

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:

401368318

Date Received:

09/22/2017

Oil and Gas Location Assessment

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

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:

**453618**

Expiration Date:

**01/01/2021**

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: 10311  
 Name: SRC ENERGY INC  
 Address: 1675 BROADWAY SUITE 2600  
 City: DENVER    State: CO    Zip: 80202

Contact Information

Name: Erin Ekblad  
 Phone: (720) 616.4319  
 Fax: (720) 616.4301  
 email: eekblad@srcenergy.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20090043     Gas Facility Surety ID: \_\_\_\_\_  
 Waste Management Surety ID: \_\_\_\_\_

LOCATION IDENTIFICATION

Name: Troutd    Number: 18-27 Pad  
 County: WELD  
 Quarter: NENW    Section: 27    Township: 6N    Range: 66W    Meridian: 6    Ground Elevation: 4720

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: 760 feet FNL from North or South section line  
1760 feet FWL from East or West section line

Latitude: 40.464592    Longitude: -104.767045

PDOP Reading: 1.9    Date of Measurement: 04/27/2017

Instrument Operator's Name: Mike Hernandez



## 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? No

Reuse Facility ID: \_\_\_\_\_ or Document Number: \_\_\_\_\_

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

## SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: SRC Energy Inc. Phone: 720.616.4300

Address: 1675 Broadway Fax: 720.616.4301

Address: Suite 2600 Email: \_\_\_\_\_

City: Denver State: CO Zip: 80202

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: applicant is owner

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

Date of Rule 306 surface owner consultation 04/27/2017

## 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:	489 Feet	300 Feet
Building Unit:	688 Feet	1401 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	743 Feet	1476 Feet
Above Ground Utility:	731 Feet	1469 Feet
Railroad:	3960 Feet	4342 Feet
Property Line:	257 Feet	156 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: 08/11/2017

- 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: NRCS 41: Nunn clay loam, 0 to 1 percent slopes

NRCS Map Unit Name: NRCS 46: Olney fine sandy loam, 0 to 1 percent slopes

NRCS Map Unit Name: NRCS 50: Otero sandy loam, 0 to 1 percent slopes

**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:

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: 21 Feet

water well: 781 Feet

Estimated depth to ground water at Oil and Gas Location 30 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: \_\_\_\_\_

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 318A

**WILDLIFE**

This location is included in a Wildlife Mitigation Plan

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

## 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	<p>The Reference well for the Troutd 18-27 Pad, is Troutd 40N-23C-M. This is a 36 Well Pad.</p> <p>SRC Energy Inc. will comply with all MLVT policies and requirements for this pad. For the MLVT, we will plan on 140 days on location. 42,000 bbl capacity 12' high x 160' diameter Manufacturer is unknown at this time. Potential: PCI Manufacturing, Pinnacle, Southern Frac, or Big Holdings. SRC will comply with all MLVT policies and requirements for this pad.</p> <p>Please note: the reclamation plan is 2 pages and reflects North and South Disturbance acreages. This is how SRC came up with the Acreage values on the Construction, Drilling and Waste Tab.</p> <p>All Traffic Plans are approved per our access permit, part of the access permitting process.</p> <p>SRC Energy Inc owns this property, so no SUA needed. SRC Energy Inc. also is requesting to waive itself for Rule 318A.a. &amp; 318A.c. Additionally SRC Energy Inc. owns the nearest BU to this location and it is currently abandoned, which it will remain that way. In the future we might be tearing it down.</p> <p>We will be adding fencing around the wellheads and facility. Sound walls will be determined once a baseline sound study has been completed.</p> <p>SRC anticipates pipeline to this location and all future locations to eliminate trucks on road. Our access permit to location is our notification to Weld County, the city of Greeley, or additional municipality if necessary for approved traffic routes, and traffic control.</p>
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I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.

