

FORM  
2A

Rev  
04/01

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:

400421597

Date Received:

05/29/2013

Oil and Gas Location Assessment

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

Submit original plus one copy. This form is to be submitted to the COGCC prior to any ground disturbance activity associated with oil and gas development operations. This Assessment may be approved as a standalone application or submitted as an informational report accompanying an Application for Permit-To-Drill, Form 2. Approval of this 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. This form may serve as notice to land owners and other interested parties, please see the COGCC web site at <http://colorado.gov/cogcc/> for all accompanying information pertinent to this Oil and Gas Location Assessment.

Location ID:

**434391**

Expiration Date:

**09/25/2016**

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

1. 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.

2. Operator

Operator Number: 10311  
 Name: SYNERGY RESOURCES CORPORATION  
 Address: 20203 HIGHWAY 60  
 City: PLATTEVILLE State: CO Zip: 80651

3. Contact Information

Name: Brianne Visconti  
 Phone: (970) 737-1073  
 Fax: (970) 737-1045  
 email: bvisconti@syrginfo.com

4. Location Identification:

Name: Kelly Farms Number: A-4-3NHZ  
 County: WELD  
 Quarter: SE Section: 4 Township: 5N Range: 66W Meridian: 6 Ground Elevation: 4754

Define a single point as a location reference for the facility location. This point should be used as the point of measurement in the drawings to be submitted with this application. When the location is to be used as a well site then the point shall be a well location.

Footage at surface: 2041 feet FNL, from North or South section line, and 2304 feet FWL, from East or West section line.  
 Latitude: 40.431766 Longitude: -104.784803 PDOP Reading: 1.5 Date of Measurement: 05/16/2013  
 Instrument Operator's Name: Aaron Demo

5. Facilities (Indicate the number of each type of oil and gas facility planned on location):

Special Purpose Pits: <input type="text"/>	Drilling Pits: <input type="text"/>	Wells: <input type="text" value="12"/>	Production Pits: <input type="text"/>	Dehydrator Units: <input type="text"/>
Condensate Tanks: <input type="text" value="20"/>	Water Tanks: <input type="text" value="6"/>	Separators: <input type="text" value="12"/>	Electric Motors: <input type="text"/>	Multi-Well Pits: <input type="text"/>
Gas or Diesel Motors: <input type="text" value="1"/>	Cavity Pumps: <input type="text"/>	LACT Unit: <input type="text"/>	Pump Jacks: <input type="text"/>	Pigging Station: <input type="text" value="1"/>
Electric Generators: <input type="text"/>	Gas Pipeline: <input type="text" value="1"/>	Oil Pipeline: <input type="text"/>	Water Pipeline: <input type="text"/>	Flare: <input type="text"/>
Gas Compressors: <input type="text" value="1"/>	VOC Combustor: <input type="text" value="6"/>	Oil Tanks: <input type="text"/>	Fuel Tanks: <input type="text"/>	

Other: \_\_\_\_\_

6. Construction:

Date planned to commence construction: 12/01/2013 Size of disturbed area during construction in acres: 5.83  
 Estimated date that interim reclamation will begin: 04/01/2014 Size of location after interim reclamation in acres: 3.75  
 Estimated post-construction ground elevation: 4750 Will a closed loop system be used for drilling fluids: Yes   
 Will salt sections be encountered during drilling: Yes  No  Is H2S anticipated? Yes  No   
 Will salt (>15,000 ppm TDS Cl) or oil based muds be used: Yes  No   
 Mud disposal: Offsite  Onsite  Method: Land Farming  Land Spreading  Disposal Facility   
 Other: \_\_\_\_\_

**7. Surface Owner:**

Name: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Address: \_\_\_\_\_ Fax: \_\_\_\_\_  
 Address: \_\_\_\_\_ Email: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ Date of Rule 306 surface owner consultation: 02/22/2013  
 Surface Owner:  Fee  State  Federal  Indian  
 Mineral Owner:  Fee  State  Federal  Indian  
 The surface owner is:  the mineral owner  committed to an oil and gas lease  
 is the executer of the oil and gas lease  the applicant  
 The right to construct the location is granted by:  oil and gas lease  Surface Use Agreement  Right of Way  
 applicant is owner  
 Surface damage assurance if no agreement is in place:  \$2000  \$5000  Blanket Surety ID \_\_\_\_\_

