

FORM
2A

Rev
08/13

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:

400933540

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Date Received:

11/13/2015

Oil and Gas Location Assessment

New Location Refile Amend Existing Location Location#: 425520

Submit signed original form. This Oil and Gas Location Assessment is to be submitted to the COGCC for approval prior to any ground disturbance activity associated with oil and gas operations. Approval of this Oil and Gas Location 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. Please see the COGCC website at <http://cogcc.state.co.us/> for all accompanying information pertinent this Oil and Gas Location Assessment.

Location ID:

425520

Expiration Date:

06/16/2019

This location assessment is included as part of a permit application.

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.

Operator

Operator Number: 96155
 Name: WHITING OIL & GAS CORPORATION
 Address: 1700 BROADWAY STE 2300
 City: DENVER State: CO Zip: 80290

Contact Information

Name: Michael Brown
 Phone: (307) 237-9310
 Fax: ()
 email: ml_brown@bresnan.net

RECLAMATION FINANCIAL ASSURANCE

- Plugging and Abandonment Bond Surety ID: 20030110 Gas Facility Surety ID: _____
- Waste Management Surety ID: _____

LOCATION IDENTIFICATION

Name: Horsetail Number: 18-0733H
 County: WELD
 Quarter: SWSE Section: 18 Township: 10N Range: 57W Meridian: 6 Ground Elevation: 4802

Define a single point as a location reference for the facility location. When the location is to be used as a well site then the point shall be a well location.

Footage at surface: 330 feet FSL from North or South section line
 1952 feet FEL from East or West section line

Latitude: 40.832514 Longitude: -103.791947

PDOP Reading: 2.8 Date of Measurement: 06/23/2011

Instrument Operator's Name: Jeremy Harris

RELATED REMOTE LOCATIONS

(Enter as many Related Locations as necessary. Enter the Form 2A document # only if there is no established COGCC Location ID#)

This proposed Oil and Gas Location is:	LOCATION ID #	FORM 2A DOC #	
Production Facilities Location serves Well(s)	441621	_____	
	442408	_____	
	431527	_____	
	430096	_____	
	443049	_____	
	432105	_____	
	435656	_____	
	441855	_____	
		400922975	_____
	442284	_____	

FACILITIES

Indicate the number of each type of oil and gas facility planned on location

Wells	1	Oil Tanks*	3	Condensate Tanks*	_____	Water Tanks*	1	Buried Produced Water Vaults*	_____
Drilling Pits	_____	Production Pits*	_____	Special Purpose Pits	_____	Multi-Well Pits*	1	Modular Large Volume Tanks	_____
Pump Jacks	1	Separators*	2	Injection Pumps*	_____	Cavity Pumps*	_____	Gas Compressors*	_____
Gas or Diesel Motors*	1	Electric Motors	_____	Electric Generators*	_____	Fuel Tanks*	_____	LACT Unit*	_____
Dehydrator Units*	_____	Vapor Recovery Unit*	_____	VOC Combustor*	1	Flare*	1	Pigging Station*	_____

OTHER FACILITIES*

<u>Other Facility Type</u>	<u>Number</u>

Those facilities indicated by an asterisk () shall be used to determine the distance from the Production Facility to the nearest cultural feature on the Cultural Setbacks Tab.

Per Rule 303.b.(3)C, description of all oil, gas, and/or water pipelines:

- Emulsion flow line from wellhead to Separator – 145' SCH 80 3" welded
- Oil production line from Treater to tanks – 145' SCH 80 3" welded
- Water production line from Treater to tanks – 170' 3" poly SDR11
- Recycle line from tanks to Treater – 195' SCH 80 2" welded
- Produced gas flare line from Treater to flare – 350' 2" SCH 80 welded
- Tank Vapor line from tanks to combustor – 165' 3" poly SDR11
- Jet pump line from water tank to wellhead – 160' 2" SCH 80 welded
- Gas supply line from treater to engine on pumping unit – 185' 1" poly SDR11
- Gas supply line from treater to water tank – 155' 1" poly SDR11
- Gas supply line from corridor in tank battery to flare – 205' 1" poly SDR11

CONSTRUCTION

Date planned to commence construction: 11/15/2015 Size of disturbed area during construction in acres: 9.41
Estimated date that interim reclamation will begin: 05/15/2016 Size of location after interim reclamation in acres: 6.50
Estimated post-construction ground elevation: 4801

DRILLING PROGRAM

Will a closed loop system be used for drilling fluids: Yes

Is H₂S anticipated? No

Will salt sections be encountered during drilling: No

Will salt based mud (>15,000 ppm Cl) be used? No

Will oil based drilling fluids be used? No

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Method: Commercial Disposal

Cutting Disposal: ONSITE Cuttings Disposal Method: Other

Other Disposal Description:

