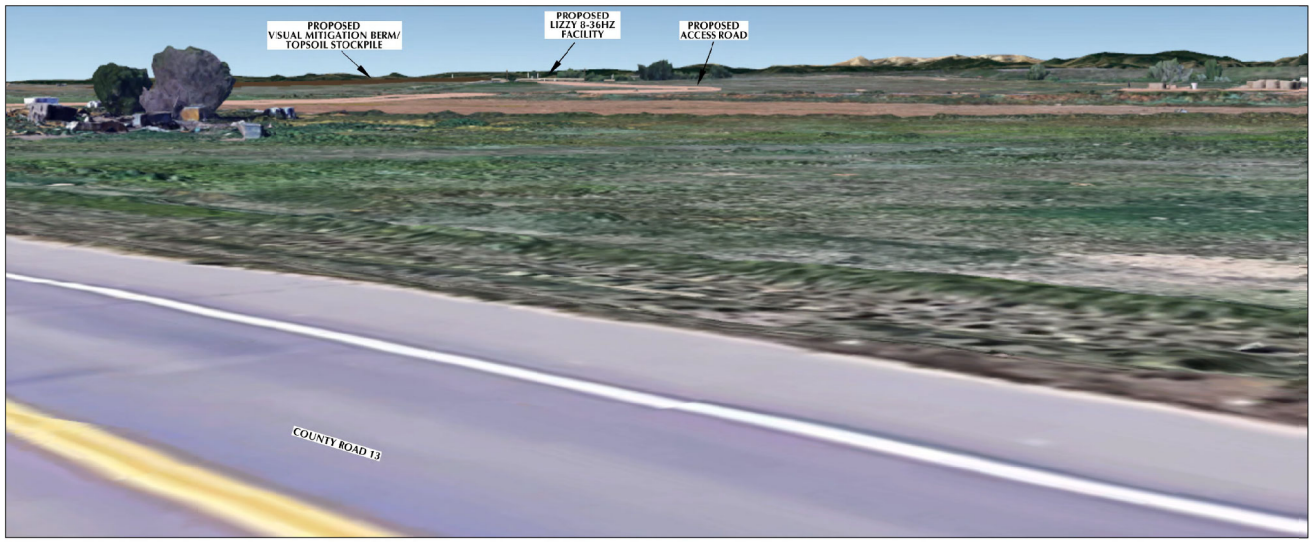
NE1/4 OF SECTION 36, TOWNSHIP 1 NORTH, RANGE 68 WEST OF THE 6TH P.M.
CITY OF NORTHGLENN, COUNTY OF WELD, STATE OF COLORADO



VICINITY MAP

1" = 500'

VISUAL SIMULATION #1 OF LIZZY 8-36HZ - CAMERA ANGLE SOUTHEAST



VISUAL SIMULATION #2 OF LIZZY 8-36HZ - CAMERA ANGLE SOUTHWEST

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LIZZY 8-36HZ
PERMANENT VISUAL MITIGATION PLAN

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LIZZY 8-36HZ - OIL AND GAS PERMIT

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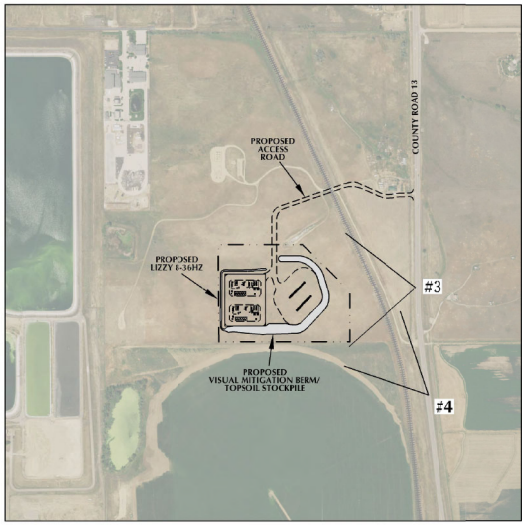

VICINITY MAP
1" = 500'

VISUAL SIMULATION #3 OF LIZZY 8-36HZ - CAMERA ANGLE WEST

VISUAL SIMULATION #4 OF LIZZY 8-36HZ - CAMERA ANGLE NORTHWEST

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LIZZY 8-36HZ
PERMANENT VISUAL MITIGATION PLAN

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4. TRANSPORTATION PLAN/TRAFFIC CONTROL PLAN

Kerr-McGee Oil & Gas Onshore LP

Transportation Plan

Lizzy 8-36HZ - Well Pad and Facility

Section 36 T1N R68W, 6th P.M.
Northglenn, Colorado

December 2022
Revised: June 13, 2023

Contents

I. Purpose

Kerr-McGee Oil and Gas Onshore developed this transportation plan pursuant to COGCC Rule 304.c.(6). This plan does not include adding turn lanes, rights-of-way or widening of existing roads.

II. Transportation Routes

KMOG will take Weld County Road (WCR) 6 to Weld County Road 13/Colorado Boulevard to access the pad.

III. The travel distribution along the identified haul routes

The travel distribution to the proposed oil and gas location is expected to be 75% from the east and 25% from the west via WCR 6.

IV. The time of day when the highest traffic volumes are expected.

The highest traffic volumes from construction of the oil and gas location are during normal business hours (7 am to 5 pm). Drilling and completion operations are both 24 hours a day, seven days a week. Highest volumes of traffic are between the hours of 6 am and 7 pm.

V. Best Management Practices & Measures

Water for completion operations will be secured by KMOG through its own "Water-on-Demand" (WOD) system, or from a water supplier in the immediate area of the drill site. This WOD system is a network of over 180 miles of underground pipeline 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 field-wide, while also reducing associated impacts of traffic, noise, emissions, and dust. KMOG anticipates this location will have approximately 121,196 truck trips eliminated during the completions process by using the WOD system.

KMOG works hard to reduce the facility size and create compact development areas. KMOG's production facilities are designed and constructed to eliminate oil storage tanks and the associated emissions and traffic associated with trucking oil. KMOG intends to utilize a comprehensive below ground oil and gas pipeline system to transport produced oil and gas to central processing facilities, resulting in a smaller production facility with fewer tanks. This pipeline infrastructure mitigates truck traffic in the area, thereby significantly reducing impacts to roads, noise, and emissions.

In addition, 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.

VI. Vehicle Traffic Estimates

The development of this pad will occur in five phases:

1. Pad Construction
2. Drilling Operations
3. Completion Operations
4. Production Facility Construction (Equipment placement)
5. Reclamation (Interim)

The estimated time periods for these phases is listed in the truck traffic table below. It is KMOG's intention to drill all the wells at one time and then complete all the wells at one time. While KMOG plans development in a phased approach, there may be delays between these phases due to unforeseen circumstances and/or economic conditions.

	Construction Phase	Drilling Phase	Completions Phase	Production Facility Construction & Equipment Placement Phase	Reclamation Phase
Days	30	192	125	44	30
Pickups/Passenger Cars	698	9,650	14,250	773	902
Tandem Trucks	329	745	1,875	303	1,125
Semi and Trailer	5,544	3,000	4,750	552	1,146
Oversized Loads	26	185	-	68	16
Total Trips (Avg/day)	220	71	167	39	106
Total	**6,596**	**13,580**	**20,875**	**1,696**	**3,189**

VII. Vehicle Descriptions

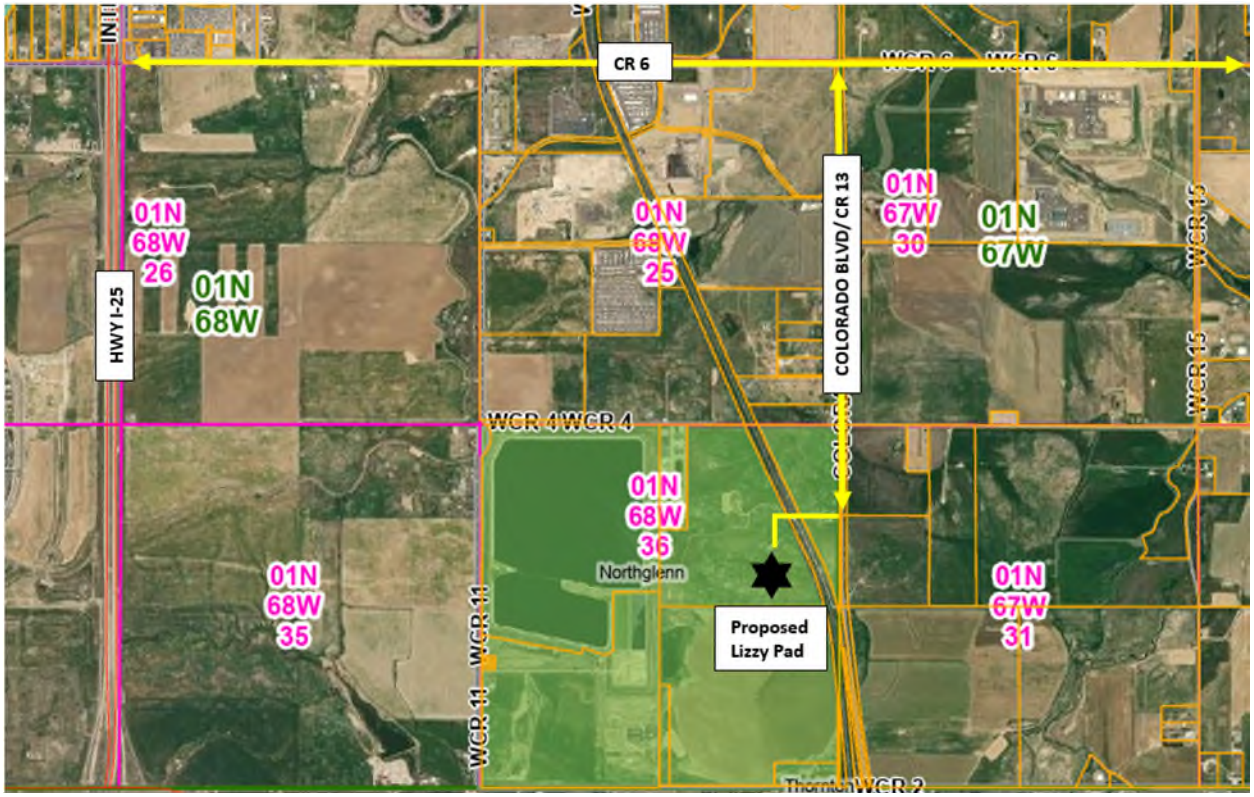
Pickups/Passenger Cars - Light Weight Truck (LWT): Light Vehicles (e.g. pickup trucks) have a Gross Vehicle Weight (GVW) between 4,500 and 8,500 lbs. and measures < 20 ft long, and two axles.

Tandem Trucks - Single Unit vehicles (e.g., 3-axle bobtail or dump truck) having a GVW between 10,000 and 20,000 lbs. and measuring between 20-40 ft long, and three to four axles.

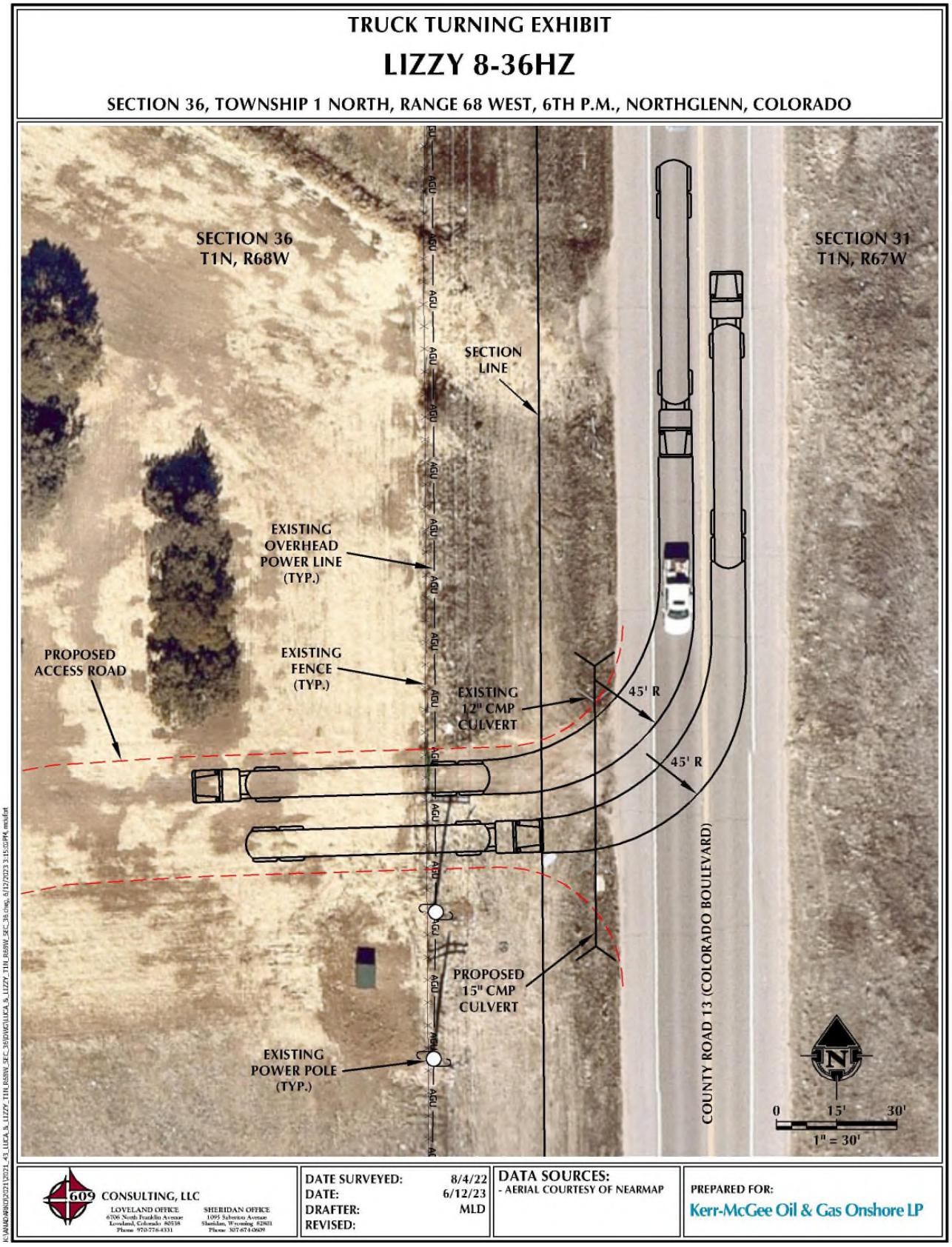
Semi and Trailer - Combo Unit vehicles (typically a semi and Trailer) having GVW between 50,000 and 70,000 lbs., measuring between 40 and 60 ft long, and five to six axles.

Oversize Loads - (low boy equipment trailers, wide loads) usually having GVW greater than 70,000 lbs. and measuring between 40 and 60 ft long, and 6 to 7 axles. KMOG recognizes that these oversized loads often require an Oversized Permit, and we coordinate with our contractor to assure these are obtained prior to use.

VIII. Proposed Haul Routes



IX. Access Detail – Turning Radius



WELD COUNTY ACCESS PERMIT

DEPARTMENT OF PLANNING SERVICES
1402 North 17th Ave
P.O. Box 758
Greeley, CO 80632

Phone (970) 400-6100

Permit Number: APOG23-0059

Issuance of this permit binds applicant and its contractors to all requirements, provisions, and ordinances of Weld County, Colorado.

Project Name:	Lizzy B well pad	**Access is on WCR:**	13
Permit Expiration Date:	06/09/2024	**Nearest Intersection WCR:**	13 - 4
Planning/Building Process		**Distance from Intersection:**	1385
Parcel(s):	146736100031	**Number of Existing Accesses:**	3
Proposed Use:	Industrial	**Access Width:**	24-40'
		Access Turning Radii:	60'
		Latitude:	40.01107
		Longitude:	-104.94251

Applicant Information:

Name:
Company: Kerr McGee Oil and Gas Onshore LP
Phone: 720-929-6160
Email: tracy_colling@oxy.com

Owner Information:

Name:
Company: Anadarko Oil and Gas Onshore LP
Phone:
Email: anthony_rader@oxy.com

Road Surface Type and Construction Information:

Road Surface: Asphalt

Culvert Size and Type:

Material to Construct Access:

Start Date: Finish Date:

A Copy of this permit must be on site at all times during construction hours
Daily work hours are Monday through Friday DAYLIGHT to1/2 HOUR BEFORE DARK (applies to weekends if approved)
Approved MUTCD traffic control / Warning devices are required before work begins and must remain until completion of work
** Crushed or recycled concrete SHALL NOT be used for tracking material in the County ROW
All access points shall comply with Chapter 8, Article XIV and Appendix 8-Q found at:
https://library.municode.com/co/weld_county/codes/charter_and_county_code?nodeId=CH8PUWO_ARTXIVROACPO
https://library.municode.com/co/weld_county/codes/charter_and_county_code?nodeId=CH8PUWO_APX8-QWECOENCOCR
Unless otherwise authorized.

Special Requirements or Comments

Utilize existing shared access point on CR 13 (1-O&G IND) located approximately 1385' South of CR 4.
Access points on CR 13 located approximately 1275' and 1150' south of CR 4 shall be closed and reclaimed on or before 01/22/2024.

CR 13 is an Arterial roadway with a 90 ft. setback from centerline.

Approved By:

5. NARRATIVE

5.1 DESCRIPTION OF INTENDED USE

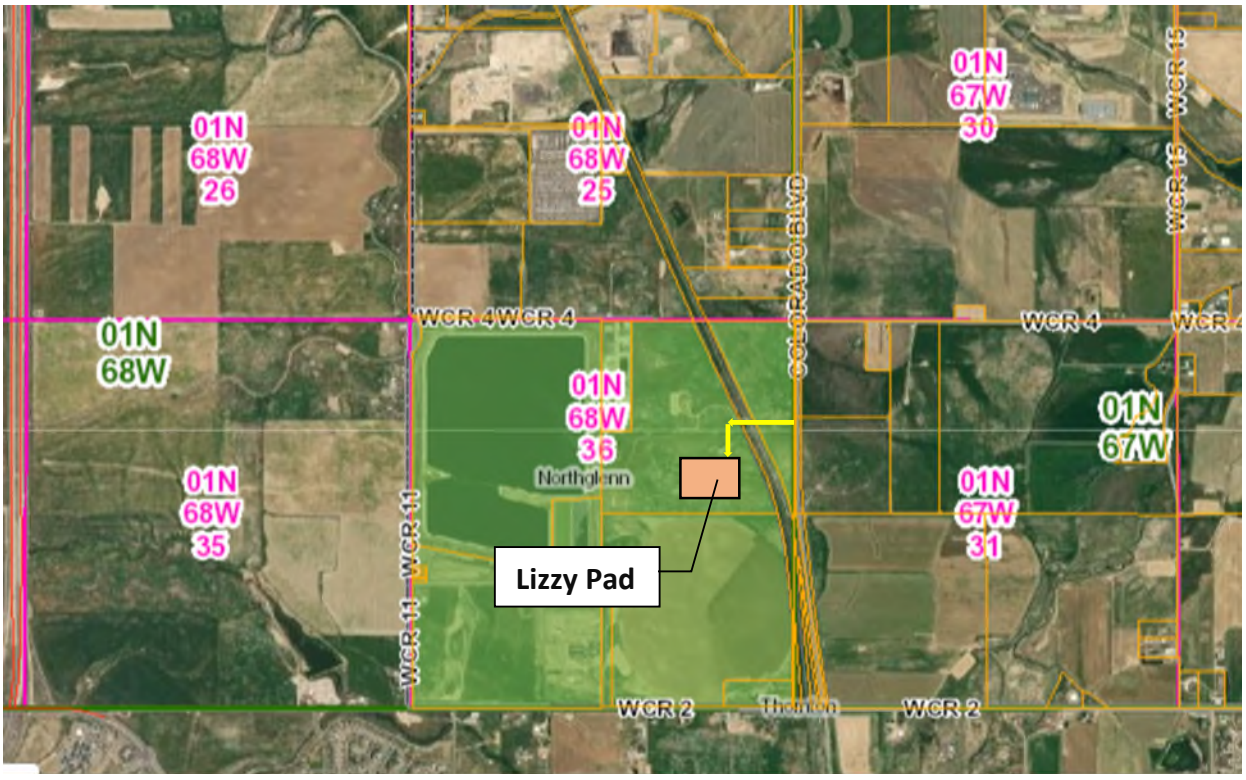
Kerr-McGee Oil & Gas Onshore LP (KMOG), a subsidiary of OXY USA Inc., intends to horizontally drill twenty-five (25) oil and gas wells from one well pad location. The proposed wells will be known as the Lizzy 8-36HZ Pad, the well names are listed below. The desired outcome of this application is to permit the wells to all formations. The purpose of these wells is to produce hydrocarbons from underlying formations known to have commercial potential from the production of the hydrocarbons.

Well names:

Lizzy North 36-1HZ	Lizzy North 36-8HZ	Lizzy South 36-15HZ	Lizzy South 36-22HZ
Lizzy North 36-2HZ	Lizzy North 36-9HZ	Lizzy South 36-16HZ	Lizzy South 36-23HZ
Lizzy North 36-3HZ	Lizzy North 36-10HZ	Lizzy South 36-17HZ	Lizzy South 36-24HZ
Lizzy North 36-4HZ	Lizzy North 36-11HZ	Lizzy South 36-18HZ	Lizzy South 36-25HZ
Lizzy North 36-5HZ	Lizzy North 36-12HZ	Lizzy South 36-19HZ	
Lizzy North 36-6HZ	Lizzy North 36-13HZ	Lizzy South 36-20HZ	
Lizzy North 36-7HZ	Lizzy South 36-14HZ	Lizzy South 36-21HZ	

A pre-application meeting with the City of Northglenn was held on May 11, 2022, to review the preliminary siting for the project. One member of the Colorado Oil and Gas Conservation Commission (COGCC) staff attended the meeting.

The wells and production facility are proposed to be in the S2NE of Section 36, Township 1 North, Range 68 West 6th P.M. Please see the aerial vicinity map below showing an arrow for the site access from County Road (CR) 13/Colorado Boulevard.



5.2 Operator and Surface Owner Information

Kerr-McGee Oil & Gas Onshore LP
1099 18th Street, Suite 700
Denver, Colorado 80202

KMOG, is a fully insured and bonded oil and gas operator, organized as a Delaware Limited Partnership, and authorized to do business in the State of Colorado as Kerr McGee Oil & Gas Onshore LP. All insurance and bonds held by KMOG meet the requirements as set forth in the rules and regulations as adopted by the COGCC. The surface owner is the applicant therefore, a surface use agreement is not applicable.

5.3 COGCC Permits

KMOG submitted the Oil and Gas Development Plan (OGDP) on December 7, 2022, and the Forms 2A, 2B, and 2C on December 8, 2022. Approved permits will be provided to the City of Northglenn.

5.4 Operating Plan

5.4.1 Construction & Drilling Phase

The initial pad construction is expected to take approximately six weeks. Drilling operations are expected to take approximately six to nine months (under normal circumstances). The subject land is first surveyed, and well locations are staked in accordance with COGCC regulations. The drilling pad is designed to prevent run off so that any spills will be contained on-site. The pad is lined with a layer of compacted clay materials to help prevent fluids from migrating vertically to the subgrade. From this point forward dirt work begins to prepare the location, including leveling the surface where the drilling rig will be located. After the location has been prepared, a drilling rig will move onto location to drill the surface intervals of the wells and cement the surface pipe to protect ground water. This process will take approximately one day per well under normal circumstances, subsequently a 25 well pad will take 25 days to complete initial surface drilling operations including cementing the surface casing pipes. Depending on the size/type of rig utilized to drill the surface interval, production drilling operations will either begin immediately with the same rig or a different rig will be moved onto location to drill the production interval. Production drilling operations will take four to five days per well, under normal circumstances, and is a 24 hour a day, seven-days a week operation. The actual drilling proceeds at a constant rate unless subsurface or mechanical problems are encountered.

If the well is deemed viable, casing is run in the hole and cemented (alternatively the well is plugged according to COGCC regulations). The casing, constructed of steel pipe, is designed to specific criteria to provide an integral conduit for transporting hydrocarbons to the surface. The casing strength is further enhanced by the cementing process. Cement is placed in the space between the casing and the wall of the hole. The cement anchors the casing, provides increased burst resistance, and contains the fracturing and produced fluids. The cement is also designed to special criteria. The cement is then allowed to cure and subsequently the rig is moved off location. At this point the drilling phase is complete.

5.4.2 Drainage and Erosion Control Plan

Changes in natural drainage patterns are not anticipated. The well site will be monitored during the drilling and completion phases for any stormwater erosion or sedimentation concerns. Necessary measures will be taken to correct any problems, immediately in most cases. Once the drilling and completion phases are

complete, the drill site will be restored as near as practical, to its original grade and vegetation planted as required by regulations and surface use agreements, if applicable. KMOG will continue to monitor the site until all applicable regulatory requirements for revegetation have been met.

KMOG uses a closed loop or "pit less" system for drilling and fluid management and does not construct a reserve pit. The drilling company will actively manage the area around the rig equipment such that any minor fluid spills will be diverted and drained to small pumps strategically located and from there, if only water, will be pumped into the drilling fluid system. If the fluid is contaminated by fluids other than water, it will be pumped into a separate container and removed from the site to an approved disposal facility.

5.4.3 WATER SOURCES FOR ACTIVITIES

Water for use in completion operations will be secured by KMOG through its own "Water on Demand" system, or from a water supplier in the immediate area of the drill site. Water use will be approved for commercial and industrial use and will be subject to a mutually acceptable agreement between KMOG and the water supplier. The water-on-demand system is a network of over 180 miles of underground pipeline that stretches the length of the 20-mile by 30-mile field to source and transport water to completion crews. This system eliminates more than 2,000 truck trips per day field wide, also reducing associated concerns of traffic, noise, emission, and dust.

5.4.4 COMPLETIONS PHASE

Upon the conclusion of production drilling operations, and as dictated by operational schedules, the well pad is then prepped for completion operations. The construction of the production facility may occur concurrent with the drilling and/or completion operations. Completion operations include all operations performed after drilling operations and prior to first production. These completion operations consist of well preparation, fracture stimulation, and preparing the well for production to sales.

The well preparation phase of completion operations is performed to prepare for the fracture stimulation operation. Initially, the necessary wellhead equipment is installed to conduct well preparation operations. KMOG wells are designed, built, operated, and maintained to the highest standards. Logging is performed to confirm the cement quality behind the well casing meets KMOG and regulatory standards. The wellbore is pressure-tested to confirm the casing can withstand the high pressures associated with a fracture stimulation. Lastly, the remaining necessary wellhead equipment is installed to prepare the well for fracture stimulation. A crew of one to six people are required to perform the above operations. The cumulative duration of the well preparation operations is three to four days.

The fracture stimulation operation is conducted to stimulate the flow of hydrocarbons from the targeted geologic formation to the wellbore and up to the wellhead. Fracture stimulation consists of pumping a water and sand mixture into the wellbore at a high pressure and flow rate. The water/sand mixture exits the wellbore to contact the rock formation through perforations made to the well casing. The stimulation operation for each well is performed in stages to concentrate the stimulation of the rock formation at designed intervals along the wellbore. In the event multiple wells are included in the fracture stimulation operations, only one well is under stimulation at one time. During stimulation, a crew of 35 to 45 people are required. The cumulative duration of the fracture stimulation operation is three to seven days per well.

At the end of the fracture stimulation operation, the well is prepared for long-term production. A coiled tubing unit is utilized to mill the plugs set in the wellbore to isolate the stimulation stages and to clean out

the wellbore. Production tubing is installed to direct the flow of hydrocarbons inside the wellbore to the wellhead at surface. Once the production tubing is landed, the well is managed by the Production Operations group. The cumulative duration of the post fracture stimulation operations is two to five weeks with a crew of three to ten people.

The completion process is a 24 hour a day, seven-days a week operation and crews are rotated every 12 hours for continuous operations. Once fracture stimulation operations begin there will be varying activity on location until the well is turned over to permanent production operations.

5.4.5 PRODUCTION PHASE

The production phase may overlap the completion phase. After the completion fleet has cleared the location, the wells are connected to a production facility. Gathering equipment may also be installed on location by a third-party gathering company. The production and gathering facility, may consist of oil maintenance tank(s), water tank(s), separator(s), Lease Automatic Custody Transfer (LACT) units, vapor recovery unit(s) (VRU), emission control device(s) (ECDs), meter(s) house, E-house, chemical tote(s), purge flare(s), communications tower, temporary produced water tanks, temporary ECDs and temporary generator. The temporary equipment will be on site for six to 12 months and then will be removed. In addition, pumping units may be installed. The production facility will be connected to the wells by pressure tested flowline buried approximately four feet deep. At this point, the gas and oil purchasers are preparing to connect the gas and oil sales meter loop.

The production facility installation is completed by constructing an earthen or metal berm around the production tank(s) and separator. The enclosed area will have sufficient volume to contain 150% the entire contents of the largest tank plus adequate freeboard to contain a 24-hour 25-year precipitation event. The berms will be inspected at least quarterly and maintained in good condition. When a berm is provided around tanks no potential ignition sources shall be installed inside that area.

When a well is completed for production, all disturbed areas no longer needed will be restored and re-vegetated as soon as practicable. All segregated soil horizons removed from crop lands shall be replaced to their original relative positions and contour and shall be tilled adequately to re-establish a proper seedbed. The area shall be treated if necessary and practicable to prevent invasion of undesirable species and noxious weeds, and to control erosion. Any perennial forage crops that were present before disturbance shall be re-established. All segregated soil horizons removed from non-crop lands shall be replaced to their original relative positions. The segregated soil horizons will contour as near as practicable to achieve erosion control and long-term stability and shall be tilled adequately to establish a proper seedbed. The disturbed area then shall be re-seeded in the first favorable season.

At some point in the well's life, tubing may be run in the well with the possible addition of a plunger lift, pumping unit or gas lift may be used. This will extend the well's producing life and maximize reserves.

5.4.6 PLUGGING AND ABANDONMENT PHASE (P&A)

Plugging and abandonment is the cementing of a well and removal of its associated production facility. This also includes the removal of flowlines after all the wells on the pad are plugged and the remediation and reclamation of the well site.

Upon the plugging and abandonment of a well, all cellars will be backfilled. All debris abandoned gathering line risers, and flowline risers, and surface equipment will be removed, and the location will be graded and

re-contoured. Within 90 days after a well is plugged and abandoned, the well site shall be cleared of all non-essential equipment, and debris. All access roads to the plugged and abandoned wells and associated production facilities shall be closed, graded, and re-contoured in accordance with the COGCC regulations and Surface Use Agreement (if applicable). Culverts and any other obstructions that were part of the access road(s) shall be removed. Well locations, access roads and associated facilities shall be reclaimed. As applicable, compaction alleviation, restoration, and revegetation of well sites and access roads shall be performed. After plugging a well, reclamation work will be completed within three months on crop land, and six months on non-crop land, or with landowner consent reclamation will occur during optimal re-vegetation times of the year.

Successful Final Reclamation of the well sites and access roads will be considered completed when:

- Reclamation of crop land has been performed and over two growing seasons has indicated no significant un-restored subsidence.
- Reclamation on non-crop land, has been performed and stabilized in such a way as to minimize erosion to the extent practicable, or a uniform vegetative cover has been established with total percent plant cover of at least eighty percent (80%) of similar adjacent reference area levels, excluding noxious weeds and overstory or tree canopy cover.
- Disturbances resulting from flow line installations shall be adequately reclaimed when the disturbed area is reasonably capable of supporting the pre-disturbance land use.
- A Sundry Notice, Form 4, will be submitted to the COGCC, which describes the final reclamation procedures and any mitigation measures associated with final reclamation

5.5 Stakeholder Relations Team

KMOG has a team dedicated to proactively reaching out to nearby stakeholders and addressing concerns prior to operations, during operations, and through the life of the wells. This team is committed to sharing frequent information about our operational activities and seeking community feedback. Since the team was created in 2014, our employees have participated in over 2,750 community events in Colorado. The Stakeholder Relations Team has a phone number and email address which will be posted at the entrance of the access road during construction, drilling, and completion activities at the proposed location. Please see their information below.

Colorado Response Line: 1-866-248-9577
ColoradoStakeholder@oxy.com
https://www.oxycoloradostakeholder.com

5.6 Surface Use Agreement

KMOG is the surface owner and therefore a Surface Use Agreement is not applicable.

5.7 List of Permits Required

- Oil and Gas Development Plan (OGDP) – COGCC
- Oil and Gas Permit – Northglenn
- Access Permit – Weld County approved the access permit on November 22,2022. Please see the approved permit in Section 4.
- Building Permit – Northglenn

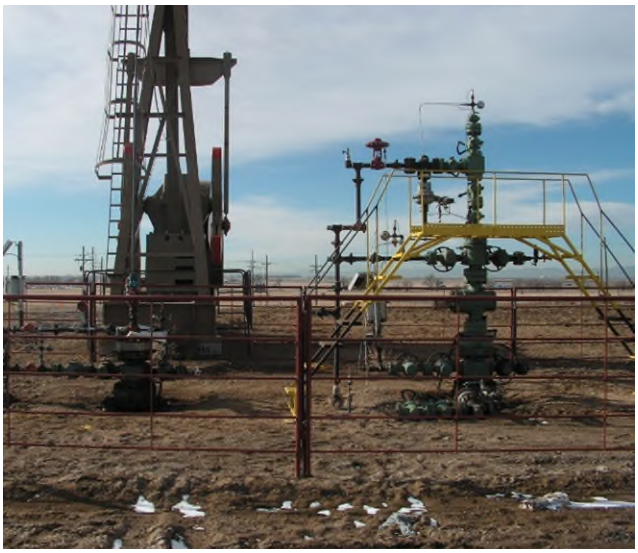
5.8 EQUIPMENT ILLUSTRATIONS

5.8.1 TYPICAL DRILLING RIG

Temporary, used during the drilling phase.

