

SITE SAFETY AND EMERGENCY ACTION PLAN



**OXY USA Inc. (OXY)
1099 18th Street, Suite 700
Denver, Colorado 80202**

Geothermal Limitless Approach to Drilling Efficiencies (GLADE) Project

NE/4 SE/4 Section 2, T3N R66W, 6th P.M.

Weld County, Colorado

April 2024

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SECTION 1 – APPROVAL SIGNATURES

OXY USA inc.			
Name	Signature	Title	Date
Marcel Fuenmayor	<div>DocuSigned by: <i>Marcel Fuenmayor</i> B40362ADD1384C5...</div>	Rockies Asset Director	4/2/2024
Platteville Gilcrest Fire Protection District			
Name	Signature	Title	Date
Dan Durkee		Fire Chief	

Weld County Office of Emergency Management
Digitally Signed



SECTION 2 – SITE ADDRESS AND DIRECTIONS

NOTE: This is not an oil and gas location. This is a geothermal pilot project. No hydrocarbons are being explored, produced, or stored at this location.

a) Directions:

From the intersection of Weld County Road (WCR) 32 and WCR 35 travel north approximately 2.4 miles (past WCR 36) to the site lease access road. Turn left and travel west on the site lease access road approximately 500 feet to pad.

b) Ingress and egress information:

All traffic into and out of the geothermal 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 ECMC Permit Approval
- **Legal Description** – NE/4 SE/4 of Section 2, Township 3 North, Range 66 West
- **Address** - * Address Pending (*Weld OEM will provide physical address for 911 dispatching*)
- **Town, CO, Zip** – Weld County, Colorado 80561
- **Lat/Long:** 40.253073, -104.739141

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.

- The Muster Assembly Points are identified in Section 5.b. of this plan, and noted in the site-specific TRP, and identified during all site safety briefings for visitors, employees, and contract personnel.
- **Sign-In Sheets:** During drilling activities all employees and approved visitors to the geothermal test 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 activities are finalized, the site will transition to the evaluation phase and no unauthorized personnel will be allowed on location without first contacting a company representative.

SECTION 3 – LIST OF EMERGENCY CONTACTS

a) OXY USA Inc.

Name	Office Phone	Emergency/Cell
OXY USA Inc. 1099 18 th Ave. Denver, CO 80202	720-929-6000	970-515-1500
OXY USA Inc. Integrated Operations Center (IOC) 501 N. Division Blvd. Platteville, CO 80651	970-336-3500	970-515-1500
OXY USA Inc. HSE on-call Emergency Number	970-515-1500	970-515-1500
HSE–Supervisor & Safety – Lynna Scranton	720-929-6317	303-906-1711
HSE – Environmental – Erik Mickelson	720-929-3406	307-554-4897

b) First Responders (Fire, EMS, HazMat)

Name	Emergency Number	Non-Emergency Number
*All emergency notifications require notification to 911 first		
Platteville Gilcrest Fire Protection District	911	970-785-2232
Weld County Sheriff	911	970-356-4015
Colorado State Patrol	911	970-506-4999

c) Local, State, and Federal Contacts

Name	Emergency Number	Non-Emergency Number
Weld County Oil and Gas Energy Department	none	970-400-3580
Weld County Office of Emergency Management	911	970-304-6540
Energy & Carbon Management Commission (ECMC)	none	303-894-2100
Colorado Department of Public Health and Environment (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
Northern Colorado Medical Center	970-352-4121
Medical Center of the Rockies	970-624-2500
UCHealth Greeley Hospital	970-652-2000

e) Contracted Spill Response Organization

Name	24/7 Emergency Number	Non-Emergency Number
EnviroServe	720-450-1316	800-488-0910
HSE-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 GLADE project is an OXY geothermal test site that will consist of two (2) Deep Geothermal wells (DGW).

As part of the Weld County 1041 WOGLA permit process, the following sections of County Code address site layout, site drawings, and identify any sensitive areas and discuss any mitigation measures needed.

