

FORM

2

Rev  
08/16

## 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:

401151263

## APPLICATION FOR PERMIT TO:

☒ Drill
 ☐ Deepen
 ☐ Re-enter
 ☐ Recomplete and Operate

Date Received:

12/02/2016

TYPE OF WELL OIL ☐ GAS ☐ COALBED ☐ OTHER InjectionRefilling ☐ZONE TYPE SINGLE ZONE ☐ MULTIPLE ZONES ☒ COMMINGLE ZONES ☒Sidetrack ☐

Well Name: EWS

Well Number: 4A

Name of Operator: EXPEDITION WATER SOLUTIONS COLORADO LLC

COGCC Operator Number: 10580

Address: 1023 39TH AVENUE SUITE E

City: GREELEY State: CO Zip: 80634

Contact Name: Jeremiah Demuth

Phone: (303)290-9414

Fax: ( )

Email: jdemuth@petrotek.com

## RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20150089

## WELL LOCATION INFORMATION

QtrQtr: SENW Sec: 17 Twp: 2N Rng: 63W Meridian: 6

Latitude: 40.139470

Longitude: -104.463560

Footage at Surface: 2232 Feet FNL/FSL FNL 2037 Feet FEL/FWL FWL

Field Name: WATTENBERG

Field Number: 90750

Ground Elevation: 4843

County: WELD

GPS Data:

Date of Measurement: 11/21/2016 PDOP Reading: 1.3 Instrument Operator's Name: Doug Berling

If well is ☐ Directional ☐ Horizontal (highly deviated) **submit deviated drilling plan.**

Footage at Top of Prod Zone: FNL/FSL FEL/FWL Bottom Hole: FNL/FSL FEL/FWL

Sec: Twp: Rng: Sec: Twp: Rng:

## LOCATION SURFACE &amp; MINERALS &amp; RIGHT TO CONSTRUCT

Surface Ownership: ☒ Fee ☐ State ☐ Federal ☐ IndianThe Surface Owner is: ☐ is the mineral owner beneath the location.  
(check all that apply) ☐ 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 by this Well: No

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

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

## LEASE INFORMATION

Using standard QtrQtr, Sec, Twp, Rng format, describe one entire mineral lease that will be produced by this well (Describe lease beneath surface location if produced. Attach separate description page or map if necessary.)

Total Acres in Described Lease: \_\_\_\_\_ Described Mineral Lease is: ☐ Fee ☐ State ☐ Federal ☐ Indian

Federal or State Lease # \_\_\_\_\_

Distance from Completed Portion of Wellbore to Nearest Lease Line of described lease: \_\_\_\_\_ Feet

## CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 647 Feet  
Building Unit: 5280 Feet  
High Occupancy Building Unit: 5280 Feet  
Designated Outside Activity Area: 5280 Feet  
Public Road: 261 Feet  
Above Ground Utility: 223 Feet  
Railroad: 420 Feet  
Property Line: 220 Feet

### INSTRUCTIONS:

- All measurements shall be provided from center of the Proposed Well to nearest of each cultural feature as described in Rule 303.a.(5).
- 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.

## 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: \_\_\_\_\_

## SPACING and UNIT INFORMATION

Distance from completed portion of proposed wellbore to nearest completed portion of offset wellbore permitted or completed in the same formation: 5280 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary \_\_\_\_\_ Feet (Enter 5280 for distance greater than 1 mile.)

Federal or State Unit Name (if appl): \_\_\_\_\_ Unit Number: \_\_\_\_\_

## SPACING & FORMATIONS COMMENTS

## OBJECTIVE FORMATIONS

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
ADMIRE	ADMI			
AMAZON	AMZN			
COUNCIL GROVE	COUGR			
DENVER BASIN COMBINED DISPOSAL ZONE	DJINJ			
FOUNTAIN	FNTN			
LOWER SATANKA	LSTKA			
LYONS	LYNS			
MISSOURI	MSSR			
VIRGIL	VRGL			
WOLFCAMP	WFCMP			

## DRILLING PROGRAM

Proposed Total Measured Depth: 10119 Feet

Distance from the proposed wellbore to nearest existing or proposed wellbore belonging to another operator, including plugged wells:

Enter distance if less than or equal to 1,500 feet: 694 Feet ☐ No well belonging to another operator within 1,500 feet

Will a closed-loop drilling system be used? Yes

Is H<sub>2</sub>S gas reasonably expected to be encountered during drilling operations at concentrations greater than or equal to 100 ppm? No (If Yes, attach an H<sub>2</sub>S Drilling Operations Plan)

Will salt sections be encountered during drilling? No

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

Will oil based drilling fluids be used? No

BOP Equipment Type: ☒ Annular Preventor ☒ Double Ram ☐ Rotating Head ☐ None

## GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 318A

## DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Methods: Commercial Disposal

Cuttings Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

Beneficial reuse or land application plan submitted? No

Reuse Facility ID: \_\_\_\_\_ or Document Number: \_\_\_\_\_

## CASING PROGRAM

Casing Type	Size of Hole	Size of Casing	Wt/Ft	Csg/Liner Top	Setting Depth	Sacks Cmt	Cmt Btm	Cmt Top
CONDUCTOR	24	16	42.09	0	100	10	100	0
SURF	12+1/2	9+5/8	36	0	1000	477	1000	0
1ST	8+3/4	7	26	0	8750	379	8750	6000
1ST LINER	6+1/8	4+1/2	11.6	8700	10119			
			Stage Tool		6000	799	6000	0

☐ Conductor Casing is NOT planned

## 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)

### GREATER WATTENBERG AREA LOCATION EXCEPTIONS

Check all that apply:

- ☐ Rule 318A.a. Exception Location (GWA Windows).
- ☐ Rule 318A.c. Exception Location (GWA Twinning).

