

FORM  
2  
Rev  
05/22

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:  
403032621  
Date Received:  
08/02/2022

APPLICATION FOR PERMIT TO

Drill     Deepen     Re-enter     Recomplete and Operate    Amend   
TYPE OF WELL    OIL     GAS     COALBED     OTHER: \_\_\_\_\_    Refile   
ZONE TYPE    SINGLE ZONE     MULTIPLE ZONES     COMMINGLE ZONES     Sidetrack

Well Name: Ballyshannon    Well Number: 8-67-26-23  
Name of Operator: ENERPLUS RESOURCES (USA) CORPORATION    COGCC Operator Number: 10177  
Address: 950 17TH STREET #2200  
City: DENVER    State: CO    Zip: 80202  
Contact Name: Jacob Everhart    Phone: (720)279 6743    Fax: ( )  
Email: jeverhart@enerplus.com

FINANCIAL ASSURANCE FOR PLUGGING, ABANDONMENT, AND RECLAMATION

**COGCC Financial Assurance**  
 The Operator has provided or will provide Financial Assurance to the COGCC for this Well.  
Surety ID Number (if applicable): 20170023

**Federal Financial Assurance**  
 In checking this box, the Operator certifies that it has provided or will provide at least this amount of Financial Assurance to the federal government for this Well. (Per Rule702.a.)  
Amount of Federal Financial Assurance \$ \_\_\_\_\_

WELL LOCATION INFORMATION

**Surface Location**  
QtrQtr: SWSE    Sec: 26    Twp: 8N    Rng: 67W    Meridian: 6  
Footage at Surface: 429 Feet    FSL    2254 Feet    FEL  
Latitude: 40.626474    Longitude: -104.858673  
GPS Data:    GPS Quality Value: 1.3    Type of GPS Quality Value: PDOP    Date of Measurement: 02/06/2017  
Ground Elevation: 5188  
Field Name: DJ HORIZONTAL NBRR-FTHYS-CODL    Field Number: 16953  
Well Plan: is  Directional     Horizontal (highly deviated)     Vertical  
If Well plan is Directional or Horizontal attach Deviated Drilling Plan and Directional Data.

**Subsurface Locations**  
Top of Productive Zone (TPZ)  
Sec: 26    Twp: 8N    Rng: 67W    Footage at TPZ: 650    FSL    645    FEL  
Measured Depth of TPZ: 8055    True Vertical Depth of TPZ: 7160    FNL/FSL    FEL/FWL

Base of Productive Zone (BPZ)

Sec: 23 Twp: 8N Rng: 67W Footage at BPZ: 650 FNL 645 FWL  
 Measured Depth of BPZ: 17357 True Vertical Depth of BPZ: 7160 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)

Sec: 23 Twp: 8N Rng: 67W Footage at BHL: 650 FNL 645 FWL  
 FNL/FSL FEL/FWL

**LOCAL GOVERNMENT PERMITTING INFORMATION**

County: WELD Municipality: N/A

Is the Surface Location of this Well in an area designated as one of State interest and subject to the requirements of § 24-65.1-108 C.R.S.? Yes

Per § 34-60-106(1)(f)(I)(A) C.R.S., the following questions pertain to the Relevant Local Government approval of the siting of the proposed Oil and Gas Location.

SB 19-181 provides that when “applying for a permit to drill,” operators must include proof that they sought a local government siting permit and the disposition of that permit application, or that the local government does not have siting regulations. § 34-60-106(1)(f)(I)(A) C.R.S.

Does the Relevant Local Government regulate the siting of Oil and Gas Locations, with respect to this Location?  Yes  No

If yes, in checking this box, I hereby certify that an application has been filed with the local government with jurisdiction to approve the siting of the proposed oil and gas location.

The disposition of the application filed with the Relevant Local Government is: Approved Date of Final Disposition: 01/31/2018

Comments: WOGLA17-0116 Submitted 12/18/2017, Approved 1/31/2018.

**SURFACE AND MINERAL OWNERSHIP AT WELL'S OIL & GAS LOCATION**

Surface Owner of the land at this Well's Oil and Gas Location:  Fee  State  Federal  Indian

Mineral Owner beneath this Well's Oil and Gas Location:  Fee  State  Federal  Indian

Surface Owner Protection Bond (if applicable): \_\_\_\_\_ Surety ID Number (if applicable): \_\_\_\_\_

**MINERALS DEVELOPED BY WELL**

The ownership of all the minerals that will be developed by this Well is (check all that apply):

- Fee
- State
- Federal
- Indian
- N/A

**LEASE INFORMATION**

Using standard QtrQtr, Section, Township, Range format describe one entire mineral lease as follows:

\* If this Well is within a unit, describe a lease that will be developed by the Well.  
 \* If this Well is not subject to a unit, describe the lease that will be produced by the Well.  
 (Attach a Lease Map or Lease Description or Lease if necessary.)

