



ADMINISTRATIVE REVIEW:

OXY USA, Inc, Operator ID #66561

Geothermal Limitless Approach to Drilling Efficiencies (GLADE)

Form 2A #403656949 (GLADE)

Form 2B #403701631

Pursuant to the Standing Order 1-326, the Director administratively issues a Conditional Approval for the OXY USA, Inc Geothermal Limitless Approach to Drilling Efficiencies (GLADE) Geothermal Stratigraphic location for two wells located in Weld County.

The underlying permit documents in support of this Administrative Review may be found through the Colorado Energy & Carbon Management Commission (ECMC) website under "[Permits](#)".

BACKGROUND

On April 25, 2024, OXY USA (OXY) submitted to the ECMC a Form 2A for their proposed GLADE location. Staff returned the Form 2A and the Form 2B to DRAFT status once on June 21, 2024 for the applicant to make corrections. Both Forms were resubmitted on July 1, 2024, and the Director determined that the application was complete on July 11, 2024. This Administrative Review is based on information finalized in the Form 2A and Form 2B as of August 18, 2024.

PROPOSED DEVELOPMENT

OXY has submitted an application for the administrative approval of the proposed GLADE project located in Weld County. The proposed location is in Section 2 of Township 3 North, Range 66 West, and can be found on a map using the Latitude/Longitude coordinates of 40.253073, -104.739141. The proposed location is a sparsely populated area that is zoned as agricultural rangeland, and is approximately 3 miles east of Highway 85 and 2 miles west of County Road 3, as seen below in Figure 1.

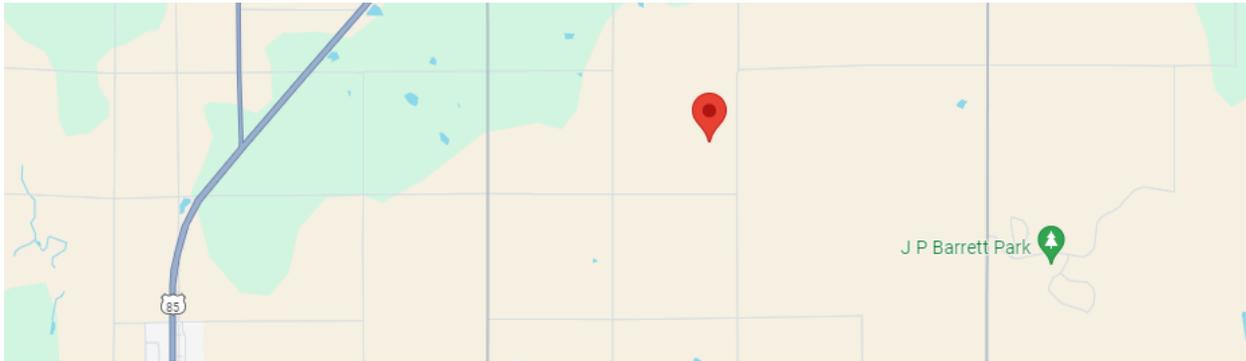


Figure 1: Approximate location of the proposed GLADE Surface Location, using the Latitude and Longitude coordinates 40.253073, -104.739141.

The GLADE location proposes two vertical wells that will be drilled to a depth of approximately 20,000 feet each, with the intended purpose to perform subsurface geologic studies and technological advancements for the feasibility of linking the two vertical wells for future use in deep geothermal energy exploration.

The proposed GLADE wells will be drilled with a drill rig using diesel engines. OXY has also submitted a Form 15 for a drilling pit, for the use of a lined pit for water-based drilling muds. There will be no oil or gas production at the proposed location.

OXY plans to conduct testing concurrently during drilling, specifically seeking data related to the hard basement granite rock, which would include the evaluation of drill bit technologies, deviated nature, total measured depth (MD), and attempting to link the 2 wellbores in the subsurface. If the drilling portion of the project is successful, then Oxy will enter into an evaluation period (up to 12 months) and gather various heat and thermosyphon effect data points to assess economic feasibility of deep geothermal in the area.

Surface Lands:

The proposed GLADE location lies on FEE surface, and the right to construct is granted through a Surface Use Agreement. The application proposes approximately 13.7 acres of total disturbance as follows:

- Oil and Gas location disturbance
 - GLADE: 13.0 acres (Approximately 6.3 acres for the Working Pad Surface (WPS)).
- Access Road disturbance: 0.7 acres.

FINANCIAL ASSURANCE

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

PUBLIC COMMENTS

Pursuant to Rule 303.d.(1).A.ii, the Public Comment Period was open for 30 days from July 11, 2024 to August 10, 2024, and no public comments were received on the Form 2A during this period.

