



**COMMUNITY AND ECONOMIC DEVELOPMENT
DEPARTMENT
STAFF REPORT**

Administrative Review Memo

04/23/2019

CASE No.: USR2018-00009	CASE NAME: Great Western – Kortum
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Owner's Name:	Patricia Castrodale
Applicant's Name:	Great Western Operating Company
Applicant's Address:	1801 W. Broadway St. Suite 500, Denver, CO 80202
Location of Request:	Section 21, Township 1S, Range 67W Parcel number 0157121000017
Nature of Request:	A Use by Special Review Permit to allow up to forty-four (44) horizontal wells and one (1) production facility on one (1) well pad for the production of oil and gas.
Zone District:	Agriculture - 3 (A-3)
Site Size:	Approximately 8.59 acres (151-acre parcel)
Proposed Uses:	Multi-well pad for the production of oil and gas
Existing Use:	Agriculture
Report Date:	04/23/2019
Case Manager:	Christine Dougherty
Director Options:	Approval with 4 Findings of Fact, 5 Conditions Precedent, and 18 Conditions; Denial; or Referral to the Board of County Commissioners
Staff Recommendation:	Approval with 4 Findings of Fact, 5 Conditions Precedent, and 18 Conditions

SUMMARY OF APPLICATION

Background:

Great Western Operating Company (Great Western), the applicant, engages in exploration and development of oil and natural gas, primarily in the Denver-Julesburg Basin. The applicant has proposed an oil and gas well pad location in unincorporated Adams County. The proposed project, Kortum, consists of the construction of one well pad with up to forty-four (44) horizontal wells, equipment, production facility, and one access road.

The proposed well pad location is on a 151-acre parcel, southeast of the intersection of Quebec Street and East 144th Avenue. Access to the site is proposed to be from Quebec Street, located on the western boundary of the property. Currently the parcel is undeveloped with five (5) vertical oil and gas wells located on the parcel, which will be plugged and abandoned as part of this project.

Summary of Application:

The project proposed by Great Western consists of forty-four (44) wells and one (1) production facility on a single well pad, with one (1) access road to accommodate all traffic during construction, production, and long-term maintenance. The project has three primary phases: construction, drilling/completions, and production. Construction of the well pad may take up to thirty (30) days to complete. The drilling period is expected to last up to six (6) days per well, and up to an additional twelve (12) days for completions, totaling up to eighteen (18) days per well. Several weeks are required between drilling and completions phases to allow the equipment to be changed accordingly.

The pad size during the drilling and completion phases will be approximately twenty-three and one half (23.5) acres. After the completions phase, the site will undergo interim restoration, during which the area of the facility will be reduced to approximately eight and one-half (8.5) acres. During interim restoration, landscaping will be installed to reduce the overall visual impacts of the facility. Final reclamation will occur when the wells are plugged and abandoned.

The equipment, which will remain on site during the production phase, includes twelve (12) oil tanks, six (6) produced water tanks, seventeen (17) three-phase separators, three (3) heater treaters, seven (7) Vapor Recovery Towers (VRT's), four (4) Lease Automated Custody Transfer (LACT) units, three (3) Vapor Recovery Units (VRU's), four (4) Emission Control Devices (ECD's), and one (1) gas meter.

The mitigation measures that have been proposed by Great Western include the following:

- **Planning:** Great Western is pursuing an Oil and Gas Location Assessment permit (Form 2A) for a multi well pad through the Colorado Oil and Gas Conservation Commission (COGCC). This will eliminate the need for multiple single well pads, which would spread out the impacts over more surface area increasing the overall footprint of the project.
- **Pipelines:** Great Western intends to construct and utilize pipelines to transfer oil and gas off site in place of onsite storage of the product. This will greatly reduce truck traffic in and out of the location for the lifetime of the well. The utilization of pipelines also ensures a safer operation as it greatly reduces the number of tanks that are required on location.
- **Noise:** Great Western will abide by COGCC rule 604.c.(2)A, noise standards for all activities, and post a 24-hour, 7 days a week, contact information to address all noise complaints arising from the oil and gas facility. To assist with mitigating noise impacts,

a sound study will be completed by the applicant and any recommended mitigation controls will be implemented.

- **Odor Mitigation:** During drilling operations, a closed loop system will be used, reducing odor and other potential emissions.
- **Visual Mitigation:** When implemented, sound walls will reduce visual impacts during the drilling and completion phases and landscaping will reduce visual impacts during the production phase. In addition, pursuant to COGCC Rule 804, the tank battery will be painted in uniform, non-contrasting, non-reflective color tones with the colors matched to but slightly darker than the surrounding landscape.
- **Landscaping:** Great Western will adhere to all Adams County requirements and/or surface owner requests, including minimizing impacts to native vegetation. Landscaping, serving as interim restoration, will consist of a perimeter fence bordered with a mixture of native grasses, shrubs, and plants along the perimeter of the facility to reduce visual impacts. Final reclamation will consist of removing all equipment and landscaping, returning the area to pre-disturbance conditions.