E/2, Sec 26, 8N, 67W

Total Acres in Described Lease: 320 Described Mineral Lease is:  Fee  State  Federal  Indian

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

## SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 5280 Feet  
Building Unit: 5280 Feet  
Public Road: 4855 Feet  
Above Ground Utility: 2721 Feet  
Railroad: 5280 Feet  
Property Line: 378 Feet

### INSTRUCTIONS:

- Specify all distances per Rule 308.b.(1).
- 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 – as defined in 100 Series Rules.

## OBJECTIVE FORMATIONS

| Objective Formation(s) | Formation Code | Spacing Order Number(s) | Unit Acreage Assigned to Well | Unit Configuration (N/2, SE/4, etc.) |
|------------------------|----------------|-------------------------|-------------------------------|--------------------------------------|
| NIOBRARA               | NBRR           | 535-774                 | 1280                          | 26 & 23: All                         |

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

## SUBSURFACE MINERAL SETBACKS

Enter 5280 for distance greater than 1 mile.

Is this Well within a unit? Yes

If YES:

Enter the minimum distance from the Completed Zone of this Well to the Unit Boundary: 645 Feet

Enter the minimum distance from the Completed Zone of this Well to the Completed Zone of an offset Well within the same unit permitted or completed in the same formation: 498 Feet

If NO:

Enter the minimum distance from the Completed Zone of this Well to the Lease Line of the described lease: \_\_\_\_\_ Feet

Enter the minimum distance from the Completed Zone of this Well to the Completed Zone of an offset Well producing from the same lease and permitted or completed in the same formation: \_\_\_\_\_ Feet

## Exception Location

If this Well requires the approval of a Rule 401.c Exception Location, enter the Rule or spacing order number and attach the Exception Location Request and Waivers. \_\_\_\_\_

## SPACING & FORMATIONS COMMENTS

## DRILLING PROGRAM

Proposed Total Measured Depth: 17357 Feet

TVD at Proposed Total Measured Depth 7160 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: 15 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 Plan unless a plan was already submitted with the Form 2A per Rule 304.c.(10).

Will there be hydraulic fracture treatment at a depth less than 2,000 feet in this well? No

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

Beneficial reuse or land application plan submitted? Yes

Reuse Facility ID: 450526 or Document Number: \_\_\_\_\_

## CASING PROGRAM

| <u>Casing Type</u> | <u>Size of Hole</u> | <u>Size of Casing</u> | <u>Grade</u> | <u>Wt/Ft</u> | <u>Csg/Liner Top</u> | <u>Setting Depth</u> | <u>Sacks Cmt</u> | <u>Cmt Btm</u> | <u>Cmt Top</u> |
|--------------------|---------------------|-----------------------|--------------|--------------|----------------------|----------------------|------------------|----------------|----------------|
| CONDUCTOR          | 24                  | 20                    | N/A          | 92           | 0                    | 80                   | 179              | 80             | 0              |
| SURF               | 13+1/2              | 9+5/8                 | J55LTC       | 36           | 0                    | 1500                 | 304              | 1500           | 0              |
| 1ST                | 8+1/2               | 5+1/2                 | HCP110       | 20           | 0                    | 17357                | 2588             | 17357          |                |

Conductor Casing is NOT planned

## POTENTIAL FLOW AND CONFINING FORMATIONS

| <u>Zone Type</u> | <u>Formation /Hazard</u> | <u>Top M.D.</u> | <u>Top T.V.D.</u> | <u>Bottom M.D.</u> | <u>Bottom T.V.D.</u> | <u>TDS (mg/L)</u> | <u>Data Source</u> | <u>Comment</u>  |
|------------------|--------------------------|-----------------|-------------------|--------------------|----------------------|-------------------|--------------------|---|
| Groundwater      | Fox Hills                | 0               | 0                 | 1348               | 1348                 | 501-1000          | USGS               |   |
| Confining Layer  | Pierre Shale             | 1348            | 1348              | 3800               | 3698                 |                   |                    |   |
| Groundwater      | Parkman                  | 3800            | 3698              | 4000               | 3876                 | 1001-10000        | Other              | DWLS formation water catalog  |
| Confining Layer  | Pierre Shale             | 4000            | 3876              | 4800               | 4691                 |                   |                    |   |
| Groundwater      | Shannon                  | 4800            | 4691              | 4900               | 4767                 | 1001-10000        | Other              | DWLS formation water catalog  |
| Confining Layer  | Pierre Shale             | 4900            | 4767              | 7300               | 7003                 |                   |                    |   |
| Confining Layer  | Sharon Springs           | 7300            | 7003              | 7400               | 7047                 |                   |                    |   |
| Hydrocarbon      | Niobrara                 | 7400            | 7047              | 17357              | 7160                 |                   |                    | The TVD of the deepest hydrocarbon zone is the bottom of the well and not the bottom of the formation. The formation is not planned to be exited. |