LOCAL GOVERNMENT PERMITTING AND PRE-APPLICATION CONSULTATIONS

Relevant Local and Proximate Governments

Weld County is the Relevant Local Government (RLG) for this application, and there are no Proximate Local Governments (PLGs). A pre-application meeting with Weld County was conducted on October 18, 2023, where representatives from OXY, Weld County, Colorado Parks and Wildlife (CPW), and ECMC were present to discuss the proposed application. Additional information can be found on the Form 2A, under Document #403765239, labeled “PRE-APPLICATION NOTIFICATION CERTIFICATION.” Weld County also left a comment on the Form 2A during the public comment period.

DIRECTOR’S CONSULTATIONS

A Colorado Department of Health and Environment (CDPHE) consultation pursuant to Rule 309.f was not required, and CDPHE did not request that one occur.

A Colorado Parks and Wildlife (CPW) consultation pursuant to Rule 309.e was not required, and CPW did not request that one occur.

ADMINISTRATIVE CONSIDERATIONS

Lesser Impact Area Exemption (LIAE) Request

A Lesser Impact Area Exemption Request was not submitted for this project.

Conditions of Approval

1. As this is not a hydrocarbon production well, Staff applied the following Condition of Approval (COA) to the Form 2A to ensure plugging, abandonment, and reclamation compliance in the event this well is not capable of geothermal energy:
If the operator finds these wells to be insufficient for geothermal energy, the two GLADE wells will be plugged and abandoned and the location reclaimed.
2. As Order 1-326 states, the Form 2A gets conditionally approved, and then the Commission has 10 days to stay the conditional approval before becoming final, Staff applied the following COA to the Form 2A:
Per Commission Order 1-326, this conditionally approved Form 2A will become final 10 days after the approval date unless it is stayed by the Commission. Any construction or other operations by the operator prior to the 2A becoming final is at the operator’s own risk, and would be subject to final reclamation if the 2A is rescinded.

ECMC STAFF'S TECHNICAL REVIEW HIGHLIGHTS

This section addresses issues related to public health, safety, welfare, the environment, and wildlife resources, as required by the Oil and Gas Conservation Act, 34-60-106(2.5)(a), for the OXY GLADE application.

Alternative location Analysis (ALA) Considerations

The proposed GLADE location does not meet any ALA criteria; an Alternative Location Analysis was not required, and one was not submitted.

Public Health, Safety, and Welfare Considerations

The nearest Residential Building Unit (RBU) is 2,075 feet to the southwest of the proposed location, and the nearest High Occupancy Building Unit (HOBUE), School Facility, and Childcare Center are all over 5,280 feet from the proposed location. OXY has committed to various Best Management Practices (BMPs) to address impacts such as the use of a 32 foot soundwall during the drilling of the wells, and lights that are mounted and pointed downward and on timers.

Environmental Resource Considerations

Water Resources

The proposed location is considered to be within a Sensitive Area for water resources, with the estimated depth to shallowest groundwater 60 feet. The nearest constructed Water Well is 1,367 feet to the northwest of the location, and the nearest downgradient Surface Waters of the State is a ditch located approximately 935 feet to the east of the location. The nearest Downgradient Wetland is located over a mile to the north of the proposed location. OXY provided BMPs for their drilling operations that stormwater management tools to minimize and mitigate potential water issues.

Wildlife Resource Considerations

The GLADE location and the proposed access road are not within a mapped HPH. CPW did not indicate any wildlife concerns and declined consultation.

DIRECTOR'S DETERMINATION:

The Director has obtained and fully reviewed all required and supplemental information necessary to evaluate the Stratigraphic Test Well proposed operation and its potential impacts on public health, safety, welfare, and the environment and wildlife resources. Through this review, the Director has determined that this application complies with all applicable requirements of the Commission's ORDER 1-326 and CONDITIONALLY APPROVES this application.

FORM
2A

Rev
05/22

State of Colorado Energy & Carbon Management Commission

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



Document Number:

403656949

Date Received:

04/25/2024

Oil and Gas Location Assessment

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

Location ID:

OGDP ID:

Expiration Date:

New Location Refile Amend Existing Location # _____

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

| Docket Number | OGDP ID | OGDP Name |
|---------------|---------|-----------|
| 299999998 | | |

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

<No existing OGDP number provided>

CONSULTATION

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

Operator

Operator Number: 66561

Name: OXY USA INC

Address: PO BOX 173779

City: DENVER State: CO Zip: 80217-3779

Contact Information

Name: Matt Wells

Phone: (720) 929-3403

Fax: ()

email: Matt_wells@oxy.com

FINANCIAL ASSURANCE FOR THIS LOCATION (check all that apply)

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

Federal Financial Assurance

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

Amount of Federal Financial Assurance \$ _____

LOCATION IDENTIFICATION

Name: GLADE Number: _____

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

Quarter: NE4SE4 Section: 2 Township: 3N Range: 66W Meridian: 6 Ground Elevation: 4897
Latitude: 40.253073 Longitude: -104.739141
GPS Quality Value: 1.6 Type of GPS Quality Value: PDOP Date of Measurement: 01/18/2024

RELATED REMOTE LOCATIONS

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

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

RELEVANT LOCAL GOVERNMENT SITING INFORMATION

County: WELD Municipality: N/A

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

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

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

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

Date Relevant Local Government permit application submitted: 04/18/2024

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

Status/disposition date: 04/18/2024

If Relevant Local Government permit has been approved or denied, attach final decision document(s).

