

FORM
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04/01

State of Colorado

Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80205 Phone: (303) 894-2100 Fax: (303) 894-2109



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Document Number:

400190981

Oil and Gas Location Assessment

☒ New Location ☐ Amend Existing Location Location#: _____

Submit original plus one copy. This form is to be submitted to the COGCC prior to any ground disturbance activity associated with oil and gas development operations. This Assessment may be approved as a standalone application or submitted as an informational report accompanying an Application for Permit-To-Drill, Form 2. Approval of this Assessment will allow for the construction of the below specified location; however, it does not supersede any land use rules applied by the local land use authority. This form may serve as notice to land owners and other interested parties, please see the COGCC web site at <http://colorado.gov/cogcc/> for all accompanying information pertinent to this Oil and Gas Location Assessment.

Location ID:

425553

Expiration Date:

09/27/2014
☒ This location assessment is included as part of a permit application.

1. CONSULTATION

- ☐ This location is included in a Comprehensive Drilling Plan. CDP # _____
- ☒ This location is in a sensitive wildlife habitat area.
- ☒ This location is in a wildlife restricted surface occupancy area.
- ☐ This location includes a Rule 306.d.(1)A.ii. variance request.

2. Operator

Operator Number: 10255

Name: QUICKSILVER RESOURCES INC

Address: 801 CHERRY ST - #3700 UNIT 19

City: FT WORTH State: TX Zip: 76102

3. Contact Information

Name: Lisa Smith

Phone: (303) 8579999

Fax: (303) 4509200

email: LSPermitco@aol.com

4. Location Identification:

Name: K-Diamond Ranch Number: 44-20

County: MOFFAT

QuarterQuarter: SESE Section: 20 Township: 6N Range: 92W Meridian: 6 Ground Elevation: 6221

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

Footage at surface: 806 feet FSL, from North or South section line, and 485 feet FEL, from East or West section line.

Latitude: 40.451244 Longitude: -107.736178 PDOP Reading: 1.5 Date of Measurement: 05/02/2011

Instrument Operator's Name: McCoy Anderson

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

Special Purpose Pits: <input type="text"/>	Drilling Pits: <input type="text"/>	Wells: <input type="text" value="1"/>	Production Pits: <input type="text"/>	Dehydrator Units: <input type="text"/>
Condensate Tanks: <input type="text"/>	Water Tanks: <input type="text" value="1"/>	Separators: <input type="text" value="2"/>	Electric Motors: <input type="text"/>	Multi-Well Pits: <input type="text"/>
Gas or Diesel Motors: <input type="text" value="1"/>	Cavity Pumps: <input type="text"/>	LACT Unit: <input type="text"/>	Pump Jacks: <input type="text" value="1"/>	Pigging Station: <input type="text"/>
Electric Generators: <input type="text"/>	Gas Pipeline: <input type="text"/>	Oil Pipeline: <input type="text"/>	Water Pipeline: <input type="text"/>	Flare: <input type="text"/>
Gas Compressors: <input type="text"/>	VOC Combustor: <input type="text"/>	Oil Tanks: <input type="text" value="2"/>	Fuel Tanks: <input type="text"/>	

Other: 1 Heater Treater

6. Construction:

Date planned to commence construction: 08/20/2011 Size of disturbed area during construction in acres: 2.00
Estimated date that interim reclamation will begin: 09/01/2012 Size of location after interim reclamation in acres: 1.00
Estimated post-construction ground elevation: 6220 Will a closed loop system be used for drilling fluids: Yes ☒
Will salt sections be encountered during drilling: Yes ☐ No ☒ Is H2S anticipated? Yes ☐ No ☒
Will salt (>15,000 ppm TDS Cl) or oil based muds be used: Yes ☒ No ☐
Mud disposal: Offsite ☒ Onsite ☐ Method: Land Farming ☐ Land Spreading ☐ Disposal Facility ☒
Other: _____

