

FORM  
2A

Rev  
08/13

State of Colorado  
Oil and Gas Conservation Commission

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



Document Number:

400568109

Date Received:

03/17/2014

Oil and Gas Location Assessment

☒ New Location    ☐ Refile    ☐ Amend Existing Location    Location#: \_\_\_\_\_

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

Location ID:

**437155**

Expiration Date:

**05/14/2017**

☒ This location assessment is included as part of a permit application.

CONSULTATION

- ☐ This location is included in a Comprehensive Drilling Plan. CDP # \_\_\_\_\_
- ☒ This location is in a sensitive wildlife habitat area.
- ☐ This location is in a wildlife restricted surface occupancy area.
- ☐ This location includes a Rule 306.d.(1)A.ii. variance request.

Operator

Operator Number: 66561

Name: OXY USA INC

Address: PO BOX 27757

City: HOUSTON    State: TX    Zip: 77227

Contact Information

Name: L. Kiki Lockett

Phone: (713) 2630510

Fax: (713) 9854962

email: kiki\_lockett@oxy.com

RECLAMATION FINANCIAL ASSURANCE

☒ Plugging and Abandonment Bond Surety ID: 20060139    ☐ Gas Facility Surety ID: \_\_\_\_\_

☐ Waste Management Surety ID: \_\_\_\_\_

LOCATION IDENTIFICATION

Name: Sheep Mountain Unit    Number: 1-12-B

County: HUERFANO

QuarterQuarter: SESW    Section: 1    Township: 28S    Range: 70W    Meridian: 6    Ground Elevation: 8647

Define a single point as a location reference for the facility location. When the location is to be used as a well site then the point shall be a well location.

Footage at surface: 391 feet FSL from North or South section line

2160 feet FWL from East or West section line

Latitude: 37.636880    Longitude: -105.171290

PDOP Reading: 2.3    Date of Measurement: 12/05/2013

Instrument Operator's Name: S. Selin

## 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 #

## FACILITIES

Indicate the number of each type of oil and gas facility planned on location

Wells	<u>1</u>	Oil Tanks	<u>      </u>	Condensate Tanks	<u>      </u>	Water Tanks	<u>      </u>	Buried Produced Water Vaults	<u>      </u>
Drilling Pits	<u>      </u>	Production Pits	<u>      </u>	Special Purpose Pits	<u>      </u>	Multi-Well Pits	<u>      </u>	Temporary Large Volume Above Ground Tanks	<u>      </u>
Pump Jacks	<u>      </u>	Separators	<u>      </u>	Injection Pumps	<u>      </u>	Cavity Pumps	<u>      </u>		
Gas or Diesel Motors	<u>      </u>	Electric Motors	<u>      </u>	Electric Generators	<u>      </u>	Fuel Tanks	<u>      </u>	Gas Compressors	<u>      </u>
Dehydrator Units	<u>      </u>	Vapor Recovery Unit	<u>      </u>	VOC Combustor	<u>      </u>	Flare	<u>      </u>	LACT Unit	<u>      </u>
								Pigging Station	<u>      </u>

## OTHER FACILITIES

Other Facility Type

Number

<input type="text"/>	<input type="text"/>
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Per Rule 303.b.(3)C, description of all oil, gas, and/or water pipelines:

Any re-entry or new drill well would be a single possible stainless steel flow line to the compressor station that is on that drill site or if an outside well is drilled a single pipeline would go to the nearest drill site. Size of pipe would depend on well flow volume. I would say lines would be 4 to 6 inch lines.

## CONSTRUCTION

Date planned to commence construction: 05/01/2014 Size of disturbed area during construction in acres: 4.30  
Estimated date that interim reclamation will begin: 11/01/2014 Size of location after interim reclamation in acres: 2.90  
Estimated post-construction ground elevation: 8636

## DRILLING PROGRAM

Will a closed loop system be used for drilling fluids: Yes

Is H<sub>2</sub>S anticipated? No

Will salt sections be encountered during drilling: No

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

Will oil based drilling fluids be used? Yes

## DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: ONSITE Drilling Fluids Disposal Method: Recycle/reuse

Cutting Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

Oxy has a Cuttings Disposal Plan.  
Drilling fluids will be reused at all four locations.