Provide the contact information for the Relevant Local Government point of contact for the local permit associated with this proposed Oil and Gas Location:

Contact Name: Jason Maxey Contact Phone: 970-400-3579

Contact Email: Jmaxey@weld.gov

PROXIMATE LOCAL GOVERNMENT INFORMATION

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

< No row provided >

FEDERAL PERMIT INFORMATION

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

Date submitted: _____

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

Status/disposition Date: _____

If Federal agency permit has been approved or denied, attach the final decision document(s).

Provide the contact information of the Federal point of contact for the Federal permit associated with this proposed Oil and Gas Location.

Contact Name: _____ Contact Phone: _____

Contact Email: _____ Field Office: _____

Additional explanation of local and/or federal process:

Local government application was submitted on 4/18/24.

RELEVANT LOCAL GOVERNMENT OR FEDERAL PRE-APPLICATION CONSULTATION

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

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

Date of local government consultation: 10/18/2023

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

Date of federal consultation: _____

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

ALA APPLICABILITY AND CRITERIA

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

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

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

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

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

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

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

ALTERNATIVE LOCATIONS DASHBOARD

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

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

< No row provided >

SURFACE & MINERAL OWNERSHIP

Surface Owner Info:

Name: Barclay Farms LLC Phone: _____
 Address: 13017 County Road 30 Fax: _____
 Address: _____ Email: kkhuston21@gmail.com
 City: Platteville State: CO Zip: 80651

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

- Check only one:
- The Operator/Applicant is the surface owner.
 - The Operator has a signed Surface Use Agreement for this Location – attach SUA.
 - All operations on this Oil & Gas Location will develop the minerals beneath the Location, and the surface owner owns the minerals beneath this Location and is committed to an oil and gas lease – attach lease map or provide lease description.
 - All operations on this Oil & Gas Location will develop the minerals beneath the Location, and the Operator intends to use a surface bond per Rule 703 to secure access to this Location – attach lease map or provide lease description.

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

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

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

Lease description if necessary: _____

SITE EQUIPMENT LIST

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

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

OTHER PERMANENT EQUIPMENT

< No Row Provided >

OTHER TEMPORARY EQUIPMENT

| Temporary Equipment Type | Number |
|----------------------------------|--------|
| Transformer | 1 |
| Organic Rankine Cycle (ORC) Unit | 2 |
| Panel Rack | 1 |
| Pump Building | 1 |
| Chemical Tank | 1 |
| Coolers | 3 |
| Communication Tower | 1 |

GAS GATHERING COMMITMENT

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

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

FLOWLINE DESCRIPTION

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

An above ground temporary 4" carbon steel flowline will be used to connect the GLADE North well to the Organic Rankine Cycle (ORC) Units.

CULTURAL DISTANCE AND DIRECTION

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

| | Distance | Direction | Rule 604.b Conditions Satisfied (check all that apply): | | | Details of Condition(s) | 604.b. (4) |
|--|-----------|-----------|--|--------------------------|--------------------------|-------------------------|--------------------------|
| | | | 604.b. (1) | 604.b. (2) | 604.b. (3) | | |
| Building: | 695 Feet | NE | | | | | |
| Residential Building Unit (RBU): | 2075 Feet | SW | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | <input type="checkbox"/> |
| High Occupancy Building Unit(HOBU) | 5280 Feet | NW | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | <input type="checkbox"/> |
| Designated Outside Activity Area: | 5280 Feet | SW | | | | | |
| Public Road: | 936 Feet | E | | | | | |
| Above Ground Utility: | 1292 Feet | NE | | | | | |
| Railroad: | 5280 Feet | NW | | | | | |
| Property Line: | 132 Feet | N | | | | | |
| School Facility: | 5280 Feet | NW | | | | | |
| Child Care Center: | 5280 Feet | NE | | | | | |
| Disproportionately Impacted (DI) Community: | 2714 Feet | N | | | | | |
| RBU, HOBU, or School Facility within a DI Community. | 3849 Feet | NW | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | <input type="checkbox"/> |

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

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

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

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

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

CONSTRUCTION

Size of disturbed area during construction in acres: 13.00

Size of location after interim reclamation in acres: 11.00

Estimated post-construction ground elevation: 4897

DRILLING PROGRAM

Will a closed-loop drilling system be used? Yes

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

Will salt sections be encountered during drilling: No

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

Will oil based drilling fluids be used? Yes

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Method: Centralized E&P WMF

Cutting Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

Please see attached Waste Management Plan

Beneficial reuse or land application plan submitted? No

Reuse Facility ID: _____ or Document Number: _____

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

CURRENT LAND USE

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

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

Non-Crop Land: Rangeland Forestry Recreation Other

Subdivided: Industrial Commercial Residential

Describe the current land use:

