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

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Document Number: 400234180

Oil and Gas Location Assessment

☐ New Location ☒ Amend Existing Location Location#: 323938

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: **323938**

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: WILLIAMS PRODUCTION RMT COMPANY 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@Williams.com

4. Location Identification:

Name: Savage Number: RMV28-27FracPad

County: GARFIELD

QuarterQuarter: SWSE Section: 27 Township: 6S Range: 94W Meridian: 6 Ground Elevation: 5308

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: 130 feet FSL , from North or South section line, and 2137 feet FEL , from East or West section line.

Latitude: 39.489339 Longitude: -107.872344 PDOP Reading: 2.8 Date of Measurement: 10/27/2011

Instrument Operator's Name: J. Kirkpatrick

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

Special Purpose Pits:		Drilling Pits:		Wells:	0	Production Pits:		Dehydrator Units:	
Condensate Tanks:		Water Tanks:	50	Separators:		Electric Motors:		Multi-Well Pits:	
Gas or Diesel Motors:		Cavity Pumps:		LACT Unit:		Pump Jacks:		Pigging Station:	
Electric Generators:		Gas Pipeline:		Oil Pipeline		Water Pipeline:		Flare:	
Gas Compressors:				VOC Combustor:		Oil Tanks:		Fuel Tanks:	

Other:

6. Construction:

Date planned to commence construction: 02/15/2012 Size of disturbed area during construction in acres: 1.01

Estimated date that interim reclamation will begin: 08/01/2012 Size of location after interim reclamation in acres: 0.00

Estimated post-construction ground elevation: 5008 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: Joan Savage Phone:

Address: 5953 County Rd 320 Fax:

Address: Email:

City: Rifle State: CO Zip: 81650 Date of Rule 306 surface owner consultation: 09/29/2008

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: 20030107 ☐ 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: 859 , public road: 644 , above ground utilit: 658

, railroad: 5300 , property line: 130

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: 46 Nihill channery loam, 1 to 6% 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: 11/06/2008

List individual species: Sage, 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: 1178 , water well: 1071 , depth to ground water: 119

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:

Although this location is located within 500 ft. of perennial, ephemeral, or intermittent surface water according to USGS mapped surface waters, the attached Sensitive Area Determination concludes that the location is not within a sensitive area due to the low potential for impacts to surface water in the case of a facility release. However, in order to satisfy COGCC guidance requiring that all locations within 500 ft. of mapped surface water incorporate BMPs to protect that surface water, Williams will employ the following BMPs at this location: • Williams will ensure 110 percent secondary containment for any volume of fluids contained at well site during drilling and completion operations.• Williams will implement best management practices to contain any unintentional release of fluids.Either a lined drilling pit or closed loop system will be implemented

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

Signed: Date: Email: Greg.J.Davis@Williams.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.

Attachment Check List

Att Doc Num	Name
400234434	ACCESS ROAD MAP
400234437	HYDROLOGY MAP
400234440	LOCATION DRAWING
400234441	LOCATION PICTURES
400234442	NRCS MAP UNIT DESC
400234443	SURFACE AGRMT/SURETY
400234444	SENSITIVE AREA DATA
400234445	REFERENCE AREA PICTURES
400234447	REFERENCE AREA MAP
400234450	PROPOSED BMPs
400234497	CONST. LAYOUT DRAWINGS

Total Attach: 11 Files

General Comments

User Group	Comment	Comment Date

Total: 0 comment(s)

BMP

Type	Comment
Site Specific	Planning • Share/consolidate corridors for pipeline ROWs to the maximum extent possible. • Maximize the utility of surface facilities by developing multiple wells from a single pad (directional drilling), and by co-locating multipurpose facilities (for example, well pads and compressors) to avoid unnecessary habitat fragmentation and disturbance of additional geographic areas. • Minimize newly planned activities and operations within 300 feet of the ordinary high water mark of any reservoir, lake, wetland, or natural perennial or seasonally flowing stream or river. • Locate roads outside of drainages where possible and outside of riparian habitat. • Avoid constructing any road segment in the channel of an intermittent or perennial stream. • Avoid new surface disturbance and placing new facilities in key wildlife habitats in consultation with CDOW. • Minimize the number, length, and footprint of oil and gas development roads; • Use existing roads where possible • Combine utility infrastructure (gas, electric, and water) planning with roadway planning to avoid separate utility corridors • Combine and share roads to minimize habitat fragmentation • Where possible, consolidate pipeline and existing roadways, or roadways that are planned for development • Place roads to avoid obstructions to migratory routes for wildlife, and to avoid displacement of wildlife from public to private lands. • Design roads with visual and auditory buffers or screens (e.g., topographic barriers, vegetation, and distance).