5.8.2 TYPICAL WELLHEADS

Permanent equipment for the life of the well.



5.8.3 TYPICAL SEPARATORS

Permanent equipment, part of the production facility.

Production Separators / Inlet Bulk and Test Separator - takes oil, natural gas and water coming from wells and separates them. These separators are approximately 12 to 20 -feet tall to top of exhaust stack / gas dryer pipe.

Second Stage Bulk Separators - this is the second stage of separation that takes oil and natural gas coming from wells and separates out oil from natural gas. These are approximately 20 feet 8 inches -tall to top of Pressure Safety Valve (PSV) outlet.

5.8.4 Typical Maintenance – Condensate/Oil and Water Tanks

Permanent equipment, part of production facility. These tanks store water produced from the separators, which is later trucked out for off-site disposal. The Maintenance Tank is used for oil storage when separators require maintenance. Both tanks are approximately ten-feet tall (top of tank), 16 feet 6 inches tall to top of vent pipes.

5.8.5 LACT Unit - (Lease Automated Custody Transfer)

Permanent Equipment part of the production facility. LACT contains pumps that run oil through Coriolis meter which read final numbers that go into sales line. Approximately 9 feet 2 inches tall.

5.8.6 TYPICAL GAS METER BUILDING

Records gas that flows through the site and into gathering system. Also houses the custody transfer gas meter. Approximately 7 feet 8 inches tall.

5.8.7 TYPICAL ELECTRICAL HOUSE

Houses the electrical circuits, approximately 9 feet 3 inches tall

5.8.8 TYPICAL WELL MANIFOLD AKA E-HOUSE

The wellhead manifold is where all the flowlines from the wells are brought into the produciton facility, approximately 7 feet 8 inches tall

5.8.9 TYPICAL GAS LIFT COMPRESSOR

This artificial lift is used to assist the production of the wells as they have less natural pressure help, approximately 15 feet tall.

5.8.10 VOC Combustor / Emission Control Device (ECD)

Volatile Organic Compound (VOC) Combustor also know as Emission Control Device (ECD) burns off emissions from produced water tanks, approximately 15 feet tall.

5.8.11 Fuel Gas (FG) Scrubber

The fuel gas scrubber dries produced gas to use for the burners on the ECD, VOC and separator burner systems, approximately 14 feet 2 inches tall.

5.8.12 TYPICAL AIR COMPRESSOR

Air compressor supplies air to the pneumatic valves on location, approximately 9 feet 4 inches tall.

5.8.13 TYPICAL CHEMICAL TOTE

Chemical totes store and pump corrosions and scale inhibitor products to preserve the integrity of the production equipment, approximately 7 feet 4 inches tall.

5.8.14 TYPICAL COMMUNICATIONS TOWER

Communication tower is used to remotely monitor the production facility from the Integrated Operation Center (IOC). Approximately 34 feet tall.

5.8.15 TYPICAL TEMPORARY EQUIPMENT

Tanks (Produced Water Storage)

Tanks store water produced from separator during initial production. Later tanks are trucked out for disposal. Color varies depending on contractor and availability. Temporary tanks are on location for 6-12 months, approximately 10 feet 4 inches tall.

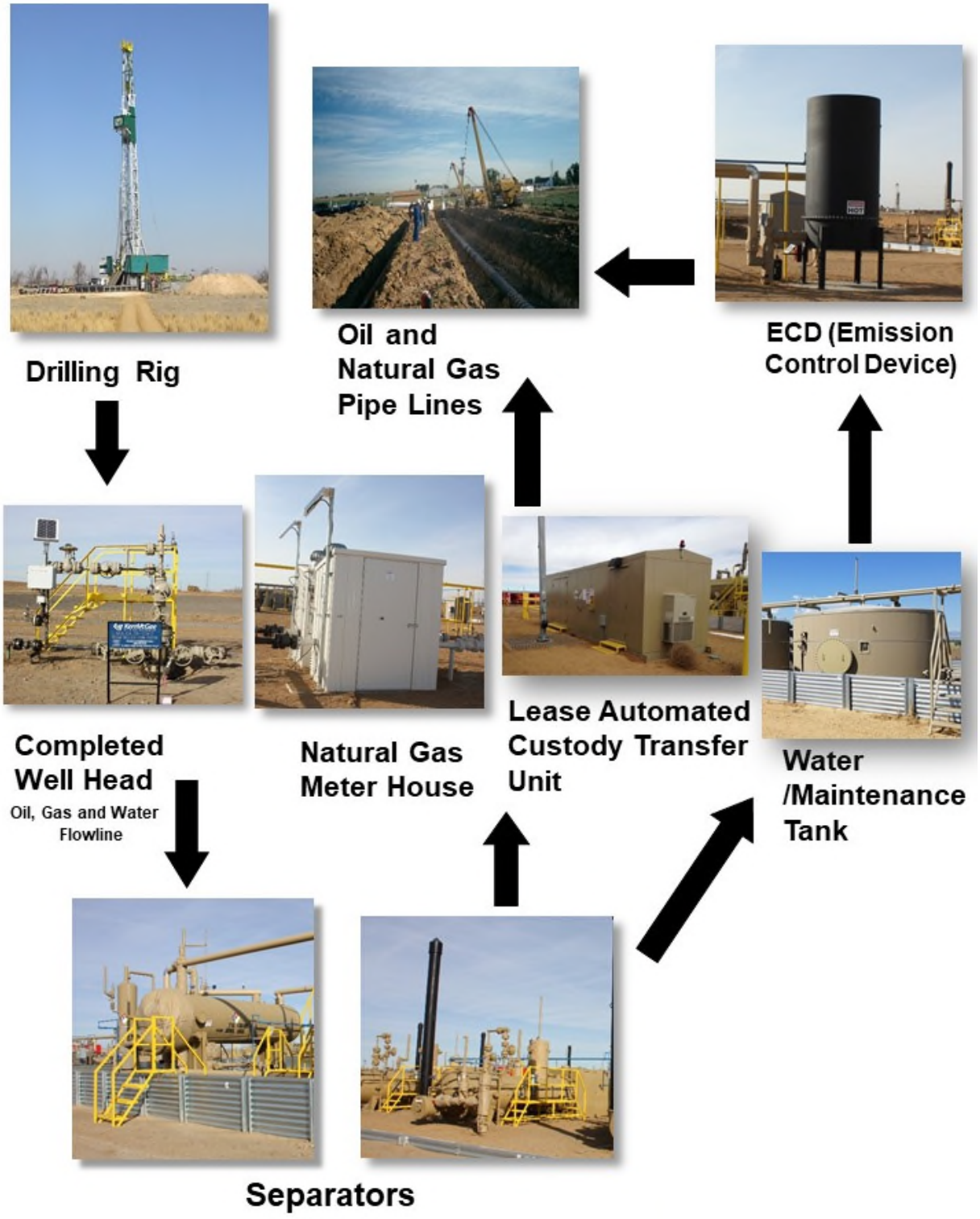
Temporary ECDs

Emission Control Device (ECD) burns off emissions from produced temporary water tanks. Approximately 24 feet 7 inches tall.

Temporary Generator – Used to operate equipment at the facility until such time as power can be brought onto the location, approximately 5 feet tall

Temporary Purge Flare – Used at the time of facility commissioning to capture gas when purging the facility of oxygen, approximately 24 feet tall

5.8.16 TYPICAL FLOW DIAGRAM



5.9 EMERGENCY RESPONSE PLAN

SITE SAFETY AND EMERGENCY RESPONSE PLAN

1099 18th Street, Suite 700
Denver, Colorado 80202

Lizzy 8-36HZ Wells and Facility

Section 36 – T1N R68W

Address: TBD

Northglenn, Colorado

Proposed Spud Date: 4th Quarter 2023

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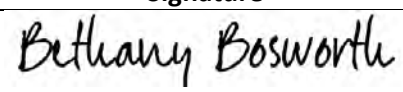
SECTION 1 – APPROVAL SIGNATURES

Kerr-McGee Oil & Gas Onshore LC			
Name	**Signature**	**Title**	**Date**
Beth Bosworth		Rockies Asset Director	6/9/2023
North Metro Fire District			
Name	**Signature**	**Title**	**Date**
Jeff Bybee		Deputy Chief of Operations	

SECTION 2 – SITE ADDRESS AND DIRECTIONS

a) Directions:

From the intersection of E 168th Avenue and WCR 13 (Colorado Blvd.) travel north approximately .75 miles to the lease access road. Turn left and travel west on the lease access road for 1,400 feet to the proposed facility and wells.

b) Ingress and egress information:

All traffic into and out of the oil and gas location will check-in and check-out with security. All ingress and egress routes will be clearly identified and kept clear from parked/staged vehicles at all times.

c) Physical Address and GPS coordinates

- **API#** – Pending COGCC Permit Approval
- **Legal Description** – SENE of Section 36, Township 1 North, Range 68 West
- **Address -** * Address Pending
- **Town, CO, Zip –** Northglenn, Colorado
- **Lat/Long:** Access Road: 40.011046˚, -104.942488˚

d) Emergency Evacuation/Muster Assembly Point(s)

For incidents, where remaining in a particular area could pose a hazard to personnel onsite, such as a fire or hazardous material release, evacuation may be required to ensure the safety of onsite personnel. In the event of an emergency, site personnel will initially be evacuated to pre-designated muster assembly points. Muster Assembly Points are identified on The Project Location Access Map on Page 7 of this plan, and noted on the site-specific TRP.

- The Muster Assembly Points will be identified in section 5.b. of this plan, and identified during all site safety briefings for visitors, employees, and contract personnel.
- **Sign-In Sheets:** During drilling and completion activities all employees and approved visitors to the oil and gas location will be required to enter through a manned security checkpoint. Upon checking in, employees and visitors will be provided a detailed safety briefing of current operations, all safety precautions that must be adhered to, and the site emergency evacuation plan. In addition, all personnel who enter the location must sign-out upon their departure. Security or Supervisory personnel are required to account for all persons entering or leaving during active operations and in the event of an incident.
- Once drilling and completion activities are finalized, the site will transition to its production phase and no unauthorized personnel will be allowed on location without first contacting a company representative.

SECTION 3 – LIST OF EMERGENCY CONTACTS

a) Kerr McGee Oil & Gas Onshore LP

Name	Office Phone	Emergency/Cell
Kerr McGee Oil & Gas Onshore LP 1099 18th Ave. Denver CO 80202	720-929-6000	970-515-1500
Kerr McGee Oil & Gas Onshore LP Integrated Operations Center (IOC) 501 N. Division Blvd. Platteville, CO 80651	970-336-3500	970-515-1500
Kerr McGee Oil & Gas Onshore LP EHS on-call Emergency Number	970-515-1500	970-515-1500
EHS–Supervisor & Safety – Lynna Scranton	720-929-6317	303-906-1711
EHS – Environmental – Greg Hamilton	970-515-1698	970-590-6256

b) First Responders (Fire, EMS, HazMat)

Name	Emergency Number	Non-Emergency Number
***All emergency notifications require notification to 911 first**		
North Metro Fire Rescue	911	303-452-9910
Northglenn Police Department	911	303-288-1535
Colorado State Patrol	911	970-506-4999

c) Local, State, and Federal Contacts

Name	Emergency Number	Non-Emergency Number
Eric Ensey – Northglenn Senior Planner	none	303-450-8740
Weld County Office of Emergency Management	911	970-304-6540
COGCC	none	303-894-2100
CDPHE	none	877-518-5608
Colorado Parks & Wildlife	none	303-291-7227
National Response Center	800-424-8802	none

d) Medical Facilities

Name	Office Phone
Centura St. Anthony North Hospital	720-627-0000
Medical Center of the Rockies	970-624-2500
Northern Colorado Medical Facility (Burn Unit)	970-810-4121
Platte Valley Medical Center	303-498-1600

e) Contracted Spill Response Organization

Name	24/7 Emergency Number	Non-Emergency Number
EnviroServe	720-450-1316	800-488-0910
EHS-Environmental HAZMAT Services	303-525-3111	720-225-9252

f) Loss of Well Control

Name	24/7 Emergency Number	Non-Emergency Number
Wild Well Control, Inc.	281-353-5481	281-784-4700
Cudd Pressure Control	307-382-6650 and 713-849-2769	800-990-2833

g) Railroad Emergency Response

Name	24/7 Emergency Number
Union Pacific Railroad	888-877-7267
BNSF	800-832-5452
Great Western Railway	800-533-9416 (Office 303-398-4500)

h) Mutual-Aid

All mutual-aid coordination within Weld County will be in accordance with the current Weld County Fire Chiefs Association Mutual-Aid Agreement. In addition, due to the size of Weld County and the large number of Fire Departments that make up the Weld County Fire Chiefs Association's, Mutual-Aid may be a mixture of full-time, combination, and volunteer FD resources responding to an incident at this oil and gas location.

SECTION – 4 SITE SPECIFIC INFORMATION

a) Site Description

The Lizzy 8-36HZ pad is a KMOG oil and gas production facility that will have 25 horizontal oil and gas wells along with two 285-barrel crude oil storage tank (these are condensate tanks used for maintenance storage as needed) and eight 285-barrel produced water tanks located inside a lined secondary containment structure.

b) Nearby Schools, High Occupancy Buildings, Waterways (measured from the Working Pad Surface)

- Schools - None within 5,280 feet of location
- High Occupancy Buildings - None within 5,280 feet of location
- Waterways – Ditch: 742’ E

c) Site Safety Requirements and General Safety Information

The minimum personal protective equipment (PPE) to enter any KMOG location includes hard hat, safety glasses, safety toe boots, four gas monitor and fire-resistant clothing (FRC). All contractors and visitors are responsible for providing their employees with the appropriate training on and use of PPE while on KMOG locations. In addition, all contract personnel entering an KMOG location to perform work must understand and abide by KMOG’s contractor expectations relating to environmental, health, and safety requirements.

The primary hazards that any person must be aware of while on an KMOG production location include, but are not limited to, the potential for release of hydrocarbon gases and/or liquids from production equipment/tanks, heavy truck and equipment traffic, loud noise, high pressures, and the potential for a flash fire. These hazards can vary depending on the work being performed.

d) Safety Data Sheets (SDS)

- **SDS:** Depending on the operations taking place on location, chemicals stored on-site may vary. In accordance with 49 CFR 1910.1200, Safety Data Sheets (SDS) will be made available for site personnel performing work and for first responders in a centralized location onsite.

e) Equipment Lists – Production Phase

Item Description	Quantity
Horizontal oil and gas wells	25
400 - barrel crude oil storage tank	0
285 - barrel produced water	8
285 - barrel condensate tank (maintenance tank only)	2

f) Chemicals stored on-site (BBLs and Gallons)

Drilling Phase			
Chemicals (CAPs indicate Product Name vs upper lower case is a generic chemical)	**Package Size (Volume)**	**Quantity**	**Comments**
ADAPTA L	5 gal can	128 cans	
BARAKLEAN	5 gal can	64 cans	
BAROID 41	bulk silo	45 tons	
BAROID 41	100 lb. sacks	400 sacks	
BARO-SEAL CLASSIC	40 lb. sacks	60 sacks	
Calcium Chloride	50 lb. sacks	500-600 sacks	
DRILTREAT	55 gal drum	4 drums	
FORTI-MUL	55 gal drum	16-20 drums	
Diesel	19,000 gal tank	19,000 gals	
Graphite	50 lb. sacks	60 sacks	
Lime	50 lb. sacks	200 sacks	
Odor Armor	275 gal tote	I tote	
RHEMOD L	55 gal drum	4 drums	
Salt-Driller's Rock	50 lb. sacks	49 sacks	
Sawdust Fine	5.5 cubic foot bag	60 bags	
STOPPIT	50 lb. sacks	80 sacks	
WALL-NUT MEDIUM	50 lb. sacks	48 sacks	
Oil Based Mud (OBM)	150-500 BBL Tanks	1,800-2,200 BBLs	11 Tanks - 3 tank sizes - 150, 350 & 500 BBLs
Completions/Hydraulic Fracturing Phase			
Chemicals	**Volume**	**Units/ Quantity**	**Comments**
Hydrochloric Acid	4,000 Gal Transport	1	Used during first stages
HCR Synthetic Acid	4,000 Gal Transport	2	
Sodium Bicarbonate	200-300 lbs	1	Acid neutralizer
Calcium Chloride (Brine)	500 BBL Capacity	1	Winter ops only
Friction Reducer (FR)	4,500 Gal Capacity ISO	1	
Hydrochloric Acid (Biocide Trailer)	4,000 Gal Capacity	1	Biocide treatment trailer
Sodium Chlorite	2,000 Gal Capacity	1	
Sodium Hypochlorite	2,000 Gal Capacity	1	Biocide treatment trailer
Produced Water	500 BBL	4	
Diesel Fuel	16,000 Gal Capacity	1	
DEF	2,200 Gal Capacity	1	
Flowback Phase			

Coil Chemicals	Volume	Units/ Quantity	Comments
Friction Reducer	330 Gal Capacity	1	Mixing plant (chemical trailer)
Biocide	330 Gal Capacity	1	Mixing plant (chemical trailer)
Pipe on pipe lubricant	330 Gal Capacity	1	Mixing plant (chemical trailer)
Foamer	330 Gal Capacity	1	Mixing plant (chemical trailer)
Defoamer	330 Gal Capacity	1	Mixing plant (chemical trailer)
Nano beads	330 Gal Capacity	1	Mixing plant (chemical trailer)
H2S scavenger	330 Gal Capacity	1	Mixing plant (chemical trailer)
Friction reducer	330 Gal Capacity	1	Coil provider (not always on pad)
Pipe on pipe lubricant	330 Gal Capacity	1	Coil provider (not always on pad)
Liquid N2	120 BBL Transport	1	Coil provider (not always on pad)
Oil on pad	20 BBL Max Allowed	N/A	Haul off oil before it reaches 20 BBL
Diesel	500 Gal Capacity	2	Steel Tanks
Biocide	350 Gal Capacity	1	Chemical injection cube (stainless steel tub)
Oxygen scavenger	350 Gal Capacity	1	Chemical injection cube (stainless steel tub)
Rig/Snub Chemicals	**Volume**	**Units/Quantity**	**Comments**
Diesel	500 Gal Capacity	2	
50/50 Methanol	500 Gal Capacity	1	Winter Ops only
Bio Water	60 BBL/well	N/A	Brought out in bobtail truck
Biocide	350 Gal Capacity	1	Chemical injection cube (stainless steel tub)
Oxygen Scavenger	350 Gal Capacity	1	Chemical injection cube (stainless steel tub)
Production Phase Chemicals			
Chemicals	**Volume**	**Units/Quantity**	
Crude oil/Condensate	285 BBL	2	
Produced Water	285 BBL	8	

g) As Built Map

An as-built facilities map will be sent to the Fire District and City staff after the wells turn over to production. The map will be in a format suitable for input into the City's GIS system depicting the locations and type of above and below ground facilities, including sizes and depths below grade of all oil and gas flow lines and associated equipment, isolation valves, surface operations and their functions, as well as transportation routes to and from exploration and development sites, for response and management purposes. The information concerning flowlines and isolation valves shall be marked and treated as confidential and shall only be disclosed in the event of an emergency or to emergency responders or for the training of emergency responders.

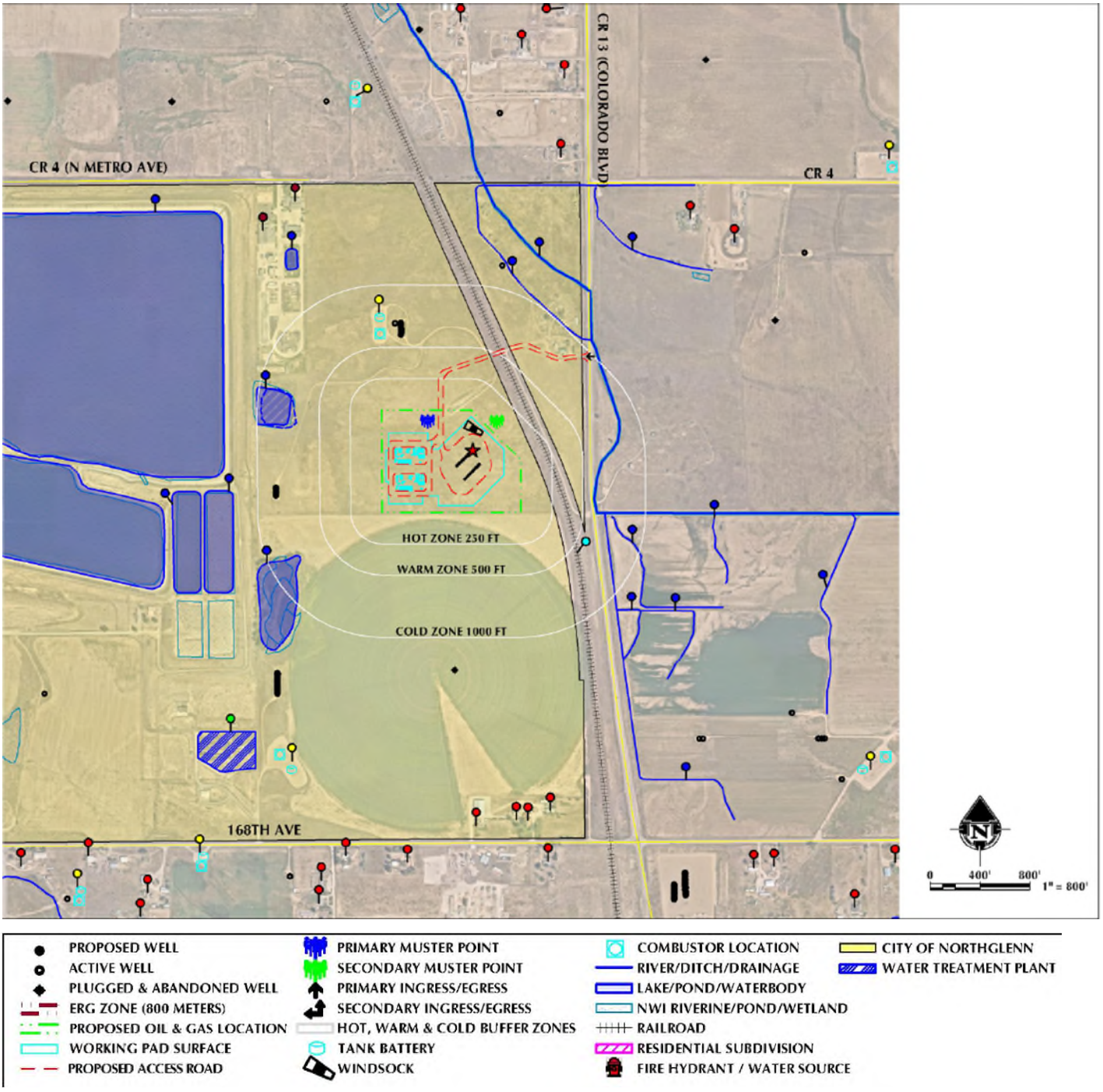
h) Reimbursement

KMOG will reimburse the appropriate agencies for their expenses resulting from operations.

SECTION 5 – MAPS AND DRAWINGS

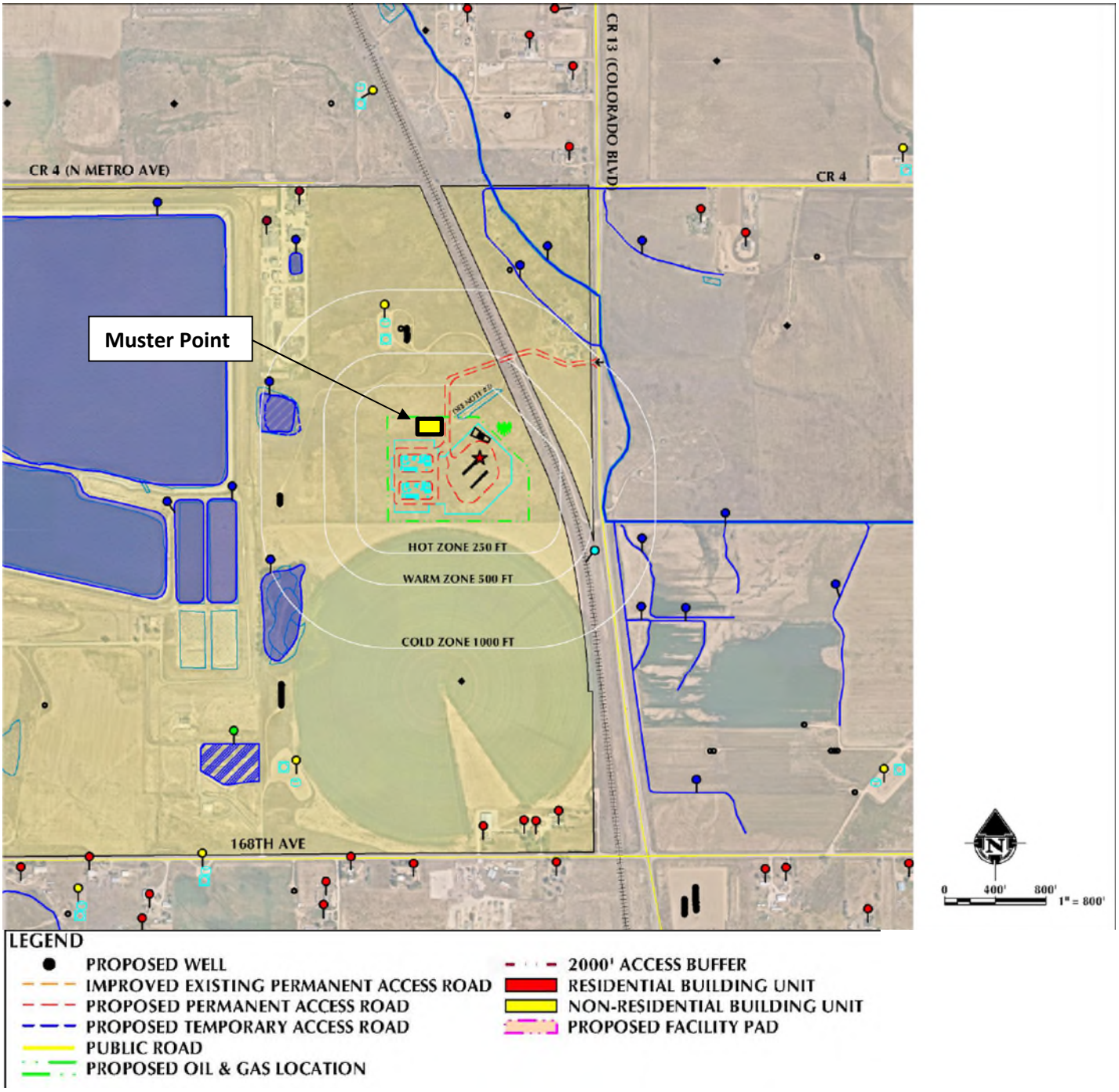
a) Project Area Map

Showing the following distances: 250 feet (Hot Zone), 500 feet (Warm Zone) and 1,000 feet (Cold Zone) from the Disturbance Area (DA).

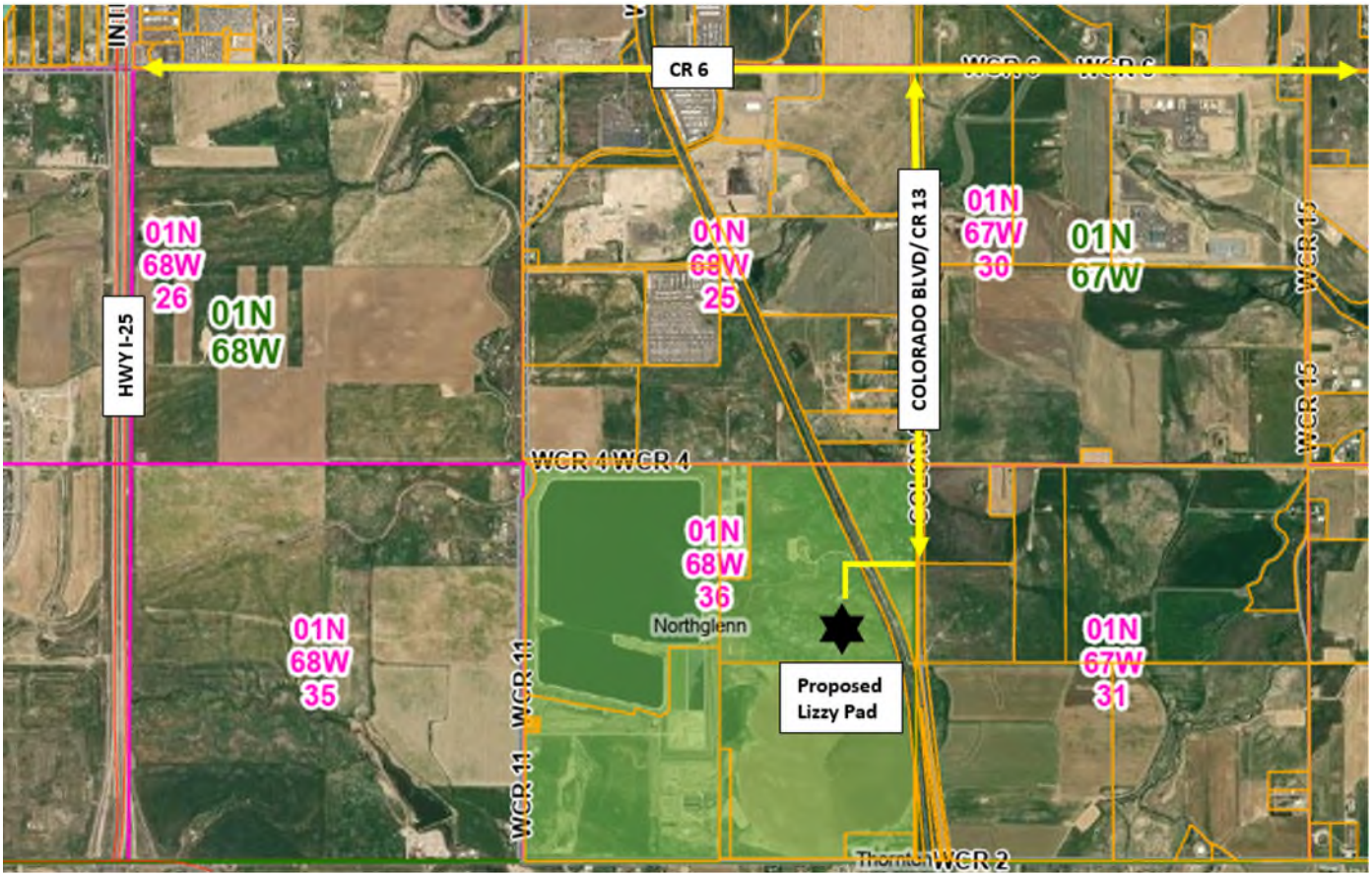


b) Project Location Access Map and Muster Point

The Primary muster point will be located at the entrance to the location as shown below. The secondary muster point is subject to change depending on the phase of operations occurring at the location.



c) Haul Route Map



d) 2,500 Foot Buffer Area Map

SECTION 6 – SPILL RESPONSE AND CLEAN-UP

a) Spill Response

There are multiple types of hydrocarbons and or chemicals stored onsite which can be released/spilled during oil and gas production and exploration. The most commonly released are unrefined products such as crude oil and produced water. Refined petroleum products such as diesel, gasoline, produced oils, and motor oil spills are less common, but still equally important to mitigate. If a spill is discovered, it will be mitigated in accordance with Colorado Oil and Gas Conservation Commission (COGCC), Colorado Department of Public Health and Environment (CDPHE), and Weld County LEPC requirements.

Once a release has been discovered, it will be immediately stopped and contained if possible and is safe to do so. When containing a spill; a combination of sorbent rolls, pads, mats, socks, or containment boom may be deployed, or earthen berms will be constructed around the release to keep spilled material contained and from spreading. These materials will be provided by KMOG and the contract company. During a spill, efforts will be made to minimize contact with live vegetation, nearby drainage, rivers, creeks, or streams. If the release is outside of secondary containment or poses a threat to flow off site, or impact environmentally sensitive areas, the spill response contractor should be notified for cleanup assistance, if needed, and for removal and disposal of spilled materials and contaminated areas.

In the event of a large incident requiring outside assistance/cascading resources, KMOG has contracted with a several spill response organizations, listed in Section 3 of this EAP. These organizations possess a working knowledge of oil and gas operations, emergency response and the Incident Command System (ICS). Once notified, personnel can be on location within 6 hours.

b) Spill Reporting

A spill/release will be reported to the COGCC if the release meets the COGCC reporting requirements per the 900 series rules. A spill/release will be reported to the CDPHE if the release meets the CDPHE reporting requirements.

These regulatory guidelines will be strictly followed by KMOG and any contractors operating under KMOG guidance during all activities at the Lizzy 8-36HZ pad at S2NE Sec 36 T1N R68W.

SECTION 7 – REPORTABLE QUANTITIES

a) Reportable Quantities

Mandated by Section 312 of the Emergency Planning and Community Right-To-Know Act (EPCRA) – also known as SARA Title III – the Tier II form captures information about the types, quantities, and locations of hazardous chemicals at a given facility. The form also lists contact information for the facility's designated emergency point-of-contact.

- Any facility that is required to maintain MSDSs (or SDSs) under the Occupational Safety and Health Administration (OSHA) 49 CFR 1910.1200 regulations for hazardous chemicals stored or used in the workplace.
- Facilities with chemicals in quantities that equal or exceed the lists of lists thresholds must report.
- Propane, benzene, propane, and methane are on the lists of lists and are known to be in crude oil. In addition, diesel is on the lists of lists and may be stored on oil and gas sites during construction and development.

b) Reportable Requirements

If your facility will meet the requirements under 40 CFR Part 370, you must submit your Tier II report to the State of Colorado every year before March 1st.

These regulatory requirements will be strictly followed by KMOG and any contractors operating under KMOG during all activities at the Lizzy 8-36HZ pad at S2NE Sec 36 T1N R68W.

