

FORM  
2A

Rev  
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



DE ET OE ES

Document Number:  
400188507

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:  
**425305**  
Expiration Date:  
**09/10/2014**

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: 43-8  
County: MOFFAT  
Quarter: NE SE Section: 8 Township: 6N Range: 92W Meridian: 6 Ground Elevation: 6380

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: 1988 feet FSL, from North or South section line, and 660 feet FEL, from East or West section line.  
Latitude: 40.483569 Longitude: -107.736803 PDOP Reading: 2.2 Date of Measurement: 05/02/2011  
Instrument Operator's Name: Glenn McElroy

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

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

Other: 1 Heater Treater

6. Construction:

Date planned to commence construction: 08/08/2011 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: 6378 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: 4517, public road: 1950, above ground utilit: 427  
 , railroad: 5280, property line: 2097

**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 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: 112: Kremmerer-Moyerson Complex: 20-40%

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: 05/20/2011  
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: 2401, water well: 5280, depth to ground water: 145  
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 Suppl 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: 07/27/2011 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. Nashin Director of COGCC Date: 9/11/2011

**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. The moisture content of any drill cuttings in a cuttings container 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 pipelines.

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.

CPW and Quicksilver are determining the need and or applicability of conducting a golden eagle nest survey. The pad site is located such that a survey may be required based on CPW preliminary analysis. If a survey is necessary, Quicksilver/CPW will complete the survey in the spring of 2012 before construction of the pad occurs. Quicksilver may at its determination move the well pad location and submit and ammended Form 2A with all required revised attachments. If the survey is not needed, the pad will be constructed and operated per the recommended BMPs listed for this location.

**Attachment Check List**

Att Doc Num	Name
2033959	CORRESPONDENCE
2033980	PROPOSED BMPs
400188507	FORM 2A SUBMITTED
400190013	ACCESS ROAD MAP
400190014	CONST. LAYOUT DRAWINGS
400190015	HYDROLOGY MAP
400190017	LOCATION PICTURES
400190019	LOCATION DRAWING
400190020	REFERENCE AREA MAP
400190022	REFERENCE AREA PICTURES
400190023	NRCS MAP UNIT DESC
400190024	SURFACE AGRMT/SURETY

Total Attach: 12 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
DOW	<p>CPW and Quicksilver have agreed to the following list of BMPs for the site:</p> <p>Where oil and gas activities must occur in mule deer critical winter range, elk winter concentration areas, and pronghorn antelope 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 10:00 am and 3:00 pm and reduce well site visitations between December 1 through April 15.</p> <p>Establish company guidelines to minimize wildlife mortality from vehicle collisions on roads.</p> <p>Close and immediately reclaim all roads that are reduncant, not used regularly, or have been abandoned to the maximum extent possible to minimize disturbance and habitat restoration.</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>Limit fence construction in pronghorn habitat. Use CPW recommended pronghorn fence designs.</p> <p>In addition to the above BMPs CPW and Quicksilver are determining the need and or applicability of conducting a golden eagle nest survey. The pad site is located such that a survey may be required based on CPW preminary analysis.</p> <p>If a survey is necessary, Quicksilver/CPW will complete the survey in the spring of 2012 before construction of the pad occurs. Quicksilver may at its determination move the well pad location. If the survey is not needed, the pad may be constructed and operated per recommended BMPs as above.</p> <p>Friday, September 2, 2011 at 2:20 P.M.</p>	9/2/2011 2:17:49 PM
Permit	Added surface owner is committed to and executer	8/25/2011 3:28:35 PM
OGLA	<p>Initiated/Completed OGLA Form 2A review on 08-02-11 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 08-02-11; received acknowledgement of COAs from operator on 08-02-11; passed by CDOW on 09-02-11 with operator agreed to BMPs and future raptor survey (spring 2012), if necessary, acceptable; passed OGLA Form 2A review on 09-09-11 by Dave Kubeczko; fluid containment, spill/release BMPs, lined pits/closed loop, moisture content cuttings, flowback to tanks, and raptor survey COAs.</p>	8/2/2011 10:40:21 AM

Total: 3 comment(s)

## BMP

<u>Type</u>	<u>Comment</u>
Wildlife	<p><b>MULE DEER &amp; ELK</b> ? Avoid oil and gas activities within mule deer critical winter range, elk winter concentration areas, elk production areas, and migration corridors. ? 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. ? Restrict post-development well site visitations to between the hours of 10:00 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. ? Establish company guidelines to minimize wildlife mortality from vehicle collisions on roads. ? Gate single-purpose roads and restrict general public access to reduce traffic disruptions to wildlife. ? 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. ? Avoid aggressive non-native grasses and shrubs in mule deer and elk habitat restoration. ? Reclaim mule deer and elk habitats with native shrubs, grasses, and forbs appropriate to the ecological site disturbed. ? Restore appropriate sagebrush species or subspecies on disturbed sagebrush sites. Use locally collected seed for reseeding where possible.</p> <p><b>PRONGHORN ANTELOPE</b> ? Avoid surface disturbance to and construction activities within pronghorn winter concentration areas west of I-25 from January 1 through March 31. ? Gate single-purpose roads to reduce traffic disruptions to wildlife. ? 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. ? Limit fence construction in pronghorn habitat. Use CDOW recommended pronghorn fence designs. ? Avoid aggressive non-native grasses and shrubs in pronghorn habitat restoration. ? Reclaim pronghorn habitats with native shrubs, grasses, and forbs appropriate to the ecological site disturbed. ? Restore appropriate sagebrush species or subspecies on disturbed sagebrush sites. Use locally collected seed for reseeding where possible. Sagebrush is less important in pronghorn reclamation on the eastern plains than it is in western Colorado (west of I-25).</p> <p><b>GOLDEN EAGLE ACTIVE NEST SITE</b> ? Survey any suitable habitat (cliffs, large trees, snags) within 1 mile of a proposed project site for raptor nests. Where raptor nests are found, site the project to provide a suitable buffer zone, and/or place sufficient seasonal limitations on construction activity to protect the nest site. ? No surface occupancy (beyond that which historically occurred in the area) within 0.25 mile of any active golden eagle nest site. ? No human encroachment or construction activity within 0.5 mile of any active golden eagle nest from December 15 to July 15.</p>

Total: 1 comment(s)