Development Standards and Regulations Requirements:

In order to obtain an Administrative Use by Special Review approval, an Oil and Gas Facility must satisfy certain criteria.

1. Memorandum of Understanding (MOU)

Great Western signed the standard County MOU, which was executed by Adams County Board of County Commissioners on January 6, 2015.

2. Satisfy Submittal Requirements

The applicant has satisfied all required submittal items as outlined in the Development Standards and Regulations. These include:

- Conceptual Review Meeting – Great Western attended a Conceptual Review Meeting with the Adams County Development Review Team to discuss their proposed site on April 10, 2017.
- Neighborhood Meeting – Great Western notified property owners within one-half mile of the parcel boundary of the proposed oil and gas facility and invited them to an open house neighborhood meeting where residents could ask the applicant questions directly. The Neighborhood Meeting was held on April 26, 2018, at the Todd Creek Golf Club, located at 8455 Heritage Drive, Thornton, CO 80602. At the meeting,

Great Western provided an overview of the project, operation timeline, and proposed mitigation measures outlined in this report.

- Application Form and Fees – Great Western submitted the required applications and paid the applicable permit fees. A traffic impact fee will be assessed consistent with the application and the Oil and Gas Traffic Impact Fee Schedule. The operator may also be required to obtain a Right-of-Way permit, Access Permit, and/or an Oversize Load Permit before starting construction activities.
- Oil and Gas Operations Plan – Great Western submitted an Oil and Gas Operations Plan, an Impact Area Map showing all oil and gas wells and water wells within one half mile, a Drilling Operation Plan, a Production Plan, and a Sign Plan.
- Emergency Preparedness Plan – The applicant submitted a site-specific Emergency Preparedness Plan that has been reviewed and approved by the Adams County Office of Emergency Management.
- Engineering Documents – Great Western provided a Grading, Erosion, and Sediment Control Report & Plan, as well as a Traffic Impact Plan, in accordance with the Development Standards and Regulations.
- Surface Owner Documentation – Great Western provided a Memorandum of Surface Use Agreement to show the proposed oil and gas facility is authorized by the surface owner.

3. Compatibility / Land Use Impacts

The subject site is approximately one hundred and fifty one (151) acres, of which twenty three and one half (23.5) acres is proposed to be used for the development of a forty four (44) well oil and gas well pad, associated production facility, and access road. Currently, the parcel is zoned Agriculture 3 (A-3) and is undeveloped except for five (5) historical oil and gas wells that have been temporarily shut in. The parcel is bordered on the north, west, and south by the City of Thornton, and on the east by parks and open space. Highway 470 is generally located on the east and north sides of the parcel. Residential communities can be found within the city of Thornton's boundaries.

According to the Adams County Comprehensive Plan, the future land use designation for this parcel is Mixed-Use Neighborhood. The Mixed-Use Neighborhood designation intends for single- and multi-family housing, and supporting uses and activities that would serve the neighborhood.

Industrial impacts inherent to large-scale oil and gas development require significant mitigation from residential and commercial development. The most significant long-term impacts associated with oil and gas production are the daily truck trips and the number of tanks required for on-site storage of oil. Taking into consideration the compatibility requirements of the Adams County Development Standards and Regulations, Great Western has agreed to connect to the

Riverdale segment of the Discovery Boardwalk Brighton West Interconnect Pipeline (RCU2017-00019) located approximately one (1) mile to the south.

The Discovery Boardwalk Brighton West Interconnect Pipeline, including the Riverdale segment, was presented to the Adams County Planning Commission on September 28, 2017. A recommendation of approval was forwarded to the Board of County Commissioners for a hearing on October 17, 2017. After approval, the pipeline was constructed and is currently in operation. Connection to the pipeline will reduce truck traffic, reduce on-site storage, and reduce the facilities surface area, all of which supports compatibility with the current and planned future land uses in the area.

The applicant has thoughtfully considered the impacts to the surrounding properties, future land use, and local roadways. These have been mitigated through a combination of site planning decisions, traffic and access management, utilization of a pipeline for all products, and long-term compatibility is addressed through the requirement for reclamation upon conclusion of surface operations. It is staff's recommendation that this criterion has been satisfied by the applicant's proposal, and through the recommended conditions of approval within this staff report.