SECTION 8 – EVACUATION INFORMATION

a) Evacuation Plan Procedures (public)

The procedure to be used in alerting the public in the event of than incident which could pose a threat to life or property will be arranged and coordinated with first responders and Weld County Emergency Management.

In the event of an actual emergency, the following steps will be immediately taken:

1. The KMOG representative will immediately notify first responders (911), to warn the public of a potential chemical exposure.
2. First responders may conduct door to door evacuation notices in addition to reverse 911 and utilizing the Integrated Public Alert and Warning System (IPAWS).
3. KMOG is responsible for employees and contract personnel will monitor essential and non-essential personnel traffic on or near the incident site.
4. General:
    a. The area included within the radius of exposure is the zone with the maximum potential hazard, per the Emergency Response Guide (ERG). When it is determined that conditions exist which create an additional area (beyond the initial zone of maximum potential hazard) vulnerable to possible hazard, public areas in the additional hazardous area will be evacuated.
    b. In the event of an incident, after the public areas have been evacuated and traffic stopped, it is expected that local civil authorities will have arrived and within a few hours will have assumed direction of and control of the public, including all public areas.
    c. KMOG will fully cooperate with these authorities and will exert every effort by careful advice to such authorities to prevent panic or rumors.

KMOG will dispatch appropriate personnel to the disaster site as soon as possible. The company's personnel will cooperate with and provide such information to civil authorities as they might require.

SECTION – 9 TRAINING AND EXERCISES

TRAINING: The National Incident Management System (NIMS) guides all levels of government, nongovernmental organizations, and the private sector to work together to prevent, protect against, mitigate, respond to and recover from incidents.

NIMS provides stakeholders across the whole community with the shared vocabulary, systems, and processes to successfully deliver the capabilities described in the National Preparedness System. NIMS defines operational systems that guide how personnel work together during incidents.

KMOG plays a vital role in the Incident Management System. KMOG has a significant impact on local, regional, and national economic recovery, and is part of the whole community and essential to the function of the Community Lifelines.

To maximize KMOG's impact and willingness to participate in incident operations, KMOG will coordinate and integrate with first responders into a Unified Command (UC)—including planning, training, and preparedness exercises. This is done independently and within the emergency response community, such as CPRN. In addition, it is also recommended

all KMOG employees who will respond to an incident within the incident command structure have training in ICS 100, ICS 200, and ICS 700 at a minimum, for company and agency emergency response interoperability to manage a response.

EXERCISES: Exercises are an important component to test an organization's response readiness, training and familiarity with various emergency response scenarios, participation, and engagement with local and or state agencies, and to develop lessons learned to improve emergency response capabilities.

SECTION – 10 COORDINATION WITH FIRST RESPONDERS

a) KMOG will communicate site construction, drill spud, completion operations and Production Turn-In-Line dates to the Weld County Office of Emergency Management for coordination/communication with local first responders. These start dates will be provided a minimum of 7 business days prior to commencement or change in oil and gas development operations.

b) In the event of an emergency requiring First Responders, Unified Command will be established between the KMOG On-site Incident Command (OSIC) and First Responders present. Unified Command post will be established based on conditions present at time of incident.

c) KMOG EHS representative and first responders identified in this Emergency Response Plan and Tactical Response Plan (TRP) have reviewed both documents and have discussed coordination efforts in the event of an emergency requiring first responder assistance.

d) **Industry Mutual-Aid:** Energy companies operating in Weld County are encouraged to be members of the Colorado Preparedness Response Network (CPRN), to support mutual-aid collaboration between industry and public emergency response organizations to achieve a coordinated and effective response to an all-hazards event. KMOG is a member of CPRN.

SECTION – 11 PLAN REVIEW AND UPDATE PROCEDURES

a) Multi-year plan review and update:
The KMOG Rockies Emergency Response Plan (ERP) is reviewed at a minimum over five years, but usually every year. Reviews include updating contacts, contractors, and procedures. **Post incident plan review and update:** Post incidents that required response personnel, an after-action review (AAR) is completed with all response participants. If during the AAR it is identified that changes or updates are needed to the ERP they are done so as a corrective action within the AAR.

SECTION – 12 WILL SERVE LETTER – NORTHGLENN POLICE DEPT

Northglenn Police Department
50 W. Community Center Drive
Northglenn, CO 80234-3308
P: 303.450.8892
F: 303.450.8896
Courtesy, Professionalism, Respect

May 11, 2023

Ms. Tracy Colling
Kerr McGee Oil and Gas Onshore LP
1099 18th Street, Suite 700
Denver, CO 80602

RE: Lizzy 8-36HZ Pad
S2NE, Section 36 T1N Range 68W (Legal Description)
NE1/4 of Section 36, Township 1 North, Range 68 West of the 6th P.M.
City of Northglenn, County of Weld, State of Colorado
Access Road 40.011046°, -104.9422488°

To Whom It May Concern,

During the scope of work to be performed at the above location, the Northglenn Police Department will provide emergency response services to the work site located in Northglenn, CO, approximately 2,700 feet northwest of the Intersection of Weld County Road 13 (Colorado Boulevard) and E. 168th Avenue. To reach our Dispatch, Adams County Communications Center (ADCOM), dial 9-1-1 or 303.288.1535.

Sincerely,

James S. May, Jr.
Chief of Police

msn

5.10 WEED CONTROL

All locations, including wells and surface production facility, will be kept free of weeds, rubbish, and other waste material. During drilling, production, and reclamation operations, all disturbed areas shall be kept reasonably free of noxious weeds and undesirable species. When a well is completed for production, all disturbed areas no longer needed will be restored and revegetated as soon as practicable.

Weed control measures shall be conducted in consultation with the Surface Owner and Northglenn based on site specific conditions. KMOG will monitor and control noxious weeds until achieving reclamation threshold for release within reclaimed disturbance areas, including monitoring to measure success of treatments. Weed control measures employed may include mowing or removal and herbicide treatment during the appropriate growing season. Please see the Interim Reclamation Plan in Section 5.2 for more details.

5.11 SANITARY FACILITIES PLAN

A sanitary facilities plan is not applicable for this location.

5.12 VERIFICATION OF MINERAL INTEREST

Please see the mineral lease attached.

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BOOK 639

Recorded at 8 35 o'clock A M JAN 15 1971

Rec. No. 1560543 Ann Spomer, Recorder

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Form 236-2
(Rev. 8/27/69)

COLORADO OIL AND GAS LEASE
ASSIGNMENT LEASE No. OG 70/8571-S

Full Assignment from Lease No. 70/8535-S

Assignor: Uel Bumpers

THIS LEASE AGREEMENT, Dated this 9th day of November, A.D. 19 70, made and entered into by and between the STATE OF COLORADO, acting by and through the STATE BOARD OF LAND COMMISSIONERS, party of the first part and hereinafter called the "lessor", and PAN AMERICAN PETROLEUM CORPORATION Security Life Building, Denver, Colorado 80202 party of the second part, hereinafter called the "lessee":

WITNESSETH

THAT WHEREAS, There has been filed in the office of the lessor a request for an assignment lease covering acreage formerly included in Colorado Oil and Gas Lease No. 70/8535-S, and

WHEREAS, All of the regulations relative to issuance of assignment leases have been complied with and said assignment has been allowed by the State Board of Land Commissioners:

THEREFORE, For and in consideration of the premises, as well as the payment of rentals hereinafter provided for, and of the covenants and agreements hereinafter contained, on the part of the lessee to be paid, kept and performed, the said lessor has granted and demised, leased and let, and by these presents does grant, demise, lease and let exclusively unto the said lessee for the sole and only purpose of exploration, development and production of oil and gas, or either of them, thereon and therefrom with the right to own all oil and gas so produced and saved therefrom and not reserved as royalty by the lessor under the terms of this lease, together with rights of way, easements and servitudes for pipe lines, telephone and telegraph lines, tanks and fixtures for producing and caring for such products, and housing and boarding employees, and any and all rights and privileges necessary for the economical operation of said land for oil and gas, with right to the use of all otherwise unappropriated water from said lands, but not from lessor's water wells or reservoirs, and with the right of removing either during or within six (6) months after the term hereof, all and any improvements placed or erected on the premises by the lessee, including the right to pull all casing, subject, however, to the conditions hereinafter set out, the following described land situated in the county of Weld, State of Colorado, and more particularly described as follows:

DESCRIPTION OF LAND	SECTION	TOWNSHIP	RANGE
All	36	1-North	68-West

Surface Patents: NE¼: #4081; NW¼: #4744
SW¼: #3474; SE¼: #3523

Land Fund: School

containing 640.00 acres, more or less.

TO HAVE AND TO HOLD Said land, and all the rights and privileges granted hereunder, to and unto the lessee to date of October 21, 1975, and so long thereafter as oil and gas, or either of them, is produced in paying quantities from said land or the lessee is diligently engaged in bona fide drilling or reworking operations on said land. Drilling or reworking operations shall be deemed to be diligently performed if there is no delay or cessation therof for a greater period than thirty (30) consecutive days unless an extension in writing is granted by lessor. Provided that such drilling or reworking operations are commenced during the term of this lease or any extension thereof or while this lease is in force by reason of production of oil and gas or either of them, or that such reworking is commenced immediately upon cessation of production for the purpose of re-establishing the same, and provided further that such production is commenced during the term of this lease or any extension thereof, or while this lease is in force by reason of such drilling or reworking operations or other production.

In consideration of the premises, the parties covenant and agree as follows:

1. During the term of this lease, lessee shall pay to lessor an annual rental of $ 320.00, computed at the rate of $ 0.50 per acre or fraction thereof of the lands covered hereby. In the event that this lease is extended for an additional term as provided in Paragraph 1¢ hereof, lessee shall during said extended period pay to the lessor an annual rental at double the rate above specified for the lands covered hereby. Extension of the term of this lease solely by discovery and production of oil or gas as in the preceding paragraph provided, shall not operate to increase the rentals payable under this paragraph; that is to say, the rental in effect at the time of discovery and production shall not be increased by reason of extension of the term of this lease by reason only of such production, but annual rentals in such amount shall be paid during the remaining life of this lease. The rentals as above provided shall be paid annually in advance on or before each October 21.

2. Except for oil and gas used on the leased premises for development and production or that unavoidably lost, the lessee shall pay the lessor as royalty, in addition to the rentals provided in this lease, the following:

(a) On oil, one-eighth of the oil produced and saved from the leased premises.

At the option of the lessor, lessor may take its royalty oil in kind, in which event lessee shall deliver such royalty oil to lessor on the leased premises, free of cost or deduction, into the pipe lines or storage tanks designated by lessor, but lessee shall not in such case be required to provide free tankage for any such oil for a longer period than one month after the same is run into the tanks.

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When paid in cash, the royalty shall be calculated upon the reasonable market value of the oil at the well which shall not be deemed to be less than the price actually paid or agreed to be paid to the lessee at the well by the purchaser thereof; and in no event shall the royalties be based upon a market value at the well less than the posted price in the field for such oil, or in the absence of a posted price in the field for such oil, upon a market value at the well less than the prevailing price received by other producers in the field for oil of like grade and gravity at the time such oil is run into pipelines or storage tanks.

(b) On gas, including casinghead gas or other gaseous substance, one-eighth of the reasonable market value at the well or of the price received by lessee at the well, whichever is greater, of all gas produced from the leased premises and sold or utilized by lessee. Where gas is sold under a contract that has been approved by lessor, the reasonable market value of such gas for determining the royalties payable hereunder shall be the price at which such gas is sold under such contract; provided, however, that no approval by lessor of the terms of any such agreement shall operate to make lessor a party thereto or obligate it in any way except as herein provided, and lessee agrees to save lessor harmless from any such obligation.

(c) All costs of marketing the oil and/or gas produced shall be borne by the lessee and such costs shall not directly or indirectly reduce the royalty payments to the lessor.

3. Lessee agrees to make a monthly production report of the production on the leased premises covering the preceding month, which report shall be filed with lessor on or before the last day of each month, and shall be accompanied by full settlement for all royalties due the lessor for such preceding month under this lease; lessee further agrees to keep and to have in possession, books and records showing the production and disposition of all oil and gas produced from the leased premises and to permit the lessor or its agents, at all reasonable hours, to examine the same. Royalties due under this lease shall be calculated on actual tankage measurements, unless the same are shown to be incorrect, or a more accurate means of measurement is provided.

4. The lessee may at any time, by paying to the State of Colorado, acting by its State Board of Land Commissioners, all amounts then due as provided herein, surrender and cancel this lease insofar as the same covers all or any portion of the lands herein leased and be relieved from further obligations or liability hereunder with respect to the lands so surrendered; provided that no partial surrender or cancellation of this lease shall be for less than contiguous tracts of approximately forty (40) acres or Governmental lot corresponding to a quarter-quarter section; provided further that this surrender clause and the option herein reserved to the lessee shall cease and become absolutely inoperative immediately and concurrently with the institution of any suit in any court of law by the lessee, lessor, or any assignee of either, to enforce this lease or any of its terms express or implied, but in no case shall surrender be effective until lessee shall have made full provision for conservation of the minerals and protection of the surface rights of the leased premises.

5. All payments due hereunder shall be made on or before the day such payment is due, and this lease shall not be in effect until lessor has received for the initial rental, the cash or cash proceeds of any checks therefor regardless of the date of this lease. Nothing in this paragraph shall be construed to extend the expiration of the primary term hereof beyond five (5) years from the date hereof.

6. The lessee, with the written consent of the lessor, shall have the right to assign this lease as to the entire leasehold interest of such lessee in all or part of the lands covered hereby, not less, however, than contiguous tracts of approximately forty (40) acres or Governmental lot corresponding to a quarter-quarter section for any partial assignment, and for approval of such assignment the lessor may make an assignment charge in the amount set forth in the current regulations issued by the Board. No assignment of undivided interests or retention or reservation of overriding royalties will be recognized or approved by lessor; and the effect, if any, of any such assignments or reservations will be strictly and only as between the parties thereto, and outside the terms of this lease, and no dispute between parties to any such assignment or reservation shall operate to relieve the lessee from performance of any terms or conditions hereof or to postpone the time therefor. Lessor will and shall at all times be entitled to look solely to the lessee or his assignee shown on its books as being the sole owner hereof, and for the sending of all notices required by this lease and for the performance of all terms and conditions hereof. If any assignment of a portion of the lands covered hereby shall be approved, a new lease shall be issued to the assignee covering the assigned lands, containing the same terms and conditions as this lease, and limited as to term as this lease is limited, and the assignor shall be released and discharged from all further obligations and liabilities, and shall be held to have released all rights and benefits thereafter accruing with respect to the assigned land, as if the same had never been a part of the subject matter of this lease. Although not binding on the State Board of Land Commissioners as heretofore stated, all instruments of every kind and nature whatsoever affecting this lease should be filed in the records of the Mineral Department of the State Land Board.

7.

(a) Lessee agrees to reasonably protect the leased premises from drainage by offset wells located on adjoining lands not owned by lessor, when such drainage is not reasonably compensated for by counter-drainage. It shall be presumed, for the purpose of this lease, that the production of oil and gas from offset wells results in drainage from the leased premises, unless lessee demonstrates to lessor's satisfaction by engineering, geological, or other data, that production from such offset well does not result in such drainage, or that the drilling of a well or wells on leased premises would not accomplish the purposes of protecting the deposits under leased premises. The Board's decision as to the existence of such drainage shall be final, and lessee shall comply with the Board's order thereon or, in lieu thereof, surrender this lease as to any such undeveloped acreage as designated by the Board.

(b) Upon discovery of oil and gas on the leased lands, lessee shall with reasonable diligence proceed to develop said premises at a rate and to an extent commensurate with the economic development of the field in which the leased lands lie.

(c) The terms and conditions of this Paragraph 7 and of this lease shall be performed and exercised subject to all laws, regulations, orders, local ordinances or resolutions applicable to and binding upon the administration of grant lands owned by the State of Colorado.

(d) In the event lessor permits any of the lands herein leased to be included within a unitization agreement, the terms of this lease and the operation of this Paragraph 7 shall be deemed to be modified to conform to such unitization agreement. When only a portion of the lands under this lease is committed to a unit, the lessor may segregate the lands and issue a separate lease for each portion and the terms of the lease on that portion included in the unit shall be deemed to be modified to conform to such unit agreement.

8. Lessee shall, subject to applicable laws, regulations and orders binding upon the administration of State lands, operate and produce all wells upon the leased premises so long as the same are capable of producing in paying quantities, and shall operate the same so as to produce at a rate commensurate with the rate of production of wells on adjoining lands within the same field and within the limits of good engineering practice, except for such times as there exist neither market nor storage therefor, and except for such limitations on or suspensions of production as may be approved in writing by lessor. If lessee shall complete a well on the leased lands productive of gas only and lessee is unable to produce such gas due to lack of suitable market therefor, lessor may grant lessee suspension of his obligations to produce hereunder until a suitable market for such gas can be found and during any such suspension period, it shall be deemed that gas is being produced hereunder in paying quantities.

3-3.

9. The lessee agrees to notify the lessor of the location of each well before commencing drilling thereon. No exploration, drilling or production operation, including permanent installations, shall be within 200 feet of any building or other improvements, including water well or reservoir, without the written permission of the owner of said improvements. Lessee shall keep a correct log of each well drilled hereunder, showing by name or description the formations passed through, the depth at which each formation was reached, the number of feet of each size casing set in each well, where set, and the total depth of each well drilled. Lessee, within thirty (30) days after the completion or abandonment of any well drilled hereunder, shall file in the office of the State Board of Land Commissioners, at Denver, Colorado, a complete and correct log of such well, together with a copy of the electric log and the radioactivity log of the well when such logs, or either of them ,are run, and also a copy of all drill stem test results, core records and analyses, record of perforations and initial production tests, if any. If any of the information required by this paragraph is contained in reports required to be filed with the Oil and Gas Conservation Commission of Colorado, the requirements of this paragraph for such information will be satisfied by the filing, with the Oil and Gas Conservation Commission, of copies of such reports as is required by Paragraph 15 hereof.

10. Lessee shall be liable and agrees to pay for all damages to the surface of the land, livestock, growing crops, water wells, reservoirs, or improvements caused by lessee's operations on said lands. It is agreed and understood that no operations shall be commenced on the lands hereinabove described unless and until the lessee or his assignee shall have filed a good and sufficient bond with the lessor in an amount to be fixed by lessor, to secure the payment for such damage to the surface of the land, livestock, growing crops, water or improvements as may be caused by lessee or his assignee's operations of said lands and also compliance with all the provisions, conditions, covenants and obligations of this lease and the statutes of the State of Colorado, and rules and regulations thereto appertaining. When requested by lessor, lessee shall bury pipe lines below plow depth. Lessee shall set and cement sufficient surface casing to protect the fresh water wells of the area.

11. The lessee shall not remove any machinery or fixtures placed on said premises, other than drilling equipment, nor draw the casing from any well unless and until all payments and obligations currently due the lessor under the terms of this agreement shall have been paid or satisfied.

12. Should lessee discover any valuable products other than oil, gas, gasoline, casinghead gas or other hydrocarbons on or within the leased premises, lessee shall within seven (7) days report such discovery to lessor, and lessee shall have no right thereto because of such discovery; provided, that the terms — oil, gas, or gasoline — shall not be deemed to include any substance over which the United States Government assumes exclusive control.

13. If lessee shall initiate or establish any water right for the leased premises, the point of surface diversion or ground water withdrawal of which is on the leased premises, such right shall, if the surface rights of said premises are owned by lessor, become property of lessor, without cost, at the termination of the lease.

14. Upon failure or default of the lessee, or any assignee, to comply with any of the provisions or covenants hereof, the lessor is hereby authorized to cancel this lease and such cancellation shall extend to and include all rights hereunder as to the whole of the tract so claimed, or possessed, by the lessee or assignee so defaulting, but shall not extend to nor affect the rights of any lessee or approved assignee claiming lands segregated by assignment from this lease; provided, that in the event of any such default or failure to comply with any of the terms and conditions hereof, lessor shall, before any such cancellation shall be made, send by certified mail to the lessee or assignee so defaulting, to the postoffice address of said lessee or assignee, as shown by the records of lessor, a notice of intention to cancel for such default, specifying the same, and if within thirty (30) days from the date of mailing said notice, the said lessee or assignee shall have paid all rents or royalties in default, and shall have begun in good faith to correct such other default as may have been specified, and shall thereafter diligently prosecute the correction of such default, there shall not be a cancellation therefor. If such default is not corrected, or correction thereof is not begun in good faith as hereinabove required, within thirty (30) days after the mailing of such notice, this lease will terminate and be cancelled by operation of this paragraph without further action by lessor, or further notice to lessee.

15. If the lessee shall have failed to make a discovery of oil and gas or either of them in paying quantities during the term hereof, or during drilling operations commenced during the term hereof, the lessee may make written application to lessor to extend this lease for an additional term of five years as to all of the lands covered hereby (excluding any lands theretofore surrendered as in Paragraph 4 provided, or assigned as in Paragraph 6 provided) and the making of such extension shall be at the option of lessor. In no instance will this lease be permitted to exist nor be extended beyond the term of the base lease from which it was issued except by special order of the Board.

16. Lessee will comply with all statutory requirements, and all rules and regulations of the Oil and Gas Conservation Commission of Colorado applicable to the administration of State owned lands, or to the development and production of oil and gas thereon, and will furnish to the Oil and Gas Conservation Commission extra copies of all reports of any kind or nature that are required by said laws, rules and regulations to be furnished to the said Oil and Gas Conservation Commission of Colorado.

17. "Paying quantities" as used herein shall mean and refer to quantities of oil and gas or of either of them sufficient to pay for the current cost of producing same.

18. If lessor owns a lesser interest in the oil and gas deposits of the above described land than the entire and undivided fee simple estate, then the royalties and rentals herein provided shall be paid the lessor only in the proportion which its interest bears to the whole and undivided fee.

19. The benefits and obligations of this lease shall inure to and be binding upon the heirs, legal representatives, successors or assigns of the lessee; but no sub-lease or assignment hereof, or of any interest herein, shall be binding upon lessor until the same has been approved by it as provided for in Paragraph 6 hereof.

IN WITNESS WHEREOF, The party of the first part has hereunto signed and caused its name to be signed by the STATE BOARD OF LAND COMMISSIONERS, with the seal of the office affixed, and the lessee has signed this agreement, the day and year first above written.

STATE BOARD OF LAND COMMISSIONERS

By Raymond T. Thompson
President

By Fenton W. Shults
Register

By Stanley C. Woodward
Engineer

Recommended:

Mineral Director

LESSEE

PAN AMERICAN PETROLEUM CORPORATION

By: T. S. Yancey
Its Attorney-in-Fact

COLORADO

STATE OF COLORADO)
: SS.
COUNTY OF DENVER)

The foregoing instrument was acknowledged before me this 17th day of November 19 70. by T. S. YANCEY, Attorney in Fact for PAN AMERICAN PETROLEUM CORPORATION

WITNESS my hand and official seal.

Enid V. Dowling
Notary Public

My commission expires:
My Commission expires June 3, 1974

5.14 ELECTRIFICATION PLAN

Drilling Phase

The production drilling rig will utilize electric power. The electric power will be supplied by the local utility company, United Power, and will be capable of supporting peak loads of 3.4MW. In the event the electric grid is temporarily down, the drilling rig will utilize backup natural gas generators to maintain safe operations on location until electricity is restored by United Power.

Production Phase

Electric power for the facility will also be supplied by United Power.

5.13 NUISANCE PREVENTION PLAN

Please see the Noise, Light, and Odor Plans attached.

5.15 AIR QUALITY MITIGATION PLAN

Please see Air Quality Mitigation Plan attached separately, which includes Air Minimization Plan, Air Monitoring Program and Air Quality Dispersion Modeling Analysis

5.16 WASTE MANAGEMENT PLAN

Kerr-McGee Oil & Gas Onshore LP

Waste Management Plan

Lizzy 8-36HZ Well Pad and Facility

Northglenn, Colorado

December 2022

Revised: June 13, 2023

1. Waste Management

Kerr-McGee Oil & Gas Onshore LP (KMOG) operations will meet the Colorado Oil and Gas Conservation Commission (COGCC) requirements including the 900 Series, and EPA CFR 40 & 49, Including 40 CFR 261.4(B)(5). All waste management and best management practices (BMP) will be conducted in accordance with the operational requirements listed below.

2. Waste Storage, Handling, and Best Management Practices

The proper handling and storage of waste is essential to ensuring protection of human health and the environment, while minimizing company liability. The following guidelines identify proper waste handling and storage practices to be employed by personnel at this Well Pad and Facility.

a. 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.
b. All specific wastes in the attached site-specific Table 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.
c. The proper personal protective equipment will always be worn when handling waste. Employees will refer to the Safety Data Sheet for additional information.
d. Good housekeeping measures will be implemented in the operating area and to ensure safety and environmental well-being.
e. Wastes will be segregated and stored according to its waste type.
f. When feasible, wastes will be recycled, re-used, or treated onsite. As a BMP fluid are generally re-used from location to location if possible. No onsite treatment or recycling is planned onsite for this location. In the event, that onsite treatment or recycling is feasible, a written management plan will be submitted to the COGCC Director for approval on a Form 4.
g. All waste streams will be transported off location for recycling or disposal in a timely manner in accordance with local, state, and federal regulations.
h. All spills or leaks will be cleaned up upon discovery in accordance with local, state, and federal testing and cleanup standards. All waste generated from the cleanup process will be profiled, as required by local, state, and federal regulations, for recycling or disposal. Manifests will be used to track all waste generated.
i. KMOG shall remove all hydraulic fracturing chemicals from a Well Site within thirty (30) days following the completing of hydraulic fracturing at that Well Site.
j. Secondary containment, such as duck ponds or lined earthen berms for temporary tanks, shall be used.
k. Secondary containment shall be constructed with a synthetic or engineered liner that contains all primary containment vessels and is mechanically connected to the steel ring to prevent leakage.

3. Waste Characterization and Volumes

Wastes will be characterized in accordance with local, state, and federal requirements. Different types of wastes will be characterized via process knowledge, safety data sheets, or laboratory analysis in accordance with regulations and the requirements of the permitted facility to which they will be taken for ultimate disposition. Different types of wastes have different classifications such as hazardous, non-hazardous, and E&P exempt. The majority of wastes

generated at this well pad will be E&P exempt. Volumes of wastes will be highly variable with some potential wastes never being generated and can vary greatly throughout the life of the well. Wastes such as drill cuttings and produced fluids will certainly be generated with volumes ranging from approximately 350-700 cubic yards per well and 50-1,500 barrels per day, respectively.

4. Waste Transportation and Disposal

Wastes will be transported to facilities authorized by the COGCC Director, to permitted commercial waste disposal facilities, permitted commercial waste facilities, or permitted beneficial use sites.
All E&P wastes transported offsite will be ticketed, signed by the transporter, and maintained to be provided upon request for a minimum of five years. Each ticket will include the information listed below

1. The date of the transport.
2. The identity of the waste generator.
3. The identity of the waste transporter.
4. The location of the waste pickup site.
5. The type and volume of waste.
6. The name and location of the treatment or disposal site.

5. Site Specific Information

The attached Table 1 lists the Potential Waste Management Options for this location. For each waste type a variety of options are identified due to factors that change during normal operation and life of the facility such as waste volumes, disposal facility hours of operation, facility capacities, etc.

TABLE 1 – POTENTIAL WASTE MANAGEMENT OPTIONS

Waste Type	Storage Container	Waste Disposal or Centralized E&P Management Facility	Waste Characterization	Potential Hazard	E&P Exempt
Water-based drilling fluids and associated drill cuttings	steel bins, roll -offs or tanks	Drilling Fluid Management Facility #3 (COGCC Facility ID 439305)	DFMF 3 COGCC permit requirements	None	Yes
		Aggregate State Fluid Recycling Facility (COGCC Facility ID 456644)	Aggregate State Fluid Recycling Facility Waste Management Plan requirements		
		Waste Connections, Erie Colorado	Landfill Requirements		
		Buffalo Ridge, Keenesburg, Colorado			
Oil-based drilling fluids and associated drill cuttings	steel bins, roll -offs or tanks	Aggregate State Fluid Recycling Facility (COGCC Facility ID 456644)	Aggregate State Fluid Recycling Facility Waste Management Plan requirements	Ignitable/ combustible, toxic	Yes
		Waste Connections, Erie Colorado	Landfill Requirements		
		Buffalo Ridge, Keenesburg, Colorado			
Flowback and Produced Water	Steel Tanks	KMOG 16-24i and 19-3i SWDs	COGCC UIC permit requirements	Ignitable/ combustible, toxic	Yes
		EWS #3, #4 and #5 SWDs			
		Lonestar Select SWD			
Oil and produced fluid impacted soil	Containment steel roll-offs, or loaded directly into transportation	KMOG Land Treatment Facility (COGCC Facility ID 149007)	Land Treatment Facility Waste Management Plan requirements	Ignitable/ combustible, toxic	Yes
		Aggregate State Fluid Recycling Facility (COGCC Facility ID 456644)	Aggregate State Fluid Recycling Facility Waste Management Plan requirements		
		Waste Connections, Erie Colorado	Landfill Requirements		
		Buffalo Ridge, Keenesburg, Colorado			
Tank bottoms, oily waste, and workover fluids	Containment steel roll-offs, or loaded directly into transportation	KMOG Land Treatment Facility (COGCC Facility ID 149007)	Land Treatment Facility Waste Management Plan requirements	Ignitable/ combustible, toxic	Yes
		Aggregate State Fluid Recycling Facility (COGCC Facility ID 456644)	Aggregate State Fluid Recycling Facility Waste Management Plan requirements		
		Waste Connections, Erie Colorado	Landfill Requirements		
		Buffalo Ridge, Keenesburg, Colorado			
		Tower Road Landfill, Denver, Colorado			
		Foothills Landfill, Golden, Colorado			
		Clean Harbors, Deer Trail Colorado			
Hazardous materials	steel bins, roll-offs, tanks, totes, drums, clean packs	Clean Harbors, Kimble, Nebraska	Resource, Conservation, and Recovery ACT (RCRA) and Landfill requirements	Ignitable/ combustible, Corrosive, Reactive, Toxic	No
		Clean Harbors, Deer Trail Colorado			
General trash and non-hazardous municipal solid waste	steel bins or roll-offs	Waste Connections, Erie Colorado	Landfill Requirements	None	Yes
		Buffalo Ridge, Keenesburg, Colorado			

5.17 HAZARDOUS MATERIALS MANAGEMENT PLAN

Kerr-McGee Oil & Gas Onshore LP

Hazardous Materials Management Plan

Lizzy 8-36 HZ Well Pad and Facility

Northglenn, Colorado

December 2022
Revised: June 13, 2023

I. Hazardous Materials Management

Kerr-McGee Oil & Gas LP operations will meet the requirements Sec. 21-5-450, COGCC 900 Series, and EPA CFR 40 parts 260 through 273. All hazardous materials management and best management practices will be conducted in accordance with the operational requirements listed below. Hazardous materials include products used to drill, complete, and construct the wells and facilities, products used to ensure the functionality and integrity of the wells and facility and hazardous waste generated as a by-product.

II. Hazardous Material Storage, Handling, and Best Management Practices

The proper handling and storage of hazardous materials is essential to ensuring protection of human health and the environment, while minimizing company liability. The following guidelines identify proper hazardous handling and storage practices to be employed by personnel at the Lizzy B 8-36HZ Well Pad and Facility.

a. Hazardous materials 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.
b. All specific hazardous materials in the attached site-specific Table will have a detailed Safety Data Sheet available which includes information such as the properties of the materials; the physical, health, and environmental health hazards; protective measures; and safety precautions for handling, storing, and transporting the material.
c. The proper personal protective equipment will always be worn when handling hazardous materials. Employees will refer to the Safety Data Sheet for additional information.
d. Good housekeeping measures will be implemented in the operating area and to ensure safety and environmental well-being.
e. Hazardous materials will be segregated and stored according to its material type.
f. When feasible, hazardous materials will be recycled, re-used, or treated onsite. As a best management practice materials are generally re-used if possible. No onsite treatment or recycling is planned onsite for the Lizzy B 8-36HZ Well Pad and Facility.
g. All hazardous wastes will be transported off location for recycling or disposal in a timely manner in accordance with local, state, and federal regulations.
h. All spills or leaks will be cleaned upon discovery. All waste generated from the clean-up and remediation process will be profiled, as required by local, state, and federal regulations, for recycling or disposal. Manifests will be used to track all waste generated.

III. Specific Hazardous Materials

Below is a list of potential hazardous materials utilized at the Lizzy B 8-36HZ well site during hydraulic fracturing.

