

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:

400446325

Date Received:

03/01/2014

Oil and Gas Location Assessment

New Location Refile Amend Existing Location Location#: _____

Submit signed original form. 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:

437211

Expiration Date:

05/15/2017

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: 10110
Name: GREAT WESTERN OPERATING COMPANY LLC
Address: 1801 BROADWAY #500
City: DENVER State: CO Zip: 80202

Contact Information

Name: Callie Fiddes
Phone: (303) 398-0550
Fax: ()
email: cfiddes@gwogco.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20090080 Gas Facility Surety ID: _____
 Waste Management Surety ID: _____

LOCATION IDENTIFICATION

Name: Rock Family LE Pad Number: 13-021HN
County: ADAMS
Quarter: SENE Section: 24 Township: 1S Range: 66W Meridian: 6 Ground Elevation: 5105

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: 2528 feet FNL from North or South section line
1353 feet FWL from East or West section line

Latitude: 39.950956 Longitude: -104.728472

PDOP Reading: 1.7 Date of Measurement: 09/05/2012

Instrument Operator's Name: Dallas Nielsen

RELATED REMOTE LOCATIONS

(Enter as many Related Locations as necessary. Enter the Form 2A document # only if there is no established COGCC Location ID#)

This proposed Oil and Gas Location is:

LOCATION ID # FORM 2A DOC #



FACILITIES

Indicate the number of each type of oil and gas facility planned on location

Wells	<u>7</u>	Oil Tanks	<u>10</u>	Condensate Tanks	<u> </u>	Water Tanks	<u>4</u>	Buried Produced Water Vaults	<u> </u>
Drilling Pits	<u> </u>	Production Pits	<u> </u>	Special Purpose Pits	<u> </u>	Multi-Well Pits	<u> </u>	Temporary Large Volume Above Ground Tanks	<u> </u>
Pump Jacks	<u> </u>	Separators	<u>5</u>	Injection Pumps	<u> </u>	Cavity Pumps	<u> </u>		
Gas or Diesel Motors	<u> </u>	Electric Motors	<u> </u>	Electric Generators	<u> </u>	Fuel Tanks	<u> </u>	Gas Compressors	<u>1</u>
Dehydrator Units	<u> </u>	Vapor Recovery Unit	<u>1</u>	VOC Combustor	<u>4</u>	Flare	<u> </u>	LACT Unit	<u> </u>
								Pigging Station	<u> </u>

OTHER FACILITIES

Other Facility Type

Number

<u>Other Facility Type</u>	<u>Number</u>

Per Rule 303.b.(3)C, description of all oil, gas, and/or water pipelines:

7 - 3" steel line
5 - 3" steel oil line
5 - 3" steel vent line
2 - 3" steel return gas line
2 - 3" poly pipe

CONSTRUCTION

Date planned to commence construction: 06/08/2014 Size of disturbed area during construction in acres: 6.49
Estimated date that interim reclamation will begin: 12/08/2014 Size of location after interim reclamation in acres: 2.95
Estimated post-construction ground elevation: 5102

DRILLING PROGRAM

Will a closed loop system be used for drilling fluids: Yes

Is H₂S anticipated? No

Will salt sections be encountered during drilling: No

Will salt based mud (>15,000 ppm Cl) be used? No

Will oil based drilling fluids be used? No

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: Willie Davis

Phone: _____

Address: 100 Corporate Pointe, Suite 310

Fax: _____

Address: _____

Email: _____

City: Culver City State: CA Zip: 90230-8757

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: Surface Use Agreement

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

Date of Rule 306 surface owner consultation _____

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

Distance to nearest:

Building: 549 Feet
Building Unit: 587 Feet
High Occupancy Building Unit: 5280 Feet
Designated Outside Activity Area: 5280 Feet
Public Road: 1074 Feet
Above Ground Utility: 745 Feet
Railroad: 5280 Feet
Property Line: 18 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.

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.

