

SITE SAFETY AND EMERGENCY ACTION PLAN



1099 18th Street, Suite 700
Denver, Colorado 80202

Swartz 2-4HZ Wells and Facility

Section 4 – T3N – R67W

Address: TBD

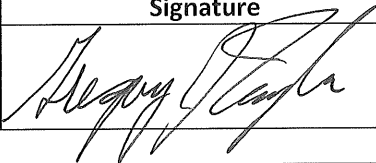
WELD COUNTY, COLORADO

Proposed Spud Date: 3rd Quarter 2023

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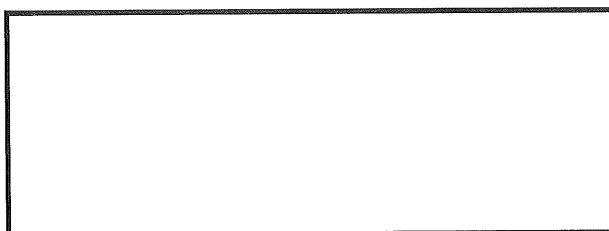
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SECTION 1 – APPROVAL SIGNATURES

Kerr-McGee Oil & Gas Onshore LC			
Name	Signature	Title	Date
Gregory Taylor		Facilities Engineering Consultant	3/9/22
Front Range Fire Rescue Authority			
Name	Signature	Title	Date
Ty Drage		Fire Marshal	

Weld County Office of Emergency Management

Digitally Signed



SECTION 2 – SITE ADDRESS AND DIRECTIONS

a) Directions:

From the intersection of Weld County Road (WCR) 38 and Weld County Road (WCR) 17 travel east approximately $\frac{3}{4}$ mile to lease access road, turn right and travel south/southwest approximately $\frac{1}{4}$ mile 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** – NE1/4 of Section 4, Township 3 North, Range 67 West
- **Address** - * Address Pending (*Weld OEM will provide physical address for 911 dispatching*)
- **Town, CO, Zip** – Weld County, Colorado 80543
- **Lat/Long:** 40.258674, -104.891597

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 18 th 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		
Front Range Fire Rescue Authority	911	970-587-4464
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
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
Northern Colorado Medical Center	970-352-4121
Medical Center of the Rockies	970-624-2500
Northern Colorado Medical Facility (Burn Unit)	970-810-4121
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
EHS-Environmental HAZMAT Services	303-525-3111	720-225-9252

f) Loss of Well Control

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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 Swartz 2-4HZ Pad is a KMOG oil and gas production facility that will have sixteen (16) horizontal oil and gas wells along with one 285-barrel crude oil storage tank (this is a condensate tank used for maintenance storage as needed) and four 285-barrel produced water tanks located inside a lined secondary containment structure.

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 – Surface water: ±75 feet SW of facility

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, 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	16
400 - barrel crude oil storage tank	0
285 - barrel produced water	4
285 - barrel condensate tank (maintenance tank only)	1