Trade Name	Supplier	Purpose	Storage (Type/Size)	Containment (Primary & Secondary)	Disposal Method
Water	Anadarko	Carrier/Base Fluid			
White Ottawa/St. Peters 40/70 Sand	Halliburton	**Proppant**	Box Container/25 ton capacity	Storage Unit/Matt Platform	SDS
15% HCl	Halliburton	**Solvent**	FSTI Tranpsort/5500 gal capacity	Storage Unit/RFHPE w/ 8" Berms	SDS
7.5% HCl	Halliburton	**Solvent**	FSTI Tranpsort/5500 gal capacity	Storage Unit/RFHPE w/ 8" Berms	SDS
Excelerate EC-8	Halliburton	**Friction Reducer**	ISO Container/6340 gal capacity	Storage Unit/RFHPE w/ 8" Berms	SDS
FightR EC-1	Halliburton	**Friction Reducer**	ISO Container/6340 gal capacity	Storage Unit/RFHPE w/ 8" Berms	SDS
HAI-501	Halliburton	**Corrosion Inhibitor**	FSTI Tranpsort/5500 gal capacity	Storage Unit/RFHPE w/ 8" Berms	SDS
LCA-1	Halliburton	**Solvent**	Caged Ploy Tote/330 gal capacity	Storage Unit/RFHPE w/ 8" Berms	SDS
LoSurf-300D	Halliburton	**Surfactant**	FSTI Tranpsort/5500 gal capacity	Storage Unit/RFHPE w/ 8" Berms	SDS
15% HCl	Rockwater	**ClO2 Precursor**	Poly Tote/330/270	Storage Unit / Containment Mat	SDS
BB-10	Rockwater	**Cl02 Precursor**	Poly Tote/330/270	Storage Unit / Containment Liner	SDS
Sodium Chlorite 25%	Rockwater	**ClO2 Precursor**	Poly Tote/330/270	Storage Unit / Containment Liner	SDS
Ingredient	**CAS#**				
1,2,4-Trimethylbenzene	95-63-6				
Acetate compound	Proprietary				
Acrylamide	79-06-1				
Acrylamide polymer	Proprietary				
Acrylamide acrylate polymer	Proprietary				
Crystalline silica quartz	14808-60-7				
Ethanol	64-17-5				
Ethoxylated alcohols	Proprietary				
Ethoxylated branched C13 alcohol	78330-21-9				
Hydrochloric acid	7647-01-0				
Hydrotreated distillate	Proprietary				
Hydrotreated light petroleum distillate	64742-47-8				
Heavy aromatic petroleum naphtha	64742-94-4				
Hexadecene	629-73-2				
Inorganic salt	Proprietary				
Methanol	67-56-1				
Mixture of dimer and trimer fatty acids of indefinite composition derived from tall oil	61790-12-3				
Modified thiourea polymer	Proprietary				
Naphthalene	91-20-3				
Oxylated phenolic resin	Proprietary				
Oxylated nonyl phenolic resin	Proprietary				
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenoly)-omega-hydroxy-, branched	127087-87-0				
Propargyl alcohol	107-19-7				
Sobitan, mono-9-octadecenoate, (Z)	1338-43-8				
Sorbitan monooleate polyoxyethylene derivative	9005-65-6				
Water	7732-18-5				
Sodium Hypochlorite	7681-52-9				
Sodium Chlorite	7758-19-2				
**RFHPE - Reinforced High Density Polyurethan					

NOTE: Based on a review of the information available, Halliburton Energy Services, Inc. believes the products sold to Kerr McGee Oil & Gas Onshore LP/ OXY USA Inc. as listed in the table above for use in stimulation operations (Hydraulic Fracturing fluid) in the state of Colorado comply with the Rule 437 and specifically Table 437.1. (this is consitent with Northglenn's BMP document Table 1).

IV. Waste Characterization and Volumes

In the event that a hazardous material cannot be used entirely and must be taken to a disposal, the waste will be characterized in accordance with local, state, and federal requirements. Wastes will be characterized via process knowledge, safety data sheets, or laboratory analysis in accordance with regulations and the requirements of the permitted facility to which they will be taken for ultimate disposition. Different types of wastes have different classifications such as hazardous, non-hazardous, and E&P exempt. This management plan only pertains to the management of hazardous wastes and not the management of non-hazardous or E&P exempt wastes. The majority of wastes generated at this well pad will be E&P exempt under federal law. Volumes of hazardous materials utilized and generated throughout the life of the well is highly variable and is often a product of the geologic conditions, reservoir properties, and resulting facility construction.

V. Hazardous Materials Transportation and Disposal

Hazardous materials will be transported to the location using Department of Transportation (DOT) approved vendors. Hazardous wastes will be transported to permitted commercial waste facilities using approved DOT vendors trained in the handling and transportation of hazardous wastes. All hazardous wastes transported offsite will be manifested, signed by the generator, signed by the transporter, contain a copy of the Land Disposal Restrictions (LDR) and maintained to be provided upon request for a minimum of 3 years from the date the hazardous waste was accepted by the initial transporter.

5.18 WATER QUALITY MONITORING PLAN

Kerr-McGee Oil & Gas Onshore LP

Water Quality Mitigation Plan

Lizzy 8-36HZ Pad
Northglenn, Colorado

December 2022

Revised June 12, 2023

In reference to Colorado Oil and Gas Conservation Commission (COGCC) Rule 615

Water Well Sampling Locations

- In addition to the COGCC Rule 615 requirements, Kerr McGee (KMG) will attempt to sample all available water sources within one-half (1/2) mile of the Lizzy B 8-36HZ Pad (herein referred to as Pad)
- KMG will attempt to collect a sample from at least one upgradient and two down-gradient water sources within the one-half (1/2) mile buffer of the Pad.
    - If these water sources are not available within the one-half (1/2) mile buffer, KMG will expand the search up to 1 mile from the Pad to fulfill the upgradient and down-gradient sample requirements.
- KMG will ensure that reasonable efforts are made to obtain consent from the surface owner of the water source. If owner consent is not obtained for any of the identified water sources, KMG will notify the City of Northglenn (City).
- KMG may rely on existing groundwater sampling data provided the water source is within the one-half mile buffer of the Pad, the data was obtained within the 12 months preceding the commencement of drilling, and the sample was analyzed for the same constituents as required in COGCC Rule 615.e.(1) and (2).
- If KMG is unable to collect samples in accordance with COGCC Rule 615.b, any variance filed and approved by the COGCC modifying requirements will be reported to the City.

Water Well Sample Timing (COGCC Rule 615.d)

- KMG will conduct all initial testing of baseline samples within 12 months prior to the commencement of drilling the first well on the Pad.
- Subsequent samples will be collected from the initial sample locations between 6 and 9 months following commencement of the Production phase, and again between 60-72 months following commencement of the Production phase. Additional subsequent samples will be collected every 5 years (57 to 63 month interval) for the life of the well.

Sampling Procedures and Analysis

- In addition to the analysis required by COGCC Rule 615.e, samples will be analyzed for parameters listed in the City of Northglenn Oil and Gas Best Management Practices Table 2 listed below (with the exception of Perfluorinated Compounds).
- Sampling procedures will be conducted in conformance with the COGCC model Sampling and Analysis Plan and COGCC Rule 615.e.
- All water source testing will be conducted by a Qualified Independent Professional Consultant.
- The location of the sampled water sources will be surveyed pursuant to COGCC Rule 216.
- Samples will be collected and analyzed for the constituents listed in Rule 615.e.(2). Field observations such as odor, water color, sediment, bubbles and effervescence will be documented. Any damaged or unsanitary well conditions and adjacent potential pollution sources will be documented and reported.
- If dissolved gas (methane, ethane, or propane) is detected at a concentration greater than 1.0 milligram per liter (mg/L), the sample will be submitted for gas compositional analysis and stable isotope analysis (Rule 615.e.(4)) to determine if the gas is biogenic or thermogenic.
- KMG will notify the COGCC, City, and landowner immediately if methane is detected at or above 10 mg/L, BTEX compounds or TPH are detected in the sample, or if gas compositional analysis indicates thermogenic gas is present in the sample. KMG will also notify the COGCC, City, and landowner if the subsequent sample methane concentration increases by more than 5 mg/L.
    - These detections may result in further action including collecting follow up sampling for additional analytes and creating an action plan to determine the source of contamination.

Sample Results and Reporting

- Copies of all analytical results will be provided to the City, the COGCC, and the landowner within 30 days after results are received.

City of Northglenn Oil and Gas Best Management Practices Table 2

General Water Quality

Alkalinity, Conductivity & TDS, pH, Dissolved Organic Carbon (or Total Organic Carbon), Bacteria, and Hydrogen Sulfide

Major Ions

Bromide, Chloride, Fluoride, Magnesium, Potassium, Sodium, Sulfate, and Nitrate + Nitrite as N

Metals

Arsenic, Barium, Boron, Chromium, Copper, Iron, Lead, Manganese, Selenium, Strontium, Mercury, Uranium, and Radium

Dissolved Gases and Volatile Organic Compounds

Methane, Ethane, Propane, BTEX as Benzene, Toluene, Ethylbenzene and Xylenes, Total Petroleum, and Hydrocarbons (TPH)

Other

Water Level*, Stable isotopes of water (Oxygen, Hydrogen, Carbon), Phosphorus

*Water level is typically unable to be obtained due to well cap seal

*Perfluorinated Compounds are not a byproduct of oil and gas development and therefore are not applicable

5.19 SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN

SPILL PREVENTION, CONTROL AND COUNTERMEASURE PLAN

PREPARED FOR:

Kerr-McGee Oil & Gas Onshore LP a Wholly Owned Subsidiary of Occidental Petroleum Corporation

GREATER WATTENBERG AREA
501 N. DIVISION BLVD

PLATTEVILLE, COLORADO 80651

PLAN TYPE:

§112.9 Requirements for Onshore Production Facilities

IF AN EMERGENCY OR SPILL,

CONTACT

GREATER WATTENBERG AREA AT (970)336-3500

AND REFER TO SECTION A.2. FOR SPILL REPORTING AND RESPONSE PROCEDURES

LIST OF FACILITIES COVERED BY THIS PART A

This plan covers all assets/facilities in the Greater Wattenberg Area.

ACTION ITEM SUMMARY

Throughout this Spill Prevention, Control and Countermeasure (SPCC) Plan (the Plan), items that require specific attention because of inspection, training and recordkeeping requirements, are presented in bold print and underlined. These 'Action Items' are summarized below.

PART A – GENERAL PLAN REQUIREMENTS

- **Section A.1.1. – (At all times)** Maintain a complete copy of the SPCC Plan at the nearest field office.
- **Section A.1.3. – (After change to a Facility)** The SPCC Plan will be revised whenever there are design, construction, operation, or maintenance changes to a Facility. See Log of Plan Review and Amendments.
- **Section A.1.3. – (Every 5 years)** Management must review, evaluate and re-certify the Plan for its adequacy.
- **Section A.1.5. - (At all times)** Inspection procedures, tests and records will be kept with the SPCC Plan for a period of no less than three years.
- **Section A.1.5. – (Annual)** Inspection of SPCC Facilities (e.g. bulk storage containers, oil-filled equipment, oil and oily-water containing process units, and containment structures) will be conducted.
- **Section A.1.6. - (Prior to assignment of responsibilities)** All oil-handling personnel will be trained in discharge prevention and spill response prior to the assignment of job responsibilities.
- **Section A.1.6. – (Annual)** Discharge prevention briefings for all oil-handling personnel will be conducted.
- **Oil Spill Contingency Plan and/or Facility Response Plan will be updated on an as-needed basis**

PART B – FACILITY INFORMATION

- **Section B.1.5.1. - (Annual)** Inspection of aboveground piping will be conducted.
- **Section B.1.8. - (After repair or change)** Field constructed containers must be reevaluated for brittle fracture failure potential.
- **Section B.1.10. - (Each drainage/discharge event)** All discharges of stormwater from secondary containment must be evaluated and recorded.

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FIGURES

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APPENDICES

FIGURES

LOG OF PLAN REVIEW AND AMENDMENTS – PART A

NON-TECHNICAL AMENDMENTS

- Non-technical amendments are not certified by a Professional Engineer.
- Examples of changes include, but are not limited to, phone numbers, name changes, or any non-technical text change(s).

TECHNICAL AMENDMENTS

- Technical amendments are certified by a Professional Engineer (§112.5(c)).
- Examples of changes include, but are not limited to, commissioning or decommissioning containers; replacement, reconstruction, or movement of containers; reconstruction, replacement, or installation of piping systems; construction or demolition that might alter secondary containment structures; changes of product or service; or addition/deletion of standard operation or maintenance procedures related to discharge prevention measures. It is the responsibility of the field to determine, and confirm with the regulatory authority as necessary, what constitutes a technical amendment. The preamble of the rule states that an amendment is required only "when there is a change that materially affects the facility's potential to discharge oil" (67 FR 47091).
- An amendment made under this section will be prepared within six (6) months of the change and implemented as soon as possible but not later than six (6) months following preparation of the amendment.
- Technical Amendments affecting various pages within the Plan will require P.E. certification of the Plan and will be documented on the log form below.

MANAGEMENT REVIEW

- Management will review this SPCC Plan at least every five (5) years and document the review on the form below (§112.5(b)).
- By signature below, signor confirms that management has completed a review and evaluation of this SPCC Plan.

Review/ Amend Date	Signature* (Specify)	Amend Plan (will/will not)	Description of Review/Amendment	Affected Page(s)	P.E. Certification (Y/N)

*Typically signed by Manager, Professional Engineer or Plan Reviewer

Area Name: Greater Wattenberg Area

FEDERAL REGULATORY APPLICABILITY / SPCC PLAN CROSS-REFERENCE

Citation	Description	Heading (Page)	
		Part A	Part B
Subpart A	Applicability, Definitions, and General Requirements for All Facilities and All Types of Oil	(See Below)	
§112.3(d)	Professional Engineer Certification		B.1.2.
§112.3(e)	Plan Copy	A.1.1.	
§112.4	Amendment of SPCC Plan by Regional Administrator	A.2.2.	
§112.5	Amendment of SPCC Plan by Owners or Operators	A.1.3., (vi)	(B-2)
§112.6	Qualified Facilities Plan Requirements	NA	NA
§112.7	General requirements for SPCC Plans for all facilities and all oil types	A.1., (vii)	
§112.7(a)	General requirements: discussion of facility's conformance with rule requirements; deviations from Plan requirements; facility characteristics that must be described in the Plan; spill reporting information in the Plan; emergency procedures	A.2., A.2.1., A.2.2., A.2.3., A.2.4.	B.1., B.1.3., B.1.4., B.1.6.
§112.7(b)	Fault analysis		B.1.7.
§112.7(c)	Secondary containment		B.1.9.
§112.7(d)	Contingency planning	A.1.2., A.1.4.	B.1.9.
§112.7(e)	Inspections, tests, and records	A.1.5.	
§112.7(f)	Employee training and discharge prevention procedures	A.1.6.	B.1.1.
§112.7(g)	Security (excluding oil production facilities)	A.1.7.	
§112.7(h)	Loading/unloading (excluding offshore facilities)		B.1.5.4.
§112.7(i)	Brittle fracture evaluation requirements		B.1.6., B.1.8.
§112.7(j)	Conformance with State requirements	A.1.8.	
§112.7(k)	Qualified Oil-filled Operational Equipment	A.1.2., A.1.4.	B.1.9.
Subpart B	Requirements for Petroleum Oils and Non-Petroleum Oils, Except Animal Fats and Oils and Greases, and Fish and Marine Mammal Oils; and Vegetable Oils (Including Oils from Seeds, Nuts, Fruits, and Kernels)	(See Below)	
§112.8	Requirements for onshore facilities (excluding production facilities)	NA	NA
§112.9	Requirements for onshore production facilities	(See Below)	
§112.9(a)	General and specific requirements	(See Below)	
§112.9(b)	Oil production facility drainage	A.1.5.	B.1.10.
§112.9(c)	Oil production facility bulk storage containers	A.1.5., A.2.3.	B.1.6., B.1.9.
§112.9(d)	Facility transfer operations, oil production facility	A.1.2., A.1.4., A.1.5., A.2.3.	B.1.5. B.1.9.
§112.10	Requirements for onshore oil drilling and workover facilities	A.3.	NA
§112.11	Requirements for offshore oil drilling, production, or workover facilities	NA	NA
Subpart C	Requirements for Animal Fats and Oils and Greases, and Fish and Marine Mammal Oils; and Vegetable Oils, Including Oils from Seeds, Nuts, Fruits, and Kernels	(See Below)	
§112.12	Requirements for onshore facilities (excluding production facilities)	NA	NA
§112.13	Requirements for onshore oil production facilities	NA	NA
§112.14	Requirements for onshore oil drilling and workover facilities	NA	NA
§112.15	Requirements for offshore oil drilling, production, or workover facilities	NA	NA
Subpart D	Response Requirements	(See Below)	
§112.20	Facility response plans	A.4., A.5.	
§112.21	Facility response training and drills/exercises	NA	NA

SPILL PREVENTION, CONTROL AND COUNTERMEASURE PLAN

Anadarko Petroleum Corporation
Greater Wattenberg Area
PART A – GENERAL PLAN REQUIREMENTS

A.1. GENERAL INFORMATION

The regulations requiring preparation of SPCC Plans were revised by EPA on July 17, 2002, December 26, 2006, December 5, 2008 and November 13, 2009. The SPCC regulations are intended to prevent the discharge of oil into or upon the navigable waters of the United States. The regulations, which are codified in 40 CFR 112 (each relevant regulatory citation is identified by brackets), require that facilities that have the potential to impact navigable waters and with aboveground oil storage capacity of 1,320 gallons or more, exclusive of exempt containers, prepare and implement an SPCC Plan.

This Plan is presented in two parts: (1) a Part A which contains Area-specific information that is associated with all of the Facilities within that Area and (2) a Part B for each Facility in the Area that contains the SPCC information specific to that Facility. Thus, Part A in its entirety is fully incorporated into each Part B and each Part B relies on and incorporates the information contained in Part A. In accordance with 40 CFR 112, a Cross-Reference Table is included in Part A of this Plan and indicates which provisions are located in the Part A and/or Part B. The Table of Contents for this Plan also serves as a cross-reference.

A.1.1. Plan Copy [§112.3(e)]

A complete copy of the SPCC Plan will be maintained either at the facility, if normally attended at least four hours per day, or at the nearest manned office and will be available for onsite review during normal working hours.

A.1.2. Management Approval [§112.7(d), §112.7 (k)(2), and §112.9(d)(3)]

I hereby certify that this document and all attachments have full management approval and will be fully implemented under my direction or supervision. Based on my inquiry of the person or persons who manage the Facilities, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. Should a discharge occur, Management is committed to provide the necessary manpower, equipment and resources required to expeditiously control and remove any harmful quantity of oil discharged.

Name: _____ Signature: _____

Title: _____ Date: _____

A.1.2.1. Designated Person Accountable for Oil Spill Prevention at the Facility [112.7(f)(2)]

The following Designated Person is accountable for discharge prevention and reports to the management personnel listed above.

Name: _____

Title: _____

A.1.3. Amendment of Plan by Owner or Operator [§112.5]

The SPCC Plan will be revised whenever there is a change to facility design, construction, operation, or maintenance that materially affects the Facility's potential for discharge as described in 40 CFR 112.1(b) and/or as described in the Log of Plan Review and Amendments of this Plan. As required by the regulations, the Plan will be revised within six (6) months of such facility change.

All amendments will be properly authorized by Facility management and will be implemented as soon as possible, but not later than six (6) months following the preparation of the amendment. Technical amendments will be certified by a Professional Engineer as required by 40 CFR 112.5(e) and kept as an attachment to this plan. The completion of the Plan reviews will be documented on Log of Plan Review and Amendments attached to the Plan.

Facility management will review and evaluate the entire Plan for its adequacy at least once every five (5) years. At the conclusion of this review, management must affirmatively document the review by completing the Log of Plan Review and Amendments.

If as a result of this review and evaluation, the Plan requires amendment, it must be amended within six (6) months of the completion of the review to include more effective prevention and control technology, if the technology has been field-proven at the time of the review and will significantly reduce the likelihood of a discharge as described in 40 CFR 112.1(b).

A.1.4. Oil Spill Contingency Plan [§112.7(d), §112.7(k)(2) and §112.9(d)(3)]

The operator has determined that for its bulk storage containers and most process vessels, the use of containment and/or diversionary structures to prevent discharged oil from reaching navigable waters is practical and effective at the facilities covered under this Part A. The operator has implemented an Oil Spill Contingency Plan for those facilities that have wellheads, oil-filled operating equipment, truck loading areas, process vessels, flowlines and gathering lines not equipped with secondary containment, or where secondary containment is insufficient. The Oil Spill Contingency Plan serves as a written commitment of manpower and resources as discussed in each facility's SPCC Part B, Section B.1.9. The facilities are visited on a frequent basis and any spills or accidental releases of oil are properly cleaned up.

A.1.5. Inspections, Tests And Records [§112.7(e), §112.9(b)(2), §112.9 (c)(3) and (5), and §112.9 (d)(1), (2) and (4)]

Inspection procedures and a record of the inspections and tests will be kept with the Plan for a period of three years. If during any inspection, equipment or a containment system is found to be malfunctioning, resulting in a loss of oil from the container, including but not limited to seams, gaskets, piping, pumps, valves, rivets, and bolts, the tank or structure will be removed from service and appropriate repairs completed.

A documented visual inspection for every bulk storage container system, flow-through process vessel, containment structure and facility piping will be completed annually. Tank, heater treater, separator, bulk separator, vapor recovery tank (VRT), scrub pot, piping and other inspections will seek out evidence of wear, defect, and releases in the oil and water containing units and their support system. Inspections of containment areas will seek out general damage, breach of the floor, breach of the walls and releases. Defects discovered in the course of the inspections will be repaired as soon as practicable. See Appendix A for sample Annual Inspection forms.

A.1.6. Personnel Training [§112.7(f)]

Appropriate oil-handling personnel will be trained in discharge prevention and spill response prior to the assignment of job responsibilities. Training will be completed under the charge of the **Designated Person,** as identified in Section A.1.2.1 of this Plan, (Designated Person) or a qualified, designated representative. Training may be done in conjunction with other materials handling training. At a minimum the training will include:

- Operation and maintenance of equipment to prevent discharges;
- Discharge emergency protocols;
- Applicable pollution control laws, rules, and regulations;
- General Facility operations; and
- The contents of the SPCC Plan.

A discharge prevention briefing for appropriate oil-handling personnel will be scheduled at least annually (this may be done in conjunction with other required annual training) and will be documented in the Area training logs. At a minimum, annual briefings will include:

- The contents of the SPCC Plan;
- Descriptions of known discharges or failures and their corrective actions;
- Malfunctioning components; and
- Recently developed precautionary measures.

A.1.7. Security [§112.7(g)]

The facility is an oil production facility and therefore, this provision is not applicable.

A.1.8. Conformance with State Requirements [§112.7(j)]

This SPCC Plan conforms to all State rules, regulations, and guidelines. Appropriate state reporting guidelines are provided in the Oil Spill Contingency Plan.

A.2. SPILL REPORTING AND RESPONSE [§112.7(a)]

Pursuant to Section 112.2, the term 'discharge' means 'spilling, leaking, pumping, pouring, emitting emptying or dumping of oil'. For the purpose of this Plan the terms discharge, spill and release shall be synonymous. Additional information with regard to spill reporting and response can be found in the Oil Spill Contingency Plan.

A.2.1. Emergency Contact Information [§112.7(a)(3)(vi)]

The emergency contact lists for responding to spills are provided in the Oil Spill Contingency Plan.

A.2.2. Spill Reporting Requirements and Amendment of Plan by Regional Administrator [§112.4(a), §112.7(a)(4) and (5)]

The requirements for spill notification and reporting to local, state, and/or federal officials depend upon the nature and extent of the spill. Notification of and reporting to federal, state and local agencies may be required as referenced in the Oil Spill Contingency Plan. A copy of the spill report form is provided in Appendix A and should be used to assist in meeting the reporting requirements identified below. Non-reportable spill events must be addressed immediately by containing, removing and disposing of the released material according to applicable regulations.

Also note that there are special reporting requirements for facilities that experience reportable spills to navigable waters as referenced in 40 CFR 112.1(b) of 1,000 gallons (238 bbls) or more or that experience two (2) reportable spills as reference in 40 CFR 112.1(b) of greater than 42 gallons (1 bbls) each within a 12-month period. Those facilities meeting one or both of these criteria are required to submit a report to the Regional Administrator within 60 days of the spill event (see Regional Administrator Reporting Form in Appendix A).

After review of the information submitted, or after an on-site review of the Plan, the Regional Administrator may require an amendment to the Plan if the Regional Administrator finds that the Plan does not meet the requirements of 40 CFR 112 or if an amendment is necessary to prevent and contain discharges at the Facility.

A.2.2.1. Spill Reporting and Response Requirements

Following discovery of a spill, on-scene personnel should notify their Supervisor and/or the Designated

Person as soon as practicable. If the situation allows, on-scene personnel should also attempt to control or eliminate the source of the spill.

A preliminary spill assessment is to be conducted by on-scene personnel to provide the Designated Person with the information necessary to initiate the appropriate response. A Spill Report Form (see Appendix A) should be completed, provided to the Designated Person and include the following information:

- Date and time of incident;
- Type and estimated total quantity of material released;
- Source and cause of the release;
- Description of all affected media and assessment of environmental conditions such as precipitation, wind speed and direction, and temperature;
- Estimated spill destination and local topography;
- Assessment of immediate danger to human life or health or to the environment, including outside the Facility, and extent of damages or injuries, if any and
- Actions being used to stop, remove and mitigate the effects of the release.

A.2.3. Emergency Response Procedures [§112.7(a)(3)(iv) and (a)(5), §112.9(c)(5) and §112.9(d)(4)]

If a spill occurs, Facility personnel trained in accordance with the training requirements of this Plan, or their Contractors listed in the Oil Spill Contingency Plan, will respond as outlined in Figure A-1 Emergency Response Flowchart and Responsibilities.

A.2.3.1. Spill Discovery and Response

In the event of a release, the observer will move to a place of safety in relation to the spill. Only if trained to do so and if it is safe, the observer will take reasonable efforts to stop or control the source of the spill. The observer will immediately report the spill to their Supervisor and/or Designated Person. If necessary, the Designated Person, or his designee, will notify the On-Scene Commander to assess the situation and initiate response actions. The Designated Person, or his designee, will then determine if the spill is reportable, notify the appropriate Agencies, and provide the information listed on the Spill Reporting Form in Appendix A.

The spill will be promptly isolated and cleaned up as directed by the Designated Person and/or On-Scene Commander. In general, the procedures to be used are as follows:

- Identify the material spilled and its source;
- Remove all sources of ignition;
- Take appropriate measures to stop the flow of material;
- Quickly determine the size and flow direction of the spill;

- If possible, contain the spill with equipment and materials located within the area;
- Determine if the spill can be handled by Facility personnel or whether an emergency clean-up contractor must become involved;
- Recover spilled material and dispose of properly; and
- Complete the Spill Reporting Form (Appendix A) as directed by the Designated Person and/or On-Scene Commander.

A.2.3.2. Spill Response Resources

The necessary response personnel, materials, contractors, and equipment are listed in the Oil Spill Contingency Plan and will be mobilized as needed to respond to each spill. Resources are as follows:

- Emergency Response Personnel - Manage and/or conduct emergency response actions. All emergency response personnel have full authority to implement response actions.
- Emergency Response Contractors - Emergency response personnel utilize emergency response contractors to supplement internal resources.
- Emergency Response Authorities - Emergency response personnel have access to a number of external emergency response authorities who can provide assistance during spill response events.
- Spill Response Equipment and Materials - Various spill response materials are maintained in the area of the Facility. These materials are stored either at the facility or supplied by contractors and are available for use by Company Emergency Response Personnel and Emergency Response Contractors.

A.2.4. Recovered Materials Management [§112.7(a)(3)(v)]

Following an emergency response incident, the On-Scene Commander and any involved contractors will ensure that any material recovered is properly characterized and managed in accordance with applicable regulations. Additionally, following the completion of spill response and cleanup activities, emergency equipment and supplies will be decontaminated and returned to storage or replaced, as appropriate.

A.3. ONSHORE WORKOVER FACILITIES [§112.10]

This section applies to company owned workover rigs. Contracted workover rigs and associated rental equipment are not covered in this SPCC Plan. Contracted workover rigs and associated rental equipment will comply with SPCC regulations as required by the Master Service Agreement.

A.3.1. Mobile Equipment and Containment [§112.10 (b) and (c)]

Mobile workover equipment will be positioned as to prevent a discharge as described in 112.10(b). Catchment basins or diversion structures to intercept and contain discharges of fuel, crude oil, or oil based

drilling fluid will be provided as appropriate. Where catchment basins or diversion structures are impracticable, the Oil Spill Contingency Plan will be utilized to prevent or minimize impacts.

A.3.2. Blowout Prevention [§112.10 (d)]

Blowout prevention (BOP) assemblies and well control systems capable of controlling the expected wellhead pressure will be installed before drilling below any casing point. When working over a well, a BOP and well control system will be used.

A.4. SUBSTANTIAL HARM DETERMINATION [§112.20]

A Substantial Harm determination has been conducted for all SPCC Facilities covered by this Part A. A certified Substantial Harm Checklist has been signed and attached as Figure A-2.

A.5. FACILITY RESPONSE PLAN [§112.20]

In accordance with 40 CFR 112.20, it has been determined that a Facility Response Plan is not required for any SPCC Facility covered by this Part A. To support this determination, a certified Substantial Harm Checklist has been signed and attached as Figure A-2.

FIGURE A-1
EMERGENCY RESPONSE FLOWCHART AND RESPONSIBILITIES

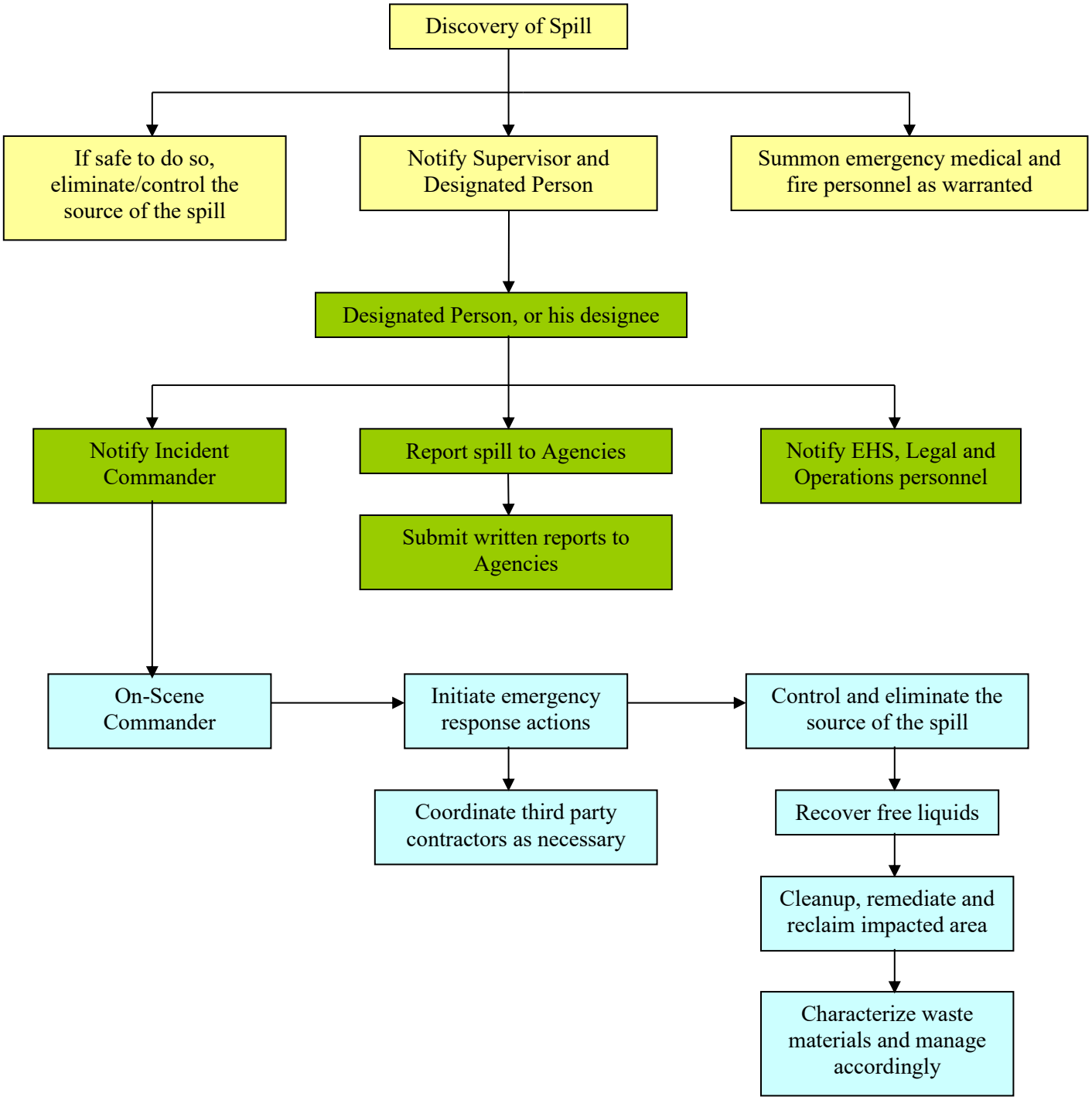


FIGURE A-2 SUBSTANTIAL HARM CRITERIA CHECKLIST [§112.20]

AREA NAME: Greater Wattenberg Area

AREA ADDRESS 501 N. Division Blvd
Platteville, Colorado

1. Do any of the facilities covered in this plan transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

   Yes_____ No__X__

2. Do any of the facilities covered in this plan have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground oil storage tank area?

   Yes_____ No__X__

3. Do any of the facilities covered in this plan have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the formula in Attachment C-III, Appendix C, 40 CFR 112 or a comparable formula[1]) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Environments" (§10, Appendix E, 40 CFR 112 for availability) and the applicable Area Contingency Plan.

   Yes_____ No__X__

4. Do any of the facilities covered in this plan have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the formula in Attachment C-III, Appendix C, 40 CFR 112 or a comparable formula[1]) such that a discharge from the facility would shut down a public drinking water intake[2]?

   Yes_____ No__X__

5. Do any of the facilities covered in this plan have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

   Yes_____ No__X__

CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining information, I believe that the submitted information is true, accurate, and complete.

Name (please type or print) Signature

Title Date

From 40 CFR 112 Appendix C, Attachment C-II

[1] If a comparable formula is used, documentation of the reliability and analytical soundness of the comparable formula must be attached to this form.

[2] For the purposes of 40 CFR part 112, public drinking water intakes are analogous to public water systems as described at 40 CFR 143.2(c).

APPENDIX A

FORMS

Spill Report Form
Regional Administrator Reporting Form
Annual SPCC Inspection Checklist
SPCC Drainage Inspection and Discharge Log

REGIONAL ADMINISTRATOR REPORTING FORM [§112.4(a)]

When reporting a discharge under 40 CFR 112.4(a), the information listed in the Regional Administrator Reporting Form must be submitted to the Regional Administrator within 60 days. (Check as appropriate)

☐ This Facility has experienced a reportable spill as referenced in 40 CFR Part 112.1(b) of 1,000 gallons or more

☐ This Facility has experienced two (2) reportable spills as referenced in 40 CFR Part 112.1(b) of greater than 42 gallons each within a 12-month period.