7. Surface Owner:

Name: _____ Phone: _____
Address: _____ Fax: _____
Address: _____ Email: _____
City: _____ State: _____ Zip: _____ Date of Rule 306 surface owner consultation: 04/20/2011
Surface Owner: ☒ Fee ☐ State ☐ Federal ☐ Indian
Mineral Owner: ☒ Fee ☐ State ☐ Federal ☐ Indian
The surface owner is: ☒ the mineral owner ☒ committed to an oil and gas lease
☐ is the executer of the oil and gas lease ☐ the applicant
The right to construct the location is granted by: ☐ oil and gas lease ☒ Surface Use Agreement ☐ Right of Way
☐ applicant is owner
Surface damage assurance if no agreement is in place: ☐ \$2000 ☐ \$5000 ☐ Blanket Surety ID _____

8. Reclamation Financial Assurance:

☒ Well Surety ID: 20080107 ☐ Gas Facility Surety ID: _____ ☐ Waste Mgnt. Surety ID: _____

9. Cultural:

Is the location in a high density area (Rule 603.b.): Yes ☐ No ☒
Distance, in feet, to nearest building: 5280, public road: 5280, above ground utilit: 5280
, railroad: 5280, property line: 806

10. Current Land Use (Check all that apply):

Crop Land: ☐ Irrigated ☐ Dry land ☐ Improved Pasture ☐ Hay Meadow ☐ CRP
Non-Crop Land: ☒ Rangeland ☐ Timber ☐ Recreational ☐ Other (describe): _____
Subdivided: ☐ Industrial ☐ Commercial ☐ Residential

11. Future Land Use (Check all that apply):

Crop Land: ☐ Irrigated ☐ Dry land ☐ Improved Pasture ☐ Hay Meadow ☐ CRP
Non-Crop Land: ☒ Rangeland ☐ Timber ☐ Recreational ☐ Other (describe): _____
Subdivided: ☐ Industrial ☐ Commercial ☐ Residential

12. Soils:

List all soil map units that occur within the proposed location. Attach the National Resource Conservation Service (NRCS) report showing the "Map Unit Description" report listing the soil typical vertical profile. This data is to be used when segregating topsoil.

The required information can be obtained from the NRCS web site at <http://soildatamart.nrcs.usda.gov/> or from the COGCC web site GIS Online map page found at <http://colorado.gov/cogcc>. Instructions are provided within the COGCC web site help section.

NRCS Map Unit Name: 23; Bulkley silty clay; 12-25

NRCS Map Unit Name: _____
NRCS Map Unit Name: _____

13. Plant Community:

Complete this section only if any portion of the disturbed area of the location's current land use is on non-crop land.

Are noxious weeds present: Yes ☐ No ☒
Plant species from: ☐ NRCS or, ☒ field observation Date of observation: 05/02/2011
List individual species: _____

Check all plant communities that exist in the disturbed area.

- ☐ Disturbed Grassland (Cactus, Yucca, Cheatgrass, Rye)
☒ Native Grassland (Bluestem, Grama, Wheatgrass, Buffalograss, Fescue, Oatgrass, Brome)
☐ Shrub Land (Mahogany, Oak, Sage, Serviceberry, Chokecherry)
☐ Plains Riparian (Cottonwood, Willow, Aspen, Maple, Poplar, Russian Olive, Tamarisk)
☐ Mountain Riparian (Cottonwood, Willow, Blue Spruce)
☐ Forest Land (Spruce, Fir, Ponderosa Pine, Lodgepole Pine, Juniper, Pinyon, Aspen)
☐ Wetlands Aquatic (Bullrush, Sedge, Cattail, Arrowhead)
☐ Alpine (above timberline)
☐ Other (describe): _____

14. Water Resources:

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

Is this a sensitive area: ☐ No ☒ Yes Was a Rule 901.e. Sensitive Areas Determination performed: ☒ No ☐ Yes
Distance (in feet) to nearest surface water: 372, water well: 5280, depth to ground water: 80
Is the location in a riparian area: ☒ No ☐ Yes Was an Army Corps of Engineers Section 404 permit filed ☒ No ☐ Yes
Is the location within a Rule 317B Surface Water Supply Area buffer zone:
☒ No ☐ 0-300 ft. zone ☐ 301-500 ft. zone ☐ 501-2640 ft. zone

If the location is within a Rule 317B Surface Water Supply Area buffer have all public water supply systems within 15 miles been notified: ☐ No ☐ Yes

15. Comments:

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

Signed: _____ Date: 08/26/2011 Email: LSPermitco@aol.com
Print Name: Lisa Smith Title: President

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: David S. Neslin Director of COGCC Date: 9/28/2011

CONDITIONS OF APPROVAL, IF ANY:

All representations, stipulations and conditions of approval stated in this Form 2A for this location shall constitute representations, stipulations and conditions of approval for any and all subsequent operations on the location unless this Form 2A is modified by Sundry Notice, Form 4 or an Amended Form 2A.

