

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:

401101102

Date Received:

12/14/2016

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:

450687

Expiration Date:

05/21/2020

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: 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@syrginfo.com

RECLAMATION FINANCIAL ASSURANCE

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

LOCATION IDENTIFICATION

Name: Ag _____ Number: 26-32 Pad
County: WELD
Quarter: NENE Section: 32 Township: 6N Range: 66W Meridian: 6 Ground Elevation: 4706

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: 1037 feet FNL from North or South section line
599 feet FEL from East or West section line

Latitude: 40.449075 Longitude: -104.794558

PDOP Reading: 1.2 Date of Measurement: 07/25/2016

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: AGGREGATE INDUSTRIES Phone: _____

Address: 1687 Cole Blvd. Fax: _____

Address: Suite 300 Email: _____

City: Golden State: CO Zip: 80401

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 05/24/2016

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:	503 Feet	455 Feet
Building Unit:	503 Feet	533 Feet
High Occupancy Building Unit:	4647 Feet	4913 Feet
Designated Outside Activity Area:	2985 Feet	3308 Feet
Public Road:	870 Feet	402 Feet
Above Ground Utility:	720 Feet	384 Feet
Railroad:	1823 Feet	1388 Feet
Property Line:	320 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

- 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: 08/29/2016

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 depicted in the Location Drawing has been placed at the request of the Surface Owner. In addition, the location for siting the multi-well Production Facility as described provides easy access, consolidated surface impact with the well pad and adequate distance to the nearby building units and outside the floodplain. This location was the greatest distance outside of Building Units to work with the surface owner outside permitted mining site to the Southeast and East. Due to the Weld County USR approved and recorded in April 2014, Synergy is unable to locate any permanent structures (wells, pipelines, facilities) in the mining limits. The future use of the property to the east and southeast is planned and approved for gravel mining.

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: 50: Otero Sandy Loam, 0 to 1 percent slopes

NRCS Map Unit Name: 52: Otero sandy loam, 3 to 5 percent slopes

NRCS Map Unit Name: 51: Otero sandy loam, 1 to 3 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: 347 Feet

water well: 461 Feet

Estimated depth to ground water at Oil and Gas Location 9 Feet

Basis for depth to groundwater and sensitive area determination:

Permit 286879: 461' West

Permit 274112-A: 921' Northwest

Permit 274112: 923' Northwest

However, nearest water well permit with static water is Permit# 69946, static water level 9, elevated depth 28
All distances measured from edge of disturbance to water well.

287' Concrete Ditch (upgradient) and 347' from Cache La Poudre River (downgradient)

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>Our access permit to location is our notification to Weld County, the city of Greeley, or additional municipality if necessary we need for approved traffic routes and traffic control.</p> <p>All traffic plans are approved per our access permit, part of the access permitting process.</p> <p>Synergy anticipates pipeline to this location and all future locations so that there are no trucks on road.</p> <p>There will be MLVT on this location. 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.</p> <p>Surface Use Agreement has waivers for Rule 318A.a. and 318A.c. See page 4, Section 8.</p> <p>The 11th Building Unit to the West is 1005' from EOL and 1270' from nearest well. Synergy plans to insure the disturbance area will not creep to the West by remaining to all plats disturbance information attached. This would entail staking the location prior to any dirt work, placing a dirt and berm for stormwater management inside the operations area and setting sound walls within the operations area. The 11th building unit has been surveyed at 1005', therefore, does not qualify for a UMA or LUMA for that matter.</p> <p>Aggregate Industries-WCR, Inc. did not actually sign the Oil and Gas Lease themselves. They are subject to the oil and gas lease that was signed by a predecessor in interest to them.</p>
----------	---

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

Signed: _____ Date: 12/14/2016 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: 5/22/2017

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>
	Operator shall conduct an As-Built survey of the location after construction & drilling activities are completed. As-Built survey shall show distance from the nearest well and production facility to the nearest Building Unit. As-Built survey shall also show the number of Building Units within 1,000 feet of the final disturbance area. Operator shall submit the As-Built survey via a Form 4 Sundry within 30 days of construction and drilling activities being completed.

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 if needed. And after our final agreement with surface owner, we agreed upon fencing the facility at the location.