**8. Reclamation Financial Assurance:**

Well Surety ID: 20090043  Gas Facility Surety ID: \_\_\_\_\_  Waste Mgnt. Surety ID: \_\_\_\_\_

**9. Cultural:**

Is the location in a high density area (Rule 603.b.): Yes  No   
 Distance, in feet, to nearest building: 520, public road: 242, above ground utility: 536,  
 railroad: 5280, property line: 226

**10. 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

**11. 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

**12. Soils:**

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.gov/> 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: Otero Sandy Loam, 3 to 5 Percent Slopes; Map Unit Symbol 52

NRCS Map Unit Name: \_\_\_\_\_  
NRCS Map Unit Name: \_\_\_\_\_

**13. 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): \_\_\_\_\_

**14. Water Resources:**

Rule 901.e. may require a sensitive area determination be performed. If this determination is performed the data is to be submitted with the Form 2A.

Is this a sensitive area:  No  Yes Was a Rule 901.e. Sensitive Areas Determination performed:  No  Yes  
Distance (in feet) to nearest surface water: 654, water well: 2290, depth to ground water: 20  
Is the location in a riparian area:  No  Yes Was an Army Corps of Engineers Section 404 permit filed  No  Yes  
Is the location within a Rule 317B Surface Water Suppl Area buffer zone:  
 No  0-300 ft. zone  301-500 ft. zone  501-2640 ft. 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:  No  Yes

**15. Comments:**

These proposed 12 wells will adjoin the SRC Northridge existing directional well pad (West of the existing wells). 7 (Kelly Farms wells) are pooling our leasehold in the NE/4 Sec. 4, and NW/4 Sec. 3, and 5 (Northridge) wells are pooling the leasehold in the NW/4 Sec. 4, and NE/4 Sec. 5, T 5N-R66W.

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.  
Signed: \_\_\_\_\_ Date: 05/29/2013 Email: crasmuson@syrginfo.com  
Print Name: Craig Rasmuson Title: VP of Operations

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: 9/26/2013

**CONDITIONS OF APPROVAL, IF ANY:** \_\_\_\_\_

**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.**

**Description**

Synergy will use emission control equipment at the oil and gas location with a design rating of 98% reduction efficiency and will provide the COGCC with documentation from the manufacturer stating the design rating.

Noise suppression practices will be used to insure the best management of noise and light during drilling and completion operations. Synergy will install a thirty foot high temporary wall around eighty percent of the location, which will remain in place during drilling and completion operations. Synergy will provide a facility drawing to the COGCC that illustrates the layout of the thirty foot high temporary wall.

Containment of silica dust: Synergy will use a state of the art vacuum system to contain silica dust during drilling and completion operations.

Synergy will also notify the COGCC via the Form 42 Notice of Notification a minimum of 48 hours prior to: 1) the start of construction; 2) move in rig up; 3) start of production; and 4) any of these same operations that occur after any 12 month or longer period of inactivity at the oil and gas location.

Synergy will comply with all mitigation measures listed in COGCC Rules 604.c. 802, 803, 804, and 805 adopted as of August 1, 2013.

Synergy will use dust abatement products to control dust created by the traffic on the road base access road and dirt operations location.

Fugitive emissions monitoring: Synergy will conduct emissions monitoring inspections using a forward-looking infrared (FLIR) camera on a monthly basis. Synergy will maintain a log of the inspections and will retain the FLIR camera video records in accordance with COGCC Rule 205.f. Synergy will remediate any equipment failure or upset conditions identified by the inspections in a timely fashion.

Conduct baseline samples and water monitoring: Synergy will conduct surface water sampling in Sheep Draw: 1) before construction commences; 2) one week after production starts; and 3) annually throughout production. At least one surface water sample will be collected upstream, adjacent to, and downstream of the oil and gas location. The initial and subsequent samples will conform with COGCC Rule 609.e, excluding dissolved gases.

Total automation on site: Synergy will insure that all new equipment on site is automated. The automated equipment is the latest development in safety systems developed specifically for oil and gas industry equipment on the facility. No audible system or device will be on site. Automation will give Synergy the ability to monitor the location 24/7 remotely, and it will also insure in an event of any changes from the normal operations, the location will automatically shut itself in and notify Synergy personnel of the event. This automation will also allow Synergy to limit the number of times the thief hatches need to be opened on the production tanks, as the tank levels will be retrieved from the automated system. The hatches will only be needed to be opened during the pick-up of the oil.