- Sec. 21-5-312 – Comprehensive Development Plans (CDPs)
- Section 21-5-320 – Application requirements for 1041 WOGLA Permit

b) Nearby Schools, High Occupancy Buildings, Waterways (measured from the Disturbance Area)

- Schools - None within 5,280 feet of location
- High Occupancy Buildings - None within 5,280 feet of location
- Waterways – Irrigation Ditch: 935 feet east of pad

c) Site Safety Requirements and General Safety Information

The minimum personal protective equipment (PPE) to enter any OXY 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 OXY locations. In addition, all contract personnel entering an OXY location to perform work must understand and abide by OXY's contractor expectations relating to environmental, health, and safety requirements.

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 – Evaluation Phase

Item Description	Quantity
Deep Geothermal wells	2
1,000 - barrel freshwater tank	6
Coolers	3
Transformer	1
Communication Tower	1
Panel Rack	1
Organic Rankine Cycle (ORC)	2
Chemical Tank	1
Pump Building	1

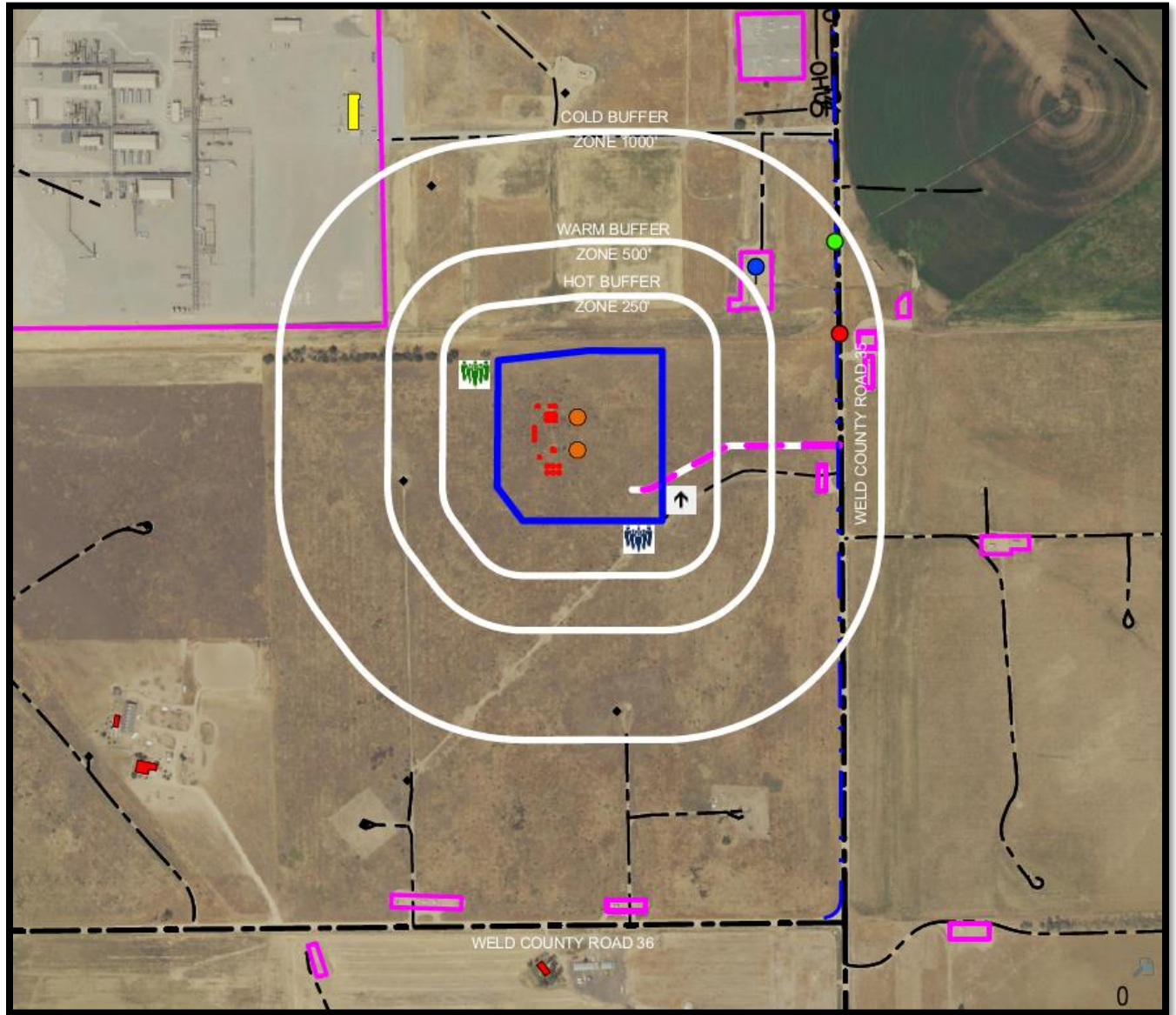
f) Chemicals stored on-site (BBLs and Gallons)