Agricultural

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

Agricultural

Describe any applicable Federal land use designation:

FINAL LAND USE

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

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

Non-Crop Land: Rangeland Forestry Recreation Other

Subdivided: Industrial Commercial Residential

REFERENCE AREA INFORMATION

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

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

Rangeland

Reference Area Latitude: 40.251240

Reference Area Longitude: -104.738560

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

| Plant Community | Dominant vegetation |
|---------------------|---------------------|
| Disturbed Grassland | Cheatgrass |
| Disturbed Grassland | Smooth brome |
| Native Grassland | Rubber rabbitbrush |

Noxious weeds present: Yes

SOILS

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

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

NRCS Map Unit Name: 48 Olney fine snady loam, 3 to 5 percent slopes

NRCS Map Unit Name: 63 Terry fine sand loam, 3 to 6 percent slopes

NRCS Map Unit Name: 69 Valent sand, 0 to 3 percent slopes

GROUNDWATER AND WATER WELL INFORMATION

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

water well: 1367 Feet NW

Spring or Seep: 5280 Feet NE

Estimated depth to shallowest groundwater that can be encountered at this Oil and Gas Location: 60 Feet

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

Loc Elev: 4897'
3631' NW, Permit 40634-, depth 130', Static Water Level* 41', Elev 4878'

SWL calc: $(4897 - 4878) + 41 = 60$

SURFACE WATER AND WETLANDS

Provide the distance and direction to the nearest downgradient surface Waters of the State, as defined 935 Feet E

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

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

Provide the distance and direction to the nearest downgradient wetland, measured from the Working

Pad Surface: 5280 Feet N

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

Ditch 935' to the east.

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

Public Water System Administrator - Contact Name _____ Email _____

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

Public Water System Administrator - Contact Name _____ Email _____

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

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

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

Federal (FEMA) State County Local

Other

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

CONSULTATION, WAIVERS, AND EXCEPTIONS

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

This location is included in a Wildlife Mitigation Plan

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

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

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

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

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

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

Pre-application Consultation:

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

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

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

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

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

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

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

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

- The applicant has obtained a Rule 1202.a CPW waiver.
- The applicant has obtained a Rule 1202.b CPW waiver.
- In accordance with Rule 1203.a.(3), the applicant requests an exception from compensatory mitigation Rule(s): _____

HIGH PRIORITY HABITAT AND COMPENSATORY MITIGATION

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

< No row provided >

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

Direct Impacts:

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

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

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

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

N/A

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

Direct impact habitat mitigation fee amount: \$ 0

Indirect Impacts:

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

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

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

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

N/A

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

Indirect impact habitat mitigation fee amount: \$ 0

Operator Proposed Wildlife BMPs

No BMP

CPW Proposed Wildlife BMPs

No BMP

AIR QUALITY MONITORING PROGRAM

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

Operator Proposed BMPs

No BMP

CDPHE Proposed COAs OR BMPs

No BMP

PLANS

Total Plans 12

Uploaded:

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

VARIANCE REQUESTS

Check all that apply:

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

Order number: _____

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

RULE 304.d LESSER IMPACT AREA EXEMPTION REQUESTS

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

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

OPERATOR COMMENTS AND SUBMITTAL

| | |
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| Comments | <p>This is not an Oil and Gas project; this is a Deep Geothermal well strat project. This application was filled out using Order 1-326 as a guide.</p> <p>The Gas Capture field was answered yes to avoid an error in Webforms. There will not be any hydrocarbons produced from these strat wells.</p> <p>General description of timing and duration: Pad construction is planned to start Q1 2025 and will take approximately 30 days. Drilling is planned to start Q2 2025 and will take approximately 120 days.</p> <p>General description of tests and potential future use: The GLADE Deep Geothermal project looks to test the feasibility and cost of drilling ~20,000 feet down; specifically seeking data of the hard basement granite rock (including drill bit technologies, deviated nature, total MD, and attempting to link the 2 wellbores). If the drilling portion of the project is successful, then Oxy will enter into an evaluation period (up to 12 months) and gather various heat and thermosyphon effect data points. This data will help Oxy determine if large scale geothermal power production is plausible and economical in the Wattenberg area.</p> <p>A drilling pit Form 15 is also being submitted for this project (#403750374)</p> <p>OXY plans to use oil based drilling fluids in the intermediate hole section and then switch to water in production hole. A redacted version of the Water Plan was submitted. A non-redacted version was shown to John Noto and Laruen Mercer on 4/25/24 and a copy was emailed to them.</p> <p>No 2C was submitted with this application.</p> <p>Fourth NRCS Map unit symbol: 70 Valent sand, 3 to 9 percent slopes (0.2 acres in AOI / 1.2% of AOI)</p> <p>Please email response to both matt_wells@oxy.com and DJRegulatory@oxy.com</p> |
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I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.