FACILITY NAME AND LOCATION: _____

_____

CONTACT PERSON (NAME, ADDRESS/PHONE NUMBER): _____

_____

MAXIMUM STORAGE/HANDLING CAPACITY: _____

NORMAL DAILY THROUGHPUT: _____

CORRECTIVE ACTION/COUNTERMEASURES: _____

_____

_____

FACILITY DESCRIPTION (Include maps and facility diagrams as needed): _____

_____

_____

_____

_____

CAUSE OF DISCHARGE/FAILURE ANALYSIS: _____

_____

_____

PREVENTIVE MEASURES TAKEN: _____

_____

_____

_____

_____ _____

Name (please type or print) Signature

_____ _____

Title Date

5.20 STORMWATER POLLUTION PREVENTION AND EROSION CONTROL PLAN

TABLE OF CONTENTS

APPENDICES

1.0 INTRODUCTION

Kerr-McGee Oil & Gas Onshore LP (Kerr-McGee) has prepared this site-specific Stormwater Management Plan (SWMP) for construction activities in City of Northglenn, Colorado. The SWMP is intended to ensure construction activities adhere to good engineering, hydrologic, and pollution control practices, and to ensure erosion, sediment and stormwater control measures are selected, installed, implemented, and maintained to protect state waters, and minimize site erosion or degradation. This facility is a part of Kerr-McGee's Area 2 operations and is covered under CDPS Permit COR402541.

2.0 SITE DESCRIPTION

Operator / ID	Kerr-McGee Oil & Gas Onshore LP
Project / Site Name:	Lizzy 8-36HZ Well Pad and Facility
Location:	Sec. 36, T1N, R68W, Northglenn, Colorado
Total Area of Project:	19.29 acres
Description of Existing Vegetation:	Existing vegetation on the subject property is a predominately undesirable vegetation interspersed with native grasses and forbs, primary use is rangeland.
Percentage of Existing Vegetation Cover:	Percentage of existing vegetation cover on the location is 60%. Method for determination: National Resource Conservation Service (NRCS) soil survey data, and on-site assessment at the time of pit excavation for planning and permitting purposes.
Soil Type(s):	57 – Renohill clay loam, 3 to 9 percent slopes. HSG: D 66 – Ulm clay loam, 0 to 3 percent slopes. HSG: C
Stream Crossings:	There are no stream crossings associated with this location.
Primary Receiving Water:	Unnamed seasonally flooded, intermittent streambed approximately 742 feet east of proposed location.
Operator ID:	47120
CDPS Permit:	COR402541
Stormwater Manager:	Lynna Scranton, HSE Director Occidental Petroleum Corporation Office: (720) 929-6317
SWMP Administrator:	Austin Lee, HSE Advisor Occidental Petroleum Corporation Office: (970) 515-1058
Emergency Contact:	Integrated Operation Center (IOC) Office: (970) 515-1500

3.0 PROPOSED SEQUENCE OF MAJOR ACTIVITIES

☒ Delineation of Disturbance Limits	☒ Access Road Construction	☒ Perimeter /Control Measures Installation	☒ Grading, stripping, excavation, earthwork	☒ Well drilling & Completions
☒ Facility Construction	☒ Pipeline & Flowline Installation	☒ Disturbance Reduction	☒ Interim & Final Reclamation	☐ Return to Agriculture

All construction and development shall be in accordance with the Colorado Department of Public Health and Environment's CDPS General Permit for Stormwater Discharges Associated with Construction Activity, and the Colorado Oil and Gas Conservation Commission (COGCC) 304.c.15 and 1002.f rules and requirements.

4.0 POTENTIAL POLLUTANT SOURCES

Potential pollution sources shall be placed within the project construction boundary, designated staging area(s), working surface, contained by general or sized secondary containment, and stormwater perimeter controls. Anticipated pollution sources which will be managed by appropriate BMP fact sheets or operational best management standard operating procedures include, but are not limited to:

☒ Disturbed and stored soils	☒ Vehicle/equipment maintenance and fueling	☐ Non-industrial waste
☒ Vehicle tracking of sediments	☒ Dust generating processes	☒ Potential Spills
☐ Management of contaminated soils	☒ Routine maintenance activities	☐ Spill prevention and response
☒ Loading/unloading ops	☒ On-site waste management	
☒ Outdoor storage activities	☐ Concrete truck washing	

No dedicated concrete or asphalt batch plants will be at the project location. Safety Data Sheets (SDS) for materials to be used are maintained by Kerr-McGee. Pollutants shall be managed in accordance with waste regulations administered by COGCC 900 series rules.

5.0 STORMWATER, EROSION & SEDIMENT CONTROL MEASURES / BMPS

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. Control measures will be implemented and adjusted with changing site conditions, as well as phases of construction. All control measures deployed throughout construction shall be identified on the site-specific stormwater management plan (grading plan), as well on as-built plans verified in the field.

A summary of stormwater control measures can be found in Appendix C of this document. A detailed description of intended structural and non-structural stormwater control measure for Lizzy 8-36HZ is as follows.

5.1 Structural Control Measures / BMPs

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. The following structural control measures will be implemented at the proposed location:

5.1.1 Limits of Construction (LOC)

- Limits of construction will be used to designate the area of intended development and areas intended for surface disturbing activities.
- The LOC will be identified prior to commencement of surface disturbing activities, on the location grading plan, and in-field with wooden survey lathe / staking to delineate the boundary.
- The LOC surrounds the entirety of Lizzy 8-36HZ.
- LOC will remain in-place until interim reclamation activities are complete.

5.1.2 Vehicle Tracking Control (VTC)

- Vehicle tracking controls will serve as a stabilized site access point which removes sediment from vehicle tires and mitigates off-site tracking onto paved surfaces.
- VTC will be installed prior to commencement of surface disturbing activities.
- VTC will be installed at the primary access for Lizzy 8-36HZ, which is to the northeast of both the well pad and facility pad. The access road adjoins/intersects Weld County Road 13, approximately 0.19 miles northeast of the location.
- VTC will remain in place until interim reclamation activities are complete.

5.1.3 Temporary Diversion Ditch and Berm (DD)

- A diversion ditch and berm will be implemented to divert stormwater run-on & run-off throughout Lizzy 8-36HZ 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.
- A diversion ditch and berm will serve as a continuous perimeter control for the location.
- Diversion ditch and berm will remain in-place until interim reclamation activities are complete.

5.1.4 Temporary Spillway and Outlet (SW/O)

- A temporary spillway and/or outlet are designed to capture sediment transported in surface runoff and slowly release flows to allow time for settling of sediment prior to discharge from the location.
- Spillway and/or outlet will be installed concurrently with the facility diversion ditch and berm, and prior to commencement of surface disturbing activities.
- A temporary spillway/outlet will be installed in the northern, southern, southeastern, and eastern segment of the disturbance area ditch and berm for Lizzy 8-36HZ.
- All spillways and outlets will remain in-place until interim reclamation activities are complete.

5.1.5 Culvert (C)

- Culverts are used to move water under a road or crossing, or to direct flow to a designated endpoint, and are sized to manage anticipated watershed and flow rates.
- Culverts will be installed at the northern and eastern location access points for Lizzy 8-36HZ facility pad and well pad. Culverts will be evaluated at the time of construction and installed as needed.
- Culverts will be reinforced with inlet and outlet protection to mitigate sediment transport and surface erosion.
- These BMPs will remain in place throughout the life of production for Lizzy 8-36HZ and removed during final reclamation.

5.1.6 Inlet / Outlet Protection (IP/OP)

- Inlet / outlet protection is a permeable barrier installed around a drain or culvert to filter runoff and remove sediment.
- This BMP will be installed prior to commencement of surface disturbing activities.
- Inlet and outlet protection will be installed for all permanent culverts, temporary spillways, and temporary outlets at Lizzy 8-36HZ.
- Inlet and outlet protection will remain in place on all permanent features throughout the life of production for Lizzy 8-36HZ and removed during final reclamation.

5.1.7 Seed & Mulch (SM)

- Seed and mulch are utilized in disturbed areas to establish stabilization through vegetative cover.
- Seeding will take place once surface disturbing activities are complete. Topsoil stockpiles will be stabilized with seed and mulch no longer than 14-days after completion of stockpiling efforts unless weather or ground conditions are not suitable to properly create a seedbed and promote successful germination.
- Seed & mulch will be installed on all disturbed areas no longer utilized for construction, and on all topsoil stockpiles which will remain on Lizzy 8-36HZ for use during interim and final reclamation. Anticipated topsoil stockpiles will be situated along the northwestern perimeter for the well pad.
- Seed and mulch will be disturbed and re-applied during topsoil application and final reclamation practices.

5.2 Non-Structural Control Measures / BMPs

Non-structural control measures / BMPs do not involve a structure or engineered solution. Non-structural control measures include:

5.2.1 Construction Phasing & Sequencing

- Construction phasing and sequencing will be implemented at Lizzy 8-36HZ to minimize the amount of surface disturbance and exposed soils to the greatest extent practicable.

5.2.2 Construction Site Waste Management

- All waste from materials imported to Lizzy 8-36HZ will be placed in containment bins, and removed for disposal/recycling at an approved, licensed facility.
- Self-contained port-o-lets will be placed on both the facility and well pad at Lizzy 8-36HZ and maintained by a licensed contractor at a frequency appropriate based on daily use.
- No waste materials will be buried or dumped on Lizzy 8-36HZ.

5.2.3 Protection and Preservation of Existing Vegetation

- Pre-existing vegetation cover will only be removed where necessary for the operation of construction and development at Lizzy 8-36HZ. Trees will only be cut or trimmed to facilitate clearing, grading and safe installation of the location.
- Vegetative buffers will be preserved to the greatest extent practicable for construction and development.

5.2.4 Good Housekeeping

- Good housekeeping measures will be implemented to prevent sediment, trash and toxic or hazardous substances from entering surface waters or impacting soils. Housekeeping practices include routine inspections, regular cleaning, site and equipment organization and maintenance, and appropriate chemical storage.

5.2.5 Materials Management

- Materials stored on Lizzy 8-36HZ will be kept away from direct traffic to prevent accidents.

- Dumpsters and trash receptacles will be enclosed and/or covered to prevent dissemination of rubbish when not in use.
- Storage areas will be swept for trash / rubbish, and cleanup coordinated by construction personnel.
- Drums and chemical storage containers will be clearly labeled, and an appropriate SDS kept on file to be made available for on-site personnel as needed.

5.2.6 Training and Certification

- All personnel involved with construction and stormwater activities will be adequately trained and familiarized with the applicable CDPS stormwater permit, local/State regulations, requirements for the stormwater permit, and identification of potential pollutant sources.
- Training(s) will cover information and procedures identified in this SWMP, and will be conducted prior to the start of construction, and as needed.
- Training is considered initial and ongoing for all personnel involved with construction and development at Lizzy 8-36HZ.

6.0 MATERIALS HANDLING AND SPILL PREVENTION

Discharges of hazardous substances or oil resulting from spills or construction operations are not authorized under the Construction General Permit or this plan. Spills and leaks will be managed by Kerr-McGee personnel or their designee, and according to the Kerr-McGee *Wattenberg Field, Colorado Spill Prevention, Control and Countermeasures (SPCC)* Plan. Kerr-McGee personnel and designees are trained to prevent, mitigate, evaluate, and response to spills and releases. In the event of a spill, notify the Stormwater Manager, after taking emergency and internal procedures for notification. Depending on the nature of the spill and material involved, the Colorado Department of Public Health and Environment 24-hour spill reporting line (877-518-5608) will be contacted and/or downstream water users notified, as necessary.

7.0 NON-STORMWATER DISCHARGES

Sources of non-stormwater discharges include emergency fire-fighting activities or a fire hydrant, uncontaminated springs which do not originate from an area of land disturbance, and construction dewatering. In the event of construction dewatering, control measures shall be implemented and Low Risk Discharge Guidance for Uncontaminated Groundwater to Land (WQP27) shall be followed.

8.0 FINAL STABILIZATION

All soil horizons segregated for the purpose of construction shall be replaced to their original relative positions and contour for reclamation and final stabilization. Following topsoil re-distribution, the reclamation area shall be cross ripped to alleviate compaction. Soil amendments will be determined and applied as necessary, and incorporated by disking, harrowing or cultipacking during seedbed preparation.

Seed used for reclamation will be determined based on surface owner consultation, and consider soil type, land use, and adjacent reference area(s) vegetation. The approved seed mix, in combination with certified weed-free mulch, will be installed when seasonal or weather conditions are most favorable to take advantage of moisture, such as early spring or late fall, and never during windy or frozen conditions.

The Colorado Department of Health and Environment (CDPHE) defines final stabilization as, “finally stabilized means that all ground surface disturbing activities at the site have been completed, and all disturbed areas have been either built on, paved, or a uniform vegetative cover has been established with an individual plant density of at least 70 percent of pre-disturbance levels, and the vegetation cover is capable of providing erosion control equivalent to pre-existing conditions, or equivalent permanent,

physical erosion reduction methods have been employed." Stabilized unpaved surfaces, such as gravel access roads or working surfaces, necessary for the operation of the facility or nearby facilities, also qualifies as "final stabilized".

9.0 POST-CONSTRUCTION STORMWATER

Following final stabilization, and pursuant of COGCC rule 1002.f and rule 1004, BMPs shall be maintained under Kerr-McGee's Post-Construction Stormwater Program, and evaluated for Tier 1 / Non-Tier 1 status as applicable and per COGCC 100 series definitions, until the facility is abandoned, and final reclamation is achieved.

10.0 INSPECTION AND MAINTENANCE PROCEDURES

10.1 Inspections

Inspections will be conducted to document the status of construction activities, stormwater control measure placement, maintenance needs, and effectiveness, to evaluate pollution sources, and to document reclamation / final stabilization progress. Inspections will be managed by the Stormwater Manager and SWMP Administrator and conducted by their designated representative(s). Inspection forms will document non-compliance conditions, including any release of sediment or other contaminants, additional control measures that are needed, or repair and maintenance work orders.

During construction, inspections shall be conducted every 14 days, and after a major precipitation or melt event, which has the potential to cause surface runoff.

For sites earthwork and construction is completed, but final stabilization is not achieved due to vegetative cover, inspections shall be conducted every 30 days and exclude precipitation or melt event response. Inspections will continue until all reclaimed areas have achieved a cover of 70% the pre-construction reference vegetation (i.e. final stabilization).

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.

10.2 Maintenance

For maintenance items discovered at active construction locations, action and documentation towards completing repairs identified at the time of inspection, shall be made within 24 hours of discovery.

Maintenance items discovered post-construction will be documented and coordinate with production personnel.

Timeline for completion of maintenance items are a priority and will depend on scope; but in all cases, shall not be completed until field conditions allow for safe access, and utility clearance has been confirmed for actions requiring ground disturbance / earthwork.

APPENDIX A

CDPS STORMWATER GENERAL PERMIT CERTIFICATION

COLORADO
Department of Public Health & Environment

CERTIFICATION TO DISCHARGE
UNDER
CDPS GENERAL PERMIT COR400000
STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES

Certification Number: COR402541

This Certification to Discharge specifically authorizes:

Owner Kerr McGee Oil and Gas Onshore LP
Operator Kerr McGee Oil and Gas Onshore LP
to discharge stormwater from the facility identified as

Kerr Area 2

To the waters of the State of Colorado, including, but not limited to:

Boulder Creek, South Platte River

Facility Activity :	Oil and Gas Exploration and Well Pad Development
Disturbed Acres:	803.11 acres
Facility Located at:	See Map in File Denver @amp; Boulder @amp; Broomfield CO 80229 Adams County Latitude 40.081 Longitude -104.717
Specific Information (if applicable):	

Certification is issued and effective: 9/30/2021
Expiration date of general permit: 3/31/2024

This certification under the permit requires that specific actions be performed at designated times. The certification holder is legally obligated to comply with all terms and conditions of the permit.

This certification was approved by:
Meg Parish, Section Manager
Permits Section
Water Quality Control Division

APPENDIX B

GRADING PLANS

FACILITY PAD - LIZZY 8-36HZ FACILITY DESIGN SUMMARY

PAD QUANTITIES AND DESIGN PARAMETERS

CUT SLOPES = 5:1
FILL SLOPES = 5:1
SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00
GRADED FACILITY PAD AREA = 3.52 ACRES
TOTAL FACILITY PAD AREA = 4.12 ACRES

FACILITY PAD QUANTITIES

TOTAL CUT FOR FACILITY PAD = 5,430 C.Y.
TOTAL FILL FOR FACILITY PAD = 7,526 C.Y.
TOPSOIL @ 8" DEPTH = 4,432 C.Y.
TOTAL IMPORT = 2,096 C.Y.

TEMPORARY EQUIPMENT PADS - LIZZY 8-36HZ DESIGN SUMMARY

PAD QUANTITIES AND DESIGN PARAMETERS

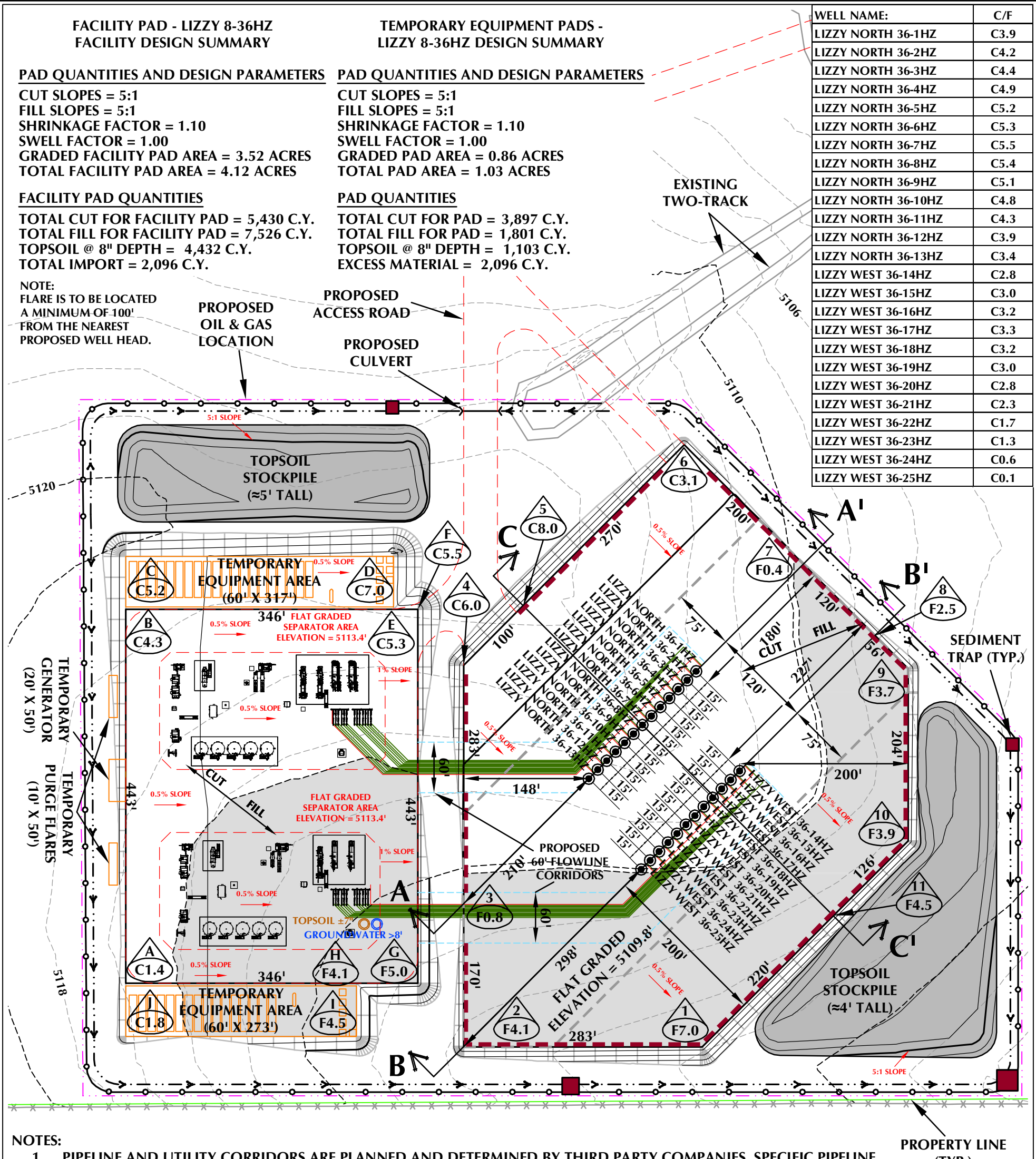
CUT SLOPES = 5:1
FILL SLOPES = 5:1
SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00
GRADED PAD AREA = 0.86 ACRES
TOTAL PAD AREA = 1.03 ACRES

PAD QUANTITIES

TOTAL CUT FOR PAD = 3,897 C.Y.
TOTAL FILL FOR PAD = 1,801 C.Y.
TOPSOIL @ 8" DEPTH = 1,103 C.Y.
EXCESS MATERIAL = 2,096 C.Y.

WELL NAME:	C/F
LIZZY NORTH 36-1HZ	C3.9
LIZZY NORTH 36-2HZ	C4.2
LIZZY NORTH 36-3HZ	C4.4
LIZZY NORTH 36-4HZ	C4.9
LIZZY NORTH 36-5HZ	C5.2
LIZZY NORTH 36-6HZ	C5.3
LIZZY NORTH 36-7HZ	C5.5
LIZZY NORTH 36-8HZ	C5.4
LIZZY NORTH 36-9HZ	C5.1
LIZZY NORTH 36-10HZ	C4.8
LIZZY NORTH 36-11HZ	C4.3
LIZZY NORTH 36-12HZ	C3.9
LIZZY NORTH 36-13HZ	C3.4
LIZZY WEST 36-14HZ	C2.8
LIZZY WEST 36-15HZ	C3.0
LIZZY WEST 36-16HZ	C3.2
LIZZY WEST 36-17HZ	C3.3
LIZZY WEST 36-18HZ	C3.2
LIZZY WEST 36-19HZ	C3.0
LIZZY WEST 36-20HZ	C2.8
LIZZY WEST 36-21HZ	C2.3
LIZZY WEST 36-22HZ	C1.7
LIZZY WEST 36-23HZ	C1.3
LIZZY WEST 36-24HZ	C0.6
LIZZY WEST 36-25HZ	C0.1

NOTE:
FLARE IS TO BE LOCATED A MINIMUM OF 100' FROM THE NEAREST PROPOSED WELL HEAD.



NOTES:

1. PIPELINE AND UTILITY CORRIDORS ARE PLANNED AND DETERMINED BY THIRD PARTY COMPANIES. SPECIFIC PIPELINE AND UTILITY CORRIDOR LOCATIONS WILL BE DECIDED BY THOSE THIRD PARTY COMPANIES CLOSER TO THE START DATE OF OPERATIONS BASED ON CONTRACT AND RIGHT-OF-WAY NEGOTIATIONS.
2. EXISTING UTILITIES DISPLAYED ON THE GRADING PLAN ARE FOR REFERENCE PURPOSES ONLY. PRIOR TO CONSTRUCTION OR EARTHWORK, CONTRACTOR WILL BE RESPONSIBLE TO CALL FOR LOCATES: (800) 922-1987
3. DIVERSION DITCH AND/OR BERM TO BE CONSTRUCTED AROUND THE ENTIRE PAD LOCATION. BERM SECTIONS TO BE COMPACTED IN ACCORDANCE WITH STANDARD CONSTRUCTION PRACTICES.
4. CENTER OF WELL PAD REFERENCED BELOW CORRESPONDS TO THE SURFACE LOCATION OF THE LIZZY NORTH 36-7HZ WELL.
5. FLAT GRADED AREA TO BE RECLAIMED DURING INTERIM RECLAMATION.

WELL PAD - LIZZY 8-36HZ DESIGN SUMMARY

WELL PAD QUANTITIES AND DESIGN PARAMETERS

EXISTING GRADE @ CENTER OF WELL PAD = 5115.3'
FINISHED GRADE ELEVATION = 5109.8'
CUT SLOPES = 3:1
FILL SLOPES = 3:1
SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00
GRADED WELL PAD SURFACE AREA = 6.36 ACRES
TOTAL WELL PAD AREA = 6.99 ACRES
PROPOSED OIL & GAS LOCATION = 19.29 ACRES

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 18,290 C.Y.
TOTAL FILL FOR WELL PAD = 18,290 C.Y.
TOPSOIL @ 8" DEPTH = 7,513 C.Y.
IMPORT MATERIAL = 0 C.Y.

LEGEND

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- EXISTING PIPELINE (EPL)
- PROPOSED FLOWLINE
- EXISTING FENCE
- PROPOSED UNDERGROUND ELECTRIC LINE (PUE)
- PROPOSED SOUND MITIGATION
- DIVERSION DITCH
- BERM

HORIZONTAL 0 60' 120' 1" = 120'
2' CONTOURS

LIZZY 8-36HZ

FACILITY REVISION: LIZZY_B-STOR-00-PP-2020 Rev G

PAD - GRADING PLAN
LIZZY NORTH 36-1HZ,
LIZZY NORTH 36-2HZ, LIZZY NORTH 36-3HZ, LIZZY NORTH 36-4HZ,
LIZZY NORTH 36-5HZ, LIZZY NORTH 36-6HZ, LIZZY NORTH 36-7HZ,
LIZZY NORTH 36-8HZ, LIZZY NORTH 36-9HZ, LIZZY NORTH 36-10HZ,
LIZZY NORTH 36-11HZ, LIZZY NORTH 36-12HZ, LIZZY NORTH 36-13HZ,
LIZZY WEST 36-14HZ, LIZZY WEST 36-15HZ, LIZZY WEST 36-16HZ,
LIZZY WEST 36-17HZ, LIZZY WEST 36-18HZ, LIZZY WEST 36-19HZ,
LIZZY WEST 36-20HZ, LIZZY WEST 36-21HZ, LIZZY WEST 36-22HZ,
LIZZY WEST 36-23HZ, LIZZY WEST 36-24HZ & LIZZY WEST 36-25HZ
LOCATED IN SECTION 36, T1N, R68W, 6TH P.M.
NORTHGLENN, COLORADO

Kerr-McGee Oil & Gas Onshore LP
1099 18th Street
Denver, Colorado 80202

609 CONSULTING, LLC
LOVELAND OFFICE
6706 North Franklin Avenue
Loveland, Colorado 80538
Phone 970-776-4331
SHERIDAN OFFICE
1095 Saberton Avenue
Sheridan, Wyoming 82801
Phone 307-674-0609

SCALE: 1"=120' | DATE: 8/2/22 | SHEET NO: 1 | 1 OF 1
REVISED: SRS 12/2/22

K:\ANADARKO\2021\2021_43_LUCA_&_LIZZY_T1N_R68W_SEC_36\DWG\LUCA_&_LIZZY_T1N_R68W_SEC_36.dwg, 12/2/2022 3:31:30 PM, steven

APPENDIX C

SUMMARY OF SITE-SPECIFIC EROSION & SEDIMENT CONTROLS / BMPS

SUMMARY OF SITE-SPECIFIC STORMWATER, EROSION & SEDIMENT CONTROLS / BMPs FOR CONSTRUCTION, DRILLING & COMPLETIONS PHASES

Stormwater will be managed during construction by a combination of site-specific erosion and sediment control measures including: delineation of limits of construction to establish a work space; a vehicle tracking control placed along the northeastern portion of the access road to the well pad and the facility pad to mitigate off-site sediment migration from vehicle traffic onto Weld County Road 13, approximately 0.19 miles northeast of the location; a temporary diversion ditch & berm around the entire location to manage run-on and run-off; temporary spillways and outlet structure placed in the northern, southern, southeastern, and eastern portions of the disturbance area ditch and berm which will allow for settling of sediment from stormwater prior to discharge; ~2 permanent culverts with inlet and outlet protection will be installed in the primary location access points to direct stormwater to designated discharge points; seed & mulch to stabilize areas no longer needed for construction, as well as for topsoil stockpiles which will remain in place until interim and final reclamation. During active construction, daily inspections will be completed by on-site personnel. A contractor will conduct stormwater compliance inspections every 14-days and/or following a rain event which produces 0.25" of precipitation or equivalent snow melt which causes surface erosion. Inspections will review all control measures / BMPs implemented, their status, and whether repair or replacement is needed. Maintenance and repair will be completed as soon as practicable, immediately in most cases.

5.21 INTERIM RECLAMATION PLAN

TABLE OF CONTENTS

APPENDICES

1.0 INTRODUCTION

Kerr-McGee Oil & Gas Onshore LP (KMOG) has developed this site-specific Interim Reclamation Plan to establish proper planning and execution for reclamation of the land within areas that are affected by oil and gas location construction and development, but no longer in use by production operations once turned over. When all wells on a pad are completed and turned over to production, the drilling footprint will be reduced, and areas not needed for production will be restored and re-vegetated in accordance with Colorado Oil and Gas Conservation Commission (COGCC) Series 1000 Reclamation Rules and consistent with the requirements of Rule 1003 for Interim Reclamation. Reference shall also be made to Rules 304.c(14) Topsoil Protection Plan and 304.c(15) Stormwater Management Plan within this process.

2.0 SITE DESCRIPTION

Operator:	Kerr-McGee Oil & Gas Onshore LP
COGCC ID:	47120
Project / Site Name:	Lizzy 8-36HZ Well Pad and Facility
Location:	Sec 36, T1N, R68W, Northglenn, Colorado
Elevation:	5109.8’
Land Type:	FEE
Surface Owner:	Anadarko E&P Onshore LLC
Total Area of Project:	CONSTRUCTION PHASE: 19.29 acres WORKING PAD SURFACE AREA: 11.32 acres TOTAL AREA INTERIM RECLAIMED FOR PRODUCTION: 12.16 acres INTERIM RECLAIM / PRODUCTION AREA: 7.13 acres
Description of Existing Vegetation:	Existing vegetation on the subject property is a predominately undesirable vegetation interspersed with native grasses and forbs, primary use is rangeland.
Soil Type(s):	57 – Renohill clay loam, 3 to 9 percent slopes. HSG: D 66 – Ulm clay loam, 0 to 3 percent slopes. HSG: C
Stream Crossings:	There are no stream crossings associated with the location.
Primary Receiving Water:	Unnamed seasonally flooded, intermittent streambed approximately 742 feet east of proposed location.
General Direction of Flow and Drainage:	East, southeast
Reclamation Manager/Contact:	Austin Lee – HSE Advisor Occidental Petroleum Corporation Office: (970) 515-1058
Major Equipment List:	The Lizzy 8-36HZ location will be a (25) well pad, with (10) tanks, (9) separators, (4) LACTs, (2) air compressors, and (4) meter buildings.

TENTATIVE DEVELOPMENT & OPERATION SCHEDULE

Phase	Work Activity	Estimated Start Date*
CON	Location construction	November 2023
SPUD	Surface drilling and well prep operations	December 2023
DRL	Horizontal drilling	January 2024
FRAC	Hydraulic fracturing operations and well completions	October 2024
FAC	Production facility construction	September 2024
INT	Interim reclamation of construction disturbance	September 2025

**Based on pending receipt of required permits, and drilling rig availability. Schedule is tentative and subject to change.*

3.0 PROPOSED SEQUENCE OF MAJOR ACTIVITIES

3.1 Surface Owner Consultation and Timing

Surface owner consultation shall be conducted to minimize disruption of agricultural operations and designate final land use. Interim reclamation shall occur approximately no later than 9/30/2025 after conclusion of subsequent operations. If soil conditions are not conducive due to weather conditions, a Form 4 Sundry Notice shall be submitted, and reclamation commenced as soon as conditions allow and as practicable.

3.2 Removal of drilling and completions equipment and associated debris and waste

Debris and non-exploration and production (E&P) waste materials (concrete, sack bentonite and other drilling mud additives, sand, plastic, pipe, and cable) will be removed, and cellars, rat holes, and other boreholes unnecessary for further lease operations will be backfilled. Soil and aggregate mix used to build a compacted surface for construction and drilling purposes will be removed in areas no longer intended for production and interim reclamation and disposed of at an approved facility.

3.3 Recontouring, compaction relief and topsoil re-distribution

All segregated soil horizons removed for construction will be replaced to their original relative positions and contour and will be tilled adequately to alleviate compaction and re-establish a proper seedbed. Operator will be responsible for segregating topsoil, backfilling, re-compacting any backfill, reseeding, and re-contouring the surface on all disturbed areas of an oil and gas location, including that which is not being used for production or processing of E&P materials so as not to interfere with Surface Owner(s) operations.

3.4 Soil Preparation

Soil preparation for interim reclamation generally includes the following practices:

3.4.1 *Compaction Alleviation*

After topsoil re-distribution, the interim reclamation area shall be cross ripped to a depth of eighteen inches with an agricultural ripper/subsoiler; however, this depth may be adjusted in rocky or shallow soils. Chiseling/ripping will be performed at the minimum depth of topsoil. Cultipacking or disking may be required to reduce soil clod size. Ripping with construction style shanks, for the purpose of surface ridge roughness as a stormwater BMP, is only allowed to a six-inch depth, and will be maintained following any precipitation or surface erosion which has the potential to compromise the BMP.

3.4.2 *Leveling*

All areas will be leveled and graded to drain properly and blend to the adjacent, natural landscape. Leveling will generally be completed with a motor grader, but can also include a dozer, landplane and other pieces of equipment based on soil and topography.

3.4.3 *Soil Amendments*

Necessary amendments will be determined by soil analysis completed during Topsoil Protection Plan Site Investigation, land use, site conditions at time of interim reclamation, and surface owner consultation. Soil amendments will be incorporated during seedbed preparation.

3.4.4 *Seedbed Preparation*

Seedbed preparation will be completed by disking, harrowing or cultipacking disturbed soil to provide a seedbed that is firm and friable. Seeding will not occur until after a proper seedbed is prepared, soil amendments applied, and all disturbed soil is viable for germination.