### RULE 502.b VARIANCE REQUEST

- ☐ Rule 502.b. Variance Request from COGCC Rule or Spacing Order Number \_\_\_\_\_

### OTHER LOCATION EXCEPTIONS

Check all that apply:

- ☐ Rule 318.c. Exception Location from Rule or Spacing Order Number \_\_\_\_\_
- ☐ Rule 603.a.(2) Exception Location (Property Line Setback).

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 nearest well in any formation is the Champlin 1-17 (05-123-11119) at 647 feet northwest. This well location was plotted using the gps coordinates of the well.

This application is in a Comprehensive Drilling Plan No CDP #: \_\_\_\_\_

Location ID: \_\_\_\_\_

Is this application being submitted with an Oil and Gas Location Assessment application? Yes

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

Signed: \_\_\_\_\_ Print Name: Jeremiah Demuth

Title: Engineering Technician Date: 12/2/2016 Email: jdemuth@petrotek.com

Operator must have a valid water right or permit allowing for industrial use or purchased water from a seller that has a valid water right or permit allowing for industrial use, otherwise an application for a change in type of use is required under Colorado law. Operator must also use the water in the location set forth in the water right decree or well permit, otherwise an application for a change in place of use is required under Colorado law. Section 37-92-103(5), C.R.S. (2011).

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

Expiration Date: 12/26/2018

#### API NUMBER

05 123 44047 00

## Conditions Of Approval

All representations, stipulations and conditions of approval stated in the Form 2A for this location shall constitute representations, stipulations and conditions of approval for this Form 2 Permit-to-Drill and are enforceable to the same extent as all other representations, stipulations and conditions of approval stated in this Permit-to-Drill.

### COA Type

### Description

	<ol style="list-style-type: none"><li>1) Submit Form 42 electronically to COGCC 48 hours prior to MIRU (spud notice) for the first well activity with a rig on the pad.</li><li>2) Comply with Rule 317.j. and provide cement coverage from end of 7-inch casing to a minimum of 200' above Niobrara. Verify coverage with cement bond log.</li><li>3) Bradenhead test shall be performed within 60 days of rig release and the Form 17 submitted within 10 days of the test.</li></ol>
	<ol style="list-style-type: none"><li>1. Injection is not authorized until approval of Subsequent Forms 31 and 33.</li><li>2. PRIOR TO PERFORMING OPERATIONS: Operator is required to contact COGCC to discuss Step Rate Test or Injectivity Test criteria for Maximum Surface Injection Pressure determination. Prior approval of Form 4 is required for step rate and injectivity tests.</li><li>3. PRIOR TO PERFORMING OPERATIONS: Approval of Form 4 is required for acid and fracturing jobs. (New as of 4/13/2016).</li><li>4. Retrieve water sample(s) from injection zone(s) before stimulating formation. Samples must be analyzed for Total Dissolved Solids at a minimum.</li><li>5. For ALL NEW DRILL UNDERGROUND INJECTION WELLS a suite of open-hole Resistivity/Gamma Ray and Density/Neutron logs IS REQUIRED from Surface Casing shoe to TD. A PDF, TIFF, or PDS visual image and a LAS or DILS file version of each log is required.</li><li>6. For all new and converted Underground Injection Control wells a Cement Bond Log (CBL) is required on the cased portions of the hole from the bottom of the casing to the top of the next shallower casing string for all casing strings other than the Surface Casing. Only a PDF, TIFF, or PDS visual image is required.</li><li>7. Operator must provide all tops of formations encountered from surface to TD on the Form 5 when submitted.</li></ol>

## Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Material Handling and Spill Prevention	Load-lines. All load-lines shall be bull-plugged or capped.
2	Drilling/Completion Operations	Green Completions – No hydrocarbons are anticipated in this well. Hydrocarbon bearing formations will be isolated behind cement and casing.
3	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.
4	Drilling/Completion Operations	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.
5	Drilling/Completion Operations	Drill stem tests. Not applicable; no Drill Stem tests are planned.
6	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 will be generated for this site.
7	Drilling/Completion Operations	Guy line anchors. All guy line anchors shall be brightly marked pursuant to Rule 604.c (2)Q.
8	Drilling/Completion Operations	Closed Loop Drilling Systems – Pit Restrictions. Not applicable; a closed-loop system will be used for drilling.
9	Final Reclamation	Well site cleared. 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.
10	Final Reclamation	Identification of plugged and abandoned wells. P&A'd wells shall be identified pursuant to 319.a.(5).

Total: 10 comment(s)

## Applicable Policies and Notices to Operators

Policy
Notice Concerning Operating Requirements for Wildlife Protection. <a href="http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf">http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf</a>

## Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
401151263	FORM 2 SUBMITTED
401159984	WELLBORE DIAGRAM
401160032	WELL LOCATION PLAT

Total Attach: 3 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	The permitting staff has removed the Open Hole Logging BMP so it does not conflict with the Injection COA's. Final Review Completed.	12/27/2016
Engineer	EWS 4A is a vertical injection well; DJ Basin Horizontal Offset Policy does not apply.	12/20/2016
Permit	Permitting Review Complete.	12/15/2016
UIC	At operator's request added Amazon to Spacing & Formations tab. Inadvertently left out.	12/05/2016
Permit	Passes completeness.	12/04/2016

Total: 5 comment(s)