

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:

400231362

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:

427810

Expiration Date:

02/20/2015

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: Howard Harris
 Phone: (303) 606-4086
 Fax: (303) 629-8268
 email: howard.harris@williams.com

4. Location Identification:

Name: Spruce Cr. Production Pit Number: 14-4-794
 County: GARFIELD
 Quarter: SWSW Section: 4 Township: 7S Range: 94W Meridian: 6 Ground Elevation: 6390

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: 143 feet FSL, from North or South section line, and 258 feet FWL, from East or West section line.
 Latitude: 39.460272 Longitude: -107.901133 PDOP Reading: 2.3 Date of Measurement: 10/04/2011
 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: <input type="checkbox"/>	Drilling Pits: <input type="checkbox"/>	Wells: <input type="checkbox"/>	Production Pits: <input type="checkbox"/>	Dehydrator Units: <input type="checkbox"/>
Condensate Tanks: <input type="checkbox"/>	Water Tanks: <input type="checkbox"/>	Separators: <input type="checkbox"/>	Electric Motors: <input type="checkbox"/>	Multi-Well Pits: <input type="checkbox"/>
Gas or Diesel Motors: <input type="checkbox"/>	Cavity Pumps: <input type="checkbox"/>	LACT Unit: <input type="checkbox"/>	Pump Jacks: <input type="checkbox"/>	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"/>	Fuel Tanks: <input type="checkbox"/>	

Other: _____

6. Construction:

Date planned to commence construction: 04/01/2012 Size of disturbed area during construction in acres: 4.60
 Estimated date that interim reclamation will begin: 09/01/2012 Size of location after interim reclamation in acres: 0.00
 Estimated post-construction ground elevation: 6390 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: NA

7. Surface Owner:

Name: Williams Phone: _____
 Address: 1001 17th Street, Ste 1200 Fax: _____
 Address: _____ Email: _____
 City: Denver State: CO Zip: 80202 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: 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: 3300, public road: 542, above ground utilit: 3370
 , railroad: 13700, property line: 143

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: 69 Vale Silt Loam, 6 to 12% 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: _____
List individual species: Cheatgrass

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: 386, water well: 266, depth to ground water: 176
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:

This location Assessment form 2A is being submitted for construction of a production pit to be used for both completions and production operations. A form 15 pit permit with supporting attachments will be submitted separately for this facility. Surface location is owned by Williams. Referencee area photos will be provided at a later date. The center of the pit is designated as the location reference point from which all measurements were taken.

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.
Signed: _____ Date: 01/05/2012 Email: howard.harris@williams.com
Print Name: Howard Harris Title: Sr. Regulatory Specialist

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: 2/21/2012

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:

Notify 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 start of construction of the pad and pit.

After installation of the uppermost liner and prior to operating the pit, the synthetic liner(s) shall be tested by filling the pit with at least 12 feet of fresh and/or produced water, measured from the base of the pit (not to exceed the 2-foot freeboard requirement). The operator shall monitor the pit for leaks for a period of 72 hours prior to draining the pit and commencing operations. The leak detection system must also be monitored during the entire test. Operator shall notify the COGCC Oil and Gas Location Assessment (OGLA) Specialist for Western Colorado (Dave Kubeczko; email dave.kubeczko@state.co.us) 48 hours prior to start of the hydrotest. Hydrotest monitoring results must be maintained by the operator for the life of the pit and provided to COGCC prior to using the pit.

In lieu of conducting an initial hydrostatic test of the pit, the operator can monitor fluid levels in the pit continuously using a minimum of two pressure transducers located at the upgradient and downgradient ends of the pit (based on the original topographic profile). These pressure transducers should be linked to the operator's SCADA system such that they can be remotely monitored. In addition, the pit liner will be marked at the two foot freeboard depth line so that operations personnel (as well as COGCC inspectors) can easily verify that the required fluid free board is being maintained. The electronically collected water level measurement data shall be used to confirm changes in pit inflow and outflow during operations based on estimates from truck and/or pipeline delivery or removal activities. Any abnormalities that are noticed during operations will be reported to the operator's field supervisor immediately so that any necessary follow-up can be scheduled.