	• Accelerate development under a “clustered-development concept” on a site-specific basis where Williams has a 100% mineral interest or control of mineral development • Maximize the use of directional drilling to minimize habitat loss/fragmentation • Maximize use of long-term centralized tank batteries to minimize traffic • Maximize use of remote completion/frac operations to minimize traffic • Maximize use of remote telemetry for well monitoring to minimize traffic • Phase and concentrate development activities, so that large areas of undisturbed habitat for wildlife remain. • Maintain undeveloped areas within development boundaries sufficient to allow wildlife to persist within development boundaries during all phases of construction, drilling, and production. • Minimize the duration of development and avoid repeated or chronic disturbance of developed areas. Complete all anticipated drilling within a phased, concentrated, development area during a single, uninterrupted time period. Construction . • Structures for perennial or intermittent stream channel crossings should be constructed using appropriately sized bridges or culverts • Design road crossings of streams to allow fish passage at all flows and to minimize the generation of sediment. • Design road crossings of streams at right angles to all riparian corridors and streams to minimize the area of disturbance to the extent possible. • Construct retention basins and ponds that benefit wildlife Drilling/Completions • Use centralized hydraulic fracturing operations. • Install and maintain adequate measures to exclude all types of wildlife (e.g., big game, birds, and small rodents) from all fluid pits (e.g., fencing, netting, and other appropriate exclusion measures). • Conduct well completions with drilling operations to limit the number of rig moves and traffic. Production/Reclamation • Utilize staked soil retention blankets for erosion control and reclamation of large surface areas with 1.5:1 or steeper slopes. Avoid use of plastic blanket materials. • Restore both form and function of impacted wetlands and riparian areas and mitigate erosion. • Remove well pad and road surface materials that are incompatible with post-production land use and re-vegetation require¬ments • Use only certified weed-free native seed in seed mixes, except for non-native plants that benefit wildlife • Williams will use certified, weed free grass hay, straw, hay or other mulch materials used for the reseeding and reclamation of disturbed areas. • Install exclusionary devices to prevent bird and other wildlife access to equipment stacks, vents and openings. • Reduce visits to well-sites through remote monitoring (i.e. SCADA) and the use of multi-function contractors. • Avoid dust suppression activities within 300 feet of the ordinary high water mark of any reservoir, lake, wetland, or natural perennial or seasonally flowing stream or river where possible. • Bore pipelines that cross perennial streams Although this location is located within 500 ft. of perennial, ephemeral, or intermittent surface water according to USGS mapped surface waters, the attached Sensitive Area Determination concludes that the location is not within a sensitive area due to the low potential for impacts to surface water in the case of a facility release. However, in order to satisfy COGCC guidance requiring that all locations within 500 ft. of mapped surface water incorporate BMPs to protect that surface water, Williams will employ the following BMPs at this location: • Williams will ensure 110 percent secondary containment for any volume of fluids contained at well site during drilling and completion operations.	

	• Williams will implement best management practices to contain any unintentional release of fluids. • Either a lined drilling pit or closed loop system will be implemented.
Interim Reclamation	Production/Reclamation • Gate access roads where necessary to minimize/control access to “crucial habitats” • Install automated emergency response systems (e.g., high tank alarms, emergency shut- down systems, etc.). • Implement fugitive dust control program • Avoid direct discharge of pipeline hydrostatic test water to any reservoir, lake, wetland, or natural perennial or seasonally flowing stream or river. • Locate above-ground facilities to minimize the visual effect (e.g., low profile equipment, appropriate paint color, vegetation screening in wooded areas, etc.). • 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. • 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 • Map the occurrence of existing weed infestations prior to development to effectively monitor and target areas that will likely become issues after development. • Evaluate the utility of soil amendment application or consider importing topsoil to achieve effective reclamation. • Use locally adapted seed whenever available and approved by landowner. • Use appropriately diverse reclamation seed mixes that mirror an appropriate reference area for the site being reclaimed where approved by landowner. • 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.) • Emphasize bunchgrass over sod-forming grasses in seed mixes in order to provide more effective wildlife cover and to facilitate forb and shrub establishment. • Seed during appropriate season to increase likelihood of reclamation success • Do not include aggressive, non-native grasses in reclamation seed mixes • 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. • Establish vegetation with total perennial non-invasive plant cover of at least eighty (80) percent of pre-disturbance or reference area levels. • 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. • 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. • 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. • Use early and effective reclamation techniques, including interim reclamation to accelerate return of disturbed areas for use by wildlife • Remove all unnecessary infrastructure during the production phase. • Reclaim reserve pits as quickly as practical after drilling and ensure that pit contents do not contaminate soil. • Remediate hydrocarbon spills on disturbed areas prior to reclamation. • Complete final reclamation activities so that seeding occurs during the first optimal season following plugging and abandonment of oil and gas wells. • Perform interim reclamation to final reclamation species composition and establishment standards. • Perform interim reclamation on all disturbed areas not needed for active support of production operations • Remove and properly dispose of degraded silt fencing and erosion control materials after their utility has expired