4. *Emergency Service Providers*

The applicant provided the required 'will-serve' letter from the Brighton Fire District, the emergency service provider for that area.

Staff Recommendation:

Based upon the application, the criteria for an Administrative Use by Special Review permit, and a recent site visit, staff recommends approval of this request with 4 findings-of-fact, 5 conditions precedent, and 18 conditions.

Findings-of-Fact:

1. The applicant and the County have executed a Memorandum of Understanding (MOU) that is currently in full force and effect, and the oil and gas facility complies with the provisions of the MOU.
2. The applicant has satisfied the submittal requirements for an Administrative Use by Special Review application, as outlined in the Development Standards and Regulations.
3. Based upon compliance with the recommended conditions of approval, the oil and gas facility is compatible with the surrounding area and does not create any site specific or material impacts to nearby land uses.
4. The applicant has provided a commitment to serve the facility from the authority having jurisdiction for providing emergency services.

Recommended Conditions of Approval:

Conditions Precedent:

1. Pad construction and/or drilling shall not commence until combined State approval of Colorado Oil and Gas Conservation Commission (COGCC) Form 2 and 2A and County approval of AUSR permit. Drilling shall only occur during the COGCC Form 2 permit validity timeframe.
 - a. Per Section 4-10-02-03-03-07-10 of the Adams County Development Standards and Regulations, proposed changes to the plans, including but not limited to, any changes in the source or location of water to be used by the Oil and Gas Facility, shall be submitted as amendments to the Administrative Use by Special Review application, reviewed by staff, and approved by the Director or BOCC (if the BOCC approved the original application).
2. Noise mitigation measures will be required to provide compatibility with the surrounding area; therefore, a Sound Impact Assessment shall be conducted and the operator will be required to implement the best management practices identified from the study to meet COGCC Rule 802 Noise Abatement and the MOU Section 9.
3. The applicant shall construct a left turn lane from Quebec Street into the access road. The turn lane shall be constructed in compliance with the City of Thornton's standards and specifications.
4. A traffic impact fee in the amount of \$929,681 for the construction and production of forty-four (44) oil and gas wells using product pipelines is due prior to ground disturbing activities.
5. The applicant shall receive a "Notice to Proceed" from the Community and Economic Development Department. Written proof that all of the conditions precedents have been satisfied shall be required prior to receiving this notice.

Conditions:

1. The applicant or the applicant's subcontractors may be required to obtain Oversize Load Permits, and/or Access Permits, and/or a Right-of-Way Construction Permit. These permits may be obtained through the Adams County One-Stop permit center.
2. The approved traffic route for travelling to and from the site will be as follows:
 - Route 1 (To Site)
 1. Highway 470 to Quebec Street
 2. Quebec Street south to Access RoadEgress from the site will be the same route in reverse order.

Route 2 (To Site)

1. Interstate 25 (I-25) to Highway 7 (160th Avenue)
2. Highway 7 east to Quebec Street
3. Quebec Street south to Access Road

Egress from the site will be the same route in reverse order.

Route 3 (To Site)

1. Highway 85 to 168th Avenue
2. 168th Avenue to Lima Street
3. Lima Street south to Highway 7 (160th Avenue)
4. Highway 7 west to Quebec Street
5. Quebec Street south to Access Road

Egress from the site will be the same route in reverse order.

3. Great Western shall provide notice to parcel owners and occupants located within a one-half mile radius of the parcel boundary on which the well pad is located at least fourteen (14) days prior to the commencement of any drilling or completions operations.
4. Screening of the site shall be provided in accordance with the approved landscape plan by a combination of fencing and landscape materials. This plan shall serve as the interim restoration plan and the applicant shall implement it within ninety (90) days of completion of the construction of the final well, if all forty-four (44) approved wells are drilled and completed at the same time. If that applicant staggers well completion (i.e., completes a lesser number of wells initially with plans to complete the remaining wells at a future date), then the interim restoration plan shall be implemented within ninety (90) days of completion of the initial set of wells. Maintenance of required landscaping and fencing shall comply with the Adams County Development Standards and Regulations at all times.
5. As referenced in 8 (c.) of the Great Western Oil and Gas/Adams County MOU the applicant agrees to conduct a baseline test of any registered water well requested by the owner, on a one-time basis, if such well is within one-half mile radius of the new oil and gas facility.
6. The access road to this site shall be outfitted with a vehicle-tracking pad.
7. Per Section 12 of the executed MOU, Great Western will construct the lease/access road to be capable of supporting a 75,000-pound emergency response vehicle.
8. The lease/access road shall be a minimum of twenty-four (24) feet wide, with a thirty-five (35) foot minimum paved radii at the intersection with Quebec Street. The first twenty-four (24) feet of the access road shall be constructed with a minimum of six (6) inches of asphalt. These specifications were requested by the City of Thornton, and any changes that are approved by the City of Thornton shall be communicated in writing to the Adams County's Community and Economic Development Director within thirty (30) days of the changes being finalized.