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

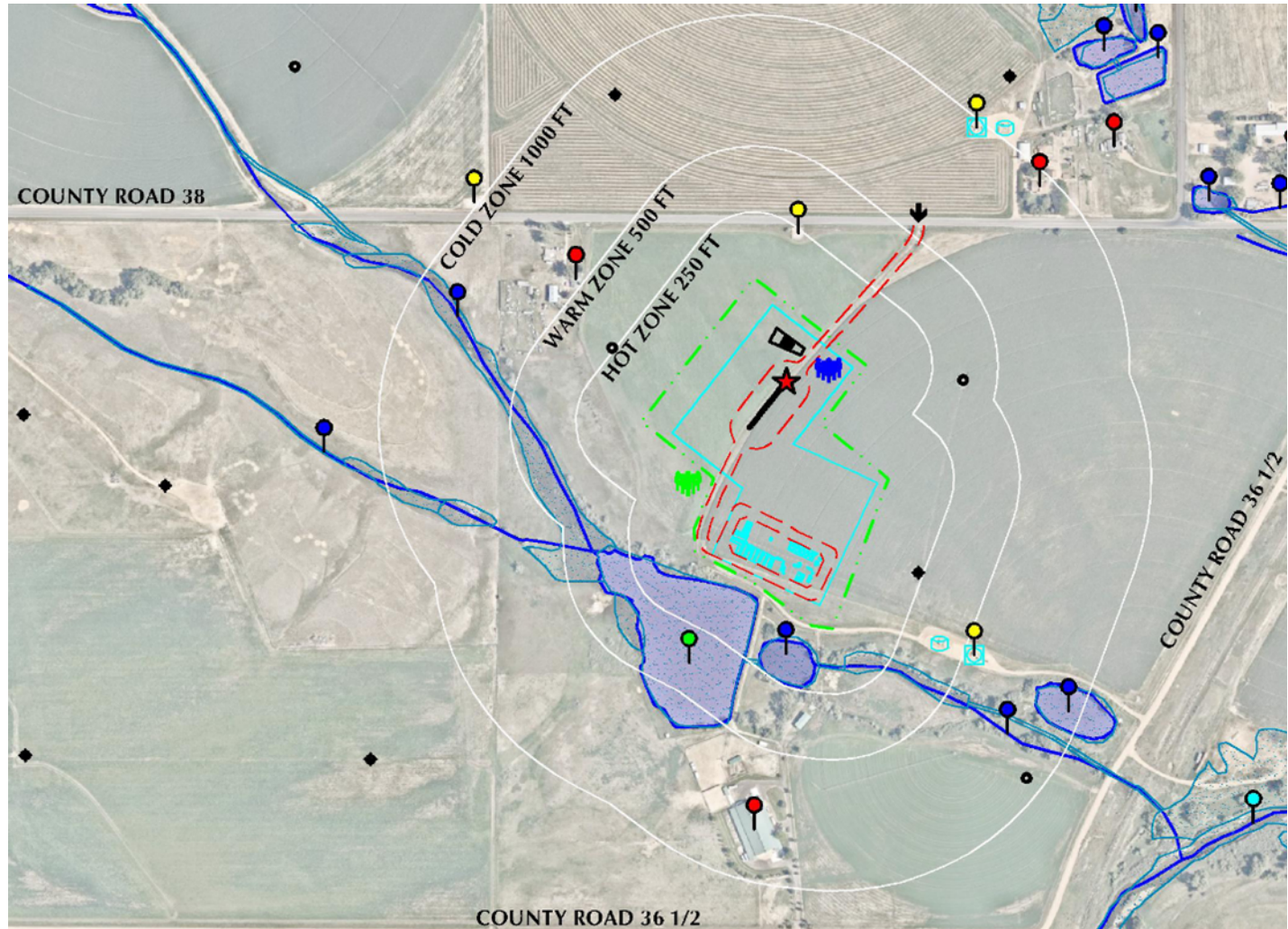
Drilling Phase			
Chemicals (CAPs indicate Product Name vs upper lower case is a generic chemical)	Package Size (Volume)	Quantity	Comments
ADAPTA L	5 gal can	128 cans	
BARAKLEAN	5 gal can	64 cans	
BAROID 41	bulk silo	45 tons	
BAROID 41	100 lb. sacks	400 sacks	
BARO-SEAL CLASSIC	40 lb. sacks	60 sacks	
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	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
Completions/Hydraulic Fracturing Phase			
Chemicals	Units	Volume	Comments
Hydrochloric Acid	1	4,000 Gal Transport	
HCR Synthetic Acid	2	4,000 Gal Transport	
Sodium Bicarbonate	1	200-300 lbs	Acid neutralizer
Calcium Chloride (Brine)	1	500 BBL capacity	Winter ops only
Friction Reducer (FR)	1	4,500 Gal Capacity ISO	