Drilling Phase			
<u>Chemicals</u> (CAPs indicate Product Name vs upper lower case is a generic chemical)	<u>Package Size</u> <u>(Volume)</u>	<u>Quantity</u>	<u>Comments</u>
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	1 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
Biocide	350 Gal Capacity	1	Chemical injection cube (stainless steel tub)
Oxygen scavenger	350 Gal Capacity	1	Chemical injection cube (stainless steel tub)
Evaluation Phase			
<u>Chemicals</u>	<u>Volume</u>	<u>Units/Quantity</u>	<u>Comments</u>
Corrosion/Scale Inhibitor	350 Gal Capacity	1	
ORC Refrigerant	~2,000 Gal	2	

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).

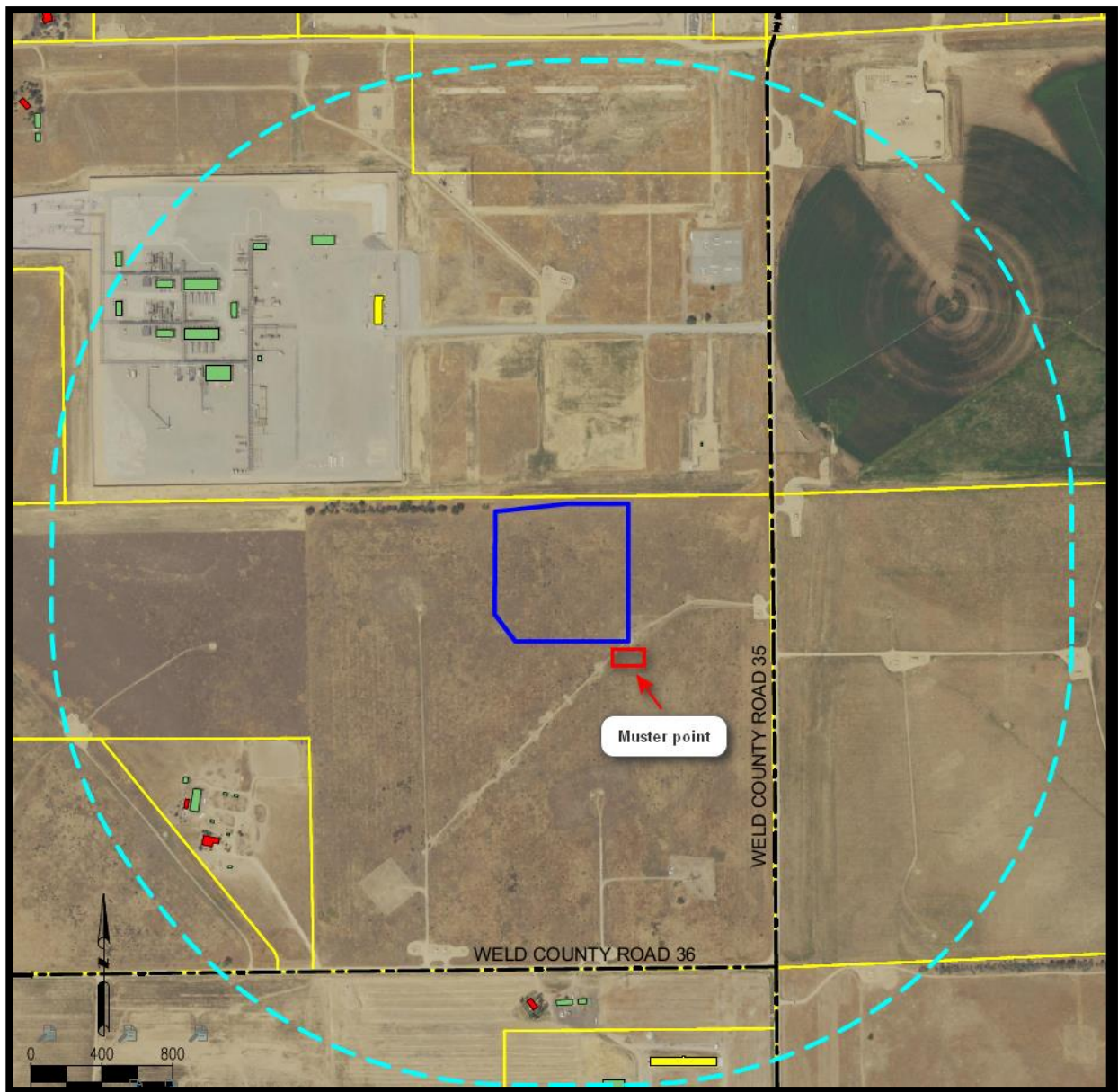