Delivery and vacuum truck hoses will not be allowed to be placed directly onto the pit liner. Operator will construct a loading/unloading station located next to the pit, to deliver fluids to or remove fluids from the pit by truck. The loading/unloading station shall be designed and utilized to prevent hoses from being dropped into the pits and dragged over the liner, which could lead to liner damage. The loading/unloading station will be the only permitted access for manual fluids transfers to or from the pit. Vehicles will not be allowed to approach the pit any closer than the loading/unloading station. Each station will have a catch basin in case a leak occurs while operations personnel are connecting or disconnecting hoses. Signs clearly marking the truck loading/unloading station shall be provided and maintained by the operator.

This production pit will comply with Rule 902. PITS - GENERAL AND SPECIAL RULES. e. Pits used for a period of no more than three (3) years for storage, recycling, reuse, treatment, or disposal of E&P waste or fresh water, as applicable, may be permitted in accordance with Rule 903 to service multiple wells.

Operator must ensure 110 percent secondary containment for any volume of fluids contained at the water handling facility site during natural gas development activities and 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.

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

No portion of any pit that will be used to hold liquids shall be constructed on fill material, unless the pit and fill slope are designed and certified by a professional engineer, subject to review and approval by the director prior to construction of the pit. The construction and lining of the pit shall be supervised by a professional engineer or their agent. The entire base of the pit must be in cut.

The completion/flowback fluids multi-well pit must be double-lined. The pit will also require a leak detection system (Rule 904.e).

Operator must submit a professional engineer (PE) approved/stamped as-built drawing (plan view and cross-sections) of the completion/flowback pit within 14 calendar days of construction.

The nearby hillside and any fill-material bermed portions of the pit must be monitored for any day-lighting of fluids throughout pit operations.

The pit must be fenced and netted. The operator must maintain the fencing and netting until the pit is closed in accordance with Rule 905. Closure of Pits, and Buried or Partially Buried Produced Water Vessels.

Operator shall pressure test pipelines in accordance with Rule 1101.e.(1) prior to putting into initial service any temporary surface pipelines or configuration of the permanent pipeline network.

Submit disposal facilities (wells, pits, landfills, etc.) for pit contents since none were provided on the Form 15, to COGCC via a Form 4 Sundry prior to disposal.

The operator will conduct baseline sampling of the domestic/irrigation water well (Permit No. 228041 - - 4508058 -Williams Well, total depth of 210 feet bgs, depth to groundwater of 176 feet bgs, and a pumping rate of 8 gpm) located approximately 266 feet to the east-northeast, prior to pit operation. The operator may conduct additional groundwater monitoring at their own discretion. This water well will also be sampled every 12 months to evaluate potential impacts from pit operations. Laboratory analysis at a minimum will include the following: pH (lab), TDS, specific conductivity (lab, not resistivity), SAR calculation, Ca, K, Mg, Na, As, B, Ba, Cd, Cr, Cu, Fe, Mn, Pb, Se (all total recoverable), Br, Cl, F, SO₄, Alkalinity (Total, HCO₃ and CO₃ – all expressed as CaCO₃), BTEX (benzene, toluene, ethyl benzene, o-xylene, m- + p-xylene), MBAS, DRO, GRO, and field parameters including pH, temperature, and specific conductivity (SC) shall be recorded prior to collecting the sample for laboratory analysis. Field observations such as odor, water color, sediment, bubbles and effervesce shall also be included. Copies of all test results, field parameters and field observations described above shall be provided to the Director, LGD, and the water well owner within three (3) months of collecting the sample. The analytical data and surveyed sample location shall also be submitted to the Director in an electronic data deliverable format.

At the time of pit closure, operator must submit disposal information via a Form 4 Sundry Notice to the COGCC Location Specialist for Western Colorado (Dave Kubeczko; email dave.kubeczko@state.co.us). The disposal method will need to be approved prior to operator starting pit closure. In addition, operator will collect a pit water sample and, at a minimum, analyze for the following parameters: pH; alkalinity; specific conductance; major cations/anions (chloride, fluoride, sulfate, sodium); total dissolved solids (TDS); BTEX/DRO; TPH; PAH's (including benzo[a]pyrene); and metals (arsenic, barium, calcium, chromium, iron, magnesium, selenium). At the time of closure/disposal of pit water, COGCC may require additional analytes, as appropriate.