	• Remove and properly dispose of pit contents where contamination of surface water, groundwater, or soil by pit contents cannot be effectively prevented • Apply certified weed free mulch and crimp or tacify to remain in place to reclaim areas for seed preservation and moisture retention • Control weeds in areas surrounding reclamation areas in order to reduce weed competition • Educate employees and contractors about weed issues • 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 • Conduct necessary reclamation and invasive plant monitoring. • Census and assess the utilization of the reclaimed areas by the target species • Maintain pre and post development site inspection records and monitor operations for compliance • Utilize GIS technologies to assess the extent of disturbance and document the reclamation progression and the footprint of disturbances • 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 • Conduct reclamation field trials to match seed mixes, soil preparation techniques, and planting methods to local conditions.
Drilling/Completion Operations	Drilling/Completions • Continue application of BMPs to prevent wildlife from entering pits including fencing and netting where appropriate • Limit days/hours operations where practical to minimize disturbance and traffic • Promptly report spills that affect wildlife to the CDOW. • Store and stage emergency spill response equipment at strategic locations so that it is available to expedite effective spill response. • Limit parking to already disturbed areas that have not yet been reclaimed • Screen water suction hoses to exclude fish. • 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.).
Construction	Construction • Schedule necessary construction in stream courses to avoid critical spawning times. • 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. • Protect culvert inlets from erosion and sedimentation and install energy dissipation structures at outfalls • Use the minimum right-of-way width and vegetation mats where pipelines cross riparian areas and streams wherever possible • 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. • Install impermeable barriers beneath fluid pits to protect groundwater, riparian areas and wetlands. • Salvage topsoil from all road construction and other rights-of-way and re-apply during interim and final reclamation. • Strip and segregate topsoil prior to construction. Appropriately configure topsoil piles and immediately seed to control erosion, prevent weed establishment and maintain soil microbial activity

Planning	In addition to compliance with General Operating Requirements required under COGCC rule 1203 to be applied in Sensitive Wildlife Habitat and Restricted Surface Occupancy areas or COGCC 1204 to be applied statewide or in areas noted in the Rule, Williams will employ the following BMPs either field wide or at the specific location for which this Form 2A is being submitted. Field Wide BMPs: General • Prepare plans and studies to support wildlife conservation and protection • Contribute to and participate in wildlife studies and research efforts related to oil and gas activity's relationship to wildlife • Treat/control noxious weeds/plants including Tamarisk • Assist CDOW in obtaining access to private lands for wildlife research and conservation • Focus BMPs on critical wildlife seclusion and "crucial habitats' • Contribute to organizations that acquire/manage habitat • Continue to Support Operation Game Thief • Continue to support CDOW sportsman's programs • Participate in wildlife seminars and conferences (e.g. AFWA) • Focus Ranch and Property Management (Williams' owned/managed properties) on wildlife resources • Identify conservation easement opportunities on Williams-owned/managed properties • Acquire water rights and irrigate key habitat areas • Restrict and/or manage grazing to benefit wildlife • Fence and restrict activities in locations that provide high value habitat • Construct habitat improvement projects as practical • Enforce policies to protect wildlife (e.g., no poaching, no firearms, no dogs on location, no feeding of wildlife, etc.). • Inventory, monitor and remove obsolete, degraded, or hazardous fencing on Williams owned property • Support research to test the effectiveness of specific Best Management Practices Planning • Conduct wildlife surveys to determine presence of game/non-game species/habitat • Identify and Protect "crucial habitats" • Site access roads, pads and facilities in locations that minimize habitat impacts • Identify private and Federal land seclusion areas where drilling will be voluntarily deferred in critical seasonal habitats • Identify and protect migration corridors • Minimize well pad density to the extent possible • Minimize the number, size and distribution of well pads and locate pads along existing roads where possible. • Cluster well pads in the least environmentally sensitive areas. • Plan pipelines routes ahead of time to avoid field fitting and reduce excessive ROW widths and reclamation. • Adequately size infrastructure and facilities to accommodate both current and future gas production.

Total: 5 comment(s)