## Attachment Check List

<b>Att Doc Num</b>	<b>Name</b>
1667714	CONST. LAYOUT DRAWINGS
1667715	OTHER
1667716	CORRESPONDENCE
1667717	ACCESS ROAD MAP
1667728	CORRESPONDENCE
1667758	CDPHE CONSULTATION
1667784	CORRESPONDENCE
1667785	CORRESPONDENCE
2086404	CORRESPONDENCE
2086405	CORRESPONDENCE
2086406	CORRESPONDENCE
2086407	CORRESPONDENCE
2086408	CORRESPONDENCE
2114108	MULTI-WELL PLAN
400421597	FORM 2A SUBMITTED
400421703	NRCS MAP UNIT DESC
400421705	OTHER
400421709	ACCESS ROAD MAP
400421710	HYDROLOGY MAP
400421722	OIL & GAS LEASE
400421723	LOCATION DRAWING
400421726	LOCATION PICTURES
400421728	LOCATION DRAWING
400421730	EXCEPTION LOC WAIVERS
400425326	EXCEPTION LOC REQUEST
400426233	WASTE MANAGEMENT PLAN

Total Attach: 26 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
OGLA	Per Director, taken off hold for final approval.	9/25/2013 6:25:04 AM
OGLA	COGCC FIU and OGLA staff visited existing Northridge Location following storm and flood event of September 2013 and observed no signs of inundation by flood waters and no site degradation due to precipitation and runoff.	9/25/2013 6:23:35 AM
OGLA	COGCC received written concurrence with COAs from operator 9/6/13.	9/25/2013 6:23:03 AM
OGLA	Status update: developing language for COAs.	8/8/2013 12:04:08 PM
OGLA	Onsite meeting conducted 7/30/2013. Additional mitigation measures discussed with and agreed to by operator.	8/8/2013 12:03:25 PM
OGLA	Placed Form 2A ON HOLD, at Director's request for additional discussions with operator regarding location, operations, and mitigation.	7/15/2013 11:15:41 AM
OGLA	Added operator provided Outreach Efforts correspondence.	6/28/2013 3:12:49 PM
OGLA	Added operator provided revised Access Road Map, Construction Layout Drawing, and USR Plans attachments. OGLA task passed.	6/24/2013 9:45:25 AM
OGLA	Per operator, changed depth to ground water to 20 feet and changed Water Resources section to indicate YES the location is a sensitive area. OGLA review completed.	6/21/2013 1:44:34 PM
Permit	Added Commercial to Future land use per operator. Received and substituted correct Multi-well plan. Ready to pass pending public comment.	6/11/2013 12:34:17 PM
Permit	-Current land use is Rangeland and Commercial. Future land use, just Rangeland. Where is Commercial going? -Multi-well plan shows all 12 wells going east of the pad. 5 should be going west.	6/11/2013 11:12:30 AM
Permit	Passed completeness.	5/31/2013 1:08:57 PM
Permit	Returned to draft. Missing Waste Management Plan.	5/30/2013 9:09:10 AM

Total: 13 comment(s)

## Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Planning	Synergy has negotiated the use of an existing water line from the City of Greeley that will allow Synergy to "pipe" all needed drilling and completion water to the location, thus diminishing the truck traffic by over seventy five percent for both phases of the operations.
2	Planning	Synergy is working to schedule the drilling and completion operations to take place during the winter months of late 2013 to early 2014.
3	Community Outreach and Notification	Synergy Representatives have met with the HOA Representatives for Summer -Park Condominium Complex that is South-west of the Proposed site
4	Community Outreach and Notification	Synergy Representatives called and visited with various Neighbors in Hunters Cove Subdivision- directly east of the proposed location
5	Community Outreach and Notification	Synergy Representatives have met with Officials from District 6 School District
6	Community Outreach and Notification	Synergy participated with the City of Greeley USR process "Neighborhood Meeting" on June 24th, 2013.
7	Traffic control	Access off 66th Avenue will serve long term production access. Drilling operations will access site from C Street.
8	Storm Water/Erosion Control	Stormwater controls as shown on attached detailed drawings (Doc #1667715).