9. The applicant shall be responsible for the cleanliness and safety of all roadways adjacent to this site. If at any time, Adams County staff determines these roadways to be dangerous or not passable due to debris or mud, the applicant will cease use of the roadways until the roadway conditions have improved and are accepted by the County. If the contractor/applicant fails to keep the adjacent roadways clean and free from debris, Adams County has the option to complete the required clean up and bill the charges directly to the applicant, Great Western.
10. The applicant shall implement and maintain the best management practices as identified in the Sound Impact Assessment (see Condition Precedent #2). The pad will be constructed in such a manner that noise mitigation may be installed and removed without disturbing the site or landscaping.
11. Per Section 14 of the executed MOU, fresh water as referenced in the COGCC's rules and Regulations, or another source as approved by the County on a case-by-case basis, may be applied to roads and land surfaces for purpose of dust mitigation. Absolutely no other liquid or substance generated by the production of the operator's facility, including, but not limited to, exploration and production waste (as defined by the COGCC) or any other application of liquids that would have negative impact to natural resources, shall be permitted to be applied to roads and land surfaces.
12. Per Section 5 of the executed MOU, in an effort to reduce truck traffic, where feasible, the Operator will identify a water source lawfully available for industrial use, including oil and gas development, close to the facility location, to be utilized by operator and its suppliers. The Operator will comply with the Colorado Department of Public Health and Environment requirements and Tri-County Health Department (TCHD) regulations concerning water quality. With respect to wastewater treatment, the Operator agrees to comply with TCHD's Regulations NO O-14, On-site Wastewater Treatment Systems, as adopted or modified. The Operator agrees to contact TCHD in a timely manner to arrange for the processing of appropriate application matters and required inspections.
13. If requested by the surface owner, or practicable for site security, the fence shall contain a gate and the gate shall remain closed and locked when the well pad and associated facilities are not in use.
 - a. The local fire district shall have access to all gate key(s)/combination(s) at all times for use in case of emergency.
 - b. The Adams County Oil & Gas Inspector shall have access to all gate key(s)/combination(s) at all times for use in case of emergency.
14. Applicant is required to receive an approved waiver of responsibility/completion of reclamation from Adams County upon abandonment and reclamation of well pad and associated facilities.

15. Well pad, associated facilities, and access road shall be free of any county and state identified noxious weeds throughout the drilling, completion and production portions of operations.
16. To prevent impacts to wildlife, the operator shall regularly inspect trenches and open areas for the presence of wildlife and cover all open trenches at the end of each workday during construction.
17. A tabletop exercise pertaining to the Emergency Response Plan will be required if requested by the County's Local Government Designee, Emergency Manager, Local Emergency Planning Commission, Sheriff's Office, site-specific Fire District, or Transportation Department.
18. All representations and commitments of the applicant made during the AUSR process are incorporated herein as conditions of approval.

CITIZEN COMMENTS

Of the five hundred and twenty five (525) referral notices sent to property owners and current residents located within one-half mile of the subject parcel boundary, no comments were received. The application and Request for Comments were also posted on the Adams County website for review by the public.