Signed: _____ Date: 04/25/2024 Email: Matt_wells@oxy.com

Print Name: Matt Wells Title: Regulatory Advisor

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

ECMC Approved: _____ Director of ECMC Date: _____

CONDITIONS OF APPROVAL, IF ANY LIST

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

| <u>COA Type</u> | <u>Description</u> |
|------------------------|---|
| Planning | Per Commission Order 1-326, this conditionally approved Form 2A will become final 10 days after the approval date unless it is stayed by the Commission. Any construction or other operations by the operator prior to the 2A becoming final is at the operator's own risk, and would be subject to final reclamation if the 2A is rescinded. |
| Planning | If the operator finds these wells to be insufficient for geothermal energy, the two GLADE wells will be plugged and abandoned and the location reclaimed. |
| 2 COAs | |

Best Management Practices

| <u>No BMP/COA Type</u> | <u>Description</u> |
|-------------------------------|---|
| 1 General Housekeeping | <p>Construction Phase: During construction of all phases, Oxy will only conduct day light operation and there will be no nighttime operations that require lighting. Exterior lighting shall be directed away from residential and other sensitive areas or shielded from said areas to eliminate glare. Light spillage beyond the perimeter of the well site shall be minimized. Bulbs shall be fully shielded to prevent light emissions above a horizontal plane drawn from the bottom of each fixture. Prior to commencement of drilling activities, a partial perimeter, engineered sound wall consisting of approximately 760 linear feet of 32-foot-tall, STC32 wall will be installed around the edge of the well pad to reduce noise levels at the critical receptor points.</p> <p>Drilling Phase: Oxy will utilize LED fixtures to reduce skyglow. Oxy will position all lights to point in a downward direction where vertical lighting is not required. Where it is required, lights are angled in a vertical direction to provide task lighting for safety and operations involving personnel. Derrick mast lighting in Section 6.1 is facing horizontally to provide adequate lighting for safe operation. Lighting is angled to mitigate the amount of light leaving the location boundary, and away from surrounding off site buildings. Lighting within the Drilling area has been reduced to provide a minimum acceptable value for safe operation. Light masts are automatically switched off/on based on lighting sensors. Lights are switched off when not required. Low power (63 W) LED lights are used for the drill rig. In the event of a lighting complaint, Oxy will address the complaint and work with all parties involved to ensure the complaint is resolved.</p> |