9	Storm Water/Erosion Control	Storm water quality Best Management Practice shall be implemented to minimize soil erosion, sedimentation, increased pollution loads and changed water flow characteristics resulting from land disturbing activity to the maximum extent practical, as to minimize pollution of receiving waters.
10	Storm Water/Erosion Control	Operator will implement the following Construction Structural BMPs: Vehicle tracking control pad; ditch and berm system; inlet protection; culvert outlet protection; silt fencing; rip rap; straw wattles; surface roughening.
11	Storm Water/Erosion Control	Operator will implement the following Permanent Structural Controls: Vehicle tracking control pad; culvert outlet protection; COGCC approved containment berm; soil rip rap; revegetation; erosion control blanket.
12	Storm Water/Erosion Control	1. To the extent practicable, erosion and sediment control measures shall be installed prior to grading activities. At all times during project construction, all temporary and permanent erosion and sediment control measures shall be maintained and repaired as needed to prevent accelerated erosion on the site and on any adjacent properties. 2. All topsoil where physically practicable shall be salvaged and no topsoil shall be removed from site except as set forth in the approved plan. Topsoil and overburden shall be segregated and stockpiled separately. Topsoil and overburden shall be redistributed within graded area after rough grading to provide a suitable base for areas which will be seeded and planted. Runoff from stockpiled area shall be controlled to prevent erosion and resultant sedimentation of receiving water. 3. Permanent or temporary soil stabilization measures shall be applied to disturbed areas within 14 days after final grade is reached on any portion of the site. Soil stabilization measures shall be applied within 14 days to disturbed areas which may not be at final grade, but will be left dormant for longer than 30 days. It is recommended that the permanent seed mix be planted after October to keep seedlings from developing before winter. Temporary vegetative cover consisting of annual rye grass shall be hybrid seeded at 20 pounds pure live seed per acre. 4. Fugitive dust emissions resulting from drilling & access road construction activities and/or wind shall be controlled using water. 5. Additional erosion control measures may be required during construction and shall be installed as soon as practical if required by the stormwater administrator or their representative. 6. Area where silt fence is not indicated may require some form of sediment control. Straw mulch and/or temporary seeding may be utilized as necessary.
13	Storm Water/Erosion Control	Inspections: 1. Perform every 14 days, and following a weather event causing runoff during the construction phase. Perform every 30 days during the completed and interim phases. 2. An inspection report will be filled out, & filed for each inspection performed. 3. Make a copy of each inspection report available to the county upon request. Maintenance: 1. Perform maintenance and repairs as soon as possible on items or areas identified in the inspection report. 2. Perform maintenance as indicated in the urban drainage & flood control district, urban storm drainage criteria manual, vol 3, per manufacturer's specifications or other sources determined to be acceptable. An efficient record-keeping system is a helpful tool in managing inspection and maintenance reports. Inspection reports, maintenance records, training logs, and other site related correspondence will be maintained in the master erosion control plan.
14	Dust control	Synergy is committed to utilize Dust Abatement on all access roads and the drilling pad to help minimize any dust issues for this location during the drilling and completion process.
15	Dust control	All disturbed areas must be topped with topsoil and re-vegetated by seeding with native dry land grass seed.
16	Construction	The Oil Production tanks will be constructed with steel berms and full liners for insurance of containment in the event of an oil spill on location.
17	Construction	All access roads shall be an all weather access road with a minimum of 6" base course.
18	Noise mitigation	The proposed location will be constructed with stock pile(s) of construction soils that will be utilized to create a "berm" around the location and then four foot by eight foot hay bales will be stacked on top of the berms in an effort to mitigate the noise and light issues that correspond to the drilling operations.
19	Interim Reclamation	Upon removal of the hay bales and final reclamation of the location post drill [COGCC Interim Reclamation], Synergy will install dozens of trees required by the City of Greeley to help permanently mitigate the visual impact of this location to the surrounding neighbors.

20	Interim Reclamation	1. Restoration of any areas disturbed by proposed grading activities shall be done in compliance with the requirements outlined in Section 14 - Vegetation & Irrigation of the storm drainage design criteria and construction standards. 2. A city of Greeley representative shall be on site during all seeding activities to inspect the conditions and ensure compliance with the storm drainage design criteria and construction standards. 3. To schedule this required inspection, please call (970) 336-4074 at least 48 hours in advance of the seeding activities. 4. All seed bags must be turned in to the city of Greeley representative.
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Total: 20 comment(s)