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: 09/12/2013

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: Truckton loamy sand, 3 to 9 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: 257 Feet

water well: 905 Feet

Estimated depth to ground water at Oil and Gas Location 30 Feet

Basis for depth to groundwater and sensitive area determination:

Receipt: 0218266
Permit #: 121742

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: _____

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 Building Unit)
- 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

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

Signed: _____ Date: 03/01/2014 Email: cfiddes@gwogco.com

Print Name: Callie Fiddes Title: Regulatory Tech

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: 5/16/2014

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>

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Planning	Multi-well Pads (Rule 604.c.(2)E. GWOC strives to utilize multi-well pads wherever technically and economically practicable to minimize potential impacts to neighbors and the environment. Multi-well pads are not always feasible due to numerous possible issues including but not limited to; landowner requirements, topographic constraints, well bore reaches, setback requirements, etc.
2	Planning	Pit level indicators (Rule 604.c.(2)K GWOC does not typically utilize pits in any of its operations. If a pit was to be used proper pit Level indicators would be installed to indicate pit levels and compliance with pit volume rules.
3	Planning	Control of Fire Hazards (Rule 604.c.(2)N GWOC constructs and operates our facilities to meet state and API codes, as appropriate, including API RP 500 electrical classifications inside bermed areas. Any unused potentially flammable materials are moved a minimum distance of 25-feet from wellhead, tanks, and separator areas. In addition, GWOC implements a Hot Work Permit Program for employees and contractors doing any defined 'Hot Work' activities on GWOC locations.
4	Planning	Development from existing well pads (Rule 604.c.(2)V Where possible, GWOC shall provide for the development of multiple reservoirs by drilling on existing pads. GWOC strives to utilize multi-well pads wherever technically and economically practicable to minimize potential impacts to neighbors and the environment. Multi-well pads are not always feasible due to numerous possible issues including but not limited to; landowner requirements, topographic constraints, well bore reaches, setback requirements, etc.
5	Traffic control	Traffic Plan (Rule 604.c.(2)D. GWOC works closely with all municipalities and the county's as appropriate on traffic, access, maintenance, and road construction issues. Typically, our Conditional Use Grant (CUG) from these agencies will include either a formal roads/traffic/access plan or language referring to specific traffic-related issues. These plans or language may address issues such as; routes, construction specification of access roads, maintenance, dust control, jake brake limits, traffic controls, enforcement, emergency response, etc.

6	General Housekeeping	<p>General housekeeping will consist of neat and orderly storage of materials and fluids. Wastes will be temporarily stored in sealed containers and regularly collected and disposed of at offsite, suitable facilities. If spills occur prompt cleanup is required to minimize any commingling of waste materials with storm water runoff. Routine maintenance will be limited to fueling and lubrication of equipment. Drip pans will be used during routine fueling and maintenance to contain spills or leaks. Any waste product from maintenance will be containerized and transported offsite for disposal or recycling. There will be no major equipment overhauls conducted onsite. Equipment will be transported offsite for major overhauls. Cleanup will consist of patrolling the roadways, access areas, and other work areas to pick up trash, scrap debris, other discarded materials, and any contaminated soil. These materials will be disposed of properly and promptly.</p>
7	General Housekeeping	<p>Removal of Surface Trash (Rule 604.c.(2)P)</p> <p>All surface debris, trash, unusable scrap, or solid waste from the facility will be properly temporarily stored on location in a secure container and ultimately removed and disposed of in a legal manner.</p>
8	General Housekeeping	<p>Guy line anchors (Rule 604.c.(2)Q)</p> <p>Guy line anchors left buried for future use shall be identified by a brightly colored marker at least 4-feet in height and within 1-foot to the east of the anchor.</p>
9	General Housekeeping	<p>Well site cleared (Rule 604.c.(2)T)</p> <p>Within ninety (90) days after a well is plugged and abandoned, the well site shall be cleared of all non-essential equipment, trash, and debris.</p>
10	Storm Water/Erosion Control	<p>Storm Water Management Plans (SWMP) are in place to address construction, drilling and operations associated with Oil and Gas development throughout the state of Colorado in accordance with Colorado Department of Public Health and Environment (CDPHE). BMP's will be constructed around the perimeter of the site prior to, or at the beginning of construction. BMP's used will vary according to the location, and will remain in place until the pad reaches final reclamation.</p>
11	Material Handling and Spill Prevention	<p>Spill Prevention Control and Countermeasures (SPCC) plans are in place to address any possible spills associated with Oil and Gas operations throughout the state of Colorado in accordance with CFR 112.</p> <p>In accordance with COGCC Rule 1002.f.(2)A. & B., shall provide a designated storage area for dry bulk chemicals and miscellaneous fluids. The storage area shall be covered to prevent contact of precipitation with chemicals, shall be elevated above storm- or standing water, and shall provide sufficient containment to prevent release of spilled fluids or chemicals from impacting soil, surface water or groundwater and will prevent the co-mingling of spilled fluids or chemicals with other E & P Waste.</p>
12	Material Handling and Spill Prevention	<p>Leak Detection Plan (Rule 604.c(2)F).</p> <p>GWOC designs its new facilities to both avoid leaks or releases as well as to help detect them in a time-efficient manner to minimize potential impacts. Oil and produced water storage tanks are in lined containment areas. A minimum containment capacity of 110% (150% in Urban Mitigation Areas) of the single largest storage vessel inside the containment is constructed around any storage area. Tanks and all visible pipelines and valves etc. are inspected informally on a daily basis by company lease operators. In addition, GWOC also conducts formal annual SPCC inspections, and formal site specific and random audits, by third-party consultants to inspect for general site conditions as well as condition of tanks, pipelines, and containment structures. In addition, our company lease operators and Production staff review production records, including volumes and pressures, looking for irregularities that may indicate a problem with a tank or pipeline. If an irregularity is detected that may indicate a potential release the suspect tank and/or pipeline(s) are removed from service, isolated, and either pressure tested or visibly inspected for indications of a potential leak.</p>