LEGEND

	= PRIMARY MUSTER POINT		= PROPOSED FACILITIES		= PROPOSED ACCESS ROAD
	= SECONDARY MUSTER POINT		= EXISTING FACILITIES		= OVERHEAD UTILITY
	= PRIMARY INGRESS/EGRESS		= PROPOSED DEEP GEOTHERMAL LOCATION		= DITCH
	= PROPOSED WELL		= BUILDING UNIT		= PUBLIC ROAD
	= EXISTING WELL		= RESIDENTIAL BUILDING UNIT		= PRIVATE ROAD
	= CRITICAL RECEPTOR		= HOT, WARM, & COLD BUFFER ZONES		
			ERG ZONE (800 METERS)		

b) Project Location Access Map and Muster Point

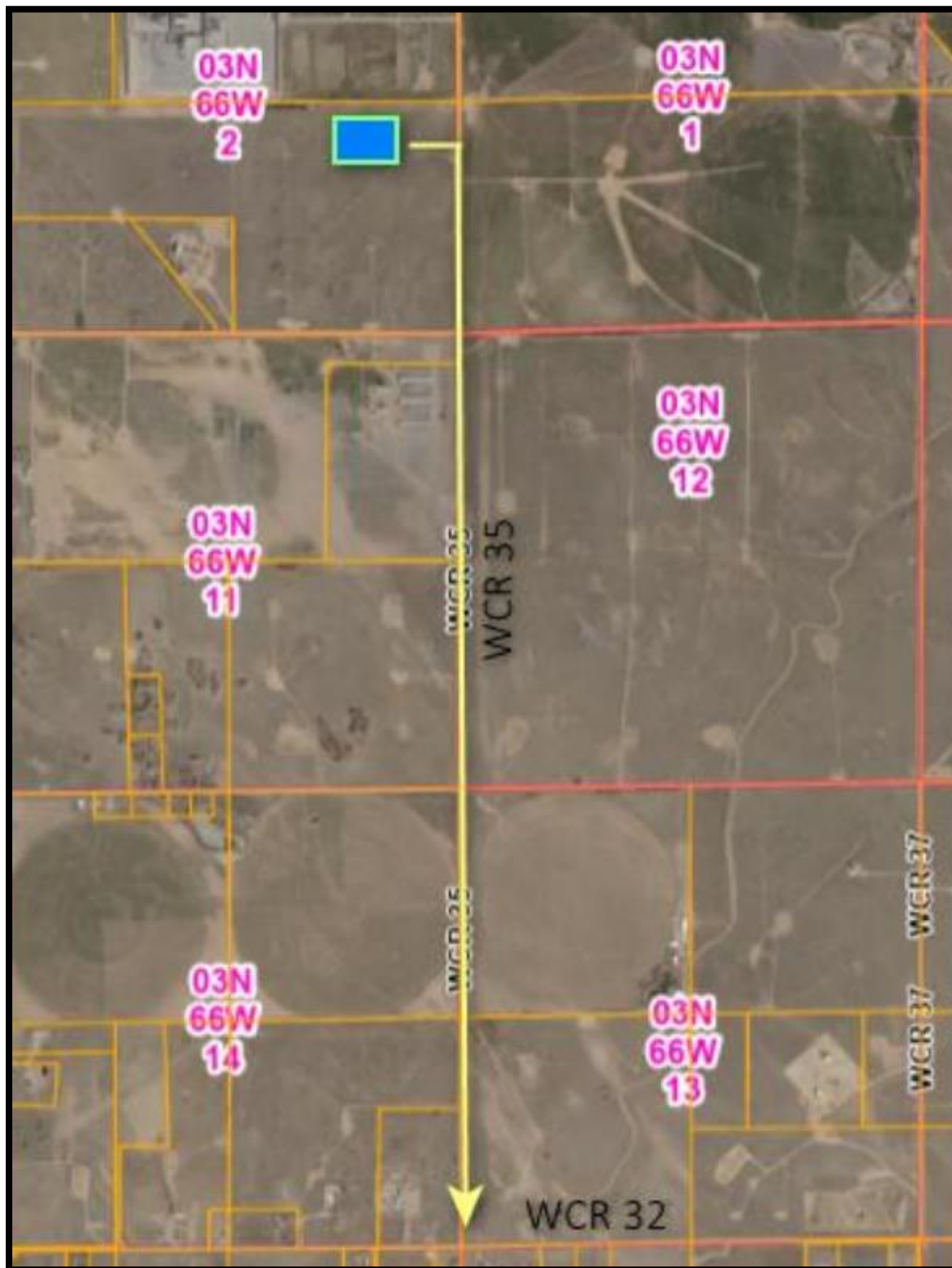
The Primary muster point will be located at the entrance to the location as shown below. The secondary muster point is subject to change depending on the phase of operations occurring at the location.



