

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:

401083243

Date Received:

08/25/2016

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:

**448030**

Expiration Date:

**10/13/2019**

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: SYNERGY RESOURCES CORPORATION  
 Address: 20203 HIGHWAY 60  
 City: PLATTEVILLE    State: CO    Zip: 80651

Contact Information

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

RECLAMATION FINANCIAL ASSURANCE

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

LOCATION IDENTIFICATION

Name: Kawata    Number: 21-16 Pad  
 County: WELD  
 Quarter: NWNE    Section: 16    Township: 4N    Range: 66W    Meridian: 6    Ground Elevation: 4732

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: 981 feet FNL from North or South section line  
2344 feet FEL from East or West section line

Latitude: 40.316227    Longitude: -104.781643

PDOP Reading: 2.3    Date of Measurement: 06/03/2016

Instrument Operator's Name: Rob Wilson



## 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: Kawata Farms LLC

Phone: \_\_\_\_\_

Address: 14708 County Road 46

Fax: \_\_\_\_\_

Address: \_\_\_\_\_

Email: \_\_\_\_\_

City: Platteville State: CO Zip: 80651-8816

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: No

The right to construct this Oil and Gas Location is granted by: Surface Use Agreement

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

Date of Rule 306 surface owner consultation 04/05/2016

## 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:	<u>855</u> Feet	<u>676</u> 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

Building Unit:	978 Feet	809 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	972 Feet	878 Feet
Above Ground Utility:	295 Feet	86 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	262 Feet	51 Feet

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

- 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.

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: 07/22/2016

**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.

The location of the production facility is placed in connection with the request of the Surface Owner (Ms. Kawata). The tanks will be placed on the north end and the compressors, separators, combustors and VOC's will be placed on the south side to help minimize noise (if any). In addition, the nearest building unit to the Northwest is unoccupied and abandoned.

**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: 72: Vona loamy sand, 0 to 3 percent slopes  
 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: \_\_\_\_\_

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: 11 Feet

water well: 623 Feet

Estimated depth to ground water at Oil and Gas Location 22 Feet

Basis for depth to groundwater and sensitive area determination:

Nearest Water Well Permit: 13427-R#, Elevation Depth 65, Static Water Level 22 per COGCC GIS Map 782 feet away.  
Additional Water Well Permit: 14716-R#, Elevation Depth 61, Static Water Level 24 per COGCC GIS Map 658 feet away. Water well 276183-A is 623' away.  
Nearest Surface Water Feature: 3505 feet from Union Ditch and 7218 feet from South Platte River. Irrigation ditches are closer.

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

**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 This is 10 well pad.  
  
We will plan on 60 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.  
Synergy will comply with all MLVT policies and requirements for this pad.

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

Signed: \_\_\_\_\_ Date: 08/25/2016 Email: eekblad@syrginfo.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: 10/14/2016

**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>
	The Approved Form 2A permit will be posted at the location during construction, drilling, and completions operations.

**Best Management Practices**

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Planning	604.c(2)M. Fencing: A meeting with the surface owner will determine a fencing plan.
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)J.i Blowout Prevention Equipment ("BOPE"): A double ram and annular preventer will be used during drilling. Stabbing valves shall be installed in the event of reverse circulation and shall be prior tested with low and high pressure fluid.
4	Planning	604.c.(2)J.ii Backup stabbing valves be required on well servicing operations during reverse circulation. Valves shall be pressure tested before each well servicing operation using both low-pressure air and high-pressure fluid.
5	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.
6	Planning	Synergy will comply with all MLVT policies and requirements for this pad.

7	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. If the land owner allows it we will place Mag Chloride on the access road. If not we will have to use water to keep the dust down. CR 46 is paved.
8	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 which is Weld County.
9	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.
10	Storm Water/Erosion Control	The existing field irrigation ditch on the north side of our proposed pad will be filled in and will no longer be utilized during out operations. In addition, a berm will be constructed around our location and a ditch and berm constructed around the exterior of our location to protect all other ditches.
11	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.
12	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.
13	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.
14	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, there will be no permanently installed lighting on site. Lighting shall be mounted at compressor stations on a pole or building and directed downward to illuminate key areas within the facility, while minimizing the amount of light projected outside the facility.
15	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.
16	Construction	604.c.(2).E. This will be a multi-well pad.
17	Noise mitigation	604.c.(2)A. Sound walls and/or hay bales will be used where necessary to surround the well site during drilling operations. Bales will be placed on the NE corner of the pad.
18	Emissions mitigation	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.
19	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.

20	Drilling/Completion Operations	RULE 604.c.I: Upon initial rig-up and at least once every thirty (30) days during drilling operations thereafter, pressure testing of the casing string and each component of the blowout prevention equipment including flange connections shall be performed to seventy percent (70%) of working pressure or seventy percent (70%) of the internal yield of casing, whichever is less. Pressure testing shall be conducted and the documented results shall be retained by the operator for inspection by the Director for a period of one (1) year. Activation of the pipe rams for function testing shall be conducted on a daily basis when practicable.
21	Drilling/Completion Operations	604.c.(2)L. Closed chamber drill stem tests shall be allowed. All other drill stem tests shall require approval by the Director. None planned for this well.
22	Drilling/Completion Operations	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.
23	Drilling/Completion Operations	604.c.(2).O. All loadlines shall be bullplugged or capped.
24	Drilling/Completion Operations	604.c.(2)B.i Operator will be utilizing a closed loop system
25	Drilling/Completion Operations	Pipeline will be in place prior to completions to ensure salable gas is put into production equipment and sent to the sales line.
26	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)
27	Final Reclamation	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.