13	Material Handling and Spill Prevention	<p>Berm Construction (Rule 604.c.(2)G).</p> <p>A minimum containment capacity of 110% (150% in Urban Mitigation Areas) of the single largest storage vessel inside the containment is constructed around any storage area. In more potentially sensitive areas such as those with surface waters in close proximity, steel containment with sealed liners are utilized at all storage facilities.</p> <p>Tanks and all visible pipelines and valves etc. are inspected informally on a daily basis by company lease operators. In addition, GWOC also conducts formal annual SPCC inspections, and formal site specific and random audits, by third-party consultants to inspect for general site conditions as well as condition of tanks, pipelines, and containment structures.</p>
14	Material Handling and Spill Prevention	<p>Load lines (Rule 604.c.(2)O)</p> <p>Load line containment is a necessary part of a complete secondary containment system. All loadlines are capped or bullplugged or locked shut to reduce the likelihood of a release occurring. In addition, GWOC places all load line receivers/valves inside secondary containment areas or in a proper load line containment device or both.</p>
15	Material Handling and Spill Prevention	<p>Tank specifications (Rule 604.c.(2)R)</p> <p>All newly installed or replaced crude oil and condensate storage tanks shall be designed, constructed, and maintained in accordance with National Fire Protection Association (NFPA) Code 30 (2008 version). GWOC shall maintain written records verifying proper design, construction, and maintenance, and shall make these records available for inspection by the Director. Only the 2008 version of NFPA Code 30 applies to this rule.</p>
16	Noise mitigation	<p>Noise (Rule 604.c.(2)A).</p> <p>The subject Great Western Operating Company, L.L.C. (GWOC) location will operate in accordance with maximum permissible noise levels per COGCC Rule 604.c.(2)A. and 802, as applicable. GWOC will utilize reasonable and cost-effective best practices to endeavor to reduce noise levels below these limits in areas where occupied structures occur within a Designated Setback Zone.</p> <p>Noise levels will be maintained at levels not to exceed COGCC specifications currently in existence, measured at a point 350' from the noise source, or as defined by current COGCC regulations. Where possible, drilling rig engine exhaust will be vented away from occupied buildings. Light sources will likewise be directed downwards, and away from occupied structures where possible. No special noise mitigation efforts should be required at this site. Once the drilling and completion rigs leave the site, there will be no permanently installed lighting on site.</p>
17	Drilling/Completion Operations	<p>Closed Loop Drilling Systems - Pit Restrictions (Rule 604.c.(2)B).</p> <p>GWOC is utilizing a Closed Loop Drilling System on the subject facility. No open pit storage of water is foreseen for this facility. If open pit storage of fresh water is required, a Form 15 will be submitted and approved prior to use of such pit, and appropriate signage and escape provisions will be provided as required.</p>
18	Drilling/Completion Operations	<p>Fencing requirements (Rule 604.c.(2)M)</p> <p>At a minimum GWOC installs appropriate fencing to restrict access by any unauthorized persons. This fencing may vary depending on site-specific situations. Fencing is properly noted on facility layout diagrams for both drilling/completion and the production phases of operations.</p>
19	Final Reclamation	<p>Identification of P&A wells (Rule 604.c.(2)U)</p> <p>GWOC shall identify the location of the P&A 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. P&A wellbores shall be cutoff well below ground surface in agricultural areas to provide for landowners to safely farm the reclaimed well area.</p>