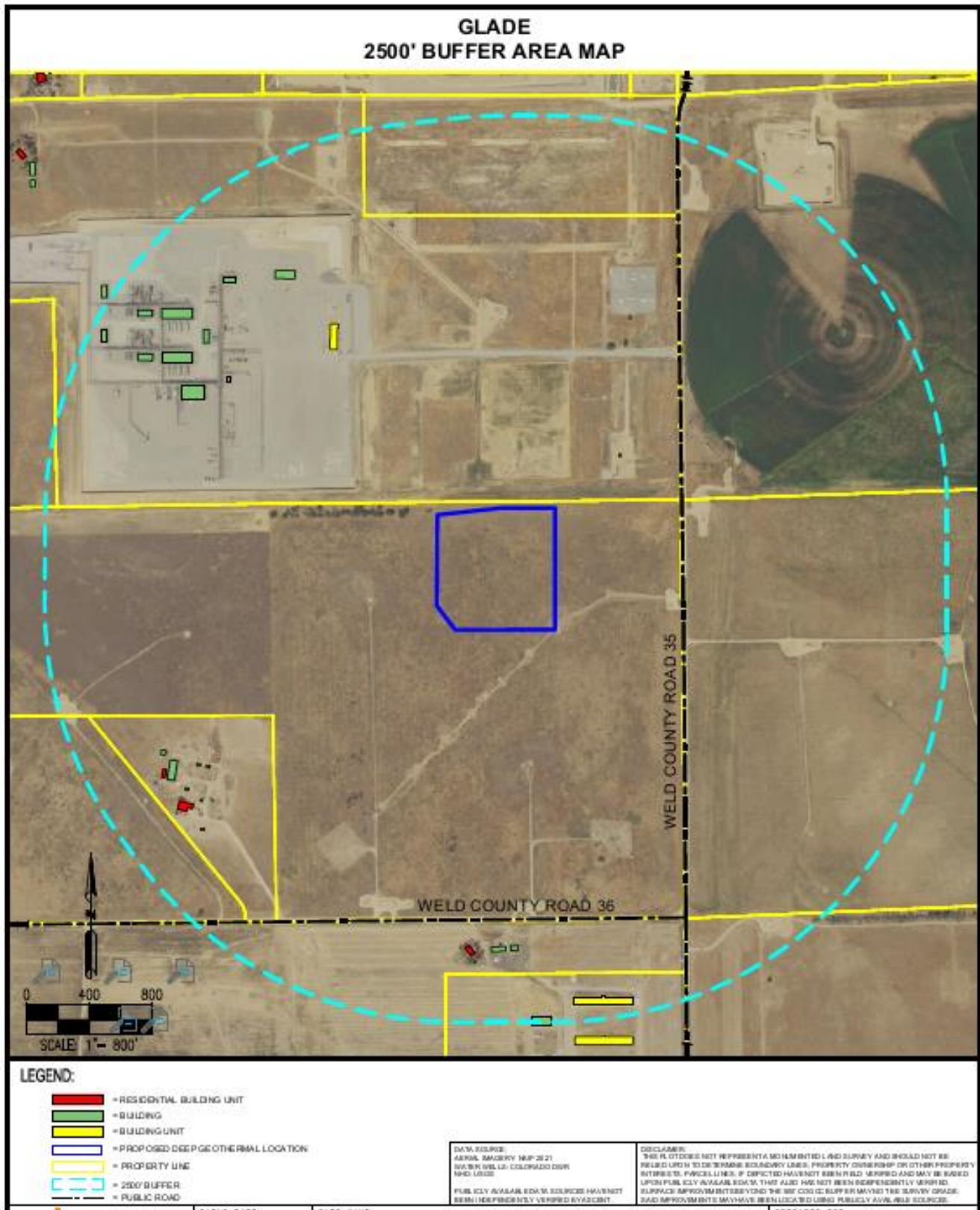
LEGEND:

- = RESIDENTIAL BUILDING UNIT
- = BUILDING
- = BUILDING UNIT
- = PROPOSED DEEP GEOTHERMAL LOCATION
- = PROPERTY LINE
- = 2500' BUFFER
- = PUBLIC ROAD

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 chemicals stored onsite which can be released/spilled during operations. If a spill is discovered, it will be mitigated in accordance with Colorado Energy & Carbon Management Commission (ECMC), Colorado Department of Public Health and Environment (CDPHE), and Weld County Local Emergency Planning Committees (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 OXY 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, OXY has contracted with a several spill response organizations, listed in Section 3 of this EAP. These organizations possess a working knowledge of 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 ECMC if released meets the ECMC reporting requirements per the 900 series rules. A spill/release will be reported to the CDPHE if released meets the CDPHE reporting requirements.

These regulatory guidelines will be strictly followed by OXY and any contractors operating under OXY guidance during all activities at the GLADE project at NE/4 SE/4 Sec 2 T3N R66W.

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.

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 OXY and any contractors operating under OXY during all activities at the GLADE project at NE/4 SE/4 Sec 2 T3N R66W.

SECTION 8 – EVACUATION INFORMATION

a) Evacuation Plan Procedures (public)

The procedure to be used in alerting the public in the event of an 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 OXY 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. OXY 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. OXY will fully cooperate with these authorities and will exert every effort by careful advice to such authorities to prevent panic or rumors.

OXY 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.

OXY plays a vital role in the Incident Management System. OXY 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 OXY's impact and willingness to participate in incident operations, OXY 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 OXY 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. Per ECMCC guidance number 16, a proposed schedule and type of exercises are provided below:

SECTION – 10 COORDINATION WITH FIRST RESPONDERS

- a) OXY will communicate site construction and drill operations and 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 operations.
- b) In the event of an emergency requiring First Responders, Unified Command will be established between the OXY On-site Incident Command (OSIC) and First Responders present. Unified Command post will be established based on conditions present at time of incident.
- c) OXY EHS representative and first responders identified in this Emergency Action Plan (EAP) 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. OXY is a member of CPRN.

SECTION – 11 PLAN REVIEW AND UPDATE PROCEDURES

- a) **Multi-year plan review and update:**
The OXY 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.



