

Base of Productive Zone (BPZ)

Sec: 27 Twp: 6S Rng: 97W Footage at BPZ: 150 FNL 800 FWL
Measured Depth of BPZ: 9662 True Vertical Depth of BPZ: 8762 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)

Sec: 27 Twp: 6S Rng: 97W Footage at BHL: 150 FNL 800 FWL
FNL/FSL FEL/FWL

LOCAL GOVERNMENT PERMITTING INFORMATION

County: GARFIELD 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? 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: Date of Final Disposition:

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 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.)

Lease Description - T6S R97W Sec. 27: ALL (640 Acres)
Please see attached lease map

Total Acres in Described Lease: 640 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: 5280 Feet
Above Ground Utility: 5280 Feet
Railroad: 5280 Feet
Property Line: 5280 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? No

If YES:

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

If NO:

Enter the minimum distance from the Completed Zone of this Well to the Lease Line of the described lease: 800 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: 301 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 PROGRAMProposed Total Measured Depth: 9662 Feet TVD at Proposed Total Measured Depth 8762 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 feetWill a closed-loop drilling system be used? YesIs H₂S gas reasonably expected to be encountered during drilling operations at concentrations greater than or equal to 100 ppm? No If yes, attach an H₂S 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? NoWill salt sections be encountered during drilling? NoWill salt based (>15,000 ppm Cl) drilling fluids be used? NoWill oil based drilling fluids be used? NoBOP Equipment Type: Annular Preventor Double Ram Rotating Head NoneBeneficial reuse or land application plan submitted? No

Reuse Facility ID: _____ 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	30	20	X65	78.67	0	80	200	80	0
SURF	13+1/2	9+5/8	J55	36.00	0	1816	474	2000	0
1ST	8+3/4	4+1/2	P110	11.60	0	8762	807	9662	4463

 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	GRRV MGNV	872	855	1318	1247	501-1000	Produced Water Sample	
Hydrocarbon	ANVIL POINTS	1318	1247	1760	1616			
Confining Layer	GARDEN GULCH	1760	1616	2203	1985			
Hydrocarbon	DOUGLAS CREEK	2203	1985	2621	2334			
Subsurface Hazard	ORANGE MARKER	2621	2334	2942	2601			
Confining Layer	WASATCH	2942	2601	5084	4387			
Hydrocarbon	G SAND	5084	4387	5324	4587			
Hydrocarbon	FORT UNION	5324	4587	5913	5087			
Confining Layer	L WASATCH	5913	5087	6750	5862			
Hydrocarbon	OHIO CREEK	6750	5862	7210	6312			
Hydrocarbon	U MESAVERDE	7210	6312	7787	6887			
Hydrocarbon	KMV GAS	7787	6887	8907	8007			
Hydrocarbon	CAMEO	8907	8007	9462	8562			
Hydrocarbon	ROLLINS	9462	8562	9662	8762			

OPERATOR COMMENTS AND SUBMITTAL

Comments

Nearest offset well producing from the same lease and permitted or completed in the same formation: Kelton WGV 311-27-697 (Doc # 403510748).

OGDP application (Docket# 220900247) was approved on 08/23/2023. Form 2A (Doc# 403135970) approved on 09/11/2023.

This application is in a Comprehensive Area Plan No CAP #: _____

Oil and Gas Development Plan Name Arco Deep 1-27 OGD ID#: 483885

Location ID: 322539

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: 9/21/2023 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**

0 COA

Best Management Practices

No BMP/COA Type

Description

1 Drilling/Completion Operations

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 9 5/8" casing shoe. 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
403506607	OffsetWellEvaluations Data
403510729	DIRECTIONAL DATA
403510730	WELL LOCATION PLAT
403510731	DEVIATED DRILLING PLAN
403515615	LEASE MAP

Total Attach: 5 Files

General Comments

User Group	Comment	Comment Date
		Stamp Upon Approval

Total: 0 comment(s)

