

FORM  
2A

Rev  
04/01

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:

400454092

Date Received:

07/25/2013

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:

Expiration Date:

☐ 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: 96850

Name: WPX ENERGY ROCKY MOUNTAIN LLC

Address: 1001 17TH STREET - SUITE #1200

City: DENVER State: CO Zip: 80202

3. Contact Information

Name: Greg Davis

Phone: (303) 606-4071

Fax: (303) 629-8268

email: greg.j.davis@wpxenergy.com

4. Location Identification:

Name: MV 53-28 Number: Frac Pad

County: GARFIELD

QuarterQuarter: SWNW Section: 28 Township: 6S Range: 96W Meridian: 6 Ground Elevation: 5555

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: 1540 feet FNL, from North or South section line, and 495 feet FWL, from East or West section line.

Latitude: 39.498242 Longitude: -108.121386 PDOP Reading: 2.0 Date of Measurement: 07/12/2013

Instrument Operator's Name: Brian Baker

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"/>	Production Pits: <input type="text"/>	Dehydrator Units: <input type="text"/>
Condensate Tanks: <input type="text"/>	Water Tanks: 2	Separators: <input type="text"/>	Electric Motors: <input type="text"/>	Multi-Well Pits: <input type="text"/>
Gas or Diesel Motors: <input type="text"/>	Cavity Pumps: <input type="text"/>	LACT Unit: <input type="text"/>	Pump Jacks: <input type="text"/>	Pigging Station: <input type="text"/>
Electric Generators: <input type="text"/>	Gas Pipeline: 4	Oil Pipeline: 1	Water Pipeline: 1	Flare: <input type="text"/>
Gas Compressors: <input type="text"/>	VOC Combustor: <input type="text"/>	Oil Tanks: 8	Fuel Tanks: <input type="text"/>	

Other: \_\_\_\_\_

6. Construction:

Date planned to commence construction: 01/01/2014 Size of disturbed area during construction in acres: 2.40  
 Estimated date that interim reclamation will begin: 09/01/2015 Size of location after interim reclamation in acres: 1.00  
 Estimated post-construction ground elevation: 5554 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: Puckett Land Company Phone: \_\_\_\_\_  
 Address: 5460 South Quebec, Suite 250 Fax: \_\_\_\_\_  
 Address: \_\_\_\_\_ Email: \_\_\_\_\_  
 City: Greewood Village State: CO Zip: 80111 Date of Rule 306 surface owner consultation: \_\_\_\_\_  
 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: \_\_\_\_\_ ☐ 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: 4250, public road: 218, above ground utility: 192,  
 railroad: 11616, property line: 837

## 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: 47 Nihill channery loam, 6 to 25% slopes

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: 05/14/2013

List individual species: Sage, Cheatgrass, Wheatgrass

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: 472, water well: 1575, depth to ground water: 25

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:

The MV 53-28 Frac Pad will serve as the remote frac pad for the future Mesa Verde wells to be drilled on the GM 11-28 Pad. The existing well pad will be slightly expanded with an additional disturbance footprint of 1.55 acres to accommodate the well completion support equipment. During pad construction, topsoil will be stripped during the initial earthwork, windrowed around the pad perimeter where ever possible, and designed to serve as stormwater controls for the pad location. The earthwork volumes are balanced with no excess material requiring stockpiling. Typical frac equipment, consisting of approximately 10 to 15 temporary 500 bbl frac tanks to hold completions water will be placed on the MV 53-28 Frac Pad. Three (3) 4.5" steel surface temporary frac lines will be installed between the MV 53-28 frac pad and the GM 11-28 well pad. Two 10" poly surface water lines will be installed within an existing pipeline corridor to the MV 53-28 well pad to support water delivery to the MV 53-28 frac pad. Re-cycled water from the "Parachute Creek E&P Water Facility" located in the SWSW Qtr Section 36 T6S R96W (Facility ID #149015) will be used for hydraulic stimulation operations. At the conclusion of operations, the frac fluids will be sent to be re-cycled at WPX's "Parachute Creek E&P Water Facility" (Facility ID #149015).