GLADE

ADDRESS:

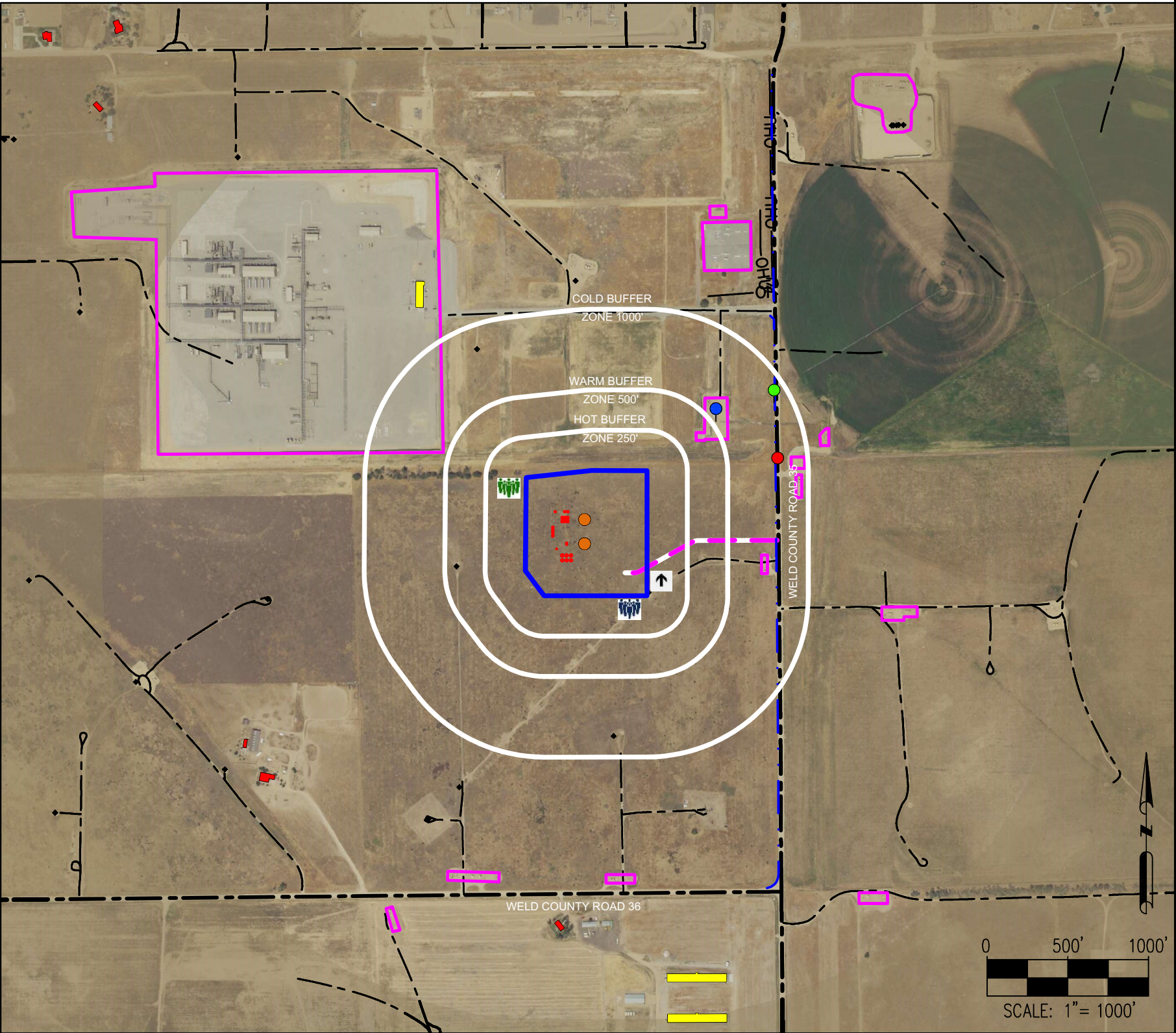
FACILITY LOCATION: 40.25307 °N, -104.73914 °W
ACCESS LOCATION: 40.25269 °N, -104.73487 °W