Bio-remediation

Beneficial reuse or land application plan submitted? _____

Reuse Facility ID: _____ or Document Number: _____

Centralized E&P Waste Management Facility ID, if applicable: _____

SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: Twomile Ranch

Phone: _____

Address: 60773 N. Highway 71

Fax: _____

Address: _____

Email: _____

City: Stoneham State: CO Zip: 80754

Surface Owner: Fee State Federal Indian

Check all that apply. The Surface Owner: is the mineral owner

is committed to an oil and Gas Lease

has signed the Oil and Gas Lease

is the applicant

The Mineral Owner beneath this Oil and Gas Location is: Fee State Federal Indian

The Minerals beneath this Oil and Gas Location will be developed from or produced to this Oil and Gas Location: Yes

The right to construct this Oil and Gas Location is granted by: Surface Use Agreement

Surface damage assurance if no agreement is in place: _____ Surface Surety ID: _____

Date of Rule 306 surface owner consultation 10/19/2015

CURRENT AND FUTURE LAND USE

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

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

CULTURAL DISTANCE INFORMATION

Provide the distance to the nearest cultural feature as measured from Wells or Production Facilities onsite.

	From WELL	From PRODUCTION FACILITY
Building:	3721 Feet	3575 Feet
Building Unit:	3721 Feet	3575 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	3220 Feet	3070 Feet
Above Ground Utility:	3265 Feet	3116 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	330 Feet	330 Feet

INSTRUCTIONS:

- All measurements shall be provided from center of nearest Well or edge of nearest Production Facility to nearest of each cultural feature as described in Rule 303.b.(3)A.
- Enter 5280 for distance greater than 1 mile.
- Building - nearest building of any type. If nearest Building is a Building Unit, enter same distance for both.
- Building Unit, High Occupancy Building Unit, and Designated Outside Activity Area - as defined in 100-Series Rules.
- For measurement purposes only, Production Facilities should only include those items with an asterisk(*) on the Facilities Tab.

DESIGNATED SETBACK LOCATION INFORMATION

- Check all that apply. This location is within a:
- Buffer Zone
 - Exception Zone
 - Urban Mitigation Area

- Buffer Zone - as described in Rule 604.a.(2), within 1,000' of a Building Unit.
- Exception Zone - as described in Rule 604.a.(1), within 500' of a Building Unit.
- Urban Mitigation Area - as defined in 100-Series Rules.

Pre-application Notifications (required if location is within 1,000 feet of a building unit):

Date of Rule 305.a.(1) Urban Mitigation Area Notification to Local Government: _____

Date of Rule 305.a.(2) Buffer Zone Notification to Building Unit Owners: _____

FOR MULTI-WELL PADS AND PRODUCTION FACILITIES WITHIN DESIGNATED SETBACK LOCATIONS ONLY:

Check this box if this Oil and Gas Location has or will have Production Facilities that serve multiple wells (on or offsite) and the Production Facilities are proposed to be located less than 1,000 feet from a Building Unit. *(Pursuant to Rule 604.c.(2)E.i., the operator must evaluate alternative locations for the Production Facilities that are farther from the Building Unit, and determine whether those alternative locations were technically feasible and economically practicable for the same proposed development.)*

By checking this box, I certify that no alternative placements for the Production Facilities, farther from the nearest Building Unit, were available based on the analysis conducted pursuant to Rule 604.c.(2)E.i.

In the space below, explain rationale for siting the multi-well Production Facility(ies) that supports your Rule 604.c.(2)E.i determination. Attach documentation that supports your determination to this Form 2A.

SOIL

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.org/> 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: Haverson loam 0-3%

NRCS Map Unit Name: _____

NRCS Map Unit Name: _____

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: 12/16/2013

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): _____

WATER RESOURCES

Is this a sensitive area: No Yes

Distance to nearest

downgradient surface water feature: 5280 Feet

water well: 2580 Feet

Estimated depth to ground water at Oil and Gas Location 17 Feet

Basis for depth to groundwater and sensitive area determination:

Water Well permit 12020

Is the location in a riparian area: No Yes

Was an Army Corps of Engineers Section 404 permit filed No Yes If yes attach permit.

Is the location within a Rule 317B Surface Water Supply Area buffer _____ No 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: _____

Is the Location within a Floodplain? No Yes Floodplain Data Sources Reviewed (check all that apply)

Federal (FEMA)

State

County

Local

Other _____

GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 609 _____

DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

- Rule 604.a.(1)A. Exception Zone (within 500' of Building Unit)
- Rule 604.b.(1)A. Exception Location (existing or approved Oil & Gas Location now within a Designated Setback as a result of Rule 604.a.)
- Rule 604.b.(1)B. Exception Location (existing or approved Oil & Gas Location is within a Designated Setback due to Building Unit construction after Location approval)
- Rule 604.b.(2) Exception Location (SUA or site-specific development plan executed on or before August 1, 2013)
- Rule 604.b.(3) Exception Location (Building Units constructed after August 1, 2013 within setback per an SUA or site-specific development plan)

RULE 502.b VARIANCE REQUEST

- Rule 502.b. Variance Request from COGCC Rule or Spacing Order Number _____

ALL exceptions and variances require attached Request Letter(s). Refer to applicable rule for additional required attachments (e.g. waivers, certifications, SUAs).

