

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:

400523416

Date Received:

03/17/2014

Oil and Gas Location Assessment

New Location     Refile     Amend Existing Location    Location#: 324496

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:

**324496**

Expiration Date:

**05/12/2017**

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: \_\_\_\_\_

Gas Facility Surety ID: \_\_\_\_\_

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

LOCATION IDENTIFICATION

Name: Sheep Mountain Unit

Number: Drill Site 1

County: HUERFANO

Quarter: NWNW    Section: 15    Township: 27S    Range: 70W    Meridian: 6    Ground Elevation: 8565

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: 47 feet FNL from North or South section line

315 feet FWL from East or West section line

Latitude: 37.707530    Longitude: -105.215170

PDOP Reading: 2.3    Date of Measurement: 12/04/2013

Instrument Operator's Name: S. Selin



Name: Carol Koscove Phone: 7192164668  
Address: 54 Maryland Fax: \_\_\_\_\_  
Address: \_\_\_\_\_ Email: lodi120@yahoo.com  
City: Colorado State: CO Zip: 80906  
Springs

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 \_\_\_\_\_

### 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: 2375 Feet  
Building Unit: 5280 Feet  
High Occupancy Building Unit: 5280 Feet  
Designated Outside Activity Area: 5280 Feet  
Public Road: 4507 Feet  
Above Ground Utility: 474 Feet  
Railroad: 5280 Feet  
Property Line: 315 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 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: 71, Ring cobbly loam, 20 to 45 percent slopes ---Huerfano County Area, Colorado  
NRCS Map Unit Name: \_\_\_\_\_  
NRCS Map Unit Name: \_\_\_\_\_

### 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: 12/10/2013

List individual species: Pine dropseed, Sideoats grama, Blue grama, Arizona fescue, Prairie junegrass, Bottlebrush squirreltail, Mountain muhly, Muttongrass, Western wheatgrass

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: 948 Feet

water well: 100 Feet

Estimated depth to ground water at Oil and Gas Location 50 Feet

Basis for depth to groundwater and sensitive area determination:

\_\_\_\_\_

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 8-15-D. The existing pad will be amended by constructing an annex to the south in order to drill the new well. There is currently 1 producing wells on this pad. The new well to be drilled will reach Federal minerals into BLM lease #COC 0100646. No new roads or pipelines will be required; the new well will tie-in to the existing gathering line. The CPW pre-consultation meeting occurred on October 31, 2013 with Al Trujillo. Al Trujillo granted an exception to the bighorn sheep and elk production area drilling restrictions. The proposed well is located in a NRCS area. Oxy will provide appropriate housing for essential personnel in order to conduct safe, efficient drilling operations at this well site.

There are so spacing orders for this location, so I utilized Rule 318.

Reference Area pictures and map will be provided in the next growing season.

If you have any questions or concerns, I can be reached at 7132157643 or kiki\_lockett@oxy.com. Thx

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: 5/13/2014

### 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.**

<u>COA Type</u>	<u>Description</u>

### Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
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.                 <ol style="list-style-type: none"> <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> </ol> </li> </ul> </li> </ul>

4. Maximize use of state-of-the-art drilling technology (e.g., high efficiency rigs, coiled-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 (*Artemesia 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

		<p>non-native plant invasion and diversity sufficient to allow for normal plant community 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 tacify 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>
2519019	NRCS MAP UNIT DESC
400523416	FORM 2A SUBMITTED
400572005	ACCESS ROAD MAP
400572006	30 DAY NOTICE LETTER
400572023	MULTI-WELL PLAN
400572025	CONST. LAYOUT DRAWINGS
400572026	CONST. LAYOUT DRAWINGS
400572027	CONST. LAYOUT DRAWINGS
400572030	HYDROLOGY MAP
400572031	LOCATION PICTURES
400574526	LOCATION DRAWING
400575366	NRCS MAP UNIT DESC

Total Attach: 12 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final review completed; no LGD or public comment received.	5/13/2014 6:53:16 AM
OGLA	Added: 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.  Per 04/16/2014 email from Operator.	4/23/2014 9:18:50 AM
OGLA	Per Operator - Topographical constraints will not allow the well to be drilled on the existing location. Field verified with COGCC staff during April 16, 2014, site visit.	4/11/2014 3:47:34 PM
OGLA	Added additional information to "Other Disposal Description" under Construction, Drilling and Waste tab per telephone conversation with Kiki Lockett, April 11, 2014.	4/11/2014 1:52:59 PM
OGLA	Added "field observation" to Vegetation.	4/4/2014 12:44:52 PM
OGLA	Appears that no acreage will be reclaimed during interim reclamation yet construction drawing of final pad size does not appear to encompass 6.10 acres. Verified with operator per telephone conversation on May 9, 2014, pad size will be 2.60 acres after Interim Reclamation.	4/4/2014 12:33:49 PM
Permit	Operator submitted elevation.	3/31/2014 10:55:27 AM
Permit	Looks like a new location.	3/31/2014 10:06:33 AM
Permit	Requested pipeline information. Size, distance, material constructed of, and substance carried by them. Requested post construction ground elevation.	3/31/2014 9:56:13 AM
DOW	Proposed well pad lies within BHS and Elk Sensitive Wildlife Habitat. The area surrounding the proposed well pad was previously disturbed by other industrial uses and CPW does not see the need for seasonal timing restrictions on new development.	3/24/2014 9:44:44 AM
Permit	Plugging bond not required on federal lease Deviated drilling plan should be on the form 2 NRCS map is incomplete No location drawing Basis for depth to ground water description missing. Sending form back to draft.	3/18/2014 11:26:56 AM

Total: 11 comment(s)