NOTIFICATIONS

- 1. OXY USA INC 24-Hour Hotline
970-515-1500
720-929-6000
- 2. Platteville-Gilcrest Fire Protection District
911 & 970-785-2232 (NON-EMERGENCY)
- 3. Weld County OEM
970-350-9600
- 4. Weld County Sheriff
970-356-4015
- 5. Colorado Highway State Patrol
303-239-4501
- 6. Weld County O&G Energy Department
970-400-3580
- 7. Colorado Oil & Gas Commission
303-894-2100
- 8. Colorado Department of Public Health & Environment
877-518-5608
- 9. Colorado Parks & Wildlife
303-291-7227
- 10. National Response Center
800-424-8802

CRITICAL RECEPTORS

- 1. WELD COUNTY 35
- 2. DITCH
- 3. EXISTING FACILITIES



SITE NAME:
GLADE
SURFACE LOCATION:
NE 1/4 SE 1/4 SEC. 2, T3N, R66W, 6TH P.M.
WELD COUNTY, COLORADO



FIELD DATE:
12-03-23

DRAWING DATE:
02-01-24

BY:
HJL

CHECKED BY:
CSG

LEGEND

- = PRIMARY MUSTER POINT
- = SECONDARY MUSTER POINT
- = PRIMARY INGRESS/EGRESS
- = PROPOSED WELL
- = EXISTING WELL
- = CRITICAL RECEPTOR
- = PROPOSED FACILITIES
- = EXISTING FACILITIES
- = PROPOSED DEEP GEOTHERMAL LOCATION
- = BUILDING UNIT
- = RESIDENTIAL BUILDING UNIT
- = HOT, WARM, & COLD BUFFER ZONES
- = ERG ZONE (800 METERS)
- = PROPOSED ACCESS ROAD
- = OVERHEAD UTILITY
- = DITCH
- = PUBLIC ROAD
- = PRIVATE ROAD

Note: This Tactical Response Card is a reference tool and is intended to provide guidance during an actual event or exercise. Placement of resources may need to be adjusted according to environmental variables. It is the responsibility of emergency response personnel to be trained in response and to be able to make adjustments to the card as needed.

DATA SOURCES:
-AERIAL IMAGERY: NAIP 2021
-HYDROLOGY: NHD

PUBLICLY AVAILABLE DATA SOURCES HAVE NOT BEEN INDEPENDENTLY VERIFIED BY ASCENT.

FIRE DEPARTMENT RESPONSE GUIDELINES		INDUSTRY RESPONSE OBJECTIVES		GEOTHERMAL FACILITY INFORMATION	
Command		Ensure safety of the public, first responders, employees, and contractors. Minimize impact to the environment and local community. The following response objectives checklist shall be followed:		Note: This is not an oil and gas site	
FIRE DEPARTMENT RESPONSE GUIDELINES				Production Facility Storage:	
COMMAND		SAFETY – PROTECT LIFE		● Oil (BBL) – 0	
● Establish initial command post near the location entrance.		● Evaluate and account for all personnel		● Condensate Tanks – 0	
● Position should provide a clear view of the entire scene		● Isolate all potential ignition sources		● Produced Water (BBL) –0	
● Advise responding units and resources to stage near the location entrance.		● Establish site control (safe perimeter and evacuation routes)		● Fresh Water tanks – 6 tanks each holds 1,000 bbl.	
● Locate operator lease sign on location (located at the entrance /site access)		● Contact emergency services as needed (911, Fire, LEPC)		Specific Facility Hazardous Conditions: (chemicals stored on site)	
● If industry personnel are not on location, call the 24-Hour Emergency Contact number located on the sign.		● Identify hazard(s) of emitted material (obtain SDS)		Drilling	
● Establish unified command with operator on-site liaison		● Implement air monitoring around impacted area		Diesel	
● Develop incident action plan with the operator to mitigate incident		● Continually assess site hazards/risks		Oil Based Mud (OBM)	
● Strategy - <u>Always defensive unless a life safety need is identified!</u>				FORTI-MUL	
				ADAPTA L	
				BARAKLEAN	
				Additional chemicals are stored on location for drilling, see Emergency Action Plan	
				Evaluation	
				Corrosion/Scale Inhibitor	
				500 Gal x 1 Totes	