SITE SPECIFIC COAs:

The drilling pit, if constructed, must be lined, or a closed loop system (which operator has indicated on the Form 2A) must be implemented during drilling. All cuttings generated during drilling with OBM/high chloride mud must be kept in the lined drilling pit, or placed either in containers or on a lined/bermed portion of the well pad; prior to analysis and/or offsite disposal.

The moisture content of any drill cuttings in a cuttings pit, trench, or pile shall be as low as practicable to prevent accumulation of liquids greater than de minimis amounts.

Operator must implement best management practices to contain any unintentional release of fluids, including any fluids conveyed via temporary surface or buried pipelines.

The access road will be constructed to prevent sediment migration from the access road to nearby surface water or any drainages leading to other nearby surface waters.

Operator must ensure secondary containment for any volume of fluids contained at well site during drilling and completion operations; including, but not limited to, construction of a berm or diversion dike, diversion/collection trenches within and/or outside of berms/dikes, site grading, or other comparable measures (i.e., best management practices (BMPs) associated with stormwater management) sufficiently protective of nearby surface water. Any berm constructed at the well pad location will be stabilized, inspected at regular intervals (at least every 14 days), and maintained in good condition.

Flowback and stimulation fluids must be sent to tanks, separators, or other containment/filtering equipment before the fluids can be placed into any pipeline or pit located on the well pad or into tanker trucks for offsite disposal. The flowback and stimulation fluid tanks, separators, or other containment/filtering equipment must be placed on the well pad in an area with additional downgradient perimeter berming. The area where flowback fluids will be stored/reused must be constructed to be sufficiently impervious to contain any spilled or released material.

Attachment Check List

Att Doc Num	Name
2033983	PROPOSED BMPs
2033985	CORRESPONDENCE
400190981	FORM 2A SUBMITTED
400200138	ACCESS ROAD MAP
400200140	CONST. LAYOUT DRAWINGS
400200141	HYDROLOGY MAP
400200142	LOCATION PICTURES
400200146	LOCATION DRAWING
400200149	REFERENCE AREA MAP
400200151	REFERENCE AREA PICTURES
400200153	NRCS MAP UNIT DESC
400200155	SURFACE AGRMT/SURETY

Total Attach: 12 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	NO PUBLIC COMMENTS. CPW BMP'S ACCEPTED BY OPERATOR. FINAL COMPREHENSIVE REVIEW STATUS--PASSED.	9/26/2011 7:39:49 AM
Permit	WO clarification of dist. to nearest well from Lisa; ready to pass once confirmed.	9/23/2011 10:00:49 AM