Referral Notifications Sent	Referral Comments Received
525	0

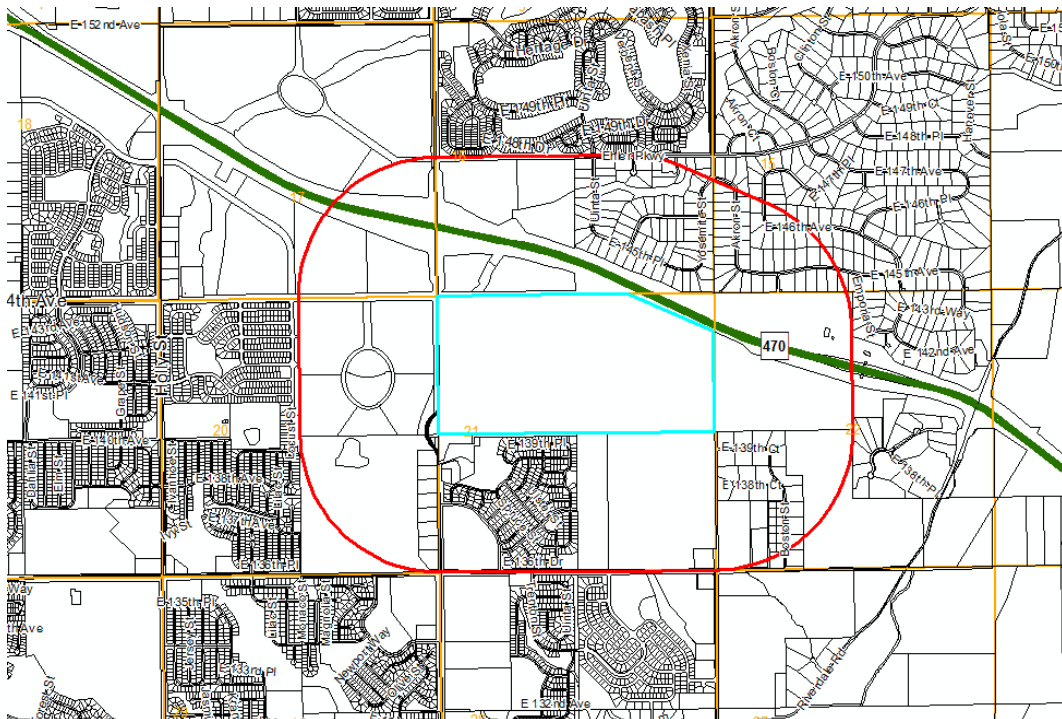


Figure 1. Map showing the 1/2 mile mailed referral radius from the parcel boundary.

COUNTY REFERRAL COMMENTS

The landscaping plans provided by the applicant were reviewed by staff and amendments were required. Great Western has responded to the requested changes with a resubmittal of their landscape plans, which have been reviewed and approved by staff.

AGENCY REFERRAL COMMENTS

Responding with Concerns:

Brighton Fire and Rescue requested that the District's emergency phone number be updated. The applicant has submitted an updated contact sheet for the Emergency Response Plan. Brighton Fire also requested a summary card, which was provided by the applicant.

Colorado Department of Public Health and Environment (CDPHE) provided guidance on six (6) topics related to oil and gas development; Air Pollutant Emissions Notice (APEN), electrical equipment, odor mitigation, waste management, use of pipelines, and plugging and abandoning of the well(s). Great Western has reviewed the Best Management Practices, and has agreed to implement them where it is feasible and/or required.

Colorado Parks and Wildlife (CPW) believes the proposed development would likely have minimal impact to wildlife. CPW recommends the use of native plant species for reclamation including a mixture of trees, shrubs, and grasses to blend with the landscape and maximize benefits for wildlife. CPW also recommends a Burrowing Owl survey be performed if earth-moving activities occur between March 15th and October 15th, and a prairie dog town is observed.

High Plains Water User Association requested assurance that the proposed oil and gas wells would not negatively affect the community well water. The Colorado Oil and Gas Conservation Commission has regulations designed to protect groundwater aquifers and minimize the potential for negatively impacting aquifers such as the one High Plains Water User Association utilizes.

The E-470 Highway Authority requested their right-of-way be reflected on drawings and provided guidance on their permitting process if construction or access is needed through their right-of-way. The applicant resubmitted drawings that included E-470 right-of-way and their plans do not reflect activities, including access road construction, in E-470's right-of-way.

Tri-County Health Department (TCHD) provided information for the applicant to obtain a licensed wastewater pump and haul company for domestic wastewater. Recommendations were also provided for the applicant to conduct baseline test for all private and commercial water wells within one-half mile. This recommendation is addressed through Adams County's MOU agreement, which requires applicants to provide baseline testing upon request of the water well owner. TCHD is requesting to review the source of water for workers and potable water systems,

which will be used by workers. This request was provided to the applicant who has agreed to provide the requested information. TCHD recommends the applicant implement secondary containment around all storage tanks, and that they use non-potable water signs on water tanks that contain non-potable water. TCHD also recommends the use of green completion technology, vapor recovery equipment and minimize flaring.

The City of Thornton has requested a review of the formal landscaping plan, and lighting plan to ensure light does not trespass from the site. They have also requested the applicant to avoid future ROW at the cross section of Quebec Street. The City provided minimum specifications for construction of the access road extending the first 200 feet into the project. The construction of turn lanes on Quebec Street was also requested by the city. The city has asked that the operator engage with the Thornton Fire Department and North Metro Fire Rescue regarding emergency response planning. These requests have been addressed through conditions of approval, which require the applicant to fulfill the City of Thornton's request.

Notified but not Responding / Considered a Favorable Response:

Adams County Office of Emergency Management
Adams County Sheriff's Office
Brighton School District 27J
United Power

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