



Base of Productive Zone (BPZ)

Sec: 7 Twp: 2S Rng: 97W Footage at BPZ: 372 FNL 1844 FWL
Measured Depth of BPZ: 12705 True Vertical Depth of BPZ: 12156 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)

Sec: 7 Twp: 2S Rng: 97W Footage at BHL: 372 FNL 1844 FWL
FNL/FSL FEL/FWL

LOCAL GOVERNMENT PERMITTING INFORMATION

County: RIO BLANCO 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.? No

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? [X] Yes [ ] No

[X] 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: 07/07/2023

Comments:

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 [X] Federal [ ] Indian

Mineral Owner beneath this Well's Oil and Gas Location: [ ] Fee [ ] State [X] 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
[X] 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.)

Please see lease map

Total Acres in Described Lease: Described Mineral Lease is: [ ] Fee [ ] State [X] Federal [ ] Indian

Federal or State Lease # COC57285

## SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 5280 Feet  
Building Unit: 5280 Feet  
Public Road: 225 Feet  
Above Ground Utility: 720 Feet  
Railroad: 5280 Feet  
Property Line: 1156 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.) |
|------------------------|----------------|-------------------------|-------------------------------|--------------------------------------|
| WILLIAMS FORK          | WMFK           | 1-229                   |                               |                                      |

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: 372 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: 356 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: 12705 Feet

TVD at Proposed Total Measured Depth 12156 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: \_\_\_\_\_ 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? No

BOP Equipment Type:  Annular Preventor  Double Ram  Rotating Head  None

Beneficial reuse or land application plan submitted? No

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



## CASING PROGRAM

| Casing Type | Size of Hole | Size of Casing | Grade | Wt/Ft | Csg/Liner Top | Setting Depth | Sacks Cmt | Cmt Btm | Cmt Top |
|-------------|--------------|----------------|-------|-------|---------------|---------------|-----------|---------|---------|
| CONDUCTOR   | 30           | 20             | X65   | 78.67 | 0             | 80            | 230       | 80      | 0       |
| SURF        | 17+1/2       | 13+3/8         | J55   | 54.5  | 0             | 1230          | 411       | 1256    | 0       |
| 1ST         | 12+1/4       | 9+5/8          | J55   | 38.6  | 0             | 3000          | 160       | 3179    | 2137    |
| 2ND         | 8+3/4        | 4+1/2          | P110  | 11.6  | 0             | 12156         | 993       | 12705   | 7162    |