3.4.5 *Surface Rock Removal*

Surface rocks that interfere with agricultural operations, seeding equipment or future mowing operations will be removed for the interim reclamation area.

3.5 Seeding

Seed mix is determined based on consultations with NRCS, CPW, and Surface Owner; also, by soil type, land use, adjacent reference area vegetation and in accordance with Rule 1202.a.6. Equipment shall be cleaned from previous mixes, soil, or debris, prior to mobilizing and commencing seeding operations between properties. In most cases, seed will be planted with a drill seeder and tractor at the appropriate depth and rate based on mix and manufacturer specifications, as referenced in Appendix B. Seeding shall not occur in windy conditions or when the soil is frozen or wet.

3.6 Mulching

Mulch will be applied within 48 hours after seeding on non-cropland. Mulch application in cropland shall be applied as requested by surface owner. If using straw or hay mulch, only mulch that has been certified as weed-free forage may be used. All mulch types must be anchored properly by methods such as crimping, disking and/or tackifier. Contractor may adjust the rate of mulch and type based on site location, soils, slopes, and time of year to maximize seeding and erosion control success.

3.7 Implement Post-Construction Stormwater Control Measures

Post-construction stormwater control measures will be installed during construction surface reduction and interim reclamation efforts. Erosion and sediment control measures will include consideration of land use, surface owner grazing practices, general location topography and flow, and potential damage to materials. Refer to Appendix C for the interim reclamation grading plan and design, as well as Section 5.0 of this plan for a list of site-specific stormwater control measures.

3.8 Weed control

Weed control measures shall be conducted in compliance with the Colorado Noxious Weed Act, C.R.S. §35-5.5-115, Article 9-15 of the City of Northglenn Municipal Code, and the current rules pertaining to the administration and enforcement of the Colorado Noxious Weed Act.

Weed control measures shall be conducted in consultation with the Surface Owner and County/Municipality Weed Management Specialist(s) based on site specific conditions. KMOG will monitor and control noxious weeds until achieving reclamation threshold for release within reclaimed disturbance areas, including monitoring to measure success of treatments. Weed control measures employed may include mowing or removal and herbicide treatment during the appropriate growing season. During drilling, production, and reclamation operations, all disturbed areas shall be kept reasonably free of noxious weeds and undesirable species.

3.9 Interim Reclamation Completion Notice

Upon reaching desired and permitted reclamation goals based on COGCC Rule 1003.e, a Form 4 Interim Reclamation Completion Notice (IRCN) shall be submitted to document successful interim reclamation as compared to adjacent reference area(s).

4.0 INTERIM RECLAMATION STORMWATER, EROSION & SEDIMENT CONTROL MEASURES / BMPS

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 during interim reclamation. Control measures will be implemented and adjusted with changing site conditions, as well as throughout all phases of construction. All control measures deployed will be identified on as-built maps.

A summary of stormwater control measures can be found in Appendix C of this document. A detailed description of intended structural and non-structural stormwater control measures for Lizzy 8-36HZ is as follows.

4.1 Structural Control Measures / BMPs

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. The following structural control measures will be implemented at the proposed location.

4.1.1 Diversion Ditch and Berm (DD)

- A berm will be installed around the northern, eastern, and southern edges of the Lizzy 8-36HZ well pad and the southern, western, and northern edges of the facility pad to divert stormwater run-on & run-off to a designated outlet structure
- This BMP will be installed during construction disturbance reduction, and prior to removal of construction perimeter controls.
- Diversion ditch and berm will remain in-place until final reclamation activities commence.

4.1.2 Spillway and Outlet (SW/O)

- A spillway and/or outlet are designed to capture sediment transported in surface runoff and slowly release flows to allow time for settling of sediment prior to discharge from the location.
- Spillway and/or outlet will be installed concurrently with the well pad and facility diversion ditch and berm.
- A temporary spillway/outlet will be installed in the southern slope of the well pad and the southern portion of the stormwater detention area for Lizzy 8-36HZ during interim reclamation.
- All spillways and outlets will remain in-place until final reclamation activities are complete.

4.1.3 Culvert (C)

- Culverts are used to move water under a road or crossing, or to direct flow to a designated endpoint, and are sized to manage anticipated watershed and flow rates.
- Culverts will be installed at the northern access off the well pad and facility pad, as well as along the eastern portion of the access road for Lizzy 8-36HZ intersecting with Weld County Road 13. Culverts will be evaluated at the time of construction and installed as needed.
- Permanent culverts will be reinforced with inlet and outlet protection to mitigate sediment transport and surface erosion.
- These BMPs will remain in place throughout the life of production for Lizzy 8-36HZ and removed during final reclamation.

4.1.4 Inlet / Outlet Protection (IP/OP)

- Inlet / outlet protection is a permeable barrier installed around a drain or culvert to filter runoff and remove sediment.
- This BMP will be installed congruently with spillways and outlets.
- Inlet and outlet protection will be installed for all permanent culverts at Lizzy 8-36HZ.
- Inlet and outlet protection will remain in place throughout the life of production for Lizzy 8-36HZ and removed during final reclamation.

4.1.5 Seed & Mulch (SM)

- Seed and mulch are utilized in disturbed areas to establish stabilization through vegetative cover.
- Seeding will take place once surface disturbing activities are complete. Topsoil stockpiles will be stabilized with seed and mulch no longer than 14-days after completion of stockpiling efforts unless weather or ground conditions are not suitable to properly create a seedbed and promote successful germination.
- Seed & mulch will be installed on all disturbed areas no longer utilized for construction, and on all topsoil stockpiles which will remain on Lizzy 8-36HZ for use during final reclamation. Anticipated topsoil stockpiles will be situated along the southern perimeter of the facility and well pads.
- Seeding will remain in place until re-disturbed during final reclamation efforts.
- In areas to be returned to crop, the seed bed will be prepared and left for surface owner to plant during next agricultural season.

4.2 Non-Structural Control Measures / BMPs

Non-structural control measures / BMPs do not involve a structure or engineered solution. Non-structural control measures include:

4.2.1 Construction Phasing & Sequencing

- Construction phasing and sequencing will be implemented at Lizzy 8-36HZ to minimize the amount of surface disturbance and exposed soils to the greatest extent practicable. Interim reclamation will occur in two phases throughout the project.

4.2.2 Protection and Preservation of Existing Vegetation

- Pre-existing vegetation cover will only be removed where necessary for the operation of construction and development at Lizzy 8-36HZ. Trees will only be cut or trimmed to facilitate clearing, grading and safe installation of the location.
- Vegetative buffers will be preserved to the greatest extent practicable for construction and development.

4.2.3 Good Housekeeping

- Good housekeeping measures will be implemented to prevent sediment, trash and toxic or hazardous substances from entering surface waters or impacting soils. Housekeeping practices include routine inspections, regular cleaning, site and equipment organization and maintenance, and appropriate chemical storage.

5.0 INTERIM STABILIZATION

Interim reclamation will commence within twelve months from first date of production for all disturbed areas affected by construction and drilling operations which are no longer in use or needed for production. Interim reclaimed areas will be returned to their original condition as practicable, or their final land use as designated by the surface owner.

5.1 Non-Cropland

Non-crop locations will be reclaimed within six months from completion of final ground disturbing activities, per rule 1003.b. Interim stabilization in non-cropland will follow the Colorado Oil and Gas Conservation Commission (COGCC) definition and guidance: "all disturbed areas no longer in use shall be considered complete when all ground surface disturbing activities at the site have been completed, and all disturbed areas have been either built on, compacted, covered, paved, or otherwise stabilized in such a way as to minimize erosion to the extent practicable, or a uniform vegetative cover has been established that reflects pre-disturbance or reference area forbs, shrubs, and grasses with total percent plant cover of at least eighty percent (80%) of pre-disturbance levels or reference areas, excluding noxious weeds". All non-cropland locations will be reclaimed within six months from completion of ground disturbing activities, per rule 1003.b.

5.2 Cropland

Per rule 1003.b., "All segregated soil horizons removed from crop lands shall be replaced to their original relative positions and contour and shall be tilled adequately to re-establish a proper seedbed. Any perennial forage crops that were present before disturbance shall be re-established". All cropland locations will be reclaimed within three months from completion final ground disturbing activities.

6.0 INSPECTIONS AND MAINTENANCE

6.1 Inspections

Inspections will be conducted to document the status of construction activities, stormwater control measure placement, maintenance needs, and effectiveness, to evaluate pollution sources, and to document reclamation / interim stabilization progress. Inspections will be managed by the Stormwater Manager and SWMP Administrator and conducted by their designated representative(s). Inspection forms will document non-compliance conditions, including any release of sediment or other contaminants, additional control measures that are needed, or repair and maintenance work orders.

For sites earthwork and construction is completed, but final stabilization is not achieved due to vegetative cover, inspections shall be conducted every 30 days and exclude precipitation or melt event response. Inspections will continue until all reclaimed areas have achieved a cover of 70% the pre-construction reference vegetation (i.e., final stabilization).

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.

6.2 Maintenance

For maintenance items discovered at active construction locations, action, and documentation towards completing repairs identified at the time of inspection, shall be made within 24 hours of discovery.

Maintenance items discovered post-construction will be documented and coordinate with production personnel.

Timeline for completion of maintenance items is a priority and will depend on scope; but in all cases, shall not be completed until field conditions allow for safe access, and utility clearance has been confirmed for actions requiring ground disturbance / earthwork.

APPENDIX A

SOIL PROPERTIES AND MAP

Soil Map—Weld County, Colorado, Southern Part
(DISTURBANCE_AREA)

Map Scale: 1:2,150 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 30 60 120 180

Feet
0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

Weld County, Colorado, Southern Part

57—Renohill clay loam, 3 to 9 percent slopes

Map Unit Setting

National map unit symbol: 3636
Elevation: 4,850 to 5,200 feet
Mean annual precipitation: 11 to 16 inches
Mean annual air temperature: 46 to 48 degrees F
Frost-free period: 100 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Renohill and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Renohill

Setting

Landform: Hills, ridges
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Residuum weathered from shale

Typical profile

H1 - 0 to 9 inches: clay loam
H2 - 9 to 32 inches: clay loam
H3 - 32 to 36 inches: unweathered bedrock

Properties and qualities

Slope: 3 to 9 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: R067BY042CO - Clayey Plains
Hydric soil rating: No

Minor Components

Shingle
Percent of map unit: 10 percent
Hydric soil rating: No

Ulm
Percent of map unit: 5 percent
Hydric soil rating: No

Data Source Information

Soil Survey Area: Weld County, Colorado, Southern Part
Survey Area Data: Version 21, Sep 1, 2022

Weld County, Colorado, Southern Part

66—Ulm clay loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 363j
Elevation: 5,070 to 5,200 feet
Mean annual precipitation: 13 to 15 inches
Mean annual air temperature: 46 to 48 degrees F
Frost-free period: 105 to 120 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Ulm and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ulm

Setting

Landform: Plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium and/or eolian deposits derived from shale

Typical profile

H1 - 0 to 5 inches: clay loam
H2 - 5 to 19 inches: clay
H3 - 19 to 60 inches: clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 10.4 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: R067BY042CO - Clayey Plains
Hydric soil rating: No

Minor Components

Renohill

Percent of map unit: 10 percent
Hydric soil rating: No

Heldt

Percent of map unit: 5 percent
Hydric soil rating: No

Data Source Information

Soil Survey Area: Weld County, Colorado, Southern Part
Survey Area Data: Version 21, Sep 1, 2022

APPENDIX B

SEED MIX

FORM 2B INTERIM RECLAMATION PLAN
(Appendix B): Seed Mix

Project/Site Name	Location	Existing Vegetation	Operator ID
Lizzy 8-36HZ	T 1N: 68W Sec 36	Vegetation on the subject property is a mixture of native grasses and forbs	47120

Landowner Requested Seed Mix

CUSTOM SANDY SOIL MIX (Buffalo Brand Seed)

Species	% Mix
Triticale (quickguard)	25
Thickspike wheatgrass	10
Western wheatgrass	10
Pubescent wheatgrass	10
Green needlegrass	3
Sideoats grama	10
Switchgrass	10
Blue Grama	3
Sand bluestem	5
Little bluestem	5
Prairie sandreed	5
Sand dropseed	2
Rocky Mtn Bee Plant	2
*Drill Seed rate of 15 PLS LBS/Acre *Seed mix is dependent on availability and may require substitution in the event of a shortage of individual species.	

APPENDIX C

INTERIM RECLAMATION GRADING PLAN

LAND USE: RANGELAND
FACILITY REVISION: LIZZY_B-STOR-00-PP-2020 Rev G

EXISTING ACCESS ROAD

UNION PACIFIC RAILROAD

EXISTING TWO-TRACK

NOTE:
FLARE IS TO BE LOCATED A MINIMUM OF 100' FROM THE NEAREST PROPOSED WELL HEAD.

PROPOSED ACCESS ROAD

PROPOSED OIL & GAS LOCATION

EDGE OF DESIGNED TEMPORARY EQUIPMENT AREA (PRIOR TO INTERIM RECLAMATION)

VISUAL MITIGATION BERM/TOPSOIL STORAGE FOR FINAL RECLAIM (≈6' TALL)

EDGE OF DESIGNED WELL PAD AREA (PRIOR TO INTERIM RECLAMATION)

PROPOSED LIZZY 8-36HZ FACILITY PAD

FLAT GRADED SEPARATOR AREA ELEVATION = 5113.4'

PROPOSED LIZZY 8-36HZ WELL PAD

FLAT GRADED WELL ELEVATION (5109.8')

PROPOSED 60' FLOWLINE CORRIDORS

STORMWATER DETENTION AREA

FILL

CUT

346'

443'

130'

120'

99'

135'

60'

5:1 SLOPES

4:1 SLOPES

10:1 SLOPES

3:1 SLOPE

3.3% SLOPE

3.2% SLOPE

3.6% SLOPE

4.2% SLOPE

2.6% SLOPE

1% SLOPE

0.5% SLOPE

5120

5110

5106

5118

5115

5100

SPILLWAY

EDGE OF DESIGNED TEMPORARY EQUIPMENT AREA (PRIOR TO INTERIM RECLAMATION)

WORKING PAD SURFACE (PRIOR TO INTERIM RECLAMATION)

OUTLET PIPE

VISUAL MITIGATION BERM/TOPSOIL STORAGE FOR FINAL RECLAIM (≈6' TALL)

PROPERTY LINE (TYP.)

NOTES:

1. PIPELINE AND UTILITY CORRIDORS ARE PLANNED AND DETERMINED BY THIRD PARTY COMPANIES. SPECIFIC PIPELINE AND UTILITY CORRIDOR LOCATIONS WILL BE DECIDED BY THOSE THIRD PARTY COMPANIES CLOSER TO THE START DATE OF OPERATIONS BASED ON CONTRACT AND RIGHT-OF-WAY NEGOTIATIONS.
2. EXISTING UTILITIES DISPLAYED ON THE GRADING PLAN ARE FOR REFERENCE PURPOSES ONLY. PRIOR TO CONSTRUCTION OR EARTHWORK, CONTRACTOR WILL BE RESPONSIBLE TO CALL FOR LOCATES: (800) 922-1987
3. THE 6' TALL TOPSOIL BERM IS TO BE CONSTRUCTED UTILIZING ±8,694 C.Y. OF BASE MATERIAL AT APPROXIMATELY 3.5' FEET OF HEIGHT AND COVERED WITH ±7,676 C.Y. OF TOPSOIL TO REACH THE EFFECTIVE 6' TALL TOPSOIL STOCKPILE HEIGHT.
4. RECLAIMED AREA WILL BE RE-SEEDED AND RE-VEGETATED DURING INTERIM RECLAMATION.

PAD - LIZZY 8-36HZ INTERIM RECLAMATION SUMMARY

QUANTITIES AND DESIGN PARAMETERS

SHRINKAGE FACTOR = 1.00
SWELL FACTOR = 1.00
PROPOSED OIL & GAS LOCATION = 19.29 ACRES
AREA RECLAIMED DURING
INTERIM RECLAMATION = 12.16 ACRES
TOTAL WELL PAD AREA AFTER
INTERIM RECLAMATION = 3.61 ACRES
TOTAL FACILITY PAD AREA AFTER
INTERIM RECLAMATION = 3.52 ACRES

PAD QUANTITIES

TOTAL CUT = 16,277 C.Y.
TOTAL FILL = 16,277 C.Y.
TOPSOIL @ 8" DEPTH
FROM WELL PAD = 7,513 C.Y.
TOPSOIL @ 8" DEPTH FROM
FACILITY/TEMP TANK PAD = 5,535 C.Y.
TOTAL TOPSOIL = 13,048 C.Y.
TOPSOIL USED FOR INTERIM REC = 5,372 C.Y.
TOPSOIL STORED FOR FINAL REC = 7,676 C.Y.

LEGEND

EXISTING WELL LOCATION
PROPOSED WELL LOCATION
EXISTING CONTOURS (1' INTERVAL)
PROPOSED CONTOURS (1' INTERVAL)
EXISTING PIPELINE
PROPOSED FLOWLINE
EXISTING FENCE
RECLAMATION AREA
WORKING PAD SURFACE (WPS)
BERM

HORIZONTAL 0 60' 120' 1" = 120'
1' CONTOURS

PAD - LIZZY 8-36HZ

PAD - INTERIM RECLAMATION
LIZZY NORTH 36-1HZ,
LIZZY NORTH 36-2HZ, LIZZY NORTH 36-3HZ, LIZZY NORTH 36-4HZ,
LIZZY NORTH 36-5HZ, LIZZY NORTH 36-6HZ, LIZZY NORTH 36-7HZ,
LIZZY NORTH 36-8HZ, LIZZY NORTH 36-9HZ, LIZZY NORTH 36-10HZ,
LIZZY NORTH 36-11HZ, LIZZY NORTH 36-12HZ, LIZZY NORTH 36-13HZ,
LIZZY WEST 36-14HZ, LIZZY WEST 36-15HZ, LIZZY WEST 36-16HZ,
LIZZY WEST 36-17HZ, LIZZY WEST 36-18HZ, LIZZY WEST 36-19HZ,
LIZZY WEST 36-20HZ, LIZZY WEST 36-21HZ, LIZZY WEST 36-22HZ,
LIZZY WEST 36-23HZ, LIZZY WEST 36-24HZ & LIZZY WEST 36-25HZ
LOCATED IN SECTION 36, T1N, R68W, 6TH P.M.
NORTHGLENN, COLORADO

Kerr-McGee Oil & Gas Onshore LP
1099 18th Street
Denver, Colorado 80202

609 CONSULTING, LLC
LOVELAND OFFICE
6706 North Franklin Avenue
Loveland, Colorado 80538
Phone 970-776-4331

SHERIDAN OFFICE
1095 Saberton Avenue
Sheridan, Wyoming 82801
Phone 307-674-0609

SCALE: 1"=120'	DATE: 8/30/22	SHEET NO:
REVISED:	SRS 11/28/22	1 OF 1

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K:\ANADARKO\2021\2021_43_LUCA_&_LIZZY_T1N_R68W_SEC_36\DWG\LUCA_&_LIZZY_T1N_R68W_SEC_36.dwg, 11/22/2022 2:55:10 PM, hayden

APPENDIX D

SUMMARY OF SITE-SPECIFIC EROSION & SEDIMENT CONTROLS / BMPs

SUMMARY OF SITE-SPECIFIC STORMWATER, EROSION & SEDIMENT CONTROLS / BMPs FOR INTERIM RECLAMATION PHASE

Stormwater will be managed during the interim reclamation and production phase by a combination of site-specific erosion and sediment control measures including: a berm around the northern, western and southern perimeter of the facility pad and northern, southern, and eastern perimeter of the well pad to manage run-on and run-off; stabilization of slopes and associated topsoil stockpile(s) by seed and crimped mulch application; permanent culverts with inlet & outlet protection may be installed at access roads and crossing, as determined in the field during construction; a temporary spillway and outlet along the southern perimeter of the well pad and southern portion of the stormwater detention area, which will remain in place until final reclamation. Post construction, daily inspections will be completed by on-site operations personnel. A third-party consultant will conduct stormwater compliance inspections every 30-days until final stabilization is achieved. Inspections will review all control measures / BMPs implemented, their status, and whether repair or replacement is needed, including weed maintenance when necessary. Maintenance and repair will be completed as soon as practicable, immediately in most cases.

5.22 DUST MITIGATION PLAN

Introduction:

KMOG has developed this Dust Mitigation Plan in compliance with the Colorado Oil and Gas Conservation Commission (COGCC) Rule 427.

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
57	Renohill clay loam, 3 to 9 percent slopes	5.6	28.9%
66	Ulm clay loam, 0 to 3 percent slopes	13.7	71.1%
Totals for Area of Interest		**19.3**	**100.0%**

427.a(2) Proposed Vehicle Speed Limits to Minimize Dust

- 10 mph on lease road from Colorado BLVD SW into location and 5 mph once vehicles reach well pad/ facility

427.a(3) Total Area of Disturbance (In Acres)

- Well pad and Facility – 19.29 acres

- Access road – 2.04 acres
    - Soil type – 66 Ulm clay loam & 57 Renohill clay

427.a(4) Whether Access Roads are Paved

- Access roads are not paved, they are constructed with a minimum of four - inches of gravel road base

427.a(5) Number of Anticipated Truck Trips During Each Phase

- Construction Phase (includes pad and production facility construction) – 8,292 truck trips
- Drilling Phase – 13,580 truck trips
- Completions Phase – 20,875 truck trips
- Production Phase – 1,106 average annual truck trips

427.a(6) A plan for Suppressing Fugitive Dust Caused Solely by Wind

- On active locations, in the event dust is caused solely by the wind KMOG will have fresh water deployed to suppress dust for the duration of the wind event
- In addition, disturbed soils will be placed to minimize ability for soil particles to become airborne. Various techniques to be used depending on soil type specific to each location:
    - Track pack/compact topsoil piles, consolidate soil used to construct perimeter ditch/berm and sediment traps
    - Hydro mulch and/or hydroseed topsoil piles and/or other stormwater BMP features
    - Seed/straw crimp disturbed soils where feasible
    - Place and compact gravel layer on working pad surfaces and access roads

427.a(7) Best Management Practices

- KMOG will proactively deploy fresh water to suppress dust along access road to well pad/ facility during all phases of pre-production operations
- Speed limits will be reduced to 10 mph on access road and 5 mph once vehicles reach well pad/ facility
- Access roads and Vehicle Tracking Control will receive maintenance as needed throughout operations
- In the event of high winds that generate dust that cannot be mitigated with an application of water, KMOG will shut down construction operations
- During the Completions phase, KMOG will utilize a fully enclosed Sand Containerized Proppant Delivery System that eliminates the use of pneumatic transfer on location. This methodology utilizes a gravity choke feed system that reduces dust significantly. The dust levels from this system are minimal and below Occupational Safety and Health Administration (OSHA) permissible exposure limit which eliminates the need for additional Personal Protective Equipment (PPE)

5.23 WETLANDS PROTECTION PLAN

Not applicable - This location is not located within or disturbing any wetlands.

5.24 FLOODPLAINS AND FLOODWAYS

Not applicable - This location is not located within the floodplain or floodways.

5.25 VISUAL MITIGATION PLAN

Please see pages 8 and 9 in the Site Plan for the Visual Mitigation Plan, including the photo simulations.

5.26 SITE SECURITY PLAN

The completed well site and production facility will be surrounded with a security fence, gate and locked with a Knox Padlock.

Authorized representatives and/or KMOG personnel shall be on-site during drilling and completion operations to monitor the location. During the production phase, KMOG personnel will monitor the facilities and visit the location about once a day. In addition, all new well sites are remotely monitored 24 hours a day, seven days a week by representatives in KMOG's Integrated Operations Center. From the Integrated Operations Center, KMOG personnel can turn wells and equipment on and off, look at tank levels, verify pressures and temperatures.

A permanent sign will be placed at the access road entrance. The sign, which shall be no less than three square feet and no more than six square feet, will provide: the name of the operator; a phone number at which the operator can be always reached; a phone number for local emergency services (911); the Oil and Gas Location name; the legal location, including the quarter-quarter section; and the assigned address. The sign will include four-inch minimum height numbers with a minimum half-inch stroke, with contrasting background color and visible from both directions.

5.27 RISK MANAGEMENT PLAN

KERR-MCGEE OIL & GAS ONSHORE LP
1099 18th Street, Suite 700
P.O. Box 173779
Denver, CO 80202
(720) 929-6000

Rockies PSRE

LIZZY 8-36HZ RISK MANAGEMENT PLAN

Effective Date: **12/1/2022**

Contents

1. PURPOSE

The purpose of this document is to define the Risk Management Plan (RMP) for the Lizzy 8-36HZ well pad and facility location.

2. APPLICABILITY

This document is specific to the Lizzy 8-36HZ well pad and facility location.

3. REQUIREMENTS

3.1 RISK MANAGEMENT

The following requirements apply to the Kerr McGee Oil and Gas (KMOG) assets in respect to Risk Management:

3.1.1 Management of Change and Pre-Startup Safety Review

The KMOG Management of Change (MOC) and Pre-Startup Safety Review (PSSR) processes are documented in the Lizzy 8-36HZ OGDP, attached as Appendix A.

3.1.2 Process Hazard Analysis;

KMOG utilizes the industry accepted Hazard and Operability (HAZOP) analysis prior to new facility construction. The HAZOP study occurs after piping and instrument diagrams (P&IDs) have been developed. The steps below outline the process. A template HAZOP report is attached as Appendix B

3.1.2.1 Credible event scenarios must be established for identified hazards resulting from failure of engineering and administrative controls.

- HAZOP is a structured study that utilizes set guide words and parameters to create deviations from normal operation. Example deviations are shown below:

Guideword	+	**Parameter**	=	**Deviation**
No	+	Flow	=	No Flow
Less	+	Temperature	=	Low Temperature
More	+	Pressure	=	High Pressure

Deviation	Cause	Consequence	Mitigations
High Pressure	Control valve fails open		

3.1.2.2 Consequences must be assigned to credible event scenarios. Qualitative evaluation of a range of the possible safety, health, and environmental effects of the failure of the controls to receptors;

- Consequences are evaluated assuming mitigation systems do not work, mitigations are applied to the probability of a credible event scenario occurring. An example is shown below:

Deviation	Cause	Consequence	Mitigations
High Pressure	Control valve fails open	Potential increased pressure in tank leading to overpressure and loss of containment	

3.1.2.3 Probabilities must be assigned to the credible event scenarios. Each credible event scenario starts at the highest level probability and is lowered through mitigations.

- Evaluate mitigations available to prevent or reduce the consequences of the event scenario
  - Mitigations must be independent of the credible event scenario cause and failure of one mitigation must not affect the function of other mitigations. Example mitigations include:
    - Process safety valves (PSVs)
    - Automated process shutdowns
    - Process alarms with operator response

Deviation	Cause	Consequence	Mitigations
High Pressure	Control valve fails open	Potential increased pressure in tank leading to overpressure and loss of containment	PSV-XXXX set at X oz PIT-XXXX set at X oz will isolate tank from process equipment

3.1.2.4 Risks of event scenarios are to be determined if applicable.

- Document risks for each event scenario with existing mitigation
- Determine if additional mitigations are needed to further reduce the probability
  - Additional mitigations identified during the study are the responsibility of the project manager to evaluate and track to closure

3.1.2.5 Documented risks are addressed if applicable;

- Communicate risks to management
- Update risks as additional mitigations are implemented

3.2 EMERGENCY RESPONSE

KMOG has developed a site-specific emergency response plan submitted with the Northglenn oil and gas permit.

3.3 COMPLIANCE

KMOG will notify locality representatives recognized by the COGCC of any state reportable spills through the self-reporting process.

4. RESPONSIBILITIES

TITLE	RESPONSIBILITIES
Rockies Process Safety and Risk Engineering Lead	The Rockies PSRE lead will be responsible for implementation of the RMP and to ensure that requirements in this plan are properly applied.
Rockies HSE Manager	The Rockies HSE Manager will be responsible for the Emergency Response and Compliance portions of the RMP.
Project Manager/ Lead	The project manager/lead is responsible to coordinate scheduling and completion of the PHA, PHA recommendations. MOC, and PSSR activities.

5. REVISION

The RMP will be reviewed every three years or after any incident for compliance with the program. Any updates will be recorded in the revision history below.

REV	STATUS	ORIGINATOR	CHECKED	APPROVED	DATE
0	Initial Lizzy 8-36HZ RMP	DBN	Initials	Initials	09/21/22

Appendix A

MANAGEMENT OF CHANGE PROGRAM PLAN

- KMOG ensures that changes proposed for new or existing processes are thoroughly reviewed prior to implementation to minimize the occurrence of unplanned events. This procedure also provides a mechanism for documenting changes and tracking all follow-up activities resulting from changes. Adherence to this procedure enables KMOG to meet the Pre-Startup Safety Review (PSSR) requirements.
- Management of change (MOC) documents for KMOG operations are managed utilizing a digital database. This tool is used to track changes, house documentation, notify required personnel, and ensure that each MOC meets the standards set out in internal HSE MOC Procedure and HSE PSSR Procedure documents.
- KMOG utilizes a detailed questionnaire that allows staff to determine if the change requires a MOC and if that MOC document is needed to communicate proposed changes to the necessary personnel. The document details any changes in technology, equipment, procedures or facilities that affect process. An example MOC applicability questionnaire is provided in Appendix A. The MOC process documents why the change is necessary. The document also addresses potential impacts to public health, safety, welfare and the environment. The approval level required is on a sliding scale based on the risk assessment associated with the change (MOC Class 1-4), shown in the table below. An example MOC Classification is provided in Appendix B. KMOG has three types of changes which are identified in the change document, temporary (<90 days), permanent and emergency.
-

MOC Class	Required Approvers
Class 1 or 2	MOC Coordinator Operations Team Lead
Class 3 or 4	MOC Coordinator Leader Surface Supervisor Surface

PRE-STARTUP SAFETY REVIEW

- A Pre-Startup Safety Review (PSSR) is intended to ensure that new or modified facilities or equipment have been thoroughly and satisfactorily checked for safety, compliance, and operability prior to facility Startup. A PSSR is a standard action item for most MOCs. As a result, a PSSR form must be completed for all MOCs that require Startup. Onsite PSSR should take place with all signing individuals after the change has taken place. PSSR should not be completed if portions of the change are not completed or if all Authorized for Startup / Safety Critical Tasks have not yet taken place.
- Alternate checklists may be utilized to assist with ensuring that the entire scope of a Change has been verified safe, compliance, and operational, if Startup is not required.
- An example of a PSSR checklist is provided in Appendix C.

Documentation

- KMOG's corporate retention policy dictates that records associated with MOC are saved for the life of the process plus 5 years.
- If the COGCC requests records, KMOG is able to provide documents within 5-7 business days.
- Records associated with MOC/PSSR are not updated after they are completed unless an audit finds a deficiency.

Appendix A: MOC Applicability Questionnaire

MOC Applicability Questionnaire (Note: An MOC is required if the response to any question is "YES")		
MOC#: 1234 **Title :** Example		
Is this an MOC?	1. Is it a new facility or modification to an existing facility such as the addition of process or treatment materials, piping, instrumentation, safety systems, or electrical equipment?	Yes
	2. Will the equipment, material, or components being replaced or repaired deviate from the existing design specifications?	No
	3. Does the change alter the content to a written operating procedure or emergency response plan? (Does not apply to format or lay-out changes)	No
	4. Is the change an adjustment to a process set point outside the established operational limits or is it a change in an alarm (mandatory action point) or shutdown (never exceed critical limit)?	No
	5. Does the change alter the production / injection flow rate or change in the pressure from or to wells that is outside established operating limits?	No
	6. Does the change remove or alter an existing ESD, fire, combustible gas, toxic gas, or other safety system?	No
	7. Is this a change to the organization that directly affects the process or operational safety (e.g. supervisory roles, shift rotations, reduced staffing)?	No
	8. Is the change a decrease in the frequency of inspection/testing/maintenance of process and safety equipment at a facility, well, or pipeline?	No
	9. Does the change remove / bypass an existing trip or alarm system that requires an additional trip or alarm system?	No
	10. Does the change alter the technical*, safety, or security aspects of a facility, well, or pipeline in manner not covered by questions above? *Examples of changes that alter the technical aspects are: • Change in a facility throughput or design capacity • Addition of insulation for heat conservation that is not part of the design specification	No
	This change requires an MOC	Result of Analysis

Appendix B: MOC Class

MOC Class		
MOC #:	**1234**	
Title :	**Example**	
Change Complexity	**1)** Can equipment or components within the Change scope take the process outside of the safe operating range?	No
	2) Does the Change affect the functionality, inspection & testing (i.e. less frequent) or removal/temporary bypass of a Consequence Level 3/4/5 Critical Mitigation Element (CME), safety device or a safety-critical control system?	No
	3) Does the Change construct a new facility, add major equipment to an existing facility, or reorder /alter processing sequences?	Yes
	4) Does the Change increase the material throughput or design capacity for a facility by greater than 10%?	No
	5) Does the Change require additional personnel interface for operations?	No
	6) Does the Change require instructor-led training for affected personnel? (i.e. class room or hands-on training)	No
	7) Does the Change require substantive modifications to established operational procedures or practices?	No
Hazard Potential	**8)** Are there potential scenarios associated with the Change that could result in a Permanent Incapacitating Injury (PII) consequence without accounting for safeguards?	No
	9) Are there potential scenarios associated with the Change that could result in an elevated environmental cleanup consequence without accounting for safeguards (e.g. dikes, berms)?	No
	10) Are there potential scenarios associated with the Change that could result in a medical treatment requiring emergency room or shorter-term hospitalization consequence to a member of the public without accounting for safeguards?	No
	11) Are there potential scenarios associated with the Change that could result in a significant combined property damage and loss of revenue consequence without accounting for safeguards?	No
MOC Class 1		Result of Analysis

Appendix C: Example PSSR

	Pre-Startup Safety Review (PSSR) Applicable for Class 1 MOCs	Rev.: 1 Revision Date: 3.1.2020
FACILITY:		
MOC NUMBER:		
MOC TITLE:		

DOCUMENTATION MUST BE AVAVILABLE UPON REQUEST FOR ALL ITEMS MARKED WITH *.

