

**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:

400499014

Date Received:

Oil and Gas Location Assessment☐ New Location ☐ Refile ☒ Amend Existing Location Location#: 335018

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:

335018

Expiration Date:

☒ 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.

OperatorOperator Number: 66571Name: OXY USA WTP LPAddress: 760 HORIZON DR #101City: GRAND JUNCTION State: CO Zip: 81506**Contact Information**Name: Joan ProulxPhone: (970) 263-3641Fax: (970) 263-3694email: joan_proulx@oxy.com**RECLAMATION FINANCIAL ASSURANCE**☒ Plugging and Abandonment Bond Surety ID: 20060137☐ Gas Facility Surety ID: _____☐ Waste Management Surety ID: _____**LOCATION IDENTIFICATION**Name: ShellNumber: 797-09ACounty: GARFIELDQuarter: NWNW Section: 9 Township: 7S Range: 97W Meridian: 6 Ground Elevation: 5918

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: 345 feet FNL from North or South section line2344 feet FWL from East or West section lineLatitude: 39.466560 Longitude: -108.225770PDOP Reading: 2.7 Date of Measurement: 07/16/2007Instrument Operator's Name: B Johnson

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>3</u> | Oil Tanks | <u>1</u> | Condensate Tanks | <u>1</u> | Water Tanks | <u>2</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>1</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>1</u> | Flare | <u> </u> | LACT Unit | <u> </u> |
| | | | | | | | | Pigging Station | <u>1</u> |

OTHER FACILITIES

Other Facility Type

Number

| | |
|----------------------|----------------------|
| <input type="text"/> | <input type="text"/> |
|----------------------|----------------------|

Per Rule 303.b.(3)C, description of all oil, gas, and/or water pipelines:

CONSTRUCTION

Date planned to commence construction: 07/01/2014 Size of disturbed area during construction in acres: 2.39
Estimated date that interim reclamation will begin: 03/01/2016 Size of location after interim reclamation in acres: 1.30
Estimated post-construction ground elevation: 5918

DRILLING PROGRAM

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

Is H₂S 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? No

DRILLING WASTE MANAGEMENT PROGRAM

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

Cutting Disposal: ONSITE Cuttings Disposal Method: Cuttings trench

Other Disposal Description:

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: Shell

Phone:

Address: 200 North Dairy Ashford

Fax: _____

Address: _____

Email: _____

City: Houston State: TX Zip: 77079

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 09/11/2013

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: 5023 Feet
Building Unit: 5280 Feet
High Occupancy Building Unit: 5280 Feet
Designated Outside Activity Area: 5280 Feet
Public Road: 5280 Feet
Above Ground Utility: 5280 Feet
Railroad: 5280 Feet
Property Line: 345 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: Happle very channery sandy loam. 3% to 12% slopes, Map Unit Symbol 44
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: _____

List individual species: Western wheatgrass, Wyoming big sagebrush, Bottlebrush squirreltail, Sandberg bluegrass, Indian ricegrass, Needleandthread, Other perennial forbs, Prairie Junegrass, Yellow rabbitbrush

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: 5438 Feet

water well: 5936 Feet

Estimated depth to ground water at Oil and Gas Location 44 Feet

Basis for depth to groundwater and sensitive area determination:

Previously approved Form 2A for this location; COGCC website map; location is 248' from existing E Fork Conn Creek drainage

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

The proposed Shell 797-09-HN1 well will be drilled from the existing Shell 797-09A pad which is located on private lands owned by Shell. There are two producing wells on this pad (Shell 797-09-12, 05-045-13794, and Shell 797-09-37A, 05-045-14926). One horizontal well will be drilled in two stages. A vertical pilot hole will reach approximately 11,500' and be entirely on fee minerals. The pilot hole will then be plugged back and a horizontal sidetrack will be drilled into Federal minerals (Lease COC 67549). Access to the location is on existing roads across private land.

The CPW pre-consultation meeting took place March 18, 2010, when the Shell 797-09A location was permitted (Form 2A document #400062185). The CPW, OXY and Shell agreed on fencing and netting COA modifications for the reserve pit; a copy of that documentation is attached. However, because a closed-loop system will be used, a reserve pit will not be utilized.

Per GarCo Vacation Ordinance dated 10-5-1987, CR 213 is now OXY's private property north of Sec 8, 7S, 97W, 6 PM. Oxy will provide appropriate housing for essential personnel in order to conduct safe, efficient drilling operations at this well site.

Please note the following: The North arrow marker on the plat pages is pointed South. The two location stakes in the plat photos are for the two wells permitted in 2010 that were never drilled.

The production casing will be a tapered casing. The top portion of the casing will be 5 ½" from surface to 8,400', and the sidetrack portion of the casing will be 4 ½" from 8,400' to 15,346'.

