

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:

401606654

(SUBMITTED)

Date Received:

04/12/2018

Oil and Gas Location Assessment

☐ New Location ☒ Refile ☐ Amend Existing Location Location#: 442030

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:

**442030**

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.

Operator

Operator Number: 2800  
Name: ANADARKO E&P ONSHORE LLC  
Address: P O BOX 173779  
City: DENVER State: CO Zip: 80217-3779

Contact Information

Name: Teisha Black  
Phone: (435) 724-3085  
Fax: ( )  
email: Teisha.Black@anadarko.com

RECLAMATION FINANCIAL ASSURANCE

☒ Plugging and Abandonment Bond Surety ID: 20030041 ☐ Gas Facility Surety ID: \_\_\_\_\_  
☐ Waste Management Surety ID: \_\_\_\_\_

LOCATION IDENTIFICATION

Name: RESOLUTION FED Number: 12-65-29-20-4NH  
County: WELD  
QuarterQuarter: SESW Section: 29 Township: 12N Range: 65W Meridian: 6 Ground Elevation: 5956  
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: 380 feet FSL from North or South section line  
2165 feet FWL from East or West section line  
Latitude: 40.971886 Longitude: -104.687450  
PDOP Reading: 1.1 Date of Measurement: 12/10/2014  
Instrument Operator's Name: CHRIS KASCHMITTER

## 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	2	Oil Tanks*	8	Condensate Tanks*		Water Tanks*	4	Buried Produced Water Vaults*	
Drilling Pits		Production Pits*		Special Purpose Pits		Multi-Well Pits*		Modular Large Volume Tanks	
Pump Jacks	2	Separators*	2	Injection Pumps*		Cavity Pumps*		Gas Compressors*	
Gas or Diesel Motors*	2	Electric Motors		Electric Generators*	2	Fuel Tanks*		LACT Unit*	
Dehydrator Units*		Vapor Recovery Unit*		VOC Combustor*	2	Flare*	2	Pigging Station*	

## OTHER FACILITIES\*

Other Facility Type

Number

Flow Lines	2
Heater Treater	2

\*Those facilities indicated by an asterisk (\*) shall be used to determine the distance from the Production Facility to the nearest cultural feature on the Cultural Setbacks Tab.

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

Please see Comments section for pipeline and flow line description.

## CONSTRUCTION

Date planned to commence construction: 10/01/2018

Size of disturbed area during construction in acres: 9.00

Estimated date that interim reclamation will begin: 03/04/2019

Size of location after interim reclamation in acres: 3.50

Estimated post-construction ground elevation: 5954

## 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: OFFSITE

Drilling Fluids Disposal Method: Commercial Disposal

Cutting Disposal: OFFSITE

Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

Beneficial reuse or land application plan submitted? Yes

Reuse Facility ID: or Document Number:

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

## SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: Junior F. Stephen Rev Tru Phone: 970-662-6912  
 Address: P.O. Box 692 Fax: \_\_\_\_\_  
 Address: \_\_\_\_\_ Email: \_\_\_\_\_  
 City: Cheyenne State: WY Zip: 82003-0692

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: Bond

Surface damage assurance if no agreement is in place: Blanket Surface Surety ID: 20030042

Date of Rule 306 surface owner consultation 03/19/2018

## 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

Provide the distance to the nearest cultural feature as measured from Wells or Production Facilities onsite.

	From WELL	From PRODUCTION FACILITY
Building:	2072 Feet	1643 Feet
Building Unit:	2217 Feet	1788 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	373 Feet	102 Feet
Above Ground Utility:	342 Feet	72 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	380 Feet	110 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.
- For measurement purposes only, Production Facilities should only include those items with an asterisk(\*) on the Facilities Tab.

## DESIGNATED SETBACK LOCATION INFORMATION

Check all that apply. This location is within a:

- ☐ Buffer Zone
- ☐ Exception Zone
- ☐ Urban Mitigation Area

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: \_\_\_\_\_

- 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.
- Large UMA Facility - as defined in 100-Series Rules.

## FOR MULTI-WELL PADS AND PRODUCTION FACILITIES WITHIN DESIGNATED SETBACK LOCATIONS ONLY:

- ☐ Check this box if this Oil and Gas Location has or will have Production Facilities that serve multiple wells (on or offsite) and the Production Facilities are proposed to be located less than 1,000 feet from a Building Unit. *(Pursuant to Rule 604.c.(2)E.i., the operator must evaluate alternative locations for the Production Facilities that are farther from the Building Unit, and determine whether those alternative locations were technically feasible and economically practicable for the same proposed development.)*
- ☐ By checking this box, I certify that no alternative placements for the Production Facilities, farther from the nearest Building Unit, were available based on the analysis conducted pursuant to Rule 604.c.(2)E.i.

In the space below, explain rationale for siting the multi-well Production Facility(ies) that supports your Rule 604.c.(2)E.i determination. Attach documentation that supports your determination to this Form 2A.