Beneficial reuse or land application plan submitted? No

Reuse Facility ID:                      or Document Number:                     

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

## SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: Houchin Family Estate

Phone: 7197462392

Address: 5838 CR 572

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

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

Email: hparadiseacres@yahoo.com

City: Laveta State: CO Zip: 81055

Surface Owner: ☒ Fee ☐ State ☐ Federal ☐ Indian

Check all that apply. The Surface Owner: ☒ is the mineral owner

☒ is committed to an oil and Gas Lease

☒ has signed the Oil and Gas Lease

☐ is the applicant

The Mineral Owner beneath this Oil and Gas Location is: ☒ Fee ☐ State ☐ Federal ☐ Indian

The Minerals beneath this Oil and Gas Location will be developed from or produced to this Oil and Gas Location: Yes

The right to construct this Oil and Gas Location is granted by: oil and gas lease

Surface damage assurance if no agreement is in place: \_\_\_\_\_ Surface Surety ID: \_\_\_\_\_

Date of Rule 306 surface owner consultation 11/21/2013

## CURRENT AND FUTURE LAND USE

Current Land Use (Check all that apply):

Crop Land: ☐ Irrigated ☐ Dry land ☐ Improved Pasture ☐ Hay Meadow ☐ CRP

Non-Crop Land: ☒ Rangeland ☐ Timber ☐ Recreational ☐ Other (describe): \_\_\_\_\_

Subdivided: ☐ Industrial ☐ Commercial ☐ Residential

Future Land Use (Check all that apply):

Crop Land: ☐ Irrigated ☐ Dry land ☐ Improved Pasture ☐ Hay Meadow ☐ CRP

Non-Crop Land: ☒ Rangeland ☐ Timber ☐ Recreational ☐ Other (describe): \_\_\_\_\_

Subdivided: ☐ Industrial ☐ Commercial ☐ Residential

## CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 5280 Feet  
Building Unit: 5280 Feet  
High Occupancy Building Unit: 5280 Feet  
Designated Outside Activity Area: 5280 Feet  
Public Road: 679 Feet  
Above Ground Utility: 4337 Feet  
Railroad: 5280 Feet  
Property Line: 494 Feet

### INSTRUCTIONS:

- All measurements shall be provided from center of nearest Well or edge of nearest Production Facility to nearest of each cultural feature as described in Rule 303.b.(3)A.  
- Enter 5280 for distance greater than 1 mile.  
- Building - nearest building of any type. If nearest Building is a Building Unit, enter same distance for both.  
- Building Unit, High Occupancy Building Unit, and Designated Outside Activity Area - as defined in 100-Series Rules.

## DESIGNATED SETBACK LOCATION INFORMATION

Check all that apply. This location is within a: ☐ Buffer Zone  
☐ Exception Zone  
☐ Urban Mitigation Area

- Buffer Zone - as described in Rule 604.a.(2), within 1,000' of a Building Unit.  
- Exception Zone - as described in Rule 604.a.(1), within 500' of a Building Unit.  
- Urban Mitigation Area - as defined in 100-Series Rules.

Pre-application Notifications (required if location is within 1,000 feet of a building unit):

Date of Rule 305.a.(1) Urban Mitigation Area Notification to Local Government: \_\_\_\_\_

Date of Rule 305.a.(2) Buffer Zone Notification to Building Unit Owners: \_\_\_\_\_

## SOIL

List all soil map units that occur within the proposed location. attach the National Resource Conservation Service (NRCS) report showing the "Map Unit Description" report listing the soil typical vertical profile. This data is to be used when segregating topsoil.

The required information can be obtained from the NRCS web site at <http://soildatamart.nrcs.usda.org/> or from the COGCC web site GIS Online map page found at <http://colorado.gov/cogcc>. Instructions are provided within the COGCC web site help section.

NRCS Map Unit Name: Map Unit 23, Goemmer cobbly clay loam, 20 to 50 percent slopes --- Huerfano County Area, Colorado  
NRCS Map Unit Name: Map Unit 19, Fughes sandy clay loam, 3 to 15 percent slopes--- Huerfano County Area, Colorado  
NRCS Map Unit Name: Map Unit 30, Leadville fine sandy loam, 25 to 55 percent slopes--- Huerfano County Area, Colorado

## PLANT COMMUNITY:

Complete this section only if any portion of the disturbed area of the location's current land use is on non-crop land.

Are noxious weeds present: Yes ☐ No ☒

Plant species from: ☒ NRCS or, ☐ field observation Date of observation: 12/05/2013

List individual species: Pine dropseed, Slender wheatgrass, Arizona fescue, Parry's danthonia, True Mountain Mahogany, Sedge, Gambel oak, Mountain Muhly

Check all plant communities that exist in the disturbed area.