OPERATIONS REPRESENTATIVE:		
Name:	**Title:**	**Date:**
TECHNICALLY KNOWLEDGEABLE REPRESENTATIVE:		
Name:	**Title:**	**Date:**

PSSR CHECKLIST:
(Ensure all items are inspected and checked for accuracy. All lines must be marked.)

ENGINEERING	**REQUIRED PRIOR TO STARTUP?**	**COMMENTS**	
Has eMOC been Reviewed and Approved?	YES		Yes No N/A
Redlined (or completed) copies of FTI scope changes available for use?*	YES		Yes No N/A
Have all flanges, fittings, pipe and other components been reviewed to ensure proper ASME/ANSI pressure rating, wall thickness and metallurgy?	YES		Yes No N/A
Are relief device setpoints correct, devices properly supported, outlet directed to a safe location, and inlet and outlet valves locked open.	YES		Yes No N/A
Have Arc Flash Study and Area Classifications been updated if required?	YES		Yes No N/A
Have all PHR Recommendations been reviewed and addressed?*	YES		Yes No N/A
Have applicable permits/ authorizations been obtained, if required?*	YES		Yes No N/A
CONSTRUCTION	**REQUIRED PRIOR TO STARTUP?**	**COMMENTS**	
Have all measurement devices been installed and certified (if applicable) with proper spacing (orifice, turbine, Corilois)?	YES		Yes No N/A
Has the construction & equipment installation been completed in accordance with design as specified by the MOC and supporting documentation such as drawings, sketches, electrical classification, etc.?	YES		Yes No N/A
Have proper materials of construction been used and documented?			Yes No N/A
If required, has piping and other equipment been leak and hydro tested?*	YES		Yes No N/A
Process is pre-comissioned properly (i.e. purged, pressure tested and other pre-comissioning procedures complete)?	YES		Yes No N/A
If required, are grounding cables installed on all equipment, tanks, vessels, and piping?	YES		Yes No N/A
Is pipe protection (heat trace, insulation, etc.) adequate per P&IDs?			Yes No N/A
Appropriate mechanical integrity and fit for purpose checks have been performed (i.e. PSV Tests)?*	YES		Yes No N/A
Isolation blinds and other isolation devices have been removed?	YES		Yes No N/A
Have system alarms, shutdowns, protective devices, interlocks and permissives been calibrated and function checked for proper setpoints/actions?*	YES		Yes No N/A
OPERATIONS	**REQUIRED PRIOR TO STARTUP?**	**COMMENTS**	
Impacted personnel have been properly trained regarding the scope of change?	YES		Yes No N/A
Are all Lock Open or Lock Closed valves locked in the proper posistion in accordance with the P&IDs?	YES		Yes No N/A
Have existing operating and maintenance procedures been reviewed and revised as necessary, due to scope of change?			Yes No N/A
HSE	**REQUIRED PRIOR TO STARTUP?**	**COMMENTS**	
Appropriate hazard/safety signs have been posted (i.e. H2S, confined space, ARC Flash labels, etc.)?			Yes No N/A
Have SDSs for new chemical(s) introduced to the site been added to the field office files?	YES		Yes No N/A
Utility, firefighting, and personnel safety equipment is functional?			Yes No N/A
Has windsock been installed and visible from all areas of facility?	YES		Yes No N/A
Is area clear of construction debris?			Yes No N/A

	Pre-Startup Safety Review (PSSR) Applicable for Class 1 MOCs	Rev.: 1 Revision Date: 3.1.2020

PSSR PARTICIPANTS		
Name:	**Title:**	**Date:**
AFTER ACTION ITEMS:		
(Must be Non-Safety Critical items)		

Action Item(s):	Person Responsible:	Targeted Completion Date:	Actual Completion Date:
FACILITY STARTUP APPROVAL:			
Facility Supervisor Signature:			**Date:**

	Example HAZOP	Document No.	PHA-20XX-0XX
		Revision No.	0
		Page No.	1 of 20
		Reviewed by	
		Release Date	

Business Unit

DRAFT Technical Report
Example HAZOP
(PHA-20XX-0XX)

0		Draft	Author	
Rev.	**Issue Date**	**Purpose/Description of Revision**	**Prepared By**	**Reviewed By**

Table of Contents

REVISION HISTORY

Rev No.	Prep By	Date	Description
0	Author		Initial DRAFT
1			FINAL

Executive Summary

From XX/XX/20XX to XX/XX/20XX a team consisting of representatives of Risk, Facilities and Construction, and Operations met to conduct a Process Hazard Review of the example facility or process. The purpose of this review was to identify potential hazards based on facility design and operation.

Process Description

A description of the facility, including major equipment and processes.

PHA Findings & Recommendations

A total of XX recommendations were offered for consideration during the development of detailed design.

Recommendations in Order of Highest Risk Level (with Mitigation)

Recommendations	Place(s) Used	Maximum Risk Level with Safeguards
1. Example Rec 1.	Consequences: 2.1.1.1	
2. Example Rec 2.	Consequences: 11.3.1.1	
3. Example Rec 3.	Consequences: 11.3.2.1	

Note: If a Recommendation does not have a Risk Level, it was provided to alleviate operational / HES concerns for scenarios that did not come from a HAZOP deviation.

HAZOP Technique

The HAZOP technique is used to identify credible process hazards that could affect the employees' and/or public safety, the environment, or result in equipment damage, so that these risks can be minimized or eliminated. It is a rigorous examination of process hazards as well as potential serious operational problems.

Thus, a HAZOP study attempts to identify how a process may deviate from the operational and design intent. The HAZOP technique is both thorough and systematic and examines the process and/or operations utilizing a multi-disciplinary team of experienced personnel to review deviations from the design intent. The team generally consists of a trained leader, a scribe and three to five resource people.

The HAZOP analysis technique provides a structured framework, which directs the HAZOP team to study various deviations from the normal operating intent of the facility (see Figure 1).

The HAZOP team determines if these deviations can result in causes that are potentially hazardous and then if there are credible consequences that can produce the deviations. Any deviation that is found to produce serious consequences, for which credible causes exist, is noted as areas where further action is to be considered. The safeguards which exist to mitigate the process deviation are then examined and, if the HAZOP team feels that these existing safeguards are inadequate, a recommendation is suggested for consideration by the facility supervision.

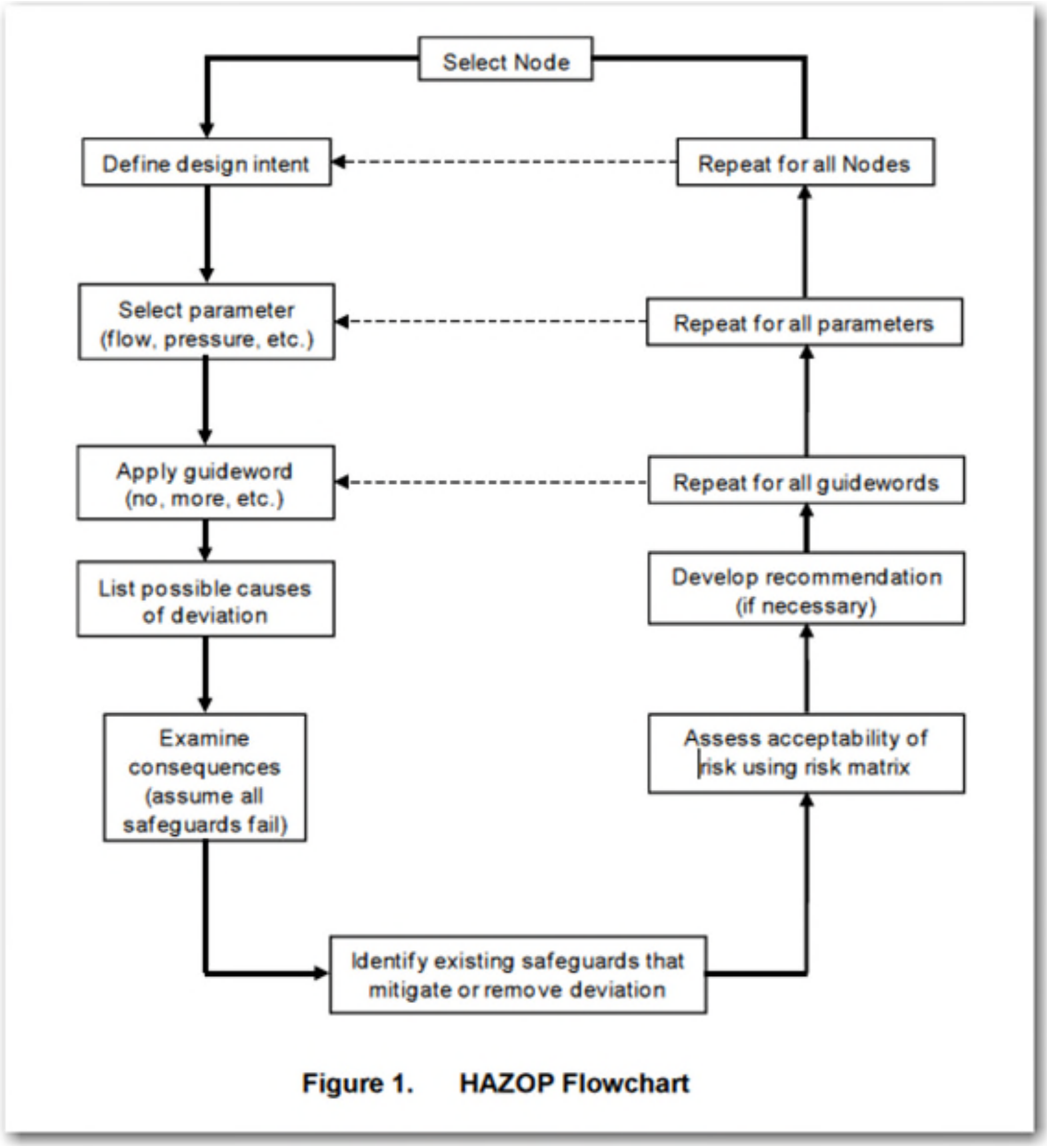

Figure 1. HAZOP Flowchart

The HAZOP terminology, a deviation is anything that is a departure from the design intention. The deviations are discovered by applying the guidewords in the following table to applicable process conditions for every process section. Standard deviations are included in Table 1.

Table 1. Standard Deviations

Standard Deviations	
No/Low Flow	Low Pressure
More (High) Flow	High Temperature
Reverse Flow	Low Temperature
Misdirected Flow	High Level
High Pressure	Low Level

Additional deviations or factors may be applied depending on the nature of the system / process under review. These additional guidewords or factors are provided in Table 2.

Table 2. Additional Deviations

Additional Deviations	
Contamination	Maintenance Hazards
Reaction/Composition/Phase Change	Abnormal Operations
Corrosion/Erosion	Startup/Shutdown Hazards
Utility Failure (Power, Glycol, Instrument Air)	Other Concerns (Safety, Human Factors, Siting)

The guideword approach often results in redundancies. For example, failure of a pump to operate may be the cause for “No Flow” in a line segment. It may also be the cause for “Less Pressure” or “High Level”. When this occurs, the scenario is discussed fully under the first deviation and additional documentation under the second (third, or more) deviation may not be necessary. For completeness, however, it will be noted there were “no additional hazards identified” under the second (third, etc.) deviation.

During or prior to the HAZOP meeting, a system or process is broken down into small sections called “Nodes”. This is to assist the review team in a more manageable fashion by focusing on a small segment of the process in which to apply deviations.

HAZOP Report

The PHA was recorded using a ARA – HAZOP Template format and is found in the following pages.

1. Team Members

Full Name	Role / Expertise
Facilitator	Risk Engineer
Engineer	F&C Engineer
Operator	Operations

2. Study Sessions

Date	Duration	Description	Leader	Scribe
1. XX/XX/20XX	3.00	Day 1 - Methodology Discussion, Nodes 1-6	Facilitator	Facilitator
2. XX/XX/20XX	2.50	Day 2 – Completed study	Facilitator	Facilitator

3. Team Members Attendance

Team Members	Sessions			
	1. XX/XX/20XX		2. XX/XX/20XX	
		Hrs		Hrs
Facilitator	Present	3	Present	2.5
Engineer	Present	3	Present	2.5
Operator	Present	3	Present	2.5

4. Nodes

Nodes	Design Conditions/Parameters	Drawings
1. Wellhead and Flowlines	Wellhead: 5000 psig (Design) Flowline: 3000 psig @ (Design)	P&ID-001
		P&ID-002
		P&ID-003
		P&ID-004
2. …	….	P&ID-001
		P&ID-002
		P&ID-003
		P&ID-004

5. Assumptions

If there we no assumptions, then state: “No Assumptions were used for this study”

6. Worksheets

Deviation	Causes	Drawing # (Cause)	Consequences	Consequence Category	Mitigation	Tag #	Controller	Drawing #	Initial Risk C	Initial Risk P	Initial Risk RL	Recommendations	Estimated Residual Risk C	Estimated Residual Risk P	Estimated Residual Risk RL	Comments
1. No / Low Flow	1. Cause 1 example...		1.1. Example...	People At the Facility	1.1.1. Mitigation 1 description				2	4	B	1. Additional CME	2	2	A	
					1.1.2. Mitigation 2 description							2. Additional CME 2				
					1.1.3. Mitigation 3description											
			1.2.	People Outside the Facility												
			1.3.	Property Damage / Loss of Revenue												
			1.4.	Non-Owned Property Damage												
			1.5.	Environment: Remediation												
			1.6.	Environment: Wild life and Habitat												
			1.7.	License to Operate / Community Relations												
	2. Cause 2 example...															
2. More (High) Flow																
3. Reverse Flow																
4. Misdirected Flow																
5. High Pressure																
6. Low Pressure																
7. High Temperature																
8. Low Temperature																
9. High Level																
10. Low Level																

Deviation	Causes	Drawing # (Cause)	Consequences	Consequence Category	Mitigation	Tag #	Controller	Drawing #	Initial Risk			Recommendations	Estimated Residual Risk			Comments
									C	P	RL		C	P	RL	
11. Contamination																
12. Reaction / Composition / Phase Change																
13. Corrosion / Erosion																
14. Utility Failure (Power, Glycol, Instrument Air)																
15. Maintenance Hazards																
16. Abnormal Operations																
17. Start-up / Shutdown Hazards																
18. Other Concerns (Safety, Human Factors, Siting)																

7. Facility Siting Checklist

The assets assessed during the study are deemed unmanned, therefore the facility siting checklist was not completed. Siting concerns and manned operations identified during the study are documented in the PHA worksheets.

8. Human Factors Checklist

The assets assessed during the study are deemed unmanned, therefore the human factors checklist was not completed. Siting concerns and manned operations identified during the study are documented in the PHA worksheets.

10. Previous Incidents

New Construction, no previous incidents.

14. Facilitator Certificate

Copy of industry accepted PHA Facilitator Certificate

15. Documents, Reference Drawings and Safety Data Sheets (SDS)

The following pages will include highlighted P&IDs, and SDS associated with the facility PHA.

5.28 PRELIMINARY DRAINAGE AND EROSION CONTROL REPORT

Please see Preliminary Drainage and Erosion Control Report attached separately

5.29 WILDLIFE PROTECTION PLAN

4480 Garfield Street
Denver, CO 80216
www.quandaryconsultants.com

WILDLIFE PROTECTION PLAN

LIZZY OGDP
LIZZY 8-36HZ PAD
Northglenn, Colorado

November 18, 2022

Occidental Petroleum
1099 18th Street
Denver, CO 80202

TABLE OF CONTENTS

TABLES

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SUMMARY OF FINDINGS

Resource	Regulatory Authorities	Findings
Hydrology	U.S. Army Corps of Engineers (USACE) – CWA Section 404; Colorado Oil & Gas Conservation Commission (COGCC) – 300 and 1200 Series Rules; COGCC – Section 421	A wetland delineation determined that the NWI-mapped wetland intersected by the Location does not meet the criteria required to be classified as a wetland per USACE. There is a downgradient Waters of the State within 0.5 mile of the WPS; there is no downgradient WOTUS, downgradient riparian corridor, nor downgradient wetland within 0.5 mile. The WPS does not intersect a FEMA-mapped 100-year floodplain or floodway.
Eagles & Other Raptors	U.S. Fish and Wildlife Service (USFWS) – Bald and Golden Eagle Protection Act; USFWS - Migratory Bird Treaty Act (MBTA); COGCC – 1200 Series Rules	There is habitat for nesting eagle and other raptors within 0.5 mile of the Location. There are five raptor nests within 0.5 mile of the Location. There are no eagle nests nor CPW-mapped bald eagle winter night roost areas within 0.5 mile of the Location.
Western Burrowing Owl	USFWS – MBTA; Colorado Parks and Wildlife (CPW) – Nongame, Endangered or Threatened Species Conservation Act; COGCC – 1200 Series Rules	There are two prairie dog colonies that present suitable burrowing owl habitat within 0.25 mile of the Location. There is a third colony that begins 0.25 mile northeast of the Location, at its closest point.
Migratory Birds	USFWS – MBTA; COGCC – 1200 Series Rules	There is suitable habitat for nesting migratory birds within and adjacent to the Location.
Threatened and Endangered (T&E) Species	USFWS – ESA; CPW – Nongame, Endangered, or Threatened Species Conservation Act	No habitat for federally listed species is present within or adjacent to the Location.
CPW High Priority Habitats	COGCC – 1200 Series Rules	There are four CPW-mapped HPHs within one mile of the WPS. The WPS does not intersect any CPW-mapped HPHs.

1.0 INTRODUCTION

Per Colorado Oil and Gas Conservation Commission (COGCC) 300 Series and 1200 Series Rules for the protection of wildlife and habitat, Kerr-McGee Oil & Gas Onshore L.P. (KMOG) is presenting this Wildlife Protection Plan (WPP) for the proposed Lizzy 8-36HZ Oil & Gas Location (hereafter referred to as Location; Figure 1) as part of the Lizzy OGDP. The wildlife and habitat evaluations included in this WPP are submitted pursuant with the COGCC Form 2A permitting process, Rule 304.c.(17) Wildlife Protection Plan, and Rule 1201.a for an Oil and Gas Location outside of any High Priority Habitat (HPH). The Lizzy 8-36HZ Location is located entirely outside of all CPW-mapped HPHs (Figure 4; CPW 2022). State and federal regulations also addressed include the Endangered Species Act (ESA), Migratory Bird Treaty Act (MBTA), Bald and Golden Eagle Protection Act (BGEPA), Colorado Parks and Wildlife (CPW) Buffer Zones and Seasonal Restrictions for Colorado Raptors guidelines, and Section 404 of the Clean Water Act (CWA).

2.0 LOCATION DESCRIPTION

Quandary Consultants (Quandary) surveyed a 0.50-mile buffer around the Lizzy 8-36HZ Location, where property access was permitted, to accommodate for the widest potential environmental constraint. Analysis included a desktop review of appropriate databases and imagery collections, identification of features requiring focused survey in the field, and a site inspection to review these desktop-identified features and to search for other instances of protected and sensitive natural resources. Three inspections were conducted on the following days:

August 3 and 4, 2021 – Initial Site Assessment
August 25, 2021 – Wetland Delineations
November 1 and 2, 2022 – Soil Sampling and Follow-Up Assessment

The results for each natural resource element reviewed are described below.

3.0 LOCATION SETTING

Land use, vegetation, and soils within the Location were reviewed and are detailed below.

3.1 Land Use

The Lizzy 8-36HZ Location entirely intersects rangeland. Table 1 lists the approximate acreage of the existing land use types that occur within one mile of the proposed disturbance area.

Table 1: Land Use Acreage Within 1 Mile of the Disturbance Area

Land Use Type	Acreage Within 1 Mile	Description
Irrigated Crop Land	937.62	USGS NLCD cultivated crops
Non-Irrigated Crop Land	0	NA
Rangeland	1145.55	USGS NLCD grassland/herbaceous and pasture/hay
Forestry	21.57	USGS NLCD shrub/scrub
Public	0	NA
Industrial	1.7	NA
Commercial	235.51	NA
Residential	267.3	NA

Land Use Type	Acreage Within 1 Mile	Description
Other	304.92	USGS NLCD developed land, barren land, wetlands, open water

3.2 Vegetation

The most recent field investigation on November 1 and 2, 2022 identified that approximately 80% of ground cover within the Lizzy 8-36HZ Location is composed of non-native plants and approximately 20% of ground cover is bare ground; native plants cover less than 1% of the Location. The dominant species present within the Location, in order of most to least abundant, are kochia (*Bassia scoparia*; 35% vegetation cover), field bindweed (*Convolvulus arvensis*; 30% vegetation cover), Russian thistle (*Salsola tragus*; 20% vegetation cover), tumble mustard (*Sisymbrium altissimum*; 8% vegetation cover), and downy brome (*Bromus tectorum*; 5% vegetation cover).

Other species encountered include wild alyssum (*Alyssum simplex*), common sunflower (*Helianthus annuus*), curly dock (*Rumex crispis*), musk thistle (*Carduus nutans*), and hairy goldenaster (*Heterotheca villosa*).

Field bindweed (*Convolvulus arvensis*) and downy brome (*Bromus tectorum*) are classified as Colorado Noxious Weeds List C species. Musk thistle (*Carduus nutans*) is classified as a Colorado Noxious Weeds List B species.

3.3 Soil

Tables 2 and 3 list the soil units identified within the Lizzy 8-36HZ Location and access road, and Table 4 lists the soil unit properties (NRCS 2022; Figure 3).

Table 2: Soil Units within the Disturbance Area

NRCS ID	NRCS Soil Name, Percent Slopes	Acres in Location
57	Renohill clay loam, 3-9% slopes	5.58
66	Ulm clay loam, 0-3% slopes	13.63

Table 3: Soil Units within the Access Road

NRCS ID	NRCS Soil Name, Percent Slopes	Acres in Location
57	Renohill clay loam, 3-9% slopes	0.88
66	Ulm clay loam, 0-3% slopes	1.07

Table 4: Soil Unit Properties

NRCS ID	NRCS Soil Name, Percent Slopes	Drainage Class	Runoff Potential	Erosion Potential (K)
57	Renohill clay loam, 3-9% slopes	Well Drained	Medium	0.28
66	Ulm clay loam, 0-3% slopes	Well Drained	Low	0.24

4.0 LOCATION FINDINGS

4.1 Hydrology

The National Hydrography Dataset (NHD) and National Wetlands Inventory (NWI) databases indicate that the Lizzy 8-36HZ Location intersects a mapped freshwater emergent wetland located in the northern portion of the Location and approximately 90 feet northwest of the working pad surface (USGS 2022b; USFWS 2022b). At the time of the initial site assessment in August 2021, the area was being used as waste disposal. A wetland delineation was conducted for the mapped area on August 25, 2021. Quandary determined that this area does not meet the definition of a wetland (per Section 404 of the Clean Water Act in 33 CFR 328.3b – area that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturate soil conditions) or possesses three essential characteristics to be considered a jurisdictional wetland by US Army Corps of Engineers (USACE) (1) a dominance of hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. The area has since been cleaned and all waste removed.

The nearest downgradient Waters of the State, measured along the most likely migration pathway, is an irrigation ditch approximately 742 feet east of the WPS. The nearest downgradient Waters of the United States (WOTUS), measured along the most likely migration pathway, is the Thompson Ditch 1,210 feet southeast of the WPS.

There are no downgradient riparian corridors nor downgradient wetlands within 0.5 mile of the WPS. Distances to these water resources are determined using the best aerial and spatial natural resources data available from the NWI (USFWS 2022b), the NHD (USGS 2022b), the Colorado Division of Water Resources (CDWR), and the COGCC (COGCC 2022). Topography is taken into consideration when identifying the nearest downgradient water features and when estimating measurements along the contaminate migration pathway.

The nearest downgradient riparian corridor and wetland, measured along the most likely migration pathway, is a riparian vegetated area along Big Dry Creek, approximately 1,438 feet southeast of the WPS (USFWS 2022b). The WPS does not intersect a FEMA-mapped floodplain or floodway (FEMA 2022).

4.2 Wildlife

4.2.1 Bald and Golden Eagles and Other Raptors

No bald or golden eagle nests were observed within 0.5 mile of the Lizzy 8-36HZ Location, and none are recorded within 0.5 mile of the Location (CPW 2022). The closest eagle nest is a bald eagle nest 1.08 miles west of the Location (1N68W_35G_EA; Figure 2).

There are five raptor nests within 0.5 mile of the Location: 0.32 mile north (1N68W_36A_RA), 0.38 mile northeast (1N67W_31D_RA), 0.15 mile southwest (1N68W_36J_RA), 0.27 mile southwest (1N68W_36J_RA2), and 0.19 mile west (1N68W_36G_RA) of the Location. There is also a raptor nest 0.54 mile southwest of the Location (1S68W_1B_RA), outside 0.5 mile (Figure 2).

The Location is not within 0.5 mile of a CPW-mapped bald eagle winter night roost area.

4.2.2 Burrowing Owl

There is suitable nesting habitat for burrowing owls (e.g., prairie dog colony) within 0.25 mile of the Location. A 34.07-acre prairie dog colony intersects both the Location and access road (BUOW_Habitat_1136). Prairie dogs were active in this colony at the time of the most recent inspection on November 1 and 2, 2022. A second 21.90-acre prairie dog colony is immediately adjacent to the western portion of the Location (BUOW_Habitat_1137). No prairie dog activity was observed in this colony and the majority of burrows appear to be abandoned and in poor conditions. A third 9.25-acre prairie dog colony was observed 0.25 mile northeast of the Location (BUOW_Habitat_1138). Prairie dogs were also active in this colony. All three colonies provide suitable nesting habitat for burrowing owls (Figure 2). No burrowing owls were observed at the time of the assessments conducted on August 3 and 4, 2021 and November 1 and 2, 2022.

4.2.3 Migratory Birds

There is suitable habitat for nesting migratory birds within and adjacent to the Location, predominately in the form of ground-nesting habitat for ground-nesting birds.

4.2.4 Federally Listed Species

According to the USFWS IPaC, seven (7) federally listed species should be considered in an effects analysis for the Location: Gray Wold (*Canis lupus*), eastern black rail (*Laterallus jamaicensis ssp. jamaicensis*), piping plover (*Charadrius melodus*), whooping crane (*Grus americana*), pallid sturgeon (*Scaphirhynchus albus*), Ute ladies'-tresses (*Spiranthes diluvialis*), and western prairie fringed orchid (*Platanthera praeclara*) (USFWS 2022a). Table 5 provides a summary review of endangered and threatened species considered in the effects analysis for the Location.

Table 5: Federally Listed Species Reviewed

Species	Federal Status	Likelihood of species presence at location?
Mammals		
Gray wolf (*Canis lupus*)	Endangered	Low; Gray wolves are adaptable to a wide range of habitats, including grasslands. However, populations in Colorado are heavily concentrated in the Front Range, where there is less potential for human conflict. There is no suitable habitat for the Gray Wolf at the site.
Birds		
Eastern black rail (*Laterallus jamaicensis spp. jamaicensis*)	Threatened	Low; Eastern black rails are a wetland-dependent bird that prefer dense overhead cover and saturated soils. No suitable habitat nor birds were observed at the site.
Piping plover (*Charadrius melodus*)	Threatened	Low; Piping plovers prefer sparsely vegetated sand or gravel beaches adjacent to vast lakes or rivers. No suitable habitat nor birds were observed at the site.
Whooping crane (*Grus americana*)	Endangered	Low; Whooping cranes prefer sparsely vegetated shallow water bodies (e.g., marshes and lagoons) away from human activity. No suitable habitat nor birds were observed at the site.
Fishes		
Pallid sturgeon (*Scaphirhynchus albus*)	Endangered	Low; Pallid sturgeons occupy large, turbid, and free-flowing riverine habitats. Site activities will not impact aquatic features.

Species	Federal Status	Likelihood of species presence at location?
Plants		
Ute ladies'-tresses orchid (*Spiranthes diluvialis*)	Threatened	Low; ULT orchids inhabit moist environments, such as riparian edges, historical floodplains, and human modified wetlands. No suitable habitat nor UTL orchids were observed at the site.
Western prairie fringed orchid (*Platanthera praeclara*)	Threatened	Low; WPF orchids inhabit mesic to wet tallgrass prairies and meadows with high soil moisture. No suitable habitat nor WPF orchids were observed at the site.

There is no habitat for federally listed species is present within or adjacent to the Location (USFWS 2022).

4.2.5 CPW High Priority Habitats

Table 6 lists the high priority habitats (HPHs) that are mapped within one mile of the Lizzy 8-36HZ WPS (CPW 2022).

Table 6: CPW High Priority Habitats Within 1 Mile of the Working Pad Surface

High Priority Habitat Name	Distance (Feet)	Estimated Disturbed Acreage
Bald Eagle Active Nest Site 0.25-Mile Buffer	4,404' W	0
Bald Eagle Active Nest Site 0.50-Mile Buffer (1)	3,084' W	0
Bald Eagle Active Nest Site 0.50-Mile Buffer (2)	4,732' SE	0
Aquatic Native Species Conservation Waters	3,756' SE	0

All four HPHs listed in Table 6 are within one mile of the WPS, however, no portion of the HPHs intersect the WPS (Figure 2).

5.0 OPERATING REQUIREMENTS AND BMPs

Pursuant to Rule 1202.a operating requirements, KMOG commits to the following Operational Requirements to avoid and minimize environmental impacts from the OGDP.

Yes	No	NA	
☐	☐	☒	Rule 1202.a.(1)- Operators will install and utilize bear-proof dumpsters and trash receptacles in black bear habitat. **Comment**: *The Location is not within black bear habitat.*
☐	☐	☒	Rule 1202.a.(2).A. & B.- Operators will disinfect water suction hoses and water tanks withdrawing from or discharging into surface waters using a CPW-approved disinfectant or with water greater than 140° F for at least 10 minutes. **Comment**: *Operations at the Location will not be withdrawing from or discharging into surface waters.*
☒	☐	☐	Rule 1202.a.(3)- Operators will not situate new staging, refueling, or chemical storage areas at new and existing locations; within 500 feet of the OHWM of any river, perennial or intermittent stream, lake, pond, or wetland. **Comment**: *KMOG will comply with this directive.*
☐	☐	☒	1202.a.(4).A., B., & C.- Operators will fence and net or install other CPW-approved exclusion devices on new or existing (if COGCC determines it is necessary to protect Wildlife Resources) drilling pits, production pits, and other pits associated with Oil and Gas Operations that are intended to contain Fluids. **Comment**: *KMOG does not utilize pits in the DJ Basin.*
☒	☐	☐	Rule 1202.a.(5)- Operators will install wildlife escape ramps – at a minimum of one ramp per ¼ mile of trench – for trenches that are left open for more than five consecutive days. **Comment**: *KMOG will comply with this directive.*
☒	☐	☐	Rule 1202.a.(6)- Operators will use CPW-recommended seed mixes (Appendix 1) for Reclamation when consistent with the Surface Owner's approval and any local soil conservation district requirements while conducting interim and final reclamation activities (pursuant to 1100 Series Rules). **Comment**: *KMOG will comply with this directive.*
☒	☐	☐	Rule 1202.a.(7)- Operators will use CPW-recommended fence designs (3 or 4 strand with the top strand height maximum height of approximately 42-inches, with the lower smooth strand without barbs at a height of approximately 18-inches) when consistent with the Surface Owner's approval and any relevant Local Government requirements. **Comment**: *KMOG will comply with this directive.*

Yes	No	NA	
☒	☐	☐	Rule 1202.a.(8)- Operators will conduct all vegetation removal necessary for Oil and Gas Operations outside of the established nesting season for migratory birds (April 1-August 31). For any vegetation removal activities performed between April 1 and August 31, Operators will conduct pre-construction nesting surveys within the proposed disturbance area prior to vegetation removal. Should active nests be located, Operators will establish appropriate work zone buffers or modify operations as practicable. **Comment**: *KMOG will comply with this directive. Pre-construction nesting bird surveys will be performed no more than 7 days prior to the start of site disturbing activities.*
☐	☐	☒	Rule 1202.a.(9)- Operators will treat drilling pits, production pits, and any other pits containing water that provides a medium for breeding mosquitoes with Bti to control mosquito larvae that may spread West Nile virus to Wildlife Resources. **Comment**: *KMOG does not utilize pits in the DJ Basin. However, if freshwater is stored on Location in Modular Large Volume Tanks (MLVT) or completely enclosed Minion tanks during well drilling/completion activities, KMOG will comply with this directive.*
☐	☐	☒	Rule 1202.a.(10).A.-E.- Operators will employ the following minimum BMPs on new locations with a Working Pad Surface located between 500-1000 feet hydraulically upgradient from a High Priority Habitat identified in Rule 1202.c.(1).Q–S: A. Contain flowback and stimulation fluids in tanks with downgradient perimeter berming; B. 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; C. Inspect locations on a daily basis, unless the approved Form 2A provides for different inspection frequency or alternative method of compliance; D. Maintain adequate spill response equipment at the location during drilling and completion operations; and E. Not construct or utilize any pits, except existing previously approved pits that were operated and maintained in compliance prior to January 15, 2021. **Comment**: *KMOG has not proposed any activities for the Location within 500-1000 feet from HPHs identified in Rule 1202.c.(1).Q-S.*

6.0 ADDITIONAL GENERAL OPERATING BMPs

KMOG commits to implement the following site-specific wildlife BMPs to further avoid and minimize environmental impacts from the OGDP:

1. Inform and educate employees and contractors on wildlife conservation practices, including no illegal hunting, harassment or feeding of wildlife.
2. Complete an environmental assessment, including a survey for raptor & burrowing owl nests, no more than 7 days prior to the start of pre-production operations. If during the environmental assessment an active nest is identified within the buffer recommend by CPW, KMOG will consult with CPW prior to beginning pre-production operations. If pre-production operations are planned between 03/15 – 08/31, CPW's three-survey protocol for determining the presence or absence of the western burrowing owl will be used. The CPW-protocol recommends that the surveys occur seven days apart, meaning that the first survey should be performed at least 14 or 15 days before the proposed start of activities at the Location. The final survey of the protocol will be no more than 7 prior to the start of pre-production operations. If active burrowing owl habitat is found within ¼ mile buffer of the WPS, pad construction will occur outside the STIP window of 03/15 – 08/31.
3. Consolidate and centralize fluid collection and distribution facilities to minimize impact to wildlife.
4. Adequately size infrastructure and facilities to accommodate both current and future gas production.
5. Protect culvert inlets from erosion and sedimentation and install energy dissipation structures at outfalls.
6. Implement fugitive dust control measures.
7. Install screening or other devices on the stacks and on other openings of heater treaters or fired vessels to prevent entry by migratory birds.
8. Minimize rig mobilization and demobilization by completing or re-completing all wells from a given well pad before moving rigs to a new location.
9. Operator will share and consolidate new corridors for pipeline rights-of-way and roads to minimize surface disturbance.
10. Engineer new pipelines to reduce field fitting and reduce excessive right-of-way widths and reclamation.
11. Mow or brush hog vegetation where appropriate, leaving root structure intact, instead of scraping the surface, where allowed by the surface owner.
12. Limit access to oil and gas access roads where approved by surface owners, surface managing agencies, or local government.
13. Post speed limits and caution signs to the extent allowed by surface owners, Federal and state regulations, local government, and land use policies.
14. Use wildlife-appropriate fencing where acceptable to the surface owner.
15. Use topographic features and vegetative screening to create seclusion areas, where acceptable to the surface owner.
16. Use remote monitoring of well production to the extent practicable.
17. Reduce traffic associated with transporting drilling water and produced liquids through the use of pipelines, large tanks, or other measures.
18. Install automated emergency response systems (e.g., high tank alarms, emergency shutdown systems).