Conductor Casing is NOT planned

## POTENTIAL FLOW AND CONFINING FORMATIONS

| Zone Type         | Formation /Hazard   | Top M.D. | Top T.V.D. | Bottom M.D. | Bottom T.V.D. | TDS (mg/L) | Data Source           | Comment            |
|-------------------|---------------------|----------|------------|-------------|---------------|------------|-----------------------|--------------------|
| Groundwater       | UINTA               | 30       | 30         | 704         | 700           | 501-1000   | Produced Water Sample |                    |
| Groundwater       | GREEN RIVER         | 704      | 700        | 858         | 850           | 501-1000   | Produced Water Sample |                    |
| Subsurface Hazard | A GROOVE            | 858      | 850        | 1067        | 1050          |            |                       |                    |
| Subsurface Hazard | B GROOVE            | 1067     | 1050       | 1389        | 1350          |            |                       |                    |
| Subsurface Hazard | DISSOLUTION SURFACE | 1389     | 1350       | 2366        | 2250          |            |                       | POSSIBLE LOSS ZONE |
| Confining Layer   | GARDEN GULCH        | 2366     | 2250       | 2550        | 2420          |            |                       |                    |
| Confining Layer   | ORANGE MARKER       | 2550     | 2420       | 2637        | 2500          |            |                       |                    |
| Confining Layer   | UPPER WASATCH       | 2637     | 2500       | 5468        | 5110          |            |                       |                    |
| Hydrocarbon       | TOP OF G SAND       | 5468     | 5110       | 5750        | 5370          |            |                       | POSSIBLE LOSS ZONE |
| Hydrocarbon       | FORT UNION          | 5750     | 5370       | 6607        | 6160          |            |                       |                    |
| Confining Layer   | LOWER WASATCH       | 6607     | 6160       | 7362        | 6856          |            |                       |                    |
| Hydrocarbon       | OHIO CREEK          | 7362     | 6856       | 8120        | 7576          |            |                       | POSSIBLE LOSS ZONE |
| Hydrocarbon       | UPPER MESAVERDE     | 8120     | 7576       | 8925        | 8376          |            |                       |                    |
| Hydrocarbon       | TOP GAS             | 8925     | 8376       | 10495       | 9946          |            |                       |                    |
| Hydrocarbon       | CAMEO COALS         | 10495    | 9946       | 11225       | 10676         |            |                       |                    |
| Hydrocarbon       | ROLLINS             | 11225    | 10676      | 11375       | 10826         |            |                       |                    |
| Hydrocarbon       | COZZETTE            | 11375    | 10826      | 11700       | 11151         |            |                       |                    |
| Hydrocarbon       | CORCORAN            | 11700    | 11151      | 11960       | 11411         |            |                       |                    |
| Hydrocarbon       | UPPER SEGO          | 11960    | 11411      | 12205       | 11656         |            |                       |                    |
| Hydrocarbon       | LOWER SEGO          | 12205    | 11656      | 12705       | 12156         |            |                       |                    |

## OPERATOR COMMENTS AND SUBMITTAL

Comments: Nearest offset well producing from the same lease and permitted or completed in the same formation: Federal RGU 21-7-297 (Doc# 403561213).

OGDP application (Docket# 221200375) was approved on 08/23/2023, Form 2A (Doc# 402525732) approved on 09/11/2023.

This application is in a Comprehensive Area Plan       No       CAP #:                       
 Oil and Gas Development Plan Name       Ryan Gulch Phase 3       OGDP ID#:       484436        
 Location ID:       335640

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

Signed: \_\_\_\_\_ Print Name: Melissa Luke

Title: Regulatory Specialist Date: 12/20/2023 Email: mluke@terraep.com

Based on the information provided herein, this Application for Permit-to-Drill complies with COGCC Rules, applicable orders, and SB 19-181 and is hereby approved.

COGCC Approved: \_\_\_\_\_ Director of COGCC Date: \_\_\_\_\_

Expiration Date: \_\_\_\_\_

API NUMBER

05

### 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

| <u>COA Type</u> | <u>Description</u> |
|-----------------|--------------------|
| 0 COA           |                    |

### Best Management Practices

No BMP/COA Type                      Description

| <u>No BMP/COA Type</u>           | <u>Description</u>  |
|----------------------------------|---|
| 1 Drilling/Completion Operations | Alternative Logging Program: One of the first wells drilled on this pad will be logged with an open-hole resistivity log with gamma-ray, from TD into the surface casing. All wells on the pad will have a cement bond log (CBL) with gamma-ray run on production casing (or on intermediate casing if production liner is run) into the surface casing. 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 will state "Alternative Logging Program - No open-hole logs were run" and will clearly identify the type of log and the well (by API#) in which open-hole logs were run. |

Total: 1 comment(s)

### Attachment List

Att Doc Num                      Name

| <u>Att Doc Num</u> | <u>Name</u>                |
|--------------------|----------------------------|
| 403631192          | OffsetWellEvaluations Data |
| 403631195          | DIRECTIONAL DATA           |
| 403631197          | DEVIATED DRILLING PLAN     |
| 403631198          | WELL LOCATION PLAT         |
| 403631200          | LEASE MAP                  |

Total Attach: 5 Files

## General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u>    |
|-------------------|----------------|------------------------|
|                   |                | Stamp Upon<br>Approval |

Total: 0 comment(s)