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| 2 | General Housekeeping | <p>Best management practices specific to each phase of operation are detailed in the attached site-specific Table 1. Waste type, storage container, disposal facility, volumes, frequency, waste characterization, potential hazards, Resource Conservation and Recovery (RCRA) exemption status are included in the table.</p> <p>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.</p> <p>All specific wastes in the attached site-specific Table 1 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.</p> <p>The proper personal protective equipment will always be worn when handling waste. Employees will refer to the Safety Data Sheet for additional information.</p> <p>Good housekeeping measures for trash included closed receptacles designed to exclude potential wildlife and prevent overflowing.</p> <p>During drilling and the evaluation phases, human waste and septic from temporary buildings will be stored in tanks. These tanks will be emptied via vacuum truck for disposal. Temporary portable restrooms will also be available for workers during this phase. Good housekeeping measures for these include regular servicing and inspections. Temporary portable restrooms will be staked to the ground to prevent from tipping over.</p> <p>Waste will be segregated and stored according to its waste type.</p> <p>When feasible, wastes will be recycled, re-used, or treated onsite. As a BMP fluids 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 ECMC Director for approval on a Form 4.</p> <p>All waste streams will be transported off location for recycling or disposal in a timely manner in accordance with local, state, and federal regulations.</p> <p>During drilling and the evaluation phases, inspection of trash receptacles, sewage tanks, temporary restrooms, waste and material storage areas are performed by a third party and documented during regular stormwater inspections.</p> <p>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.</p> |
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| 3 | Wildlife | <p>If Location construction starts between December 1 and July 31, CPW recommends surveys for nesting eagles. If construction starts between February 1 and August 15, CPW recommends surveys for nesting non-eagle raptors.</p> <p>For ground disturbances beginning between March 15 and August 31, 2024, a follow-up survey will be completed at least fifteen (15) days prior to the start of work, to check for possible encroachment from prairie dogs. If suitable habitat is observed within 0.25 miles from the Location, the full three-survey burrowing owl CPW-protocol will be initiated, with the final survey performed no more than seven (7) days prior to the start of construction. If burrowing owls are observed using burrows within 0.25 miles of the Location, OXY will consult with CPW to determine appropriate mitigation measures. Confirm there is no suitable habitat for burrowing owls within 0.25 miles of the Location. If suitable habitat is discovered within 0.25 miles, CPW's three-survey burrowing owl protocol will be completed before ground-disturbing activities begin. Inform and educate employees and contractors on wildlife conservation practices, including no hunting, harassment, or feeding of wildlife. Consolidate and centralize fluid collection and distribution facilities to minimize impact to wildlife. Adequately size infrastructure and facilities to accommodate both current and future gas production. Protect culvert inlets from erosion and sedimentation and install energy dissipation structures at outfalls. Implement fugitive dust control measures. Install screening or other devices on the stacks and on other openings of heater treaters or fired vessels to prevent entry by migratory birds. Mow or brush hog vegetation where appropriate, leaving root structure intact, instead of scraping the surface, where allowed by the surface owner. Limit access to access roads where approved by surface owners, surface managing agencies, or local government. Post speed limits and caution signs to the extent allowed by surface owners, Federal and state regulations, local government, and land-use policies. Use wildlife-appropriate fencing where acceptable to the surface owner. Use topographic features and vegetative screening to create seclusion areas, where acceptable to the surface owner. Use remote monitoring of well production to the extent practicable. Reduce traffic associated with transporting drilling water through the use of pipelines, large tanks, or other measures. Install automated emergency response systems (e.g., high tank alarms, emergency shutdown systems).</p> |
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| 4 | Storm Water/Erosion Control | <p>Construction Phase</p> <p>Ditch and berm shall be installed around the perimeter of the location, and subsequently around all topsoil stockpiles, to intercept and divert stormwater run-on/run-off and sediment from precipitation and melt events.</p> <p>Track packing all topsoil stockpiles will occur to prevent erosion from stormwater and wind, as well as provide temporary stabilization.</p> <p>Seeding and crimped straw mulch will be applied to prevent erosion and soil loss from stormwater and wind.</p> <p>Vegetation establishment through seeding efforts will promote soil health and maintain carbon exchange.</p> <p>Weed control will occur seasonally and as needed to hinder the spread of weeds throughout the topsoil stockpile(s) and help native grass establishment.</p> <p>Drilling Phase</p> <p>Ditch and berm shall be installed around the perimeter of the location, and subsequently around all topsoil stockpiles, to intercept and divert stormwater run-on/run-off and sediment from precipitation and melt events.</p> <p>Track packing all topsoil stockpiles will occur to prevent erosion from stormwater and wind, as well as provide temporary stabilization.</p> <p>Seeding and crimped straw mulch will be applied to prevent erosion and soil loss from stormwater and wind.</p> <p>Vegetation establishment through seeding efforts will promote soil health and maintain carbon exchange.</p> <p>Weed control will occur seasonally and as needed to hinder the spread of weeds throughout the topsoil stockpile(s) and help native grass establishment.</p> <p>Production Phase</p> <p>Vegetation establishment through seeding efforts will promote soil health and maintain carbon exchange.</p> <p>Weed control will occur seasonally and as needed to hinder the spread of weeds throughout the topsoil stockpile(s) and help native grass establishment.</p> | |
| 5 | Storm Water/Erosion Control | <p>Limits of Construction (LOC)</p> <p>Limits of construction will be used to designate the area of intended development and areas intended for surface disturbing activities.</p> <p>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.</p> <p>The LOC surrounds the entirety of the GLADE.</p> <p>LOC will remain in-place until interim reclamation activities are complete.</p> <p>Vehicle Tracking Control (VTC)</p> <p>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.</p> <p>VTC will be installed prior to commencement of surface disturbing activities.</p> <p>VTC will be installed at the primary access for GLADE, which is to the east of the location. The access road adjoins/intersects Weld County Road 35, approximately 0.13 miles east of the location.</p> <p>VTC will remain in place until interim reclamation activities are complete.</p> <p>Temporary Diversion Ditch and Berm (DD)</p> <p>A diversion ditch and berm will be implemented to divert stormwater run-on & run-off throughout GLADE to a designated outlet structure(s).</p> <p>This BMP will be installed prior surface disturbing activities and will surround the entirety of the location to create continuous perimeter control.</p> <p>A berm will be installed along the northern and eastern perimeter of the location.</p> <p>Diversion ditch and berm will remain in-place until interim reclamation activities are complete.</p> <p>Temporary Spillway and Outlet (SW/O)</p> <p>A temporary spillway and/or outlet is 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.</p> <p>Spillway and/or outlet will be installed concurrently with the location diversion ditch and berm, and prior to commencement of surface disturbing activities.</p> <p>A temporary spillway/outlet will be installed in the northern, eastern, southern and western segments of the disturbance area ditch and berm and the northeastern portion of the location berm for GLADE.</p> <p>All spillways and outlets will remain in-place until interim reclamation activities are complete.</p> | |

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. A Culvert will be installed at the eastern location access point for the GLADE location. Additional 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 construction for GLADE and removed during interim reclamation.

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 GLADE.
 Inlet and outlet protection will remain in place on all permanent features throughout the life of production for GLADE and removed during final reclamation.

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 GLADE for use during interim and final reclamation. Anticipated topsoil stockpiles will be situated along the southern and western perimeter of the location.
 Seed and mulch will be disturbed and re-applied during topsoil application and final reclamation practices.

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

Construction Phasing & Sequencing
 Construction phasing and sequencing will be implemented at GLADE to minimize the amount of surface disturbance and exposed soils to the greatest extent practicable.