- ☐ Disturbed Grassland (Cactus, Yucca, Cheatgrass, Rye)
- ☒ Native Grassland (Bluestem, Grama, Wheatgrass, Buffalograss, Fescue, Oatgrass, Brome)
- ☒ Shrub Land (Mahogany, Oak, Sage, Serviceberry, Chokecherry)
- ☐ Plains Riparian (Cottonwood, Willow, Aspen, Maple, Poplar, Russian Olive, Tamarisk)
- ☐ Mountain Riparian (Cottonwood, Willow, Blue Spruce)
- ☐ Forest Land (Spruce, Fir, Ponderosa Pine, Lodgepole Pine, Juniper, Pinyon, Aspen)
- ☐ Wetlands Aquatic (Bullrush, Sedge, Cattail, Arrowhead)
- ☐ Alpine (above timberline)
- ☐ Other (describe): \_\_\_\_\_

## WATER RESOURCES

Is this a sensitive area: ☒ No ☐ Yes

Distance to nearest

downgradient surface water feature: 494 Feet

water well: 9804 Feet

Estimated depth to ground water at Oil and Gas Location 100 Feet

Basis for depth to groundwater and sensitive area determination:

Hydrology Plat and COGCC website map...

Is the location in a riparian area: ☒ No ☐ Yes

Was an Army Corps of Engineers Section 404 permit filed ☒ No ☐ Yes If yes attach permit.

Is the location within a Rule 317B Surface Water Supply Area buffer No zone:

If the location is within a Rule 317B Surface Water Supply Area buffer have all public water supply systems within 15 miles been notified: \_\_\_\_\_

## GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 609

## DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

- ☐ Rule 604.a.(1)A. Exception Zone (within 500' of Building Unit)
- ☐ Rule 604.b.(1)A. Exception Location (existing or approved Oil & Gas Location now within a Designated Setback as a result of Rule 604.a.)
- ☐ Rule 604.b.(1)B. Exception Location (existing or approved Oil & Gas Location is within a Designated Setback due to Building Unit construction after Location approval)
- ☐ Rule 604.b.(2) Exception Location (SUA or site-specific development plan executed on or before August 1, 2013)
- ☐ Rule 604.b.(3) Exception Location (Building Units constructed after August 1, 2013 within setback per an SUA or site-specific development plan)

## RULE 502.b VARIANCE REQUEST

- ☐ Rule 502.b. Variance Request from COGCC Rule or Spacing Order Number \_\_\_\_\_

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

## OPERATOR COMMENTS AND SUBMITTAL

Comments

Oxy is proposing to drill a new CO2 well. The new well will tie-in to the existing pipeline located 580' to the NW. The pad lies on private surface and the surface owner consultation meeting occurred on November 21, 2013 with David Woest, Land Team Leader, from Oxy's Land Department.

The CPW pre-consultation meeting occurred on October 31, 2013 with Al Trujillo and he granted an exception to the bighorn sheep and elk production area drilling restrictions.

The dry pond on the plat Location Drawing is utilized for capturing rainwater and stormwater runoff. Oxy will provide approximate housing for essential personnel in order to conduct safe, efficient drilling operations at this well site.

If you have any questions or comments, I can be reached at 713-215-7643 or kiki\_lockett@oxy.com

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

Signed: \_\_\_\_\_ Date: 03/17/2014 Email: kiki\_lockett@oxy.com

Print Name: L. Kiki Lockett Title: Regulatory Analyst

Based on the information provided herein, this Application for Permit-to-Drill complies with COGCC Rules and applicable orders and is hereby approved.

COGCC Approved: \_\_\_\_\_



Director of COGCC

Date: 5/15/2014

### **Conditions Of Approval**

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

#### **COA Type**

#### **Description**

	Reference Area Photographs will be submitted within 12 months from the submittal date of this Form 2A.
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### **Best Management Practices**

#### **No BMP/COA Type**

#### **Description**

1	Wildlife	<p>OXY USA WTP LP and OXY USA Inc.</p> <p>Sensitive Wildlife Habitat: Elk Production Area and Bighorn Sheep</p> <ul style="list-style-type: none"><li>• Consult with CPW to identify locations of elk production areas and bighorn sheep production areas. Map all seasonal habitats using CPW habitat selection models as they become available.</li><li>• After drilling and completions activities reduce visits to well-sites through remote monitoring (i.e. SCADA) and the use of multi-function contractors.</li><li>• Schedule, as best as possible, well site visitations to portions of the day between 8:00 a.m. and 3:00 p.m. between November 1 through April 15 in Bighorn Sheep areas.</li><li>• Schedule, as best as possible, well site visitations to portions of the day between 8:00 a.m. and 3:00 p.m. between May 15 through June 30 in elk production areas.</li><li>• Establish company guidelines to minimize wildlife mortality from vehicle collisions on roads.</li><li>• Implement the species appropriate Infrastructure Layout and Drilling and Production Operations Wildlife Protection Measures found in Section II D. of the CPW Wildlife BMP document as follows:<ul style="list-style-type: none"><li>• Section II D. DRILLING AND PRODUCTION OPERATIONS WILDLIFE PROTECTION MEASURES: The purpose of these measures is to reduce disturbance on the actual drill site and the surrounding area, to reduce direct conflict with wildlife and hunters, and to prevent wildlife access to equipment.</li></ul></li><li>1. Use centralized hydraulic fracturing operations.</li><li>2. Where possible, transport water through centralized pipeline systems rather than by trucking.</li><li>3. Where possible, locate pipeline systems under existing roadways, or roadways that are planned for development.</li><li>4. Maximize use of state-of-the-art drilling technology (e.g., high efficiency rigs, coiled-</li></ul>
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tubing unit rigs, closed-loop or pitless drilling, etc.) to minimize disturbance.