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

Signed: Date: 07/25/2013 Email: greg.j.davis@wpxenergy.com

Print Name: Greg Davis Title: Supervisor Permits

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: \_\_\_\_\_

**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.**

**Description**

**PIPELINE COAs:**

Operator shall pressure test pipelines in accordance with Rule 1101.e.(1) prior to putting into initial service any temporary surface or permanent buried pipelines and following any reconfiguration of the pipeline network. Operator shall notify the COGCC Oil and Gas Location Assessment (OGLA) Specialist for Western Colorado (Dave Kubeczko; email dave.kubeczko@state.co.us) and the COGCC Field Inspection Supervisor for Northwest Colorado (Shaun Kellerby; email shaun.kellerby@state.co.us) 48 hours prior to testing surface poly/steel or buried poly/steel pipelines.

Operator must implement best management practices to contain any unintentional release of fluids along all portions of the surface pipeline route where temporary pumps and other necessary equipment are located.

Operator must routinely inspect the entire length of the surface pipeline to ensure integrity. Operator shall conduct daily inspections of surface poly pipeline routes for leaks during active transfer of fluids. Inspections shall be conducted by viewing the length of the pipeline; operator will endeavor to minimize surface disturbance during pipeline monitoring. The operator shall maintain records of inspections, findings and repairs, if necessary, for the life of the pits.

Operator must ensure 110 percent secondary containment for any potential volume of fluids that may be released from the surface pipeline at all sensitive area crossings, including, but not limited to stream, intermittent stream, ditch, and drainage crossings.

Operator will utilize, to the extent practical, all existing access and other public roads, and/or existing pipeline right-of-ways, when placing/routing the surface pipelines. This will reduce surface disturbance and fragmentation of wildlife habitat in the area.

#### GENERAL SITE COAs:

Notify the COGCC 48 hours prior to start of frac pad construction, pipeline installation, and start of hydraulic stimulation operations using Form 42 (the appropriate COGCC individuals will automatically be email notified, including the LGD for hydraulic stimulation operations).

Operator must implement best management practices to contain any unintentional release of fluids at the frac pad location, as well as any fluids conveyed via temporary surface or buried permanent pipelines.

Operator must ensure secondary containment for any volume of fluids contained at frac pad site during operations (as listed in the Proposed BMPs attachment and described in the Sensitive Area Data attachment); 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 pit/frac pad location will be stabilized, inspected at regular intervals (at least every 14 days), and maintained in good condition.

Strategically apply fugitive dust control measures, including enforcing established speed limits on private roads, to reduce fugitive dust and coating of vegetation and deposition in water sources.

Operator shall stabilize exposed soils and slopes as an interim measure during frac pad operations at this site.

Flowback and stimulation fluids from the wells/pads being completed using this frac pad (if applicable) must be sent to tanks, separators, or other containment/filtering equipment before the fluids can be placed into any pipeline, storage vessel, or lined pit (only if an amended Form 2A has been submitted/approved and a Form 15 Earthen Pit Permitted has been submitted/approved) 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.

Berms or other containment devices shall be constructed to be sufficiently impervious (preferably corrugated steel with poly liner) to contain any spilled or released material around crude oil, condensate, and produced water storage tanks.

Additional containment shall be required where temporary or permanent pumps and other necessary equipment or chemicals are located on the frac pad site.

Operator will use adequately sized containment devices for all chemicals and/or hazardous materials stored or used on location.

Operator will implement measures to ensure that adequate separation of hydrocarbons from the influent occurs to prevent accumulation of oil on the surface of stored fluids. Operator shall also employ a method for monitoring buildup of phase-separated hydrocarbons on the surface of stored fluids.

#### **Attachment Check List**

<b><u>Att Doc Num</u></b>	<b><u>Name</u></b>
2106732	OTHER
2106744	CORRESPONDENCE
2157204	SURFACE AGRMT/SURETY
400454211	LOCATION PICTURES
400454214	LOCATION DRAWING
400454217	HYDROLOGY MAP
400454219	ACCESS ROAD MAP
400454221	REFERENCE AREA MAP
400454223	NRCS MAP UNIT DESC
400454225	CONST. LAYOUT DRAWINGS
400454227	PROPOSED BMPs
400454228	SENSITIVE AREA DATA
400454246	SURFACE AGRMT/SURETY