Construction Site Waste Management
 All waste from materials imported to GLADE 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 GLADE and maintained by a licensed contractor at a frequency appropriate based on daily use.
 No waste materials will be buried or dumped on GLADE.

Protection and Preservation of Existing Vegetation
 Pre-existing vegetation cover will only be removed where necessary for the operation of construction and development at GLADE. 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.

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.
 Materials stored on GLADE 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.

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

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| | | <p>pollutant sources.</p> <p>Training(s) will cover information and procedures identified in this SWMP, and will be conducted prior to the start of construction, and as needed.</p> <p>Training is considered initial and ongoing for all personnel involved with construction and development at GLADE.</p> | |
| 6 | Storm Water/Erosion Control | <p>Structural Control Measures / BMPs</p> <p>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.</p> <p>Diversion Ditch and Berm (DD)</p> <p>A berm will be installed around the northern and eastern edges of the GLADE location to divert stormwater run-on & run-off to a designated outlet structure.</p> <p>This BMP will be installed during construction disturbance reduction, and prior to removal of construction perimeter controls.</p> <p>Diversion ditch and berm will remain in-place until final reclamation activities commence.</p> <p>Spillway and Outlet (SW/O)</p> <p>A spillway and/or outlet is 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.</p> <p>Spillway and/or outlet will be installed concurrently with the location diversion berm.</p> <p>A spillway/outlet will be installed in the northeastern portion of the location berm for GLADE during interim reclamation.</p> <p>All spillways and outlets will remain in-place until final reclamation activities are complete.</p> <p>Culvert (C)</p> <p>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.</p> <p>Culverts at GLADE will be installed at the eastern access off the location intersecting with Weld County Road 35. Culverts will be evaluated at the time of construction and installed as needed.</p> <p>Permanent culverts will be reinforced with inlet and outlet protection to mitigate sediment transport and surface erosion.</p> <p>These BMPs will remain in place throughout the life of production for GLADE and removed during final reclamation.</p> <p>Inlet / Outlet Protection (IP/OP)</p> <p>Inlet and outlet protection is a permeable barrier installed around a drain or culvert to filter runoff and remove sediment.</p> <p>This BMP will be installed congruently with spillways and outlets.</p> <p>Inlet and outlet protection will be installed for all permanent culverts at GLADE.</p> <p>Inlet and outlet protection will remain in place throughout the life of production for GLADE and removed during final reclamation.</p> <p>Seed & Mulch (SM)</p> <p>Seed and mulch are utilized in disturbed areas to establish stabilization through vegetative cover.</p> <p>Seeding will take place once surface disturbing activities are complete and only when a different means of stabilization is not implemented. Topsoil stockpiles will be stabilized with seed and mulch as soon as practicable after completion of stockpiling efforts unless weather or ground conditions are not suitable to properly create a seedbed and promote successful germination.</p> <p>Seed & mulch will be installed on all disturbed areas no longer utilized for construction, and on all topsoil stockpiles which will remain on GLADE for use during final reclamation. Anticipated topsoil stockpiling will be situated along the western and southern perimeter of the location.</p> <p>Seeding will remain in place until re-disturbed during final reclamation efforts.</p> <p>In areas to be returned to crop, a seed bed will be prepared and left for the surface owner to plant during the next agricultural season.</p> <p>Non-Structural Control Measures / BMPs</p> <p>Non-structural control measures / BMPs do not involve a structure or engineered solution. Non-structural control measures include:</p> <p>Construction Phasing & Sequencing</p> <p>Construction phasing and sequencing will be implemented at GLADE to minimize the amount of surface disturbance and exposed soils to the greatest extent practicable.</p> <p>Interim reclamation will occur in two phases throughout the project to coincide with drill</p> | |

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| | | <p>scheduling.</p> <p>Protection and Preservation of Existing Vegetation Pre-existing vegetation cover will only be removed where necessary for the operation of construction and development at GLADE. 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.</p> <p>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.</p> |
| 7 | Dust control | <p>OXY 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, OXY will shut down construction operations`</p> |
| 8 | Noise mitigation | <p>Oxy conducted a Noise Impact Assessment (NIA) for each phase of operations (drilling and production) to assess operational noise levels against the maximum permissible dBA and dBC noise levels stated in both the Colorado ECMC Rule 423 and the WOGLA Section 215-435 noise regulations. Each phase of operation will comply with the MPNLs of both codes as summarized in Table 4 in Section 2 of this document. Oxy is utilizing a modified drilling rig designed to reduce overall noise levels. This will include low noise level shale shakers and modifications to the generator house to reduce noise levels from the exhaust vents and radiator fans. Additional noise reduction modifications may also be implemented depending on the rig contractor utilized following a noise survey study. Prior to commencement of drilling activities, a partial perimeter, engineered sound wall consisting of approximately 760 linear feet of 32-foot-tall, STC32 wall will be installed around the edge of the well pad to reduce noise levels at the critical receptor points. A baseline ambient sound level survey was not conducted at the time of the writing of this NMP. A survey will be conducted 30 and 90 days prior to the commencement of construction activities. Throughout the duration of preproduction operations and any construction lasting longer than 24 hours, Oxy will conduct continuous noise monitoring at the ECMC ambient monitoring points (Monitoring Points 1 and 2) as seen in Figure 3 of Section 7. If the drilling rig is changed prior to commencement of operations, the mitigation measures employed will be equally or more protective. A sundry form will be submitted to outline any changes, per both codes, as required. Oxy will post contact information to receive and address noise complaints arising from preproduction operations around the clock, 24 hours, 7 days per week. Upon receipt of a complaint, either directly to Oxy, from the Colorado ECMC, or from Weld County, an Oxy representative will contact the associated stakeholder within 48 hours of receipt.`</p> |