2	Planning	<p>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.</p> <p>Synergy has agreed to place 15-20 trees on the west and northeast side of the facility after completion/installation of the production facility and wells. In addition to the trees, Synergy plans to place a temporary sound wall around the Operations Area during drilling and completion operations as well as a permanent sound wall around the compressors at the production facility. Use dust suppression tactics for roadways. Remove existing AG facilities and wells. Additionally provide a gate at the entrance.</p>
3	Planning	<p>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.</p>
4	Traffic control	<p>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.</p>
5	Traffic control	<p>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</p>
6	General Housekeeping	<p>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.</p>
7	Material Handling and Spill Prevention	<p>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.</p>
8	Material Handling and Spill Prevention	<p>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.</p>
9	Construction	<p>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.</p>
10	Construction	<p>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.</p>
11	Construction	<p>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.</p>
12	Construction	<p>Construction: 604.c.(2).E. This will be a multi-well pad.</p>
13	Noise mitigation	<p>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.</p>
14	Odor mitigation	<p>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.</p>

15	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.
16	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.
17	Drilling/Completion Operations	Synergy will comply with all MLVT policies and requirements for this pad.
18	Final Reclamation	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)
19	Final Reclamation	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: 19 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
2478118	RULE 306.E. CERTIFICATION
2478119	CORRESPONDENCE
2478281	CORRESPONDENCE
401101102	FORM 2A SUBMITTED
401115786	ACCESS ROAD MAP
401115793	FACILITY LAYOUT DRAWING
401115795	LOCATION PICTURES
401115801	HYDROLOGY MAP
401115803	LOCATION DRAWING
401115804	MULTI-WELL PLAN
401115806	OTHER
401115807	OTHER
401115809	WASTE MANAGEMENT PLAN
401120389	NRCS MAP UNIT DESC
401158633	SURFACE AGRMT/SURETY
401159036	NRCS MAP UNIT DESC
401159037	NRCS MAP UNIT DESC
401171876	OTHER

Total Attach: 18 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
OGLA	Operator has a SUA that indicates the property is primarily permitted for gravel mining operations and that the planned mining operations constrain the placement of the oil & Gas Location. See attachment Doc #2478281. Operator provided an updated construction start date.	05/19/2017
Permit	Final Review Completed.	05/18/2017
Permit	Per operator Right to Construct is Oil and Gas lease. Added comment about lease, checked "is committed" and changed Right to Construct to Oil and Gas lease. Permitting Review Complete.	03/20/2017
OGLA	OGLA Supervisor has completed his Siting Rationale review. OGLA task passed.	03/01/2017
OGLA	IN PROCESS - Operator revised cultural distance from the nearest well to a Public Road, Above Ground Utility, Railroad, and Property Line, revised distance to the nearest downgradient surface water feature, distance to the nearest water well, revised the Visual Impact BMP, & provided the Rule 306.e. Certification letter. OGLA review complete. Waiting on the Siting Rationale review by the OGLA Supervisor.	01/27/2017
OGLA	ON HOLD - Requested operator revise cultural distance from the nearest well to a Public Road, Above Ground Utility, Railroad, and Property Line, revise distance to the nearest downgradient surface water feature, distance to the nearest water well, revise the Visual Impact BMP, & the Rule 306.e. Certification letter. Due by 2/25/17.	01/25/2017
LGD	This proposed oil and gas facility is located in unincorporated Weld County in teh Agricultural Zoned District. Proposed access is off CR 64, which is owned and maintained by Weld County. On August 31, 2016, the Weld County Oil and Gas Liaison/LGD was contacted by the Building Unit (BU) owner of 30879 Rocky Rd who was provided with drawings of the proposed location and had no further concerns. In September 2016, the Weld County Oil and Gas Liaison/LGD was contacted by the BU owner of 30878 Rocky Rd and a meeting was held with the BU owner and operator on October 3, 2016. Additional information regarding the proposed location was provided by the operator and LGD. At the request of the BU owner, the operator agreed to landscape the west side of the proposed location and the surface owner concurred with these plans. The COGCC Form 2A for this location was submitted on or before February 1, 2017 and is considered a Use by Right with no Weld Oil and Gas Location Assessment (WOGLA) required. A building permit is required for the production facilities (tank battery, separators, pump jacks, compressors, generators, etc.) from the Department of Planning Services. Access points from a County roads require an Access Permit from the Department of Public Works, which includes any necessary traffic control plans and Improvement Agreements. The use of a right-of-way requires a Right-Of-Way Permit from the Department of Public Works. Troy Swain, Weld Oil/Gas Liaison and LGD (970) 400-3579.	01/16/2017
Permit	Passed completeness.	12/27/2016
OGLA	Passed Buffer Zone completeness review	12/23/2016
OGLA	Missing 305.a pre-application certification attachment - return to Draft	12/21/2016
Permit	Referred to OGLA Supervisor.	12/15/2016

Total: 11 comment(s)