Total: 27 comment(s)

### Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
2316000	WASTE MANAGEMENT PLAN
2316001	CORRESPONDENCE
2316002	RULE 306.E. CERTIFICATION
2316003	CORRESPONDENCE
401083243	FORM 2A SUBMITTED
401083282	ACCESS ROAD MAP
401083290	CONST. LAYOUT DRAWINGS
401084839	NRCS MAP UNIT DESC
401084844	SURFACE AGRMT/SURETY
401084846	LOCATION PICTURES
401084848	HYDROLOGY MAP
401084849	LOCATION DRAWING
401084854	MULTI-WELL PLAN
401084855	OTHER
401084860	OTHER
401092632	FACILITY LAYOUT DRAWING
401104030	OTHER

Total Attach: 17 Files

### General Comments

<b>User Group</b>	<b>Comment</b>	<b>Comment Date</b>
Permit	Final Review Completed.	10/14/2016 10:40:19 AM
OGLA	Public comment is from LGD for county requirements. No other public comments were made. Based on updates, OGLA technical review complete and task passed.	10/14/2016 10:22:34 AM
OGLA	Based on the information provided by the Operator, COGCC has determined that this proposed Oil and Gas Location meets the requirements for conditional approval based on compliance with COGCC Rules, including, but not limited to; Rule 604 Series Setback and Mitigation Measures. The Operator has presented a siting rationale for the Production Facilities in the Buffer Zone and Best Management Practices that adequately address site specific environmental, health, safety and welfare concerns.	10/13/2016 2:37:41 PM
OGLA	Email from Operator on 10/3/2016 with ECD for flowback, but no information on sales line. Call Operator 10/13/2016 and leave message regarding timing on sales line. - Operator responded with sales line information "We will have a gas sale line as they are nearby this location and it will be available when the wells are available to go to sales. The pipeline is always available in this area." - added to BMP section with updates on Green Completions. Change gas skid lift to gas lift skid under other facilities. 2-phase separators for liquids to gas are listed separately from the separators associated with each well.	10/13/2016 11:09:28 AM
Permit	Permitting Review Complete.	10/3/2016 4:03:47 PM
OGLA	Emailed Operator on 9/30 regarding Green Completions BMP for flow back. Operator sent email with update to 604.c.(2)C.i. BMP.	10/3/2016 1:41:05 PM
OGLA	Received 306e certification from Operator - attached. Also attached correspondence for MLVT and other changes on 2A as previously documented.	9/29/2016 2:23:19 PM
LGD	This proposed oil and gas facility is located in unincorporated Weld County.As of today's date, September 27, 2016, the Weld County Oil and Gas Liaison/LGD has not been contacted by any nearby resident(s) regarding this proposed location.The County will respond to legitimate concerns or issues regarding a proposed location and attempt to facilitate a solution with the operator.The County expects operators and land owners to work together to ensure that a diligent effort has been made to conserve agricultural lands.Oil and Gas Exploration and Production activities are currently considered a Use by Right in the Agricultural Zoned District and no land use permitting is required by the County.A building permit is required for the production facilities (tank battery, separators, pump jacks, compressors, etc.) from the Department of Planning Services.Access points from a County road require Access Permits from the Department of Public Works, which include any necessary traffic control plans.The use of a right-of-way requires a Right-Of-Way Permit from the Department of Public Works.Troy Swain, Weld County Oil and Gas Liaison and LGD (970) 400-3579.	9/27/2016 1:46:11 PM
OGLA	Email from Operator - updated distance to surface water and water well and changed. Updated BMPs - including noise, dust on roads, and protection of nearby surface water. Added MLVT information in the comments section and on facility list. Remove reference area pictures.	9/27/2016 10:13:58 AM
OGLA	Spoke with Operator on the phone (9/20) re: clarify email questions/comments. Operator will send additional information for MLVT and surface water. Operator would like statement regarding waiver from property line removed from comments section. Updated dust control, noise, and pit information.	9/21/2016 3:50:41 PM
OGLA	Send Operator an email regarding, MLVT, WMP, property line waivers from neighbors, don't need reference area pictures, and surface water info does not match hydrology map, and BMP clarification. Operator emailed new WMP and OGCC replaced. Talked to Operator regarding property line waiver and other questions. Going to send an email response.	9/15/2016 3:24:13 PM
OGLA	Passed completeness.	9/8/2016 9:20:28 AM
OGLA	Per OGLA Supervisor via email; ready to pass completeness without further initial review from OGLA.	9/8/2016 9:19:53 AM

Permit	Relabeled 305.a.(2) certification "30 Day Notice Letter" per Operator request.	9/7/2016 3:00:37 PM
OGLA	Did not pass Buffer Zone completeness review. Missing 305.a pre-application certification. Contacted operator - pushed to Draft.	9/6/2016 9:46:23 AM
Permit	Referred to OGLA Supervisor for buffer zone review.	8/25/2016 1:30:47 PM

Total: 16 comment(s)