Signed: \_\_\_\_\_ Date: 09/22/2017 Email: eeklad@srcenergy.com

Print Name: Erin Ekblad Title: Manager Regulatory Affair

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: 1/2/2018

## 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.**

<b>COA Type</b>	<b>Description</b>
	Operator shall post an approved copy of the Form 2A on the location during all construction, drilling, and well completion activities.
<b><u>Best Management Practices</u></b>	
<b>No BMP/COA Type</b>	<b>Description</b>
1 Planning	Planning : 604.c(2)M. Fencing: SRC Energy Inc. owns this property and we will be adding fencing around the wellheads and facility.
2 Planning	804. Visual Impacts: All long term facility structures will be painted a color that enables the facilities to blend in with the natural background color of the landscape, as seen from a viewing distance and location typically used by the public. Maintain appearance with garbage clean-up; a trash bin will be located on site to accumulate waste by the personnel drilling the wells. Site will have unused equipment, trash and junk removed immediately.
3 Planning	604.c.(2)N. Control of fire hazards: All material that is considered a fire hazard shall be a minimum of 25' from the wellhead tanks or separators. Electrical equipment shall comply with API IRP 500 and will comply with the current national electrical code. Per 604A.d. Flammable liquids shall not be stored within fifty (50) feet of the wellbore, except for the fuel in the tanks of operating equipment or supply for injection pumps. Where terrain and location configuration do not permit maintaining this distance, equivalent safety measures should be taken.
4 Traffic control	604.c.(2)S. Access Roads: The access road will be constructed to accommodate local emergency vehicles. This road will be maintained for access at all times. Traffic will be routed to minimize local interruption. Dust control measures will also be utilized., which we will use Magnesium Chloride to control dust.
5 Traffic control	RULE 604.c.(2)D: If required by the local government, a traffic plan shall be coordinated with the local jurisdiction prior to commencement of move in and rig up. Any subsequent modification to the traffic plan must be coordinated with the local jurisdiction. Our access permit to location is our notification to Weld County, the city of Greeley, or additional municipality if necessary for approved traffic routes, and traffic control. All Traffic Plans are approved per our access permit, part of the access permitting process
6 General Housekeeping	General Housekeeping: 604.c.(2)P. Trash Removal: All trash, debris and material not intrinsic to the operation of the oil and gas facility shall be removed and legally disposed of as applicable.
7 Material Handling and Spill Prevention	604.c.(2)F. Leak Detention Plan: Pumper will visit the location daily and visually inspect all tanks and fittings for leaks. Additionally, monthly documented SPCCP inspections are conducted pursuant to 40 CFR 112.
8 Material Handling and Spill Prevention	604.c.(2)R Tank Specifications: Tanks will be designed, constructed and maintained in accordance with NFPA Code 30. The tanks are visually inspected once a day for issues, and recorded inspections are conducted once a month.
9 Construction	604.c.(3)B. Berm Construction. Tank berms shall be constructed of steel rings with a synthetic or engineered liner and designed to contain 150% of the capacity of the largest tank. All berms will be visually checked periodically to ensure proper working condition. Secondary containment devices shall be sufficiently impervious to contain any spilled or released material. Tertiary containment, such as an earthen berm, will be installed around production facilities.
10 Construction	803 Light sources during all phases of operations will be directed downwards and away from occupied structures where possible. Once the drilling and completion rigs leave the site, lighting usually exists on the entrance/exit doors to the LACT units and Instrument Air skids, all for safety. The light fixtures need to be specified as "shine down" with appropriate shields.
11 Construction	604.c.(2).Q. All guy line anchors left buried for future use shall be identified by a marker of bright color not less than four (4) feet in height and not greater than one (1) foot east of the guy line anchor.
12 Construction	604.c.(2).E. This will be a multi-well pad.
13 Noise mitigation	604.c.(2)A. Sound walls will be used where necessary to surround the well site during drilling operations. Sound walls will be determined once a baseline sound study has been completed at this time.

14	Emissions mitigation	604.c.(2)C.i. Green Completions - Emission Control System: Test separators and associated flow lines and sand traps shall be installed on-site to accommodate green completions techniques pursuant to COGCC Rules. The flowback gas shall be sold or shall be captured and combusted with an Emissions Control Device (ECD), which will be installed and kept in operable condition for least the first 90-days of production pursuant to CDPHE rules. This ECD shall have an adequate capacity for 1.5 times the largest flowback within a 10 mile radius, and will be piped to other or permanent equipment and shall be provided with the equipment needed to maintain combustions where non-combustible gases are present. There is a sales line available, SRC plans to turns to sales as soon as possible.
15	Odor mitigation	Rule 805: Oil & gas facilities and equipment shall be operated in such a manner that odors and dust do not constitute a nuisance or hazard to public welfare.
16	Odor mitigation	Odor Mitigation: For the OBM system, the base fluid is D822. The fluid is a refined product that has low VOC and BTEX counts. The BTEX counts are trace levels so this provides a much safer work environment as compared to diesel. The product has a reduction in aromatic compounds when compared to diesel so the odor emitted by the fluid is minimal. The flash point is 85°F higher than diesel which increases the overall safety of the product. During our drilling operations we average 5-6 loads of cuttings hauled off per day to a disposal facility. During the platting process of every location, special consideration is payed to the orientation of the rig with respect to surrounding residential units. When possible, the generators will be placed on the far side of location away from surrounding occupied units. Prevailing wind direction is taken into consideration when planning a location in order to mitigate odor, and noise from being a nuisance to the surrounding stakeholders. When possible, the rig is oriented in a way in which residential units are upwind from the location. Hydrocarbon odors from production facilities are minimize and eliminated by keeping all product inside pipe, separators, tanks, and combustors. Uncommon leaks are discovered by frequent FLIR camera inspections and immediately repaired. All tanks are sealed with best available industry thief hatches and gaskets. Tank vapors are captured with properly sized piping and combustors.
17	Drilling/Completion Operations	Drilling/Completion Operations 604.c.(2).K. 604.c.(2).K. Pit level Indicators - For the rig pits (steel tanks) we utilize the Pason PVT (Pit Volume Totalizer) system in conjunction with the EDR (Electronic Depth Recorder) systems on both rigs which incorporate digital recording of pit volumes, settable alarms for gain and loss so we are able to track the pit volumes. These items are standard on a 5K system which is what we are permitting for.
18	Drilling/Completion Operations	SRC will comply with all MLVT policies and requirements for this pad.
19	Drilling/Completion Operations	604.c.(2).U. Final Reclamation-The operator shall identify the location of the wellbore with a permanent monument as specified in Rule 319.a.(5). The operator shall also inscribe or imbed the well number and date of plugging upon the permanent monument.
20	Drilling/Completion Operations	604.c.(2).O. Drilling and Completion-All loadlines shall be bullplugged or capped.
21	Drilling/Completion Operations	604.c.(2)B.i Operator will be utilizing a closed loop system.
22	Final Reclamation	604.c.(2)T. Within 90 days subsequent to the time of plugging and abandonment of the entire site, superfluous debris and equipment shall be removed from the site. Identification of plugged and abandoned wells will be identified pursuant to 319.a.(5)