Hydrochloric Acid (Biocide Trailer)	1	4,000 Gal Capacity	Biocide treatment trailer
Sodium Chlorite	1	2,000 Gal Capacity	
Sodium Hypochlorite	1	2,000 Gal Capacity	Biocide treatment trailer
Preventative Biocide (TTPC)	1	4,500 Gal Capacity ISO	Biocide treatment trailer
Produced Water	4	500 BBL	
Diesel Fuel	1	16,000 Gal Capacity	
DEF	1	2,200 gal capacity	
Flowback Phase			
<u>Coil Chemicals</u>	<u>Unit</u>	<u>Volume</u>	<u>Comments</u>
Friction Reducer	1	330 Gal Capacity	Mixing plant (chemical trailer)
Biocide	1	330 Gal Capacity	Mixing plant (chemical trailer)
Pipe on pipe lubricant	1	330 Gal Capacity	Mixing plant (chemical trailer)
Foamer	1	330 Gal Capacity	Mixing plant (chemical trailer)
Defoamer	1	330 Gal Capacity	Mixing plant (chemical trailer)
Nano beads	1	330 Gal Capacity	Mixing plant (chemical trailer)
H2S scavenger	1	330 Gal Capacity	Mixing plant (chemical trailer)
Friction reducer	1	330 Gal Capacity	Coil provider (not always on pad)
Pipe on pipe lubricant	1	330 Gal Capacity	Coil provider (not always on pad)
Liquid N2	1	120 BBL Transport	Coil provider (not always on pad)
Oil on pad	N/A	20 BBL Max Allowed	Haul off oil before it reaches 20 BBL
Diesel	2	500 Gal Capacity	Steel Tanks
Biocide	1	350 Gal Capacity	Chemical injection cube (stainless steel tub)
Oxygen scavenger	1	350 Gal Capacity	Chemical injection cube (stainless steel tub)
<u>Rig/Snub Chemicals</u>	<u>Unit</u>	<u>Volume</u>	<u>Comments</u>
Diesel	2	500 Gal Capacity	
50/50 Methanol	1	500 Gal Capacity	Winter Ops only
Bio Water	N/A	60 BBL/well	Brought out in bobtail truck
Biocide	1	350 Gal Capacity	Chemical injection cube (stainless steel tub)
Oxygen Scavenger	1	350 Gal Capacity	Chemical injection cube (stainless steel tub)
Production Phase Chemicals			
<u>Chemicals</u>	<u>Unit</u>	<u>Volume</u>	
Crude oil/Condensate	1	285 BBL	
Produced Water	4	285 BBL	