OPERATOR COMMENTS AND SUBMITTAL

Comments The temporary water tanks were removed before construction of the Fresh Water Pit. The fresh water pit was constructed 5/12/14.

Wells located on the following pads, Horsetail 07E, Horsetail 07F, Horsetail 07G, Horsetail 07H, Horsetail 08A, Horsetail 08B, Horsetail 08C, Razor 12F, Razor 12G, Razor 12H will use this freshwater and additional wells to be determined. Trucks or temporary surface waterlines will be used to transport freshwater from this pit to the well locations. This Freshwater Pit is part of a system of interlinked freshwater pits and transfer lines. This system was constructed to supply fresh water for drilling and completion operations while minimizing truck traffic. In 2015 approximately 87,000 truck trips for fresh water were eliminated due to this system.

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

Signed: _____ Date: 11/13/2015 Email: ml_brown@bresnan.net

Print Name: Michael Brown Title: Agent

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: Matthew Lee Director of COGCC Date: 6/17/2016

Conditions Of Approval

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.

<u>COA Type</u>	<u>Description</u>

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Storm Water/Erosion Control	Stormwater management plans (SWMP) are in place to address construction, drilling and operations associated with oil and gas development throughout the State of Colorado. BMPs will be constructed as necessary to prevent stormwater from leaving the construction site. BMPs used will vary according to the location, and will remain until the pad is reclaimed.
2	Material Handling and Spill Prevention	Spill Prevention Control and Countermeasures (SPCC) plans are in place to address any possible spill associated with oil and gas operations throughout the State of Colorado. <ul style="list-style-type: none">• Materials and fluids will be stored in a neat and orderly fashion.• Waste will be collected regularly and disposed of at an offsite facility.• Prompt cleanup is required of spills to minimize waste materials entering the stormwater runoff.• Drip pans will be used during fueling and maintenance to contain spills or leaks.• Cleanup of trash and discarded material will be done at the end of the work day.• Cleanup will consist of monitoring the road, location and any other work areas.• Material to be cleaned up includes trash, scrap, and contaminated soil.

Total: 2 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
2477770	LOCATION PICTURES
2477771	CONST. LAYOUT DRAWINGS
2477772	CORRESPONDENCE
2477907	SURFACE AGRMT/SURETY
400933540	FORM 2A SUBMITTED
400936874	LOCATION DRAWING

Total Attach: 6 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
OGLA	Operator provided a Surface Use Agreement for the freshwater pit. Changed Right to Construct to SUA.	6/17/2016 2:10:58 PM
Permit	Final review complete.	6/16/2016 10:56:20 AM
Permit	Permitting task complete.	6/16/2016 10:55:52 AM
OGLA	IN PROCESS - OGLA & Enforcement staff issued a Warning Letter on June 15, 2016, to the operator concerning the construction of this freshwater pit and expansion of this location prior to obtaining an Amended Form 2A. Now that Enforcement actions have been conducted, the OGLA task is passed.	6/16/2016 7:44:20 AM
OGLA	No Public Comments & OGLA technical review complete. However, the 2A will remain ON HOLD until OGLA & Enforcement staff decide what to do concerning the Freshwater Pit being constructed and additional surface disturbance occurring prior to this Amended Form 2A being submitted and approved.	1/4/2016 10:21:28 AM
OGLA	Operator provided pipeline description, agreed to revise distance to nearest Building Unit from a well and production facility, confirmed the additional production facilities, provided current Location Pictures, & Construction Layout Drawings. The Freshwater Pit has already been constructed so the date planned to commence construction is just to get the 2A through completeness. Operator provided a list of the approved wellpads the Freshwater Pit has/will be needed for. Operator has indicated Freshwater Pit will be used indefinitely but provided a revised interim reclamation acreage when it is eventually removed.	1/4/2016 10:14:57 AM
OGLA	Operator has indicated the Freshwater Pit was constructed in May 2014 and that the surface disturbance increased from an approved 5.5 acres to 9.4 acres, but no Form 2A was submitted and approved prior to this happening.	12/1/2015 11:49:35 AM
OGLA	ON HOLD - Operator to provide pipeline description, revise distance to nearest Building Unit from a well and production facility, confirm the additional production facilities, provide current Location Pictures, what does the date planned to commence construction refer to if the Freshwater Pit has already been constructed, onsite well is drilled and completed so what is the Freshwater Pit needed for, and why such little interim reclamation/what are the long term plans for the Freshwater Pit. Due by 1/1/16.	12/1/2015 11:45:17 AM
Permit	Passed completeness.	11/16/2015 10:48:34 AM

Total: 9 comment(s)