Total Attach: 13 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
OGLA	Initiated/Completed OGLA Form 2A review on 09-10-13 by Dave Kubeczko, placed fluid containment, spill/release BMPs, flowback to tanks, tank berming, additional secondary containment, dust control, pipeline, and notification COAs on Form 2A; sent email to operator on 09-10-13; passed by CPW on 07-29-13 with operator submitted BMPs acceptable; changed to sensitive area due to potential shallow GW (20 to 25' bgs) and surface materials (alluvium and gravels); passed OGLA Form 2A review on 09-23-13 by Dave Kubeczko; fluid containment, spill/release BMPs, flowback to tanks, tank berming, pipeline, and notification COAs.	9/10/2013 10:51:44 AM
Permit	Amended Location??? Attached SUA memo w/ land description.	8/15/2013 1:34:06 PM
LGD	pass, gdb	8/12/2013 3:40:03 PM
DOW	The BMPs submitted with the Form 2A application adequately address wildlife concerns.  Approved:Jim Komatinsky 7-29-2013	7/29/2013 11:23:05 AM
Permit	This form has passed completeness.	7/29/2013 7:05:09 AM

Total: 5 comment(s)

## Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Planning	<p>Planning</p> <ul style="list-style-type: none"> <li>• Conduct wildlife surveys to determine presence of game/non-game species/habitat</li> <li>• Minimize well pad density to the extent possible</li> <li>• Minimize the number, size and distribution of well pads and locate pads along existing roads where possible.</li> <li>• Adequately size infrastructure and facilities to accommodate both current and future gas production</li> </ul>
2	General Housekeeping	<p>General</p> <ul style="list-style-type: none"> <li>• Contribute to and participate in wildlife studies and research efforts related to oil and gas activity's relationship to wildlife</li> <li>• Treat/control noxious weeds/plants including Tamarisk</li> <li>• Continue to Support Operation Game Thief</li> <li>• Participate in wildlife seminars and conferences (e.g. AFWA)</li> <li>• Focus Ranch and Property Management (WPXs' owned/managed properties) on wildlife resources</li> <li>• Restrict and/or manage grazing to benefit wildlife</li> <li>• Enforce policies to protect wildlife (e.g., no poaching, no firearms, no dogs on location, no feeding of wildlife, etc.).</li> <li>• Inventory, monitor and remove obsolete, degraded, or hazardous fencing on WPX owned property</li> <li>• Support research to test the effectiveness of specific Best Management Practices</li> </ul>

3	Construction	<p>Construction</p> <ul style="list-style-type: none"> <li>• Surface roads to ensure that the anticipated volume of traffic and the weight and speed of vehicles using the road do not cause environmental damage, including generation of fugitive dust and contribution of sediment to downstream areas.</li> <li>• Protect culvert inlets from erosion and sedimentation and install energy dissipation structures at outfalls</li> <li>• Construct fluid pit fences and nets that are capable of withstanding animal pressure and environmental conditions and that are appropriately sized for the wildlife encountered.</li> <li>• Install impermeable barriers beneath fluid pits to protect groundwater, riparian areas and wetlands.</li> <li>• Salvage topsoil from all road construction and other rights-of-way and re-apply during interim and final reclamation.</li> <li>• Strip and segregate topsoil prior to construction. Appropriately configure topsoil piles control erosion, prevent weed establishment and maintain soil microbial activity</li> </ul>	
4	Drilling/Completion Operations	<p>Drilling/Completions</p> <ul style="list-style-type: none"> <li>• Continue application of BMPs to prevent wildlife from entering pits including fencing and netting where appropriate</li> <li>• Promptly report spills that affect wildlife to the CDOW.</li> <li>• Store and stage emergency spill response equipment at strategic locations so that it is available to expedite effective spill response.</li> <li>• Limit parking to already disturbed areas that have not yet been reclaimed</li> <li>• Screen water suction hoses to exclude fish.</li> <li>• Reduce noise by using effective sound dampening devices or techniques (e.g., hospital-grade mufflers, equipment housing, insulation, installation of sound barriers, earthen berms, vegetative buffers, etc.).</li> </ul>	
5	Interim Reclamation	<p>Production/Reclamation</p> <ul style="list-style-type: none"> <li>• Install automated emergency response systems (e.g., high tank alarms, emergency shut- down systems, etc.).</li> <li>• Implement fugitive dust control program</li> <li>• Avoid direct discharge of pipeline hydrostatic test water to any reservoir, lake, wetland, or natural perennial or seasonally flowing stream or river.</li> <li>• Locate above-ground facilities to minimize the visual effect (e.g., low profile equipment, appropriate paint color, vegetation screening in wooded areas, etc.).</li> <li>• Skim and eliminate oil from produced water ponds and fluid pits at a rate sufficient to prevent oiling of birds or other wildlife that could gain access to the pit.</li> <li>• Apply an aggressive, integrated, noxious and invasive weed management plan. Utilize an adaptive management strategy that permits effective responses to monitored findings and reflects local site and geologic conditions</li> <li>• Map the occurrence of existing weed infestations prior to development to effectively monitor and target areas that will likely become issues after development.</li> <li>• Evaluate the utility of soil amendment application to achieve effective reclamation.</li> <li>• Use locally adapted seed whenever available and approved by landowner.</li> <li>• Use appropriately diverse reclamation seed mixes that mirror an appropriate reference area for the site being reclaimed where approved by landowner.</li> <li>• Conduct seeding in a manner that ensures that seedbed preparation and planting techniques are targeted toward the varied needs of grasses, forbs and shrubs (e.g., seed forbs and shrubs separately from grasses, broadcast big sagebrush but drill grasses, etc.)</li> <li>• Emphasize bunchgrass over sod-forming grasses in seed mixes in order to provide more effective wildlife cover and to facilitate forb and shrub establishment.</li> <li>• Seed during appropriate season to increase likelihood of reclamation success</li> <li>• Do not include aggressive, non-native grasses in reclamation seed mixes</li> <li>• Choose reference areas as goals for reclamation that have high wildlife value, with attributes such a diverse and productive understory of vegetation, productive and palatable shrubs, and a high prevalence of native species.</li> <li>• Establish vegetation with total perennial non-invasive plant cover of at least eighty (80) percent of pre-disturbance or reference area levels.</li> <li>• Establish vegetation with plant diversity of non-invasive species which is at least half that of pre-disturbance or reference area levels. Quantify diversity of vegetation using a metric that considers only species with at least 3 percent relative plant cover.</li> </ul>	