DOW	<p>The following BMPs were discussed and agreed to between CPW and Quicksilver. The confirmation is contained in an email to CPW and COGCC dated September 1, 2011.</p> <p>Quicksilver will construct the pad and drill the well outside of the period between March 1 and May 15 - lekking season.</p> <p>Restrict well site visitations to portions of the day between 9:00 a.m. and 4:00 p.m. during lekking season (March 1 to May 15).</p> <p>Quicksilver will construct and or drill any subsequent wells outside the period between March 1 and May 15.</p> <p>Quicksilver will conduct post development well site visitations to between the hours of 9:00 a.m. and 4:00 p.m. and reduce well site visitations between March 1 and July 30 - brood rearing period. Emergencies exempted.</p> <p>Quicksilver will use hospital grade mufflers for compressors, pump jacks, or other motors necessary to run operations at the site. Mufflers will be pointed upward to dissipate potential vibration.</p> <p>Interim and final reclamation will match existing vegetation.</p> <p>Quicksilver will include a weed management plan and implement the plan as part of reclamation.</p> <p>Mule Deer, Elk, and Pronghorn Antelope</p> <p>Where oil and gas activities must occur in mule deer critical winter range, elk winter concentration areas, conduct these activities outside the time period from December 1 through April 15.</p> <p>Restrict post-development well site visitations to between the hours of 9:00 a.m. and 3:00 p.m. and reduce well site visitations between December 1 and April 15.</p> <p>Establish company guidelines to minimize wildlife mortality from vehicle collisions on roads.</p> <p>Gate single purpose roads and restrict general public access to reduce traffic disruptions to wildlife.</p> <p>Close and immediately reclaim all roads that are redundant, not used regularly, or have been abandoned to the maximum extent possible to minimize disturbance and habitat fragmentation.</p> <p>Avoid aggressive non-native grasses and shrubs in mule deer, elk and pronghorn habitat restoration.</p> <p>Reclaim mule deer, elk, and pronghorn habitats with native shrubs, grasses, and forbs appropriate to the ecological site disturbed.</p> <p>Restore appropriate sagebrush species or subspecies on disturbed sagebrush sites. Use locally collected seed for reseeding where possible.</p> <p>Monday, September 12, 2011 at 11:55 A.M.</p>	9/12/2011 11:51:29 AM
OGLA	<p>Initiated/Completed OGLA Form 2A review on 08-29-11 by Dave Kubeczko; requested acknowledgement of fluid containment, spill/release BMPs, lined pits/closed loop, moisture content cuttings, and flowback to tanks COAs from operator on 08-29-11; received acknowledgement of COAs from operator on 08-29-11; passed by CDOW on 09-12-11 with operator agreed to BMPs acceptable; passed OGLA Form 2A review on 09-16-11 by Dave Kubeczko; fluid containment, spill/release BMPs, lined pits/closed loop, moisture content cuttings, and flowback to tanks COAs.</p>	8/29/2011 12:29:37 PM

Total: 4 comment(s)

BMP

<u>Type</u>	<u>Comment</u>
Wildlife	<p>Wildlife concern – Mapped greater sage-grouse lek, (RSO) elk winter concentration area, mule deer critical winter range and pronghorn winter concentration area (sensitive wildlife habitats). Greater Sage-grouse CP&W recommendations and concerns 1) Quicksilver will construct the pad and drill the well outside of the period between March 1 and May 15 – lekking season. 2) Restrict well site visitations to portions of the day between 9:00 a.m. and 4:00 p.m. during the lekking season (March 1 to May 15). 3) Quicksilver will construct and or drill any subsequent wells outside the period between March 1 and May 15. 4) Quicksilver will conduct post-development well site visitations to between the hours of 9:00 a.m. and 4:00 p.m. and reduce well site visitations between March 1 and July 30 - brood rearing period. Emergencies exempted. 5) Quicksilver will use hospital grade mufflers for compressors, pump jacks or other motors necessary to run operations at the site. Mufflers will be pointed upward to dissipate potential vibration. 6) Interim and final reclamation will match existing vegetation. 7) Quicksilver will include a weed management plan and implement the plan as part of reclamation.</p> <p>Mule Deer, Elk, & Pronghorn 1) Where oil and gas activities must occur in mule deer critical winter range or elk winter concentration areas, conduct these activities outside the time period from December 1 through April 15. 2) Restrict post-development well site visitations to between the hours of 9:00 a.m. and 3:00 p.m. and reduce well site visitations between December 1 and April 15 in mule deer and elk winter range. 3) Establish company guidelines to minimize wildlife mortality from vehicle collisions on roads. 4) Gate single-purpose roads and restrict general public access to reduce traffic disruptions to wildlife. 5) Close and immediately reclaim all roads that are redundant, not used regularly, or have been abandoned to the maximum extent possible to minimize disturbance and habitat fragmentation. 6) Avoid aggressive non-native grasses and shrubs in mule deer, elk, and pronghorn habitat restoration. 7) Reclaim mule deer, elk, and pronghorn habitats with native shrubs, grasses, and forbs appropriate to the ecological site disturbed. 8) Restore appropriate sagebrush species or subspecies on disturbed sagebrush sites. Use locally collected seed for reseeding where possible.</p>

Total: 1 comment(s)