## OPERATOR COMMENTS AND SUBMITTAL

Comments



## 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.

### Condition of Approval

| <u>COA Type</u>                | <u>Description</u>  |
|--------------------------------|---|
| Interim Reclamation            | Operator shall comply with Notice to Operators: Interim Reclamation Procedures for Delayed Operations (dated January 5, 2017).  |
| Construction                   | If conductors are preset, operator shall comply with Notice to Operators: Procedures for Preset Conductors (dated September 1, 2016).   |
| Drilling/Completion Operations | Per COGCC Order 1-232, Bradenhead tests shall be performed according to the following schedule and Form 17 submitted within 10 days of each test:<br>1) Within 60 days of rig release, prior to stimulation. If any pressure greater than 200 psi, must contact COGCC engineer prior to stimulation.<br>2) If a delayed completion, a second test is required between 6-9 months, of if there is pressure above 200 psi, after rig release and prior to stimulation. If any pressure greater than 200 psi, must contact COGCC engineer prior to stimulation.<br>3) A post-production test within 60 days after first sales, as reported on the Form 10, Certificate of Clearance. |
| Drilling/Completion Operations | 1) Submit Form 42 electronically to COGCC 2 business days prior to MIRU (Spud Notice), for the first well/activity on the pad and provide 2 business days spud notice for all subsequent wells drilled on the pad.<br>2) Comply with Rule 408.j and provide cement coverage from the end of production casing to a minimum of 500' above Niobrara. Verify coverage with cement bond log.<br>3) Oil-based drilling fluid is to be used only after all aquifers are covered.  |
| 4 COAs                         |   |

### Best Management Practices

| <u>No</u> | <u>BMP/COA Type</u>            | <u>Description</u>  |
|-----------|--------------------------------|---|
| 1         | Drilling/Completion Operations | Alternative Logging Program: The Sligo 8-67-26-23C (API 05-123-44921) has been logged with open-hole Resistivity Log and Gamma Ray Log from the kick-off point into the surface casing. All wells on the pad will have a cement bond log with gamma-ray run on production casing (or on intermediate casing if production liner is run) into the surface casing. The horizontal portion of every well will be logged with a measured while-drilling gamma-ray log. The Form 5, Completion Report, for each well on the pad will list all logs run and have those logs attached. The Form 5 for a well without open hole logs shall clearly state "Alternative Logging Program- No open-hole logs were run" and shall clearly identify the well Sligo 8-67-26-23C (API 05-123-44921) in which open-hole logs were run. |

Total: 1 comment(s)

### Attachment List

| <u>Att Doc Num</u> | <u>Name</u>                |
|--------------------|----------------------------|
| 403032621          | FORM 2 SUBMITTED           |
| 403108109          | OffsetWellEvaluations Data |
| 403108120          | DEVIATED DRILLING PLAN     |
| 403108123          | DIRECTIONAL DATA           |
| 403108141          | WELL LOCATION PLAT         |
| 403177811          | OFFSET WELL EVALUATION     |

Total Attach: 6 Files

## General Comments

| <u>User Group</u> | <u>Comment</u>   | <u>Comment Date</u> |
|-------------------|--|---------------------|
| Permit            | Final Review Completed.  | 09/13/2022          |
| Permit            | Requesting correction to the MD BPZ and TVD BPZ.<br>With operators concurrence corrected the MD BPZ and TVD BPZ.<br>Permitting Review Complete.  | 09/09/2022          |
| OGLA              | Wildlife and stormwater BMPs added to Irish Pad (Location ID 450827) by operator via Sundry Form 4 Document number 403144765.  | 08/24/2022          |
| OGLA              | OGLA review complete.  | 08/16/2022          |
| Engineer          | Revised the "N/A" to a "YES", on the Drilling Plan tab, in the Beneficial Reuse section, along with adding the Facility No. 450526, per the Operator.  | 08/03/2022          |
| Engineer          | Emailed Operator on discrepancy on the measured depth of the BPZ on the Well Location tab and the Drilling and Casing tabs.,<br>Revised the BPZ to 17357, on the Well Location tab, per the Operator, 8/02/22.   | 08/03/2022          |
| Permit            | <p>RETURNED TO DRAFT: This application has been reviewed by COGCC staff and cannot be approved based on the information submitted; therefore, the COGCC is returning this form to DRAFT for the applicant to resolve the issues. In compliance with § 24-65.1-108(1), C.R.S., the COGCC is returning this application to the applicant to remedy the deficiencies. The applicant may resubmit this application for COGCC review; upon resubmittal of any application, the COGCC will have 60 days in which to approve, deny, or request all additional information necessary to complete the regulatory review.</p> <p>In addition to all standard required information and attachments, the COGCC hereby confirms the following information is necessary for review:</p> <ol style="list-style-type: none"> <li>1.Well type</li> <li>2.Field name</li> <li>3.Top of Productive zone footages.</li> <li>4.Measured Depth of TPZ</li> <li>5.Measured Depth of BPZ</li> <li>6.Spacing order</li> <li>7.Refile comment</li> <li>8.Open Hole BMP.</li> </ol> | 07/29/2022          |
| Engineer          | Offset Wells Re-evaluated with this APD.   | 07/25/2022          |

Total: 8 comment(s)