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

Signed: _____ Date: _____ Email: joan_proulx@oxy.com

Print Name: Joan Proulx Title: Regulatory

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: _____

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

| | |
|--|--|
| | |
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Best Management Practices

| No | BMP/COA Type | Description |
|----|--------------|--|
| 1 | Wildlife | <p>Wildlife and Domestic Animals Policy</p> <ul style="list-style-type: none"> • All firearms and hunting paraphernalia are strictly prohibited. • Employees, contractors, subcontractors, or visitors will not hunt, fish, trap, trade, feed, or harass animals or keep wildlife in captivity. • Employees, contractors, subcontractors or visitors shall not bring domestic animals to Oxy property. • All employees, contractors, subcontractors, or visitors shall comply with Colorado Division of Wildlife, and U.S. Fish and Wildlife rules and regulations pertaining to wildlife. • All employees and visitors shall attend Oxy's Visitor Orientation presentation which includes training for Oxy's Wildlife and Domestic Animals policy. • Contractors and subcontractors shall read Oxy's Contractor, Health, Environment, and Safety Expectations Handbook, which contains Oxy's wildlife policies. After reading the handbook, all contractors and subcontractors shall sign, date, and return the last sheet of the handbook prior to coming on location. • All employees, contractors, subcontractors, or visitors shall comply with the following bear specific guidelines: <ul style="list-style-type: none"> o Initiate a food and waste/refuse management program that uses bear-proof food storage containers and trash receptacles, including but not limited to all permanent facilities, drilling locations, temp housing facilities, completions and workover locations. o Food and food waste located at temporary job sites shall be kept in the vehicle and only disposed of in bear-proof containers. o Report bear conflicts immediately to Oxy HES and/or Regulatory Departments so that it may be reported to CDOW. |
| 2 | Wildlife | <p>Sensitive Wildlife Habitat: Mule Deer and Elk</p> <ul style="list-style-type: none"> • Consult with CDPW to identify locations of mule deer and elk important wintering habitats and production areas. Map all seasonal habitats using CDPW habitat selection models as they become available. • After drilling and completions activities reduce visits to well-sites through remote monitoring (i.e. SCADA) and the use of multi-function contractors. • Schedule, as best as possible, well site visitations to portions of the day between 10:00 a.m. and 3:00 p.m. between December 1 through June 1 in mule deer critical winter range or elk winter concentration areas. • Schedule, as best as possible, well site visitations to portions of the day between 10:00 a.m. and 3:00 p.m. between May 15 through June 30 in mule deer or elk production areas. • Establish company guidelines to minimize wildlife mortality from vehicle collisions on roads. • Implement the species appropriate Infrastructure Layout and Drilling and Production Operations Wildlife Protection Measures found in Section II D. of the CDPW Wildlife BMP document as follows: <ul style="list-style-type: none"> • 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"> 1. Use centralized hydraulic fracturing operations. 2. Transport water through centralized pipeline systems rather than by trucking. 3. Where possible, locate pipeline systems under existing roadways, or roadways that are planned for development. 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 mule deer and elk 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 CDPW 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 CDPW, 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 CDPW.
 - 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 development.
 3. Timing
 - a. Use early and effective reclamation techniques, including interim reclamation to accelerate return of disturbed areas for use by wildlife.
 - b. Remove all unnecessary infrastructure.
 - c. Close and reclaim roads not necessary for development immediately, including removing all bridges and culverts and recontouring/reclaiming all stream crossings.
 - d. Reclaim reserve pits as quickly as possible after drilling and ensure that pit contents do not contaminate soil.

| | | |
|--|--|---|
| | | e. Remediate hydrocarbon spills on disturbed areas prior to reclamation. f. Reclaim sites during optimum seasons (e.g. late fall/early winter or early spring). g. Complete final reclamation activities so that seeding occurs during the first optimal season following plugging and abandonment of oil and gas wells. 4. Interim reclamation 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. b. Oxy will make a good-faith effort to perform interi |
|--|--|---|

Total: 2 comment(s)

Attachment Check List

| <u>Att Doc Num</u> | <u>Name</u> |
|---------------------------|-------------------------|
| 400499100 | ACCESS ROAD MAP |
| 400499102 | TOPO MAP |
| 400499103 | HYDROLOGY MAP |
| 400499104 | REFERENCE AREA MAP |
| 400499105 | LOCATION DRAWING |
| 400499108 | LOCATION PICTURES |
| 400499109 | REFERENCE AREA PICTURES |
| 400499110 | OTHER |
| 400499122 | LOCATION DRAWING |
| 400499125 | MINERAL LEASE MAP |
| 400499128 | LEGAL/LEASE DESCRIPTION |
| 400499129 | OTHER |
| 400499130 | LOCATION DRAWING |
| 400499131 | MULTI-WELL PLAN |
| 400499132 | OTHER |
| 400499135 | DRILLING PLAN |
| 400499139 | OTHER |
| 400499140 | NRCS MAP UNIT DESC |
| 400499178 | SURFACE OWNER CONSENT |

Total Attach: 19 Files

General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|--------------------------|-----------------------|----------------------------|
| | | |

Total: 0 comment(s)