

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:

401151285

Date Received:

12/02/2016

Oil and Gas Location Assessment

☒ New Location ☐ Refile ☐ Amend Existing Location Location#: _____

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:

448844

Expiration Date:

12/26/2019

☒ 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: 10580

Name: EXPEDITION WATER SOLUTIONS COLORADO LLC

Address: 1023 39TH AVENUE SUITE E

City: GREELEY State: CO Zip: 80634

Contact Information

Name: Jeremiah Demuth

Phone: (303) 290-9414

Fax: ()

email: jdemuth@petrotek.com

RECLAMATION FINANCIAL ASSURANCE

☒ Plugging and Abandonment Bond Surety ID: 20150089 ☐ Gas Facility Surety ID: _____

☐ Waste Management Surety ID: _____

LOCATION IDENTIFICATION

Name: EWS Number: 4A

County: WELD

QuarterQuarter: SE Section: 17 Township: 2N Range: 63W Meridian: 6 Ground Elevation: 4843

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: 2232 feet FNL from North or South section line

2037 feet FWL from East or West section line

Latitude: 40.139470 Longitude: -104.463560

PDOP Reading: 1.3 Date of Measurement: 11/21/2016

Instrument Operator's Name: Doug Berling

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 #

Well Site is served by Production Facilities

401126279

FACILITIES

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

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

OTHER FACILITIES*

Other Facility Type

Number

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:

The EWS 4A well will be joined to the EWS Facility #4 by a buried 4" heavy duty pipeline.

CONSTRUCTION

Date planned to commence construction: 12/28/2016 Size of disturbed area during construction in acres: 3.70

Estimated date that interim reclamation will begin: 01/30/2017 Size of location after interim reclamation in acres: 1.60

Estimated post-construction ground elevation: _____

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: OFFSITE

Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

Beneficial reuse or land application plan submitted? No

Reuse Facility ID: _____ or Document Number: _____

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

SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: Julius A. Pluss

Phone: _____

Address: 2400 E Cherry Creek South Dr

Fax: _____

Address: Unit 306

Email: _____

City: Denver State: CO Zip: 80209

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: No

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 _____

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:	647 Feet	Feet
Building Unit:	5280 Feet	Feet
High Occupancy Building Unit:	5280 Feet	Feet
Designated Outside Activity Area:	5280 Feet	Feet
Public Road:	261 Feet	Feet
Above Ground Utility:	223 Feet	Feet
Railroad:	420 Feet	Feet
Property Line:	220 Feet	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.
- Large UMA Facility - 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 be 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: 49—Osgood sand, 0 to 3 percent slopes

NRCS Map Unit Name: 70—Valent sand, 3 to 9 percent slopes

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: 11/21/2016

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: 29 Feet

water well: 2019 Feet

Estimated depth to ground water at Oil and Gas Location 28 Feet

Basis for depth to groundwater and sensitive area determination:

The nearest feature which may hold water is a ditch at 29 feet from the edge of the disturbed area. The nearest body of water is over a mile to the east. The nearest well permit is Permit=0297713--, which records indicate was never drilled. This permit is 2,019 feet away from the EWS 4A well. The only completed water well in the section has a depth to water of 220 feet. This well can be found under the permit number 290142- - and is owned by Plains Marketing. Estimated Depth to Groundwater based on DWR Water Well Permit #11363. Location lies within the Lost Creek Designated Groundwater Management Area and Designated Basin.

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 318A

WILDLIFE

- ☐ This location is included in a Wildlife Mitigation Plan
- ☐ This location was subject to a pre-consultation meeting with CPW held on _____

DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

- ☐ Rule 604.a.(1)A. Exception Zone (within 500' of a Building Unit) and is in an Urban Mitigation Area
- ☐ 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 Please note that Expedition is under contract to purchase this property. No construction of any sort will occur before the purchase is completed. As such, no rule 306.a consultation has taken place. The Surface use agreement allowing for permitting of the project before the completion of the purchase has been attached.

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

Signed: _____ Date: 12/02/2016 Email: jdemuth@petrotek.com

Print Name: Jeremiah Demuth Title: Engineering Technician

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: 12/27/2016

Surface Owner Information

Owner Name	Address	Phone	Fax	Email
Julius A. Pluss	2400 E Cherry Creek South Dr			
	Unit 306			
	Denver, CO 80209			
Kauffman Bros LTD	8616 CR 63			
	Keensburg, CO 80643			

2 Surface Owner(s)

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.