Attachment Check List

Att Doc Num	Name
1642078	OTHER
2034133	CORRESPONDENCE
2034145	CORRESPONDENCE
400231362	FORM 2A SUBMITTED
400238011	ACCESS ROAD MAP
400238012	CONST. LAYOUT DRAWINGS
400238014	HYDROLOGY MAP
400238015	LOCATION PICTURES
400238018	LOCATION DRAWING
400238019	NRCS MAP UNIT DESC
400238020	REFERENCE AREA MAP
400238040	SENSITIVE AREA DATA

Total Attach: 12 Files

General Comments

User Group	Comment	Comment Date
Permit	LGD/public comments waived. Final Comprehensive Review Status--passed.	2/21/2012 11:40:08 AM
DOW	<p>Thank you for the opportunity to comment on this Production Pit project. It is clear that Williams Production Company recognizes the importance of protecting the wildlife and their habitat, and has laid out a good plan to minimize impact during and after primary construction. Their BMPs and Reclamation Plan address the CPW's primary concerns and reflects positively on Williams commitment to proactive conservation.</p> <p>Since this large pit will be in place and used a long time, the CPW strongly encourages Williams to implement COGCC Rule 902.d, regarding fencing guidelines, to adequately protect wildlife throughout the extended use time period. In addition, to help minimize disturbances to and confrontations with wildlife, CPW encourages water and liquid transports occur during mid-day.</p>	1/25/2012 8:12:11 AM
OGLA	Form 2A placed "ON HOLD" on 01-13-12 until Form 15 Pit Permit has been submitted. Initiated/Completed OGLA Form 2A review on 01-25-12 by Dave Kubeczko; placed fluid containment, spill/release BMPs, double-lined pit, no pit in fill, pit contents disposal options, fencing/netting of pit, as-builts, hydrotesting, GW testing of water well, and pipeline testing COAs on the Form 2A; same and/or additional COAs (truck loading/unloading station, 3-year use) were placed on the Form 15 permit; sent email to operator on 01-25-12; recent emails to operator on 02-14-12 and 02-15-12 with additional COAs; passed Form 15 Permit on 02-15-12 by Dave Kubeczko; passed by CDOW on 01-25-12 with BMPs submitted by operator (with permit application) acceptable; passed OGLA Form 2A review on 02-15-12 by Dave Kubeczko; placed fluid containment, spill/release BMPs, double-lined pit, no pit in fill, pit contents disposal options, fencing/netting of pit, as-builts, hydrotesting, GW testing of water well, truck loading/unloading station, 3-year use, and pipeline testing COAs.	1/13/2012 1:00:02 PM
Permit	Operator reattached all attachments. This form has passed completeness.	1/6/2012 6:28:07 AM
Permit	Returned to draft. Attachments will not open.	1/5/2012 3:00:05 PM

Total: 5 comment(s)

BMP

<u>Type</u>	<u>Comment</u>
Construction	<p>Construction</p> <ul style="list-style-type: none"> • 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 • 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

Drilling/Completion Operations	<p>Drilling/Completions</p> <ul style="list-style-type: none"> • Continue application of BMPs to prevent wildlife from entering pits including fencing and netting where appropriate • 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
Planning	<p>Planning</p> <ul style="list-style-type: none"> • 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

Interim Reclamation	<p>Production/Reclamation</p> <ul style="list-style-type: none"> • Install automated emergency response systems (e.g., high tank alarms, emergency shut-down systems, etc.). • Implement fugitive dust control program • 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 • 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 on all disturbed areas not needed for active support of production operations • 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
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Site Specific	<p>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:</p> <ul style="list-style-type: none"> • 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.
General Housekeeping	<p>General</p> <ul style="list-style-type: none"> • Treat/control noxious weeds/plants including Tamarisk • 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 • Enforce policies to protect wildlife (e.g., no poaching, no firearms, no dogs on location, no feeding of wildlife, etc.). • Support research to test the effectiveness of specific Best Management Practices

Total: 6 comment(s)