Total: 22 comment(s)

## Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
2478434	FACILITY LAYOUT DRAWING
2478435	RULE 306.E. CERTIFICATION
2478436	CORRESPONDENCE
2478456	CORRESPONDENCE
2478457	OTHER
401368318	FORM 2A SUBMITTED
401368340	WASTE MANAGEMENT PLAN
401368375	NRCS MAP UNIT DESC
401368378	NRCS MAP UNIT DESC
401368381	NRCS MAP UNIT DESC
401368384	ACCESS ROAD MAP
401368386	OTHER
401368390	LOCATION PICTURES
401368393	LOCATION DRAWING
401368395	LOCATION PICTURES
401368399	OTHER
401368404	MULTI-WELL PLAN
401409240	HYDROLOGY MAP
401410401	PRE-APPLICATION NOTIFICATION CERTIFICATION

Total Attach: 19 Files

**General Comments**

<b><u>User Group</u></b>	<b><u>Comment</u></b>	<b><u>Comment Date</u></b>
Permit	Final Review Completed. Changed the right to construct to Applicant with operator's concurrence.	12/29/2017
Permit	Permitting Review Complete.	12/14/2017
OGLA	Operator provided updated size of disturbance area during construction and after interim reclamation & a revised Reclamation Plan drawing attachment.	11/29/2017
OGLA	IN PROCESS - Operator revised Facility Layout Drawing to show missing gas lift skids, revised the date interim reclamation will begin, revised the distance to the nearest downgradient surface water feature, revised the basis for groundwater depth and sensitive area determination, revised the 604.c.(2)N Control of fire hazards BMP, & provided the Rule 306.e. Certification letter.  OGLA review complete and task passed.	11/13/2017
OGLA	ON HOLD - Requested operator revise Facility Layout Drawing to show missing gas lift skids, revise the date interim reclamation will begin or clarify how they will comply with Rule 1003.b., revise the distance to the nearest downgradient surface water feature, revise the basis for groundwater depth and sensitive area determination, revise the 604.c.(2)N Control of fire hazards BMP, & provide the Rule 306.e. Certification letter. Due by 12/8/17.	11/08/2017
LGD	The City of Greeley is reviewing an application for local land use approval from the applicants for this proposed oil and gas facility (Planning File No. USR 11:17).The City respectfully requests that the State withhold approval of any State permit until the operator successfully receives local land use approval, in this instance a Use by Special Review.  If the COGCC does not withhold approval, the City then requests that the State application be approved with the condition that the 2A Permit be subsequently formally amended to incorporate any site and/or operational standards that gets finalized through the local Use by Special Review approval.The City believes this deference is consistent with, and in the spirit of, the standing Memorandum of Understanding between the City of Greeley and the COGCC, and at the same time the City acknowledges the State's right to determine areas of operational conflict that would otherwise prohibit the incorporation of such standards into an Amended Form 2A Permit.  City of Greeley LGD Comments  Brad Mueller  Brad.mueller@greeleygov.com  (970)350-9786	10/13/2017
Permit	Passed Completeness.	10/10/2017
OGLA	Passed Buffer Zone completeness review	10/03/2017
OGLA	Did not pass Buffer Zone completeness review. Missing BMPs for Rule 604.c.(2)B, C, and O. Note that BMP for 604.c.(2)B on form should be 604.c.(2)G. Contact operator and push to Draft.	10/03/2017
Permit	Referred to OGLA Supervisor for buffer zone review.	09/25/2017

Total: 10 comment(s)