COA Type

Description

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Best Management Practices

No	BMP/COA Type	Description
1	Planning	The EWS 4A is a single well pad that will be linked to the EWS Facility #4 by a buried 4-inch pipeline.
2	Traffic control	Access road. The access road will be constructed to accommodate local emergency vehicles. This road will be maintained for access until drilling and completion operations are complete. Emergency access will be at the EWS Facility #4 once drilling and completion operations are complete.
3	General Housekeeping	Fencing requirements. A permanent fencing plan will be created by Expedition during the final construction of the location. Expedition is under contract for the property and will be the surface owner.
4	General Housekeeping	Removal of surface trash. All trash, debris and material not intrinsic to the operation of the oil and gas facility shall be removed and legally disposed of as is applicable.
5	Material Handling and Spill Prevention	Leak Detection Plan. Staff will visit the location daily and visually inspect all fittings for leaks. Additionally, monthly documented SPCCP inspections are conducted pursuant to 40 CFR §112. There will be no produced water or hydrocarbon storage tanks at this location.
6	Material Handling and Spill Prevention	Berm construction. No permanent berms shall be constructed at this site. During drilling operations the well pad will be bermed.
7	Material Handling and Spill Prevention	Load-lines. All load-lines shall be bull-plugged or capped.
8	Material Handling and Spill Prevention	Tank specifications No tanks for produced water or hydrocarbons will be constructed on this site.
9	Noise mitigation	Rig shrouding is not believed necessary as this is a remote area. Permanent equipment on location shall be muffled to reduce noise, or shall be appropriately buffered.
10	Odor mitigation	Oil & gas facilities and equipment shall be operated in such a manner that odors and dust do not constitute a nuisance or hazard to public welfare.
11	Drilling/Completion Operations	Closed Loop Drilling Systems – Pit Restrictions. Not applicable; a closed-loop system will be used for drilling.
12	Drilling/Completion Operations	Green Completions – No hydrocarbons are anticipated to be produced from this well. Producing zones will be cased off and cemented.
13	Drilling/Completion Operations	Blowout preventer equipment (“BOPE”). A double ram and annular preventer will be used during drilling. At least the drilling company shall have a valid well blowout prevention certifications.
14	Drilling/Completion Operations	Pit level indicators. Not applicable; a closed-loop system will be used and no pits shall be dug.
15	Drilling/Completion Operations	Drill stem tests. Not applicable; no Drill Stem tests are planned.
16	Drilling/Completion Operations	Control of fire hazards. All materials which are considered fire hazards shall be a minimum of 25’ from the wellhead tanks or separators. Electrical equipment shall comply with API RP 500 and will comply with the current national electrical code. An emergency response plan shall be generated for this site.
17	Drilling/Completion Operations	Guy line anchors. All guy line anchors shall be brightly marked pursuant to Rule 604.c (2)Q
18	Drilling/Completion Operations	Lighting abatement measures shall be implemented, including the installation lighting shield devices on all of the more conspicuous lights and low density sodium lighting where practicable.
19	Interim Reclamation	BOPE for well servicing operations. Adequate BOP equipment shall be used. Stabbing valves shall be installed in the event of reverse circulation and shall be prior tested with low and high pressure fluid.
20	Final Reclamation	Within 90-day subsequent to the time of plugging and abandonment of the entire site, superfluous debris and equipment shall be removed from the site.
21	Final Reclamation	P&A’d wells shall be identified pursuant to 319.a.(5).

Total: 21 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
1010147	LOCATION PICTURES
1010148	WASTE MANAGEMENT PLAN
401151285	FORM 2A SUBMITTED
401152292	NRCS MAP UNIT DESC
401157428	ACCESS ROAD MAP
401159071	SURFACE AGRMT/SURETY
401160034	HYDROLOGY MAP
401160035	LOCATION DRAWING

Total Attach: 8 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed.	12/27/2016
OGLA	Changed Estimated Depth to Groundwater to 28 feet. The closest water well having a reported static water level, DWR Water Well Permit #290142, indicates depth to groundwater at 220 feet; however, DWR Water Well Permit #11363, (approximately 7500 feet to the northeast, has a reported depth to groundwater at 28 feet. Historically, Weld County has a shallow aquifer ranging from 20 to 30 feet.	12/22/2016
OGLA	Per discussion with the Town of Keenesburg, the Location remains in unincorporated Weld County at the time of this permit approval. No comments have been received, to date, from Weld County regarding this Location.	12/22/2016
OGLA	Moved the Lighting BMP from the Noise BMP and placed it under Drilling/Completions, Operations. Location Pictures reference the EWS 3A on the second page. - Received and uploaded modified Location Pictures - 12/23/2016	12/21/2016
OGLA	- Changed Sensitive Area to YES as the Location lies within the Lost Creek Designated Groundwater Management Area and Designated Basin. - Added the Lost Creek Designated Groundwater Management Area and Designated Basin to the Basis Statement. - Changed Distance to the Nearest Surface Water Feature to 29 feet based on the Hydrology Map. - Need WMP. - Uploaded updated WMP - 12/27/2016	12/21/2016
OGLA	Per Operator request, added " Expedition is under contract for the land at the EWS 4 and 4A Oil and Gas Locations. The purchase will be completed upon the receipt of a permit to drill. No construction will occur before the purchase is completed" to the Submit Tab.	12/16/2016
Permit	Permitting Review Complete.	12/15/2016
Permit	Passes completeness.	12/04/2016

Total: 8 comment(s)