SECTION 5 – MAPS AND DRAWINGS

a) Project Area Map

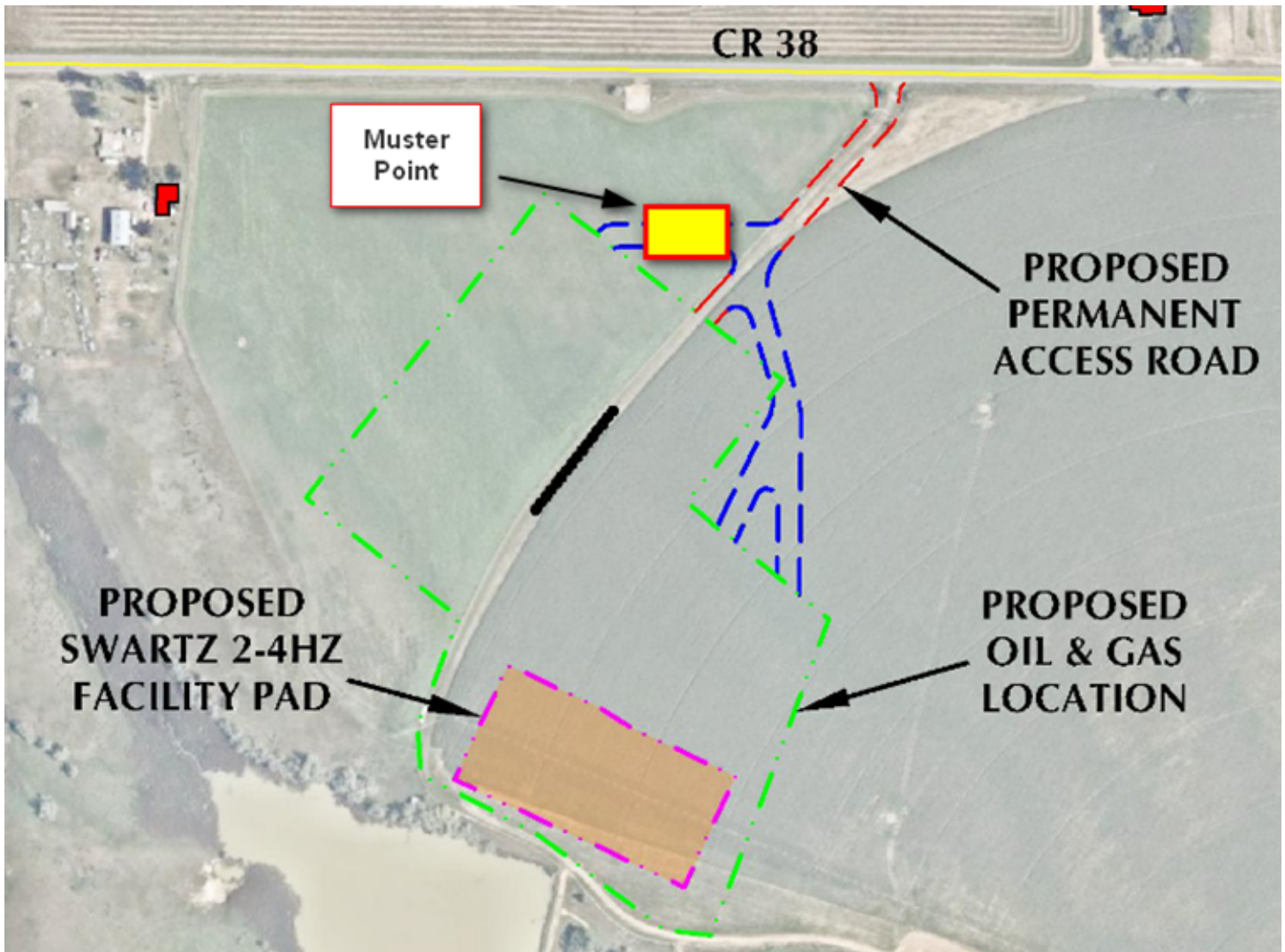
Showing the following distances: 250 feet (Hot Zone), 500 feet (Warm Zone) and 1,000 feet (Cold Zone) from the Disturbance Area (DA).



● PROPOSED WELL	PRIMARY MUSTER POINT	COMBUSTOR LOCATION
○ ACTIVE WELL	SECONDARY MUSTER POINT	— RIVER/DITCH
◆ PLUGGED & ABANDONED WELL	PRIMARY INGRESS/EGRESS	— LAKE/POND/WATERBODY
— ERG ZONE (800 METERS)	SECONDARY INGRESS/EGRESS	— NWI RIVERINE/POND/WETLAND
— OIL AND GAS LOCATION	— HOT, WARM & COLD BUFFER ZONES	— RAILROAD
— WORKING PAD SURFACE	— TANK BATTERY	— RESIDENTIAL SUBDIVISION
— PROPOSED ACCESS ROAD	— WINDSOCK	— FIRE HYDRANT / WATER SOURCE

