

**APPLICATION FOR PERMIT TO:**

**Drill**       Deepen       Re-enter       Recomplete and Operate

TYPE OF WELL    OIL <input type="checkbox"/> GAS <input type="checkbox"/> COALBED <input type="checkbox"/> OTHER <u>Injection</u>	Refiling <input type="checkbox"/>
ZONE TYPE    SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONES <input checked="" type="checkbox"/> COMMINGLE ZONES <input checked="" type="checkbox"/>	Sidetrack <input type="checkbox"/>

Date Received:  
06/21/2018

Well Name: EWS      Well Number: 1B

Name of Operator: EWS 1 DJ BASIN LLC      COGCC Operator Number: 10640

Address: 2015 CLUBHOUSE DR SUITE 201

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: 20180136

**WELL LOCATION INFORMATION**

QtrQtr: NENW    Sec: 26    Twp: 8N    Rng: 60W    Meridian: 6

Latitude: 40.639850      Longitude: -104.060210

Footage at Surface: <u>295</u> Feet	FNL/FSL	FEL/FWL
<u>FNL</u> <u>2205</u> Feet	<u>FNL</u>	<u>FWL</u>

Field Name: CLAY BASKET      Field Number: 11340

Ground Elevation: 4908      County: WELD

GPS Data:  
Date of Measurement: 04/30/2018    PDOP Reading: 2.2    Instrument Operator's Name: Jake Stille

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

Footage at Top of Prod Zone: <u>841</u> Feet	FNL/FSL	FEL/FWL	Bottom Hole: <u>102</u> Feet	FNL/FSL	FEL/FWL
<u>FNL</u> <u>2643</u> Feet	<u>FNL</u>	<u>FWL</u>	<u>FNL</u> <u>2630</u> Feet	<u>FNL</u>	<u>FEL</u>

Sec: 23    Twp: 8    Rng: 60      Sec: 23    Twp: 8    Rng: 60

**LOCATION SURFACE & MINERALS & RIGHT TO CONSTRUCT**

Surface Ownership:  Fee     State     Federal     Indian

The 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: applicant is owner

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.)

No minerals will be produced by this well.

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: 1910 Feet
- Building Unit: 5280 Feet
- High Occupancy Building Unit: 5280 Feet
- Designated Outside Activity Area: 5280 Feet
- Public Road: 277 Feet
- Above Ground Utility: 2207 Feet
- Railroad: 5280 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: 4960 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			
ATOKA	ATOK			
BLAINE	BLIN			
COUNCIL GROVE	COUGR			
DENVER BASIN COMBINED DISPOSAL ZONE	DJINJ			
DES MOINES	DSMS			
LOWER SATANKA	LSTKA			
LYONS	LYNS			
MISSOURI	MSSR			
VIRGIL	VRGL			
WOLFCAMP	WFCMP			

**DRILLING PROGRAM**

Proposed Total Measured Depth: 11212 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: 279 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? Yes

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 609

**DRILLING WASTE MANAGEMENT PROGRAM**

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Methods: Recycle/reuse

Cuttings Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

Oily cuttings will be disposed of at an appropriate commercial disposal facility.  
 Water-based cuttings and drill fluids will be applied at the EWS 1A land application site (Site #452594).

Beneficial reuse or land application plan submitted? No

Reuse Facility ID: 452594 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	0	100	270	100	0
SURF	12+1/4	9+5/8	36	0	2500	523	2500	0
1ST	8+3/4	7	26	0	9915	492	9915	5685
1ST LINER	6+1/8	4+1/2	11.6	9855	11212	0		
			Stage Tool		5685	639	5685	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 A plugging and abandonment surety bond will be in place for this well before drilling operations commence. Documentation of the bond will be submitted via a Form 4.

This application is in a Comprehensive Drilling Plan \_\_\_\_\_ CDP #: \_\_\_\_\_

Location ID: 438160

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: 6/21/2018 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: 10/28/2018

Expiration Date: 10/27/2020

### API NUMBER

05 123 48339 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.

<u>COA Type</u>	<u>Description</u>
	<p>Bradenhead tests shall be performed and reported according to the following schedule and Form 17 submitted within 10 days of each test.:</p> <ol style="list-style-type: none"> <li>1) All: Within 60 days of rig release, prior to stimulation.</li> <li>2) Delayed completion: 6 months after rig release, prior to stimulation.</li> <li>3) All: Within 90 days after first sales, as reported on the Form 5A, Completed Interval Report.</li> </ol>
	<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 and provide 48 hour spud notice via Form 42 for all subsequent wells drilled on the pad.</li> <li>2) Provide cement coverage to a minimum of 200' above Niobrara. Verify coverage with cement bond log.</li> <li>3) Oil-based drilling fluid is to be used only after setting surface casing.</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. Retrieve water sample(s) from injection zone(s) before stimulating formation. Samples must be analyzed for Total Dissolved Solids at a minimum.</li> <li>3. PRIOR TO PERFORMING OPERATIONS: Operator is required to contact COGCC to discuss acid and fracturing jobs. Approval of Form 4 may be required for acid and fracturing jobs. (As of 4/13/2016)</li> <li>4. 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 may be required for step rate and injectivity tests.</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 DLIS 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> <li>8. Well must pass MIT witnessed by COGCC before Subsequent Forms 31 and 33 will be approved. Well in must be in injection configuration.</li> </ol>

## Best Management Practices

<b>No</b>	<b>BMP/COA Type</b>	<b>Description</b>
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.
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	A bradenhead test will be performed within 60 days of rig release and prior to any stimulation activities. A Form 17 will be submitted on eForms within 10 days following the test. Bradenhead pressure will be monitored during stimulation activities. In the event of a rise in bradenhead pressure of more than 200 psi during stimulation activities, the COGCC will be notified per Rule 341.
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

Notice Concerning Operating Requirements for Wildlife Protection.  
[http://cogcc.state.co.us/documents/reg/Policies/Wildlife\\_Notice.pdf](http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf)

## Attachment Check List

<b>Att Doc Num</b>	<b>Name</b>
401654878	FORM 2 SUBMITTED
401664836	WELL LOCATION PLAT
401664837	DIRECTIONAL DATA
401664840	DEVIATED DRILLING PLAN
401682114	WELLBORE DIAGRAM

Total Attach: 5 Files

### General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed.	10/26/2018
UIC	Wellbore diagram says slots in liner begin at 8425 ft but top liner is at 9855 ft. Operator contacted for corrected diagram. Repaired document received and switched into file-OK. Doc # 401682114.	10/05/2018
Permit	The permitting staff has removed the Open Hole Logging BMP so it does not conflict with the Injection COA's. Permitting Review Complete.	10/04/2018
Permit	A task has been opened for UIC to review this document.	10/04/2018
Permit	Passed Completeness.	06/27/2018

Total: 5 comment(s)