Total: 8 comment(s)

ATTACHMENT LIST

| <u>Att Doc Num</u> | <u>Name</u> |
|---------------------------|--|
| 403656949 | FORM 2A SUBMITTED |
| 403765166 | SURFACE OWNER CONSENT |
| 403765178 | LAYOUT DRAWING |
| 403765183 | ACCESS ROAD MAP |
| 403765186 | DIRECTIONAL WELL PLAT |
| 403765195 | HYDROLOGY MAP |
| 403765203 | LOCATION DRAWING |
| 403765215 | LOCATION PICTURES |
| 403765219 | NRCS MAP UNIT DESC |
| 403765220 | WILDLIFE HABITAT DRAWING |
| 403765226 | OTHER |
| 403765235 | CULTURAL FEATURES MAP |
| 403765239 | PRE-APPLICATION NOTIFICATION CERTIFICATION |
| 403765249 | GEOLOGIC HAZARD MAP |
| 403834480 | WORKING PAD SURFACE GIS SHP |
| 403841260 | REFERENCE AREA MAP |
| 403841269 | REFERENCE AREA PICTURES |
| 403851367 | CORRESPONDENCE |

Total Attach: 18 Files

General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|-------------------|--|---------------------|
| OGLA | The Director has determined that the application that this Form is a component of conditionally meets all requirements of Order 1-326. The Administrative Review has been attached to the Form 2A. | 08/18/2024 |
| OGLA | Docket Number 299999998 is an erroneous number, this application is not associated with an OGD application. | 08/18/2024 |
| OGLA | A Weld Co. comment has been added to the Form 2A at the request of the County. | 08/18/2024 |
| LGD | <p>The Weld County Oil and Gas Energy Department (OGED) submits the following comments:</p> <ol style="list-style-type: none"> 1. The Oxy GLADE (geothermal) Project will not have an assigned Weld County number associated with it, as this project is being considered a pilot. Deep geothermal projects are a new emerging energy technology, and as such Weld County is working with Oxy to allow the project to proceed through its construction and testing phases, prior to creating code or an official permitting process for this type of development. 2. Weld County Code, ORD2021-17, was used as the basis for certain submittals from Oxy. However, not all 1041 WOGLA application requirements are applicable to this proposal. Oxy worked with the OGED Director, Jason Maxey, to prepare and submit application materials that are anticipated to pertain to this type of development, while excluding other items that do not apply. 3. A pre-application meeting was held on October 18, 2023. Attendees included OGED Staff, other Weld County Staff, Oxy Staff, ECMC, and CPW. 4. The application material was received on June 4, 2024. The application submitted is compliant with all requirements agreed upon between OGED and Oxy. 5. In the application materials, Oxy has committed to best management practices that protect the health, safety, security, and general welfare of the present and future residents of Weld County, while also protecting both the environment and wildlife. 6. Weld County sent referrals to appropriate parties on June 14, 2024, and the referral period ended on July 15, 2024. 7. A final staff report is being written by the OGED Director, as part of the administrative approval of this pilot project. 8. Returned referral responses may have comments or requested conditions of approval included, and the OGED Director will be including those in the staff report. 9. Due to the temporary nature of this project and the need to gather data to evaluate any future plans for this project or this new technology, the OGED Director will be granting a maximum period of two (2) years for Oxy to complete testing. This timeframe will be stipulated in the staff report, and will not begin until that report is issued to Oxy. 10. Weld County has no concerns with the pending ECMC permit. | 08/18/2024 |
| OGLA | The Director has determined this application is complete. Form pushed to IN PROCESS. | 07/11/2024 |
| OGLA | The Conditions of Approval (COA) and Best Management Practices (BMPs) on the Form 2A are the final enforceable permit conditions for this Oil and Gas Location. Any plan or attachment that contains information or language that is contrary to or less protective than ECMC rules or the COAs and BMPs on the Form 2A does not relieve the operator from compliance with the applied COAs, BMPs or any ECMC rules. | 07/11/2024 |
| OGLA | Returned to DRAFT for the following reasons: Datafield corrections Attachment and Plan corrections | 06/21/2024 |

Total: 7 comment(s)

Public Comments

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