Total: 19 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
1668181	RULE 306.E. CERTIFICATION
2157689	OTHER
400446325	FORM 2A SUBMITTED
400447576	WASTE MANAGEMENT PLAN
400561761	ACCESS ROAD MAP
400561762	CONST. LAYOUT DRAWINGS
400561764	LOCATION DRAWING
400561766	LOCATION PICTURES
400561769	FACILITY LAYOUT DRAWING
400561784	MULTI-WELL PLAN
400561916	HYDROLOGY MAP
400561920	TOPO MAP
400571378	OTHER
400576128	SURFACE AGRMT/SURETY
400576167	NRCS MAP UNIT DESC

Total Attach: 15 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
OGLA	Changed distance to Designated Outside Activity Area to 5280 feet	5/16/2014 11:46:51 AM
Permit	Distance to cultural features is from prod. facilities on west side of pad. Oper. submitted revised table of cultural distances (attached as OTHER). LGD comments refer to need to obtain county permits. No public comments. Final Review--passed.	5/14/2014 11:39:02 AM
OGLA	Operator provided mitigation measures in compliance with Rule 604.c via email received on April 23, 2014. Added Additional BMP: To ensure that oil and gas facilities operate in such a manner that fugitive dust do not constitute a nuisance or a hazard to public welfare; speed restrictions, road maintenance, restriction of construction activities during high wind days, and silica dust controls when handling sand used in hydraulic fracturing operations shall be employed during construction, drilling and completion operations. If fugitive dust continues to create a nuisance or hazard, additional management practices including road surfacing, wind breaks and barriers, or automation of wells to reduce truck traffic may also be required if technologically feasible and economically reasonable to minimize fugitive dust emissions. Per May 7, 2014 telephone conversation with the Operator.	4/24/2014 12:07:15 PM
OGLA	Changed Depth to Groundwater to 30 from 28 feet. Changed basis of groundwater depth to DWR Permit#121742 and receipt to #0218266. Changed distance to water well to 905 feet.	4/17/2014 4:44:14 PM
OGLA	Changed distance to nearest surface water body to 257 feet from 1250.	4/17/2014 4:38:49 PM
OGLA	Need revised distances from the production facilities to the garage (building) and house (building unit).	4/17/2014 11:46:13 AM
Permit	Corrected lat/long to agree w/ reference pt. on loc. drawing. Corrected survey info.	4/1/2014 7:33:01 AM

LGD	Adams County will approve all access points. It appears as though this site will be accessed by an existing access point. If this point is to be upgraded or relocated, Adams County must approve all related construction, culverts and access point locations. An Oil and gas Drilling Rig Move Permit will be required to move the drilling rig both into and out of this location. If the well is placed into production, an Oil and Gas Facilities Production Permit will be required. Please contact Mr. Mark Russell at 720-523-6821 for information regarding these permits.	3/27/2014 4:07:59 PM
Permit	This form has passed completeness.	3/27/2014 1:04:02 PM
Permit	Location Drawing shows different lat/longs as given on this form. There is 26' difference between the two values. Returned to DRAFT.	3/26/2014 8:26:01 AM
Permit	Returned to draft: 1) Longitude for location does not match loc. drawing.	3/24/2014 7:12:17 AM
Permit	Returned to draft: 1) SUA for Section 13. 2) NRCS attachment incorrect. 3) Need comment that exception request ltr. for Rule 603.a.(2) is attached to related APD's.	3/18/2014 1:22:56 PM
Permit	Returned to draft per operator.	3/3/2014 1:21:21 PM
Permit	Returned to draft: SUA for section 13. Surface Location on form 2A in section 24. Need proof that building unit owners received notices (attachment with return receipt)	3/3/2014 1:00:54 PM

Total: 14 comment(s)