5. Conduct well completions with drilling operations to limit the number of rig moves and traffic.

6. Install exclusionary devices to prevent bird and other wildlife access to equipment stacks, vents and openings.

- Minimize surface disturbance and fragmentation of elk and bighorn sheep habitat through use of the smallest facility footprints possible, use of multiple well pads, clustering of roads and pipelines, and the widest possible spacing of surface facilities.
- Remove all unnecessary infrastructure.
- Treat waste water pits and any associated pit containing water that provides a suitable medium for breeding mosquitoes with Bti (*Bacillus thuringiensis* v. *israelensis*) or take other effective action to control mosquito larvae that may spread West Nile Virus to wildlife, especially grouse.
- In order to prevent wildlife from accessing the temporary drilling pits, pits will be contained by a 4-foot high fence. Further, while the pit is not in use, flagging will be placed over the pit to prevent birds from entering the pit.
- Implement the species appropriate reclamation guidelines found in Section II G. of the CPW Wildlife BMP document.
- Section II G. RESTORATION, RECLAMATION AND ABANDONMENT: The purpose of these measures is to restore disturbed sites to their pre-development conditions, using native vegetation that can be used by the indigenous wildlife. Develop a reclamation plan in consultation with CPW, NRCS, and the land owner or land management agency that incorporates wildlife species-specific goals and that defines reclamation performance standards, including the following components:

1. Seed

- a. Use only certified weed-free native seed in seed mixes, unless use of non-native plant materials is recommended by CPW.
- b. Use locally adapted seed whenever available, especially for species which have wide geographic ranges and much genetic variation (e.g., big sagebrush (*Artemisia tridentata*), antelope bitterbrush (*Purshia tridentata*), etc.).
- c. Where more than one ecotype of a given species is available and potentially adapted to the site, include more than one ecotype per species in the seed mix.
- d. Use appropriately diverse reclamation seed mixes that mirror an appropriate reference area for the site being reclaimed (see also species-specific recommendations).
- e. Conduct seeding in a manner that ensures that seedbed preparation and planting techniques are targeted toward the varied needs of grasses, forbs and shrubs (e.g., seed forbs and shrubs separately from grasses, broadcast big sagebrush but drill grasses, etc.).
- f. Emphasize bunchgrass over sod-forming grasses in seed mixes in order to provide more effective wildlife cover and to facilitate forb and shrub establishment.
- g. Seed immediately after recontouring and spreading topsoil. Spread topsoil and conduct seeding during optimal periods for seed germination and establishment. Use of the same contractor for re-contouring land as used for seeding is often the most effective approach.
- h. Do not include aggressive, non-native grasses (e.g., intermediate wheatgrass, pubescent wheatgrass, crested wheatgrass, smooth brome, etc.) in reclamation seed mixes. Site specific exceptions may be considered.
- i. Distribute quick germinating site adapted native seed or sterile non-native seed for interim reclamation on cut and fill slopes and topsoil piles.
- j. Plan for reclamation failure and be prepared to repeat seeding as necessary to meet vegetation cover, composition, and diversity standards.