	<ul style="list-style-type: none"> <li>• Establish permanent and monumented photo points and vegetation measurement plots or transects; monitor at least annually until plant cover, composition, and diversity standards have been met.</li> <li>• Observe and maintain a performance standard for reclamation success characterized by the establishment of a self-sustaining, vigorous, diverse, locally appropriate plant community on the site, with a density sufficient to control erosion and non-native plant invasion and diversity sufficient to allow for normal plant community development.</li> <li>• Use early and effective reclamation techniques, including interim reclamation to accelerate return of disturbed areas for use by wildlife</li> <li>• Remove all unnecessary infrastructure during the production phase.</li> <li>• Reclaim reserve pits as quickly as practical after drilling and ensure that pit contents do not contaminate soil.</li> <li>• Remediate hydrocarbon spills on disturbed areas prior to reclamation.</li> <li>• Complete final reclamation activities so that seeding occurs during the first optimal season following plugging and abandonment of oil and gas wells.</li> <li>• Perform interim reclamation to final reclamation species composition and establishment standards.</li> <li>• Perform interim reclamation on all disturbed areas not needed for active support of production operations</li> <li>• Remove and properly dispose of pit contents where contamination of surface water, groundwater, or soil by pit contents cannot be effectively prevented</li> <li>• Apply certified weed free mulch and crimp or tacyfy to remain in place to reclaim areas for seed preservation and moisture retention</li> <li>• Control weeds in areas surrounding reclamation areas in order to reduce weed competition</li> <li>• Educate employees and contractors about weed issues</li> <li>• Where possible, fence livestock and/or wildlife out of newly reclaimed areas until reclamation standards have been met and plants are capable of sustaining herbivory</li> <li>• Conduct necessary reclamation and invasive plant monitoring.</li> <li>• Census and assess the utilization of the reclaimed areas by the target species</li> <li>• Maintain pre and post development site inspection records and monitor operations for compliance</li> <li>• Utilize GIS technologies to assess the extent of disturbance and document the reclamation progression and the footprint of disturbances</li> <li>• Identify native species for which commercial seed sources are not available. Provide support to contractors for developing cultivation and seed production techniques for needed species</li> <li>• Conduct reclamation field trials to match seed mixes, soil preparation techniques, and planting methods to local conditions.</li> </ul>
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Total: 5 comment(s)