b) Project Location Access Map and Muster Point

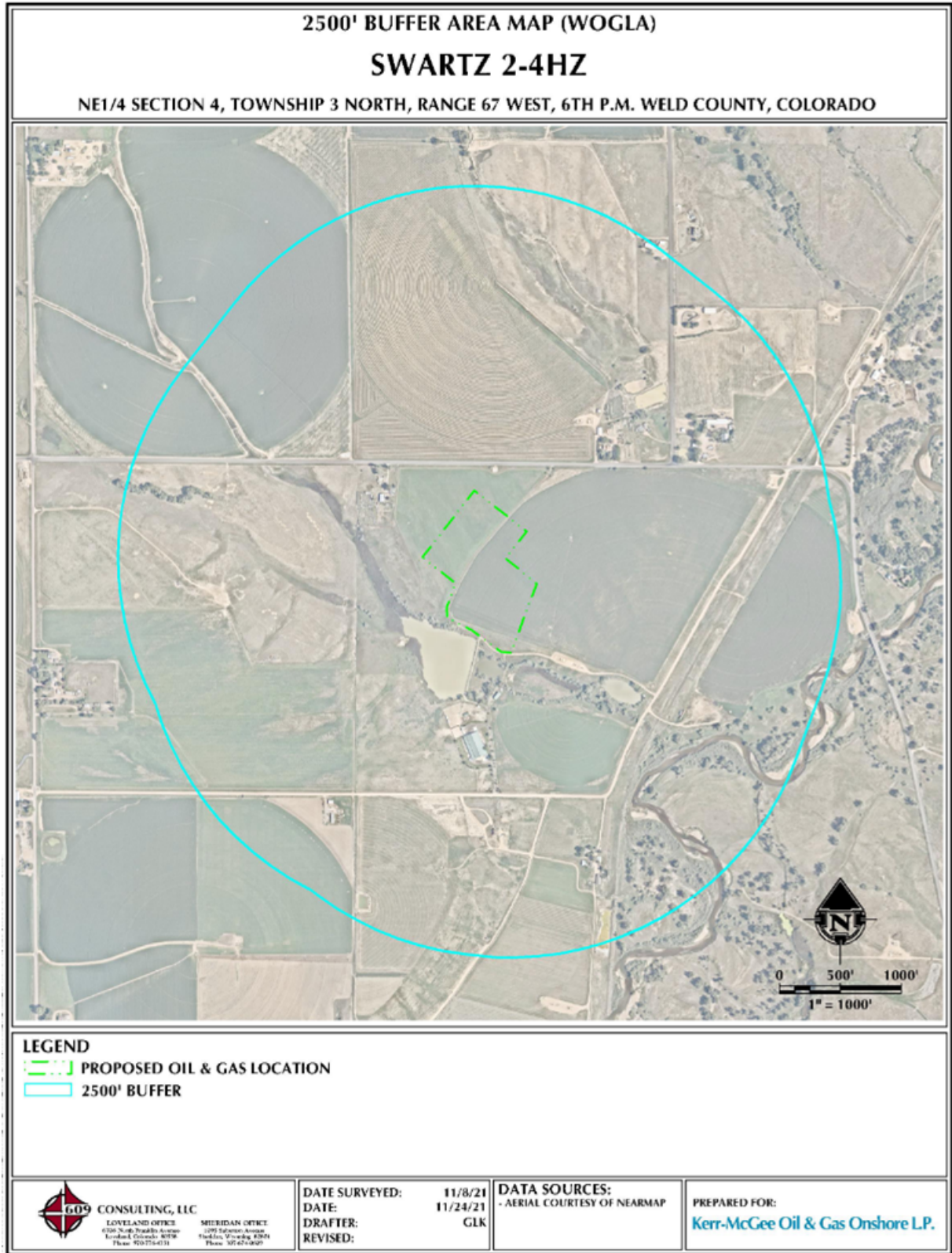
The Primary muster point will be located at the entrance to the location as shown below. The secondary muster point is subject to change depending on the phase of operations occurring at the location.



c) Haul Route Map



d) 2,500 Foot Buffer Area Map



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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 released meets the COGCC 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 KMOG and any contractors operating under KMOG guidance during all activities at the Swartz 2-4HZ Pad at NE1/4 Sec 4 T3N R67W.

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 Swartz 2-4HZ Pad at NE1/4 Sec 4 T3N R67W.

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 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. Per COGCC guidance number 16, a proposed schedule and type of exercises are provided below:

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 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. 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.