## 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: 5—Ascalon sandy loam, 5 to 9 percent slopes

NRCS Map Unit Name: 50—Paoli fine sandy loam, 6 to 9 percent slopes

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: 02/08/2018

List individual species: Indian ricegrass, prairie sagewort, Aster, blue grama, Cirsium, needle and thread, winterfat, pricklypear, Phacelia, unknown perennial grass

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: 388 Feet

water well: 5034 Feet

Estimated depth to ground water at Oil and Gas Location 344 Feet

Basis for depth to groundwater and sensitive area determination:

Nearest Surface Water Features:

Intermittent Stream: 388' NW Elev: 5928'

Intermittent Stream: 838' N Elev: 5921

Other: 880' N Elev: 5921' Loc Elev: 5955'

Nearest water wells:

5034' SSW, Permit 173500-, depth 344', Static Water Level 210', Elev 6013'

Sensitive Area Determination: SENSITIVE AREA, downgradient surface water feature within 1,000'

NO SWL CALCULATION PERFORMED, no acceptable water wells within 3 miles for calculation

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: \_\_\_\_\_

Is the Location within a Floodplain?

☒ No ☐ Yes

Floodplain Data Sources Reviewed (check all that apply)

☒ Federal (FEMA)

☐ State

☒ County

☐ Local

☐ Other \_\_\_\_\_

## GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 609

## WILDLIFE

☐ This location is included in a Wildlife Mitigation Plan

☐ This location was subject to a pre-consultation meeting with CPW held on \_\_\_\_\_

### Operator Proposed Wildlife BMPs

No BMP

## DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

☐ Rule 604.a.(1)A. Exception Zone (within 500' of a Building Unit) and is in an Urban Mitigation Area

☐ 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 nearest building unit is located 2062' away from this oil and gas location, therefore it is not within a Designated Setback Location and is exempt from 604.c..

Drilling fluids disposal: Anadarko will reuse water-based drilling fluids to the maximum extent possible, at which point they will either be land applied or taken to a licensed, commercial disposal site; the decision will be based upon laboratory analysis of fluids. KMG will reuse oil-based drilling fluids to the maximum extent possible, at which point they will be returned to the fluids manufacturer for reconditioning or disposal at the licensed, commercial disposal sites listed below.

Liquids:

- Waste Management's CSI facility in Bennett, CO
- Republic Services' Tower Road landfill in Denver, CO

Solids

- Waste Management's Buffalo Ridge facility in Keenesburg, CO
- Waste Management's North Weld facility in Ault, CO
- Waste Connection's North Regional Landfill in Erie, CO

Pipelines: Buried pipelines will be utilized to gather the gas and oil product from the location (3 gas pipelines, 1 oil pipeline). Both gas and oil pipelines will be constructed from steel of suitable wall thickness and material grade to meet the respective gathering systems design pressure. Gas pipelines will range in diameter from 4" to 20"; oil pipelines from 4" to 12". Capacity of pipelines will vary based on diameter. Pipelines will begin at the location and terminate at larger trunk lines in the area. Temporary above ground polyethylene water pipelines (diameter 10" – 12" with a 60 BPM capacity) will deliver water to location operations from larger trunk lines.

Flow Lines: Three (3) flow lines will flow to the production facility location. During production, flow direction in the flow lines is from the well head to the production facility. The size of flow lines is typically 2". Flow lines will be constructed from steel pipe, buried, and will equal the distance between the well heads and will be contained within the identified disturbance area.

There will be one (1) compress air supply line installed from each well head to the production facility. During operation flow direction in the supply lines will be from the production facility to the well head. The size of the supply lines is typically 1". Supply lines will be constructed from poly or steel pipe, buried, and will be contained within the identified disturbance area.

Gas lift lines are also occasionally installed (one per well) from the well head to the production facility. During operation flow direction in the gas lift lines will be from the production facility to the well head. The size of the gas lift lines is typically 2". Gas lift lines will be constructed from steel pipe, buried, and will be completely contained within the identified disturbance area if required.

Right to construct and Surface Use Agreement currently under negotiation with surface owner. Currently have a staking waiver. Using blanket bond for right to construct at time of permit submission.

Reclamation will commence during the following growing season.

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

Signed: \_\_\_\_\_ Date: 04/12/2018 Email: Teisha.Black@anadarko.com

Print Name: Teisha Black 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: \_\_\_\_\_

## 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	Planning	The nearest building unit is located 2217' away from this oil and gas location, therefore it is not within a Designated Setback Location and is exempt from 604.c.
2	Storm Water/Erosion Control	604c.(2).G. Berm Construction: Anadarko E&P Onshore LLC will create tertiary containment by construction of a berm or diversion dike, site grading, or other comparable measures sufficient to further protect the intermittent stream located 439' west of the proposed oil and gas location.

Total: 2 comment(s)

**Attachment Check List**

**Att Doc Num**

**Name**

401606654	FORM 2A SUBMITTED
401616823	NRCS MAP UNIT DESC
401616834	ACCESS ROAD MAP
401616841	CONST. LAYOUT DRAWINGS
401616847	MULTI-WELL PLAN
401616848	LOCATION DRAWING
401616887	WELL LOCATION PLAT
401616891	REFERENCE AREA PICTURES
401616892	REFERENCE AREA MAP
401616897	HYDROLOGY MAP
401616906	REFERENCE AREA PICTURES
401616909	WASTE MANAGEMENT PLAN

Total Attach: 12 Files

**General Comments**

**User Group**

**Comment**

**Comment Date**

		Stamp Upon Approval
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Total: 0 comment(s)



## **Public Comments**

No public comments were received on this application during the comment period.