2. Vegetative Cover Standard

- a. Choose reference areas as goals for reclamation that have high wildlife value, with attributes such a diverse and productive understory of vegetation, productive and palatable shrubs, and a high prevalence of native species.
- b. Establish vegetation with total perennial non-invasive plant cover of at least eighty (80) percent of pre-disturbance or reference area levels.
- c. Establish vegetation with plant diversity of non-invasive species which is at least half that of pre-disturbance or reference area levels. Quantify diversity of vegetation using a metric that considers only species with at least 3 percent relative plant cover.
- d. Observe and maintain a performance standard for reclamation success characterized by the establishment of a self-sustaining, vigorous, diverse, locally appropriate plant community on the site, with a density sufficient to control erosion and non-native plant invasion and diversity sufficient to allow for normal plant community

		<p>development.</p> <p>3. Timing</p> <p>a. Use early and effective reclamation techniques, including interim reclamation to accelerate return of disturbed areas for use by wildlife.</p> <p>b. Remove all unnecessary infrastructure.</p> <p>c. Close and reclaim roads not necessary for development immediately, including removing all bridges and culverts and recontouring/reclaiming all stream crossings.</p> <p>d. Reclaim reserve pits as quickly as possible after drilling and ensure that pit contents do not contaminate soil.</p> <p>e. Remediate hydrocarbon spills on disturbed areas prior to reclamation.</p> <p>f. Reclaim sites during optimum seasons (e.g. late fall/early winter or early spring).</p> <p>g. Complete final reclamation activities so that seeding occurs during the first optimal season following plugging and abandonment of oil and gas wells.</p>	
2	Interim Reclamation	<p>4. Interim reclamation</p> <p>a. Use a variety of native grasses and forbs to establish effective, interim reclamation on all disturbed areas (e.g., road shoulders and borrow areas), including disturbed areas where additional future ground disturbance is expected to occur.</p> <p>b. Oxy will make a good-faith effort to perform interim reclamation to final reclamation species composition and establishment standards.</p> <p>c. Perform "interim" reclamation on all disturbed areas not needed for active support of production operations.</p> <p>5. Riparian areas (none associated with this pad or associated access roads and pipelines)</p> <p>a. Replace all riparian vegetation removed during development at a rate of at least 3:1.</p> <p>b. Restore both form and function of impacted wetlands and riparian areas and mitigate erosion.</p> <p>6. Disposal</p> <p>a. Remove well pad and road surface materials that are incompatible with post-production land use and re-vegetation requirements.</p> <p>b. Remove and properly dispose of degraded silt fencing and erosion control materials after their utility has expired.</p> <p>c. Remove and properly dispose of pit contents where contamination of surface water, groundwater, or soil by pit contents cannot be effectively prevented.</p> <p>7. Establishing reclaimed areas</p> <p>a. Apply certified weed free mulch and crimp or tacy to remain in place to reclaim areas for seed preservation and moisture retention.</p> <p>b. Utilize staked soil retention blankets for erosion control and reclamation of large surface areas with 3:1 or steeper slopes. Avoid use of plastic blanket materials, known to cause mortality of snakes.</p> <p>c. Control weeds in areas surrounding reclamation areas in order to reduce weed competition.</p> <p>d. Educate employees and contractors about weed issues.</p> <ul style="list-style-type: none"> <li>• Use early and effective reclamation techniques, including an aggressive interim reclamation program, to return habitat to use by greater sage-grouse as quickly as possible.</li> <li>• Gate single-purpose roads and restrict general public access to reduce traffic disruptions to wildlife.</li> <li>• Close and immediately reclaim all roads that are redundant, not used regularly, or have been abandoned to the maximum extent possible to minimize disturbance and habitat fragmentation.</li> <li>• Avoid aggressive non-native grasses and shrubs in mule deer and elk habitat restoration.</li> <li>• Reclaim mule deer and elk habitats with native shrubs, grasses, and forbs appropriate to the ecological site disturbed.</li> <li>• Restore disturbed sagebrush sites with the appropriate sagebrush species or subspecies on disturbed sagebrush sites. Use locally collected seed for reseeding where possible.</li> </ul>	

Total: 2 comment(s)



### Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
2519017	NRCS MAP UNIT DESC
400568109	FORM 2A SUBMITTED
400570302	30 DAY NOTICE LETTER
400570303	HYDROLOGY MAP
400570304	REFERENCE AREA MAP
400570306	CONST. LAYOUT DRAWINGS
400570307	CDPHE CONSULTATION
400570308	LOCATION PICTURES
400570312	LOCATION DRAWING
400570313	ACCESS ROAD MAP

Total Attach: 10 Files

### General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final review completed; no LGD or public comment received.	5/12/2014 2:19:57 PM
OGLA	Added pipeline information per Operator email dated April 16, 2014.	4/24/2014 1:49:06 PM
OGLA	Changed CDPHE Consultation to CPW Consultation in Attachments.	4/11/2014 4:27:55 PM
Permit	NRCS soil description incorrect. Operator provided correct survey.	3/20/2014 11:16:04 AM
DOW	CPW consultation complete.	3/19/2014 9:52:57 AM
Permit	New location pictures will be needed along with new reference area pictures.	3/19/2014 8:05:04 AM

Total: 6 comment(s)