7.0 PHOTOGRAPHS

Photo 1. Lizzy 8-36HZ Location, facing north.

Photo 2. Lizzy 8-36HZ Location, facing east.

Photo 3. Lizzy 8-36HZ Location, facing south.

Photo 4. Lizzy 8-36HZ Location, facing west.

Photo 5. Lizzy 8-36HZ Location, representative vegetation distribution.

Photo 6. Kochia (*Bassia scoparia*)

Photo 7. Field bindweed (*Convolvulus arvensis*)

Photo 8. Russian thistle (*Salsola tragus*)

Photo 9. Tumble mustard (*Sisymbrium altissimum*)

Photo 10. Downy brome (*Bromus tectorum*).

Photo 11. Non-wetland area previously used as trash disposal (August 2021).

Photo 12. Non-wetland area previously used as trash disposal (August 2021).

8.0 REFERENCES

The following sources were used in the review and evaluation process of the Lizzy 8-36HZ Location and in preparation of the WPP:

(COGCC) Colorado Oil & Gas Conservation Commission. 2022. Colorado Oil and Gas Information System (COGIS). Available online at: https://cogcc.state.co.us/data.html#/cogis. (Accessed November 2022)

(CPW) Colorado Parks & Wildlife. 2022. HPH COGCC SB181 Data. Available online at: https://www.arcgis.com/home/group.html?id=280f7c0420604edaa66ed6c0311d31d9#overview. (Accessed November 2022).

(FEMA) Federal Emergency Management Agency. 2022. USA Flood Hazard Areas. Available online at: https://www.fema.gov/flood-maps/national-flood-hazard-layer. (Accessed November 2022).

(NRCS) Natural Resources Conservation Service. 2022. Web Soil Survey. Available at: http://websoilsurvey.nrcs.usda.gov/. (Accessed November 2022)

(USFWS) U.S. Fish and Wildlife Service. 2022a. IPaC – Information Planning and Conservation System. Available online at: http://ecos.fws.gov/ipac/. (Accessed November 2022).

(USFWS) U.S. Fish and Wildlife Service. 2022b. National Wetlands Inventory. Available online at: https://www.fws.gov/wetlands/. (Accessed November 2022).

(USGS) U.S. Geological Survey. 2022a. Groundwater levels for Colorado. Available online at: https://nwis.waterdata.usgs.gov/co/nwis/gwlevels. (Accessed November 2022)

(USGS) U.S. Geological Survey. 2022b. National Hydrography Dataset Plus High Resolution. Available online at: https://www.usgs.gov/core-science-systems/ngp/national-hydrography/nhdplus-high-resolution. (Accessed November 2022).

9.0 APPENDIX 1

CPW-NE Region Recommended Mitigation Seed Mix for Pronghorn – Loamy Soil

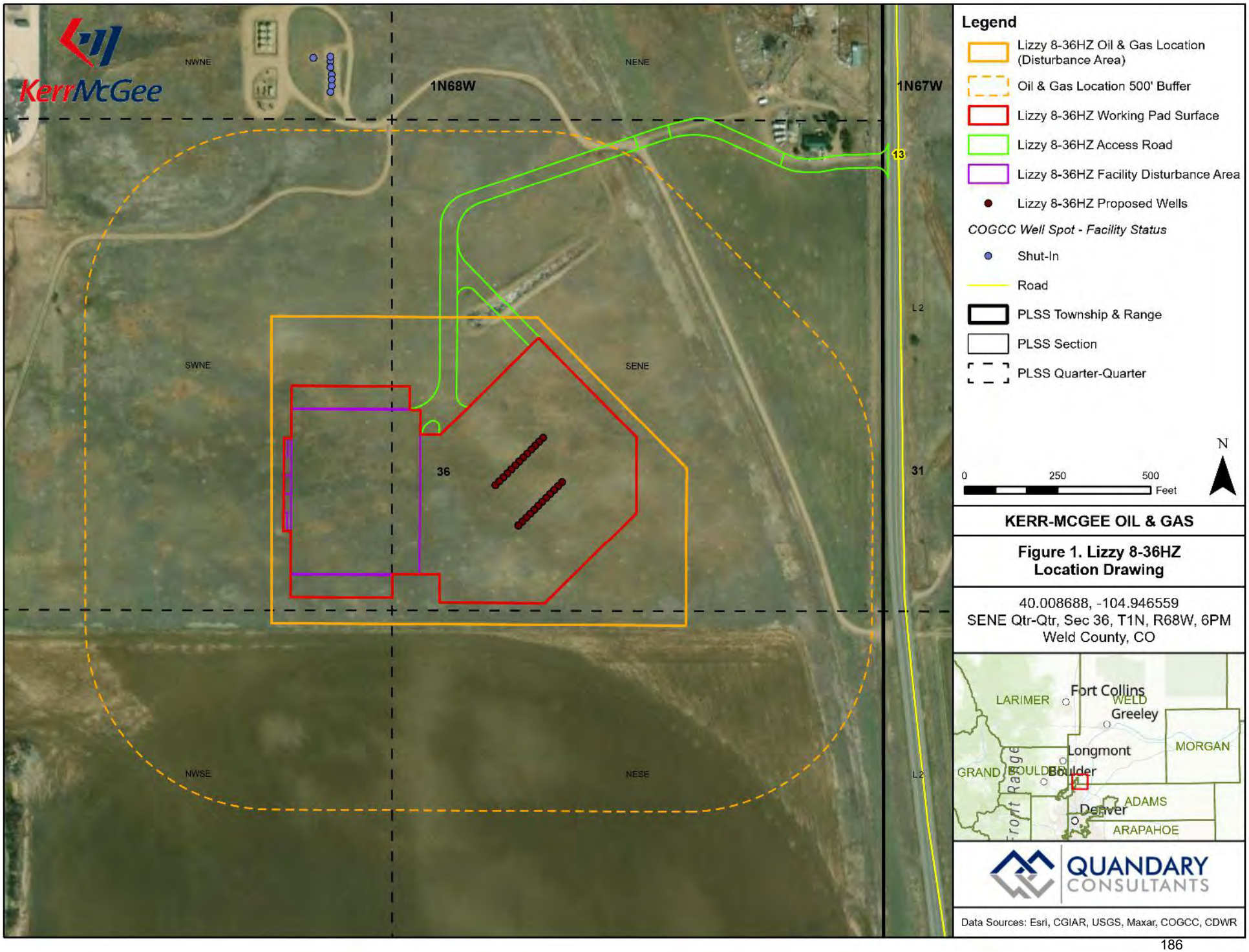
USDA NRCS
United States Department of Agriculture
Natural Resources Conservation Service

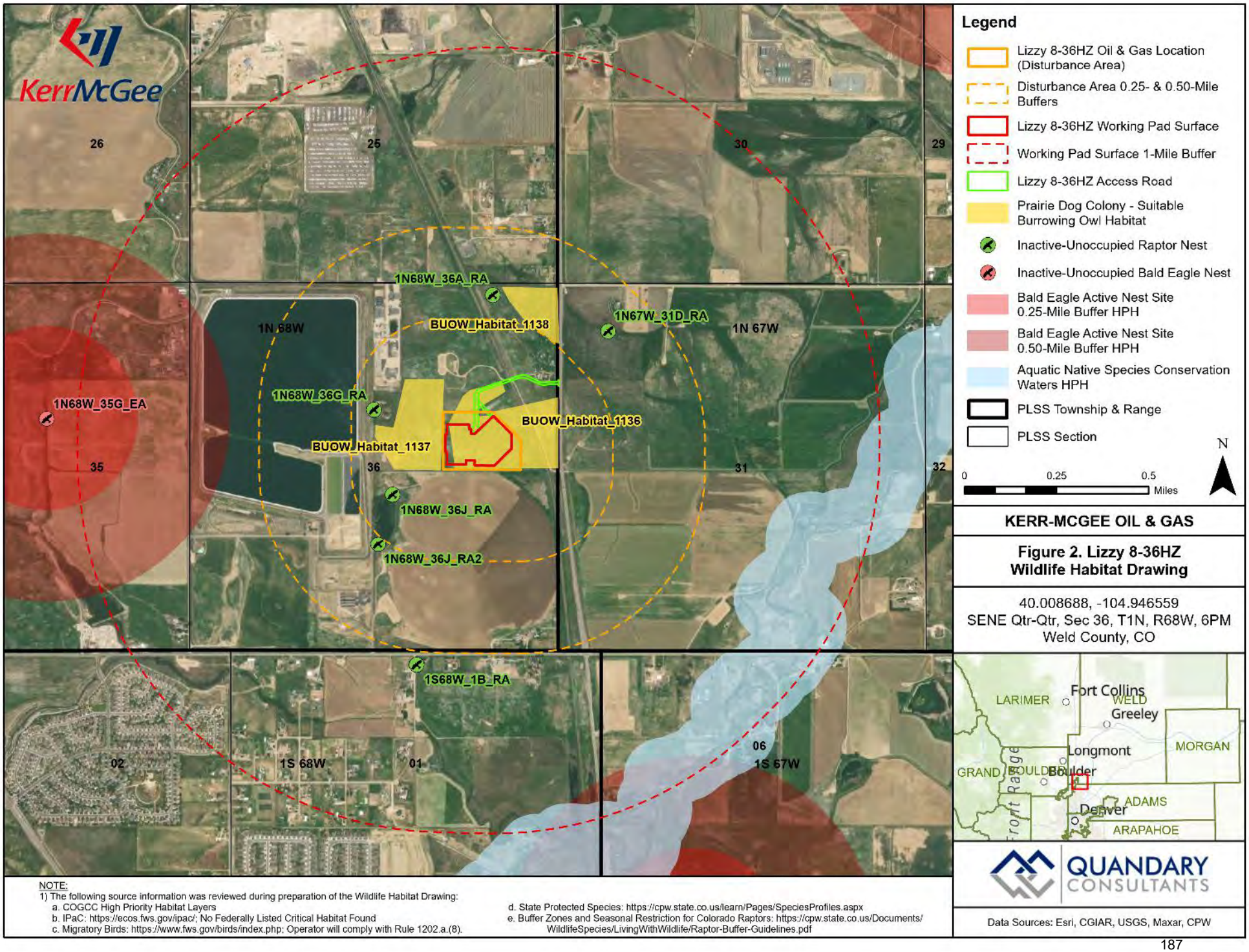
Seed Ordering and Mixing Sheet

Cooperator/Project Name	CPW recommended mitigation mix for pronghorn	Date	3/17/2021
Tract/Field No		Acres	1

Requirements for Seed: All seed must be of USA or Canada origin. Seed must be mixed and bagged as shown below. Any substitutions for plant species or cultivars must be approved by NRCS. Bulk pounds for each species must be on the seed tag or provided on a separate sheet from the seed dealer.

Common Name	Genus, species	Cultivar	Pounds Pure Live Seed (PLS)
Fluffy Seeds (Bag 1):			
Blanketflower	Gaillardia aristata		0.22
Fourwing Saltbush	Atriplex canescens		0.40
Large Hard Seeds (Bag 2):			
Green needlegrass	Nassella viridula	Lodorm	0.24
Needleandthread	Hesperostipa comata		0.27
Indian ricegrass	Achnatherum hymenoides	Paloma	0.31
Slim-leaf penstemon	Penstemon angustifolius		0.14
Dotted Gayfeather	Liatris punctata		0.14
Tahoka Daisy	Machaeranthera Tanacetifolia		0.11
Sainfoin	Onobrychis vicifolia	Shoshone	1.74
Rocky Mountain Beeplant	Cleome serrulata		0.68
Small burnet	Sanguisorba minor	Delar	1.04
Winterfat	Krascheninnikovia lanata		0.14
Rubber rabbitbrush	Ericameria nauseosa		0.04
Small Hard Seeds (Bag 3):			
Sandberg bluegrass	Poa secunda		0.05
Alfalfa	Medicago sativa	Ladak	0.20
Blue flax	Linum perenne	Appar	0.15
Cicer milkvetch	Astragalus cicer	Lutana, Monarch	0.22
Pale evening primrose	Oenothera pallida		0.07
Prairie Coneflower	Ratibida columnifera		0.05
Prickly poppy	Argemone polyanthemos		0.03
Rocky mtn. penstemon	Penstemon strictus	Bandera	0.09
Scarlet globemallow	Sphaeralcea coccinea		0.09


KerrMcGee
NWNE
NENE
1N68W
1N67W
13
SWNE
SENE
36
31
L2
NWSE
NESE
Legend
Lizzy 8-36HZ Oil & Gas Location (Disturbance Area)
Oil & Gas Location 500' Buffer
Lizzy 8-36HZ Working Pad Surface
Lizzy 8-36HZ Access Road
Lizzy 8-36HZ Facility Disturbance Area
Lizzy 8-36HZ Proposed Wells
COGCC Well Spot - Facility Status
Shut-In
Road
PLSS Township & Range
PLSS Section
PLSS Quarter-Quarter
N
0
250
500
Feet
KERR-MCGEE OIL & GAS
Figure 1. Lizzy 8-36HZ
Location Drawing
40.008688, -104.946559
SENE Qtr-Qtr, Sec 36, T1N, R68W, 6PM
Weld County, CO
LARIMER
Fort Collins
WELD
Greeley
MORGAN
Longmont
GRAND
BOULDER
Boulder
Front Range
ADAMS
Denver
ARAPAHOE
QUANDARY
CONSULTANTS
Data Sources: Esri, CGIAR, USGS, Maxar, COGCC, CDWR



KERR-MCGEE OIL & GAS

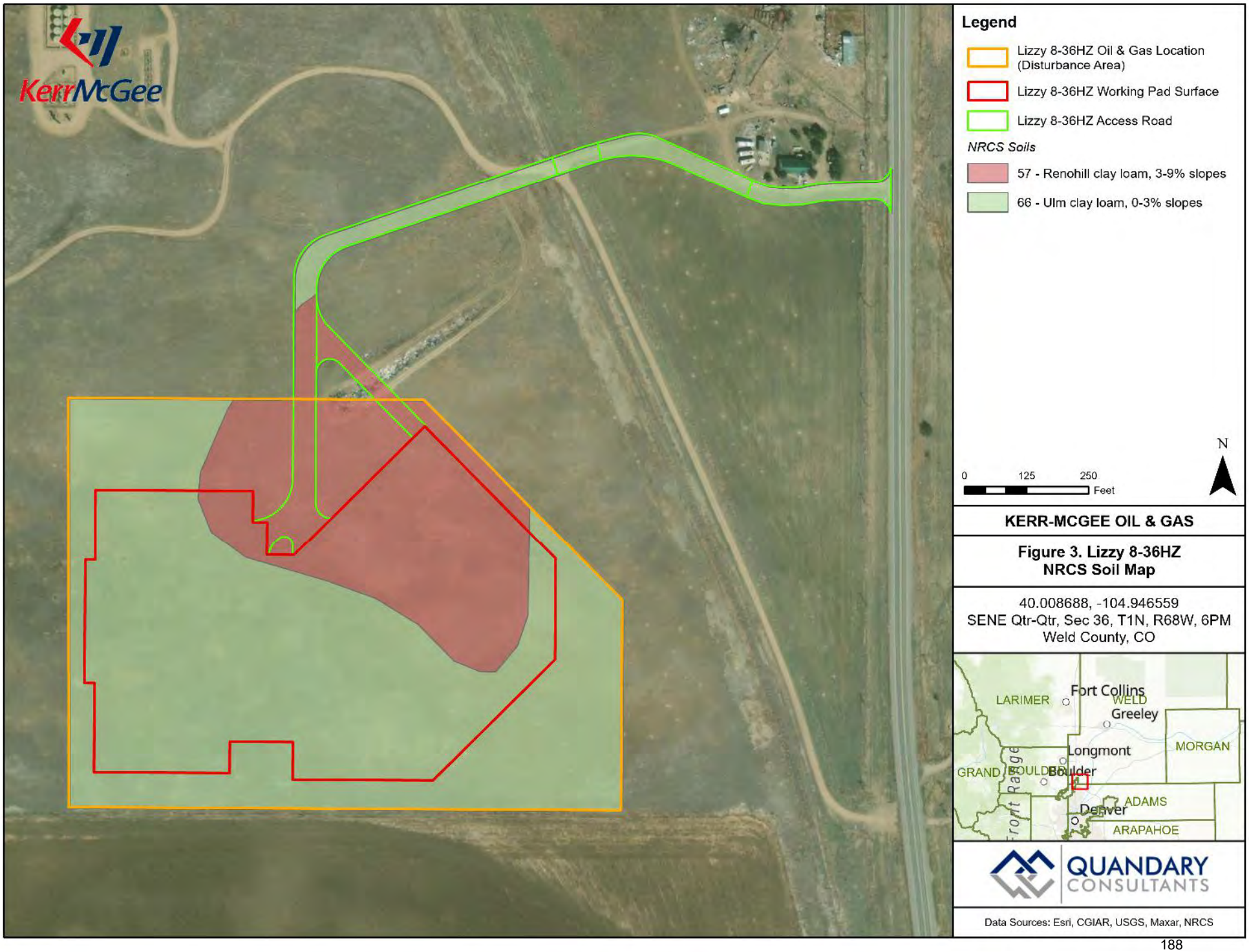
Figure 2. Lizzy 8-36HZ
Wildlife Habitat Drawing

40.008688, -104.946559
SENE Qtr-Qtr, Sec 36, T1N, R68W, 6PM
Weld County, CO

QUANDARY CONSULTANTS

Data Sources: Esri, CGIAR, USGS, Maxar, CPW

NOTE:
1) The following source information was reviewed during preparation of the Wildlife Habitat Drawing:
a. COGCC High Priority Habitat Layers
b. IPaC: https://ecos.fws.gov/ipac/; No Federally Listed Critical Habitat Found
c. Migratory Birds: https://www.fws.gov/birds/index.php; Operator will comply with Rule 1202.a.(8).
d. State Protected Species: https://cpw.state.co.us/learn/Pages/SpeciesProfiles.aspx
e. Buffer Zones and Seasonal Restriction for Colorado Raptors: https://cpw.state.co.us/Documents/WildlifeSpecies/LivingWithWildlife/Raptor-Buffer-Guidelines.pdf


KerrMcGee
Legend
Lizzy 8-36HZ Oil & Gas Location (Disturbance Area)
Lizzy 8-36HZ Working Pad Surface
Lizzy 8-36HZ Access Road
NRCS Soils
57 - Renohill clay loam, 3-9% slopes
66 - Ulm clay loam, 0-3% slopes
N
0
125
250
Feet
KERR-MCGEE OIL & GAS
Figure 3. Lizzy 8-36HZ
NRCS Soil Map
40.008688, -104.946559
SENE Qtr-Qtr, Sec 36, T1N, R68W, 6PM
Weld County, CO
LARIMER
Fort Collins
WELD
Greeley
MORGAN
Longmont
GRAND
BOULDER
Boulder
Front Range
ADAMS
Denver
ARAPAHOE
QUANDARY CONSULTANTS
Data Sources: Esri, CGIAR, USGS, Maxar, NRCS

5.30 BMP COMPLIANCE DOCUMENT

KMOG has complied with the BMPs listed in the City of Northglenn Oil and Gas Best Management Practices "BMP Document". The table below represents the BMPs that KMOG is providing clarification regarding how KMOG will comply with these specific BMPs.

Best Management Practices	How KMOG will comply with the Best Management Practices
C.1.o. Operator shall eliminate or minimize flaring to the maximum extent practicable.	KMOG will comply with this BMP by eliminating or minimizing flaring, during the drilling production phase, to the maximum extent practicable.
C.1.t. Operator shall use telemetric control and monitoring systems, including surveillance monitors, to detect when pilot lights on control devices are extinguished.	KMOG will comply with this BMP by using telemetric control and monitoring systems, during the production phase, including surveillance monitors, to detect when pilot lights on control devices are extinguished.
C.1.v. Operator shall participate in Natural Gas STAR program or other equivalent voluntary programs to encourage innovation in pollution control at each Well Site.	KMOG will comply with this BMP by participating in the Environmental Partnership program. The Environmental Partnership is a voluntary program that is focused on emission reductions. There are focused reductions measures such as pneumatics and LDAR, and there is annual reporting. Please click this link for more information - https://theenvironmentalpartnership.org/
C.3. Ambient Air Modeling. Operator shall provide access to the Well Sites to the City's designated personnel or agent to allow air sampling to occur, without condition. Operator will provide a regionally based air modeling and emissions inventory.	KMOG will comply with this BMP by providing access to the Well Sites to the City's designated personnel or agent to allow inspections using CDPHE approved instrument monitoring methods to occur, without condition. The City will notify KMOG at least 24 hours prior to coming onto location, will wear proper PPE, and will be escorted by KMOG personnel. KMOG will comply with the air modeling and monitoring requirements as outlined in the Air Quality Mitigation Plan in the permit.
C.7. Flares and Combustion Devices. To the extent flares, thermal oxidizers, or combustion devices are utilized, all such flares shall be designed and operated as follows: a.Flares shall be fired with natural gas and designed to operate with a 98% of higher hydrocarbon destruction efficiency.	To the extent flares, thermal oxidizers, or combustion devices are utilized, all such flares shall be designed and operated as follows during the production phase. a.Flares, thermal oxidizer, or combustion devices used to comply with permit conditions or Regulation 7 requirements should be designed and operated as followed in the production phase: Verification that the pilot is lit continuously; Have a designed destruction efficiency of 98%
C.9. Odor Containment. i. Running mud through a cooler to reduce odor;	KMOG will comply with this BMP by using Group III drilling fluids which are considered to have negligible odor and do not require any type of additional additive to suppress nuisance odors. For this reason, KMOG will not run mud through a cooler. Please see the Odor Plan in the permit for more details.
C.10.e. Operator shall not conduct or permit uncontrolled venting other than where necessary for safety.	KMOG will comply with this BMP by complying with CDPHE's REG 7 flowback requirements.
10.6.a. Operator shall not conduct vehicle maintenance at any Well Site.	During drilling and completions operations and maintenance, vehicle maintenance will be done on site.
D.9.xi. Operator shall provide copies of all test results to the City, the COGCC, and the water source owners within 30 days after receiving the samples.	KMOG will comply with this BMP by providing copies of all test results to the City, the COGCC, and the water source owners within 30 days after receiving the test results.
D.9. Table 2	Perfluorinated Compounds, listed in Table 2, are not a byproduct of oil and gas development and therefore are not applicable. Please see the Water Quality Plan for more details.
E.1.a. Operator shall use pipelines for the transport of oil, gas, and produced water from Well Sites where feasible, and shall utilize such pipelines at each Well Site before the Production Phase commences.	KMOG will comply with this BMP by utilizing pipelines to transport oil and gas. KMOG reviewed the possibility of piping produced water. The closest disposal well to the proposed facility is approximately 5.5 miles away and would create approximately 50 additional acres of overall disturbance. KMOG determined that this disturbance would create more of an impact than trucking water, which drastically reduces in frequency after a year.
F.6.d.v. Use of electric-powered motors and pumping systems.	KMOG will comply with this BMP by using electric-powered motors and pumping systems during the production phase.
F.6.d.vi. Construction of buildings or other enclosures where Operations create noise and visual impacts that cannot otherwise be mitigated due to proximity, density or intensity of adjacent land use.	KMOG does not enclose our drilling or completions equipment due to safety reasons.

6. BENEFICIAL IMPACTS

6.1 SURFACE PROPERTY

- Anadarko E&P Onshore LP purchased the property (parcel # 146736100031) on July 2, 2022.
- KMOG's Health, Safety and Environment Team spent four months cleaning up the property.
    - Eight neglected structures were removed, including a barn, a house, and sheds.
    - All items in the picture shown below, were removed and the entire area was cleaned up (see page 16 of Wildlife Protection Plan for more details).
- A loamy wildlife mix was spread on reclaimed areas. This mix includes grasses and forbs that are beneficial for cover, food, and pollinators.
- KMOG is in the process of reclaiming two access points and removing the culverts which will reduce the overall disturbance area on the property.

6.2 PLUGGING AND ABANDONING WELLS AND DECOMMISSIONING FACILITIES

- KMOG is committed to plugging and abandoning the wells below within one year of all wells associated with the Lizzy pad being fully turned over to production through permanent facility equipment. If unanticipated delays are encountered associated with safety concerns, wildlife stipulations, landowner considerations, offset operations or rig availability KMOG will provide staff with an updated schedule for plugging and abandonment.
- KMOG will reclaim approximately 15.19 acres associated with the plugging and abandoning of the wells below and the associated eight facilities. The proposed Lizzy location will be reclaimed to approximately 7.13 acres.

WELL NAME	API	OPERATOR	STATUS	LOCATION	COGCC FACILITY ID
1 NORMAN D FRISBIE UNIT TRUE	0512311304	KMOG	TA	NENW 30 1N67W 6	319456
10-25 KIRKMEYER	0512327359	KMOG	SI	NWSE 25 1N68W 6	302212
4-25 BROOKMAN	0512327332	KMOG	SI	NWNW 25 1N68W 6	302193
13-36 (HSR) NORTHGLENN STATE	0512319638	KMOG	SI	SWSW 36 1N68W 6	330794
16-25 MITCHELL	0512324437	KMOG	SI	SESE 25 1N68W 6	306324
15-25 COORS	0512324512	KMOG	SI	WSE 25 1N68W 6	306352
14-24 JOHNSTON	0512307665	KMOG	PR	SWSW 24 1N68W 6	317728
24-13JI JOHNSTON UU	0512323743	KMOG	SI	SWSW 24 1N68W 6	305961
1 UPRR 43 PAN AM Y	0512314378	KMOG	SI	NENE 25 1N68W 6	327242
8-25 TALBOT	0512324273	KMOG	SI	SENE 25 1N68W 6	306233
7-25 TALBOT	0512324297	KMOG	SI	SWNE 25 1N68W 6	306248
NORTHGLENN STATE 8-36	0512330981	KMOG	SI	NWNE 36 1N68W 6	331959
NORTHGLENN STATE 3-36	0512330987	KMOG	SI	NWNE 36 1N68W 6	331959
NORTHGLENN STATE 18-36	0512330960	KMOG	SI	SWNE 36 1N68W 6	415031
NORTHGLENN STATE 25-36	0512330958	KMOG	SI	SWNE 36 1N68W 6	415031
NORTHGLENN STATE 4-36	0512330964	KMOG	SI	SWNE 36 1N68W 6	415031
NORTHGLENN STATE 21-36	0512330988	KMOG	SI	NWNE 36 1N68W 6	331959
NORTHGLENN STATE 41-36	0512330984	KMOG	SI	NWNE 36 1N68W 6	331959
NORTHGLENN STATE 1-36	0512330980	KMOG	SI	NWNE 36 1N68W 6	331959
NORTHGLENN STATE 2-36	0512330989	KMOG	SI	NWNE 36 1N68W 6	331959
2-36 STEELE STATE	0512321629	KMOG	SI	NWNE 36 1N68W 6	331959
NORTHGLENN STATE 7-36	0512330986	KMOG	SI	NWNE 36 1N68W 6	331959
NORTHGLENN STATE 5-36	0512330959	KMOG	SI	SWNE 36 1N68W 6	415031
NORTHGLENN STATE 6-36	0512330961	KMOG	SI	SWNE 36 1N68W 6	415031
NORTHGLENN STATE 10-36	0512334471	KMOG	SI	NWSE 36 1N68W 6	425699
NORTHGLENN STATE 12-36	0512334466	KMOG	SI	SWSE 36 1N68W 6	425699
NORTHGLENN STATE 40-36	0512334489	KMOG	SI	NWSE 36 1N68W 6	425699
NORTHGLENN STATE 24-36	0512334463	KMOG	SI	NWSE 36 1N68W 6	425699
NORTHGLENN STATE 39-36	0512334467	KMOG	SI	SWSE 36 1N68W 6	425699
NORTHGLENN STATE 14-36	0512334488	KMOG	SI	SWSE 36 1N68W 6	425699
NORTHGLENN STATE 19-36X	0512334469	KMOG	PR	SWSE 36 1N68W 6	425699
NORTHGLENN STATE 36-36	0512334473	KMOG	SI	SWSE 36 1N68W 6	425699
NORTHGLENN STATE 16-36	0512334465	KMOG	SI	SWSE 36 1N68W 6	425699
NORTHGLENN STATE 23-36	0512334472	KMOG	SI	SWSE 36 1N68W 6	425699
NORTHGLENN STATE 33-36	0512334464	KMOG	SI	SWSE 36 1N68W 6	425699
1 ALBERT SACK UNIT C	0512309845	KMOG	TA	SESW 31 1N67W 6	318736

SPONSORED BY: MAYOR LEIGHTY

COUNCIL MEMBER'S RESOLUTION RESOLUTION NO.

No. CR-115
Series of 2023 Series of 2023

A RESOLUTION APPROVING AN OIL AND GAS PERMIT APPLICATION SUBMITTED BY KERR-MCGEE OIL & GAS ONSHORE LP FOR THE LIZZY WELL PAD SITE LOCATED WITHIN TOWNSHIP 1 NORTH, RANGE 68 WEST, 6TH P.M. S2NE SECTION 36, CITY OF NORTHGLENN, COUNTY OF WELD, STATE OF COLORADO

WHEREAS, Kerr-McGee Oil & Gas Onshore LP has submitted an application for an Oil and Gas Permit to drill twenty-five (25) new wells from one well pad site, referred to as the Lizzy 8-36HZ Well Pad and Production Facility (the "Facility");

WHEREAS, the Northglenn Planning Commission held a public hearing on the application on August 1, 2023 and has recommended approval of the application to City Council, with certain conditions as stated in Planning Commission Resolution 2023-10; and

WHEREAS, the City Council held a duly noticed public hearing on August 28, 2023 to consider and review the application as set forth in the requirements of Chapter 11, Article 3, and Chapter 3, Article 7 of the Northglenn Municipal Code.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF NORTHGLENN, COLORADO THAT:

Section 1. Pursuant to Section 11-3-6 of the City of Northglenn Municipal Code, the City Council of the City of Northglenn hereby makes the following findings of fact regarding the application by Kerr-McGee Oil & Gas Onshore LP for an Oil and Gas Permit for the Lizzy 8-36HZ Well Pad and Production Facility to be located within Township 1 North, Range 68 West, 6th P.M. S2NE Section 36, City of Northglenn, in Weld County, Colorado.

A. The applicant has submitted the information required by Section 11-3-6(d)(1);

B. The site plan for the well site complies with the requirements of subsection 11-3-6(d)(3)(A);

C. The applicant has submitted information regarding a traffic control plan as required by subsection 11-3-6(d)(3)(B);

D. The written narrative complies with the requirements of subsection 11-3-6(d)(3)(C);

E. The application complies with the location restrictions provided in subsection 11-3-6(p);

F. The application complies with the provisions for wildlife mitigation procedures provided in subsection 11-3-6(q);

G. The proposed Facility will not result in a substantial or undue adverse effect on adjacent property, the character of the neighborhood, traffic conditions, parking, public improvements, either as they presently exist or as they may exist in the future;

H. The proposed Facility is in conformance with the City of Northglenn Comprehensive Plan; and

I. The proposed use will not significantly degrade the environment or public health, safety, or welfare.

Section 2. Based on the findings set forth above, the City Council of the City of Northglenn approves the Oil and Gas Permit upon satisfaction of the following conditions:

A. All permitting required by the State of Colorado shall be obtained by the applicant prior to the start of operations.

B. If any of the State's review modifies the information contained in this Oil and Gas Permit, the permit will need to be updated. Any substantial modifications that might alter the intent of this permit will be required to be accepted by the City Council.

C. Civil, grading, right-of-way, and building construction drawings shall be submitted for review and approved prior to commencing construction. Civil drawings shall include specifications for the private access drive in compliance with the requirements in Section 11-3-6(l) of the Northglenn Municipal Code.

D. A final as-built survey shall be submitted once the Facility is constructed to verify the Facility complies with the 1,000-foot setback from the property line of the City's Wastewater Treatment Plant.

DATED, at Northglenn, Colorado, this _____day of _____, 2023.

_____
SHANNON LUKEMAN-HIROMASA
Mayor Pro Tem

ATTEST:

_____
JOHANNA SMALL, CMC
City Clerk

APPROVED AS TO FORM:

_____
COREY Y. HOFFMANN
City Attorney