

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:

403213141

Date Received:

11/04/2022

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: Crowchild Well Number: 7-67-3-34C

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)2796743 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): _____

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 \$ 60000

WELL LOCATION INFORMATION

Surface Location

QtrQtr: SWSW Sec: 26 Twp: 8N Rng: 67W Meridian: 6
 Footage at Surface: 345 Feet FSL 247 Feet FWL
Latitude: 40.626263 Longitude: -104.868635GPS Data: GPS Quality Value: 1.5 Type of GPS Quality Value: PDOP Date of Measurement: 10/04/2022Ground Elevation: 5154Field Name: DJ HORIZONTAL NBRR-FTHYS-CODL Field Number: 16953Well 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: 34 Twp: 8N Rng: 67W Footage at TPZ: 660 FNL 850 FWL
 Measured Depth of TPZ: 9448 True Vertical Depth of TPZ: 7305 FNL/FSL FEL/FWL

Base of Productive Zone (BPZ)Sec: 3 Twp: 7N Rng: 67WFootage at BPZ: 660 FSL 850 FWLMeasured Depth of BPZ: 18880True Vertical Depth of BPZ: 7305 FNL/FSL FEL/FWL**Bottom Hole Location (BHL)**Sec: 3 Twp: 7N Rng: 67WFootage at BHL: 660 FSL 850 FWLFNL/FSLFEL/FWL**LOCAL GOVERNMENT PERMITTING INFORMATION**County: WELDMunicipality: 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: 07/23/2020Comments: 1041WOGLA20-0050 approved on 7/23/2020**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 ☐ IndianMineral 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.)

E2SW SEC 34 T8N R67W

The wellbore does not cross lease described but the lease is within DSU.

Total Acres in Described Lease: 73

Described Mineral Lease is: ☐ Fee ☐ State ☒ Federal ☐ Indian

Federal or State Lease # COC 079377

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 5280 Feet
Building Unit: 5280 Feet
Public Road: 4961 Feet
Above Ground Utility: 4928 Feet
Railroad: 5280 Feet
Property Line: 247 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.)
CODELL	CODL	407-2359	1280	3-7-67 & 34-8-67: 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: 660 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: 1183 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: 18880 Feet

TVD at Proposed Total Measured Depth 7305 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: 190 Feet ☐ No well belonging to another operator within 1,500 feet

Will a closed-loop drilling system be used? Yes

Is 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? 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? _____

Reuse Facility ID: 478120 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	24	16	J-55	65	0	80	179	80	0
SURF	13+1/5	9+5/8	J-55	36	0	1500	304	1500	0
1ST	8+1/2	5+1/2	P-110	20	0	18880	2844	18880	0

☐ 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	Fox Hills	0	0	1297	1297	501-1000	USGS	
Confining Layer	Pierre Shale	1297	1297	3644	3537			
Groundwater	Parkman	3649	3537	4000	3817	1001-10000	Other	DWLS formation water catalog
Confining Layer	Pierre Shale	4000	3817	5234	4692			
Groundwater	Shannon	5234	4692	5400	4782	1001-10000	Other	DWLS formation water catalog
Confining Layer	Pierre Shale	5400	4782	8659	6957			
Confining Layer	Sharon Springs	8659	6957	8717	6995			
Hydrocarbon	Niobrara	8717	6995	9255	7279			
Confining Layer	Fort Hays	9255	7279	9356	7299			
Hydrocarbon	Codell	9356	7299	18880	7305			Bottom TVD is bottom of the well and not bottom of the formation; the formation is not planned to be exited.

OPERATOR COMMENTS AND SUBMITTAL

Comments

This Form 2 is being submitted as an refile of API: 05-123-51359.

No wells have been drilled. The well names/numbers, SHL/TPZ/BHZ/BHL/TMD/TVD, cultural distances, spacing, formation, casing grades, nearest well, and PFZ table information are being confirmed or amended for the following wells:

Glenmore Trail 7-67-3-34C (API:05-123-51358)

Crowchild 7-67-3-34C (API:05-123-51359)

Sarcee 7-67-3-34C (API:05-123-51360)

McKnight 7-67-3-34C (API:05-123-51361)

The remaining 4 well slots are being submitted along with the above amended Form 2s for the following wells:

Macleod Trail 7-67-3-34

Deerfoot Trail 7-67-3-34

Memorial 7-67-3-34

Bow Trail 7-67-3-34

There have been no new buildings constructed and no changes to the surrounding land use, mineral lease descriptions from the previously approved APD. The well site has been constructed. There are no proposed changes to the location disturbance or equipment. All previously submitted notices and letters are also still valid.

The nearest well in unit per anti-collision is the Glenmore Trails 7-67-3-34C @ 1183'.

The nearest outside operated well per 2-D calculation is the Upr-Amoco 1 (API: 05-123-08747) PA status @ 190'.

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

Oil and Gas Development Plan Name _____ OGDID #: _____

Location ID: 478120

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

Signed: _____ Print Name: Jordan Lukasik

Title: Regulatory Analyst Date: 11/4/2022 Email: regulatory@ascentgeomatics.c

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, applicable orders, and SB 19-181 and is hereby approved.

COGCC Approved:  Director of COGCC Date: 1/27/2023

Expiration Date: 01/26/2026

API NUMBER

05 123 51359 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>
Drilling/Completion Operations	Operator will log two (2) wells during the first rig occupation with open-hole resistivity log with gamma-ray log from the kick-off point into the surface casing for the two stratigraphically deepest wells on each side of the pad
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: 1) Within 60 days of rig release, prior to stimulation. If any pressure greater than 200 psi, must contact COGCC engineer prior to stimulation. 2) If a delayed completion, 6 months after rig release and prior to stimulation. If any pressure greater than 200 psi, must contact COGCC engineer prior to stimulation. 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 48 hours prior to MIRU (Spud Notice), for the first well/activity on the pad and provide 48 hour spud notice for all subsequent wells drilled on the pad. 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. 3) Oil-based drilling fluid is to be used only after all aquifers are covered.
5 COAs	

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Drilling/Completion Operations	One of the first wells drilled on the pad during the first rig occupation will be logged with open-hole resistivity log with gamma-ray log from the kick-off point into the surface casing for one of the stratigraphically deepest wells on the pad. 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 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

<u>Att Doc Num</u>	<u>Name</u>
403213141	FORM 2 SUBMITTED
403218573	OffsetWellEvaluations Data
403218580	DIRECTIONAL DATA
403218582	DEVIATED DRILLING PLAN

403218586	WELL LOCATION PLAT
403305002	OFFSET WELL EVALUATION

Total Attach: 6 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed.	01/25/2023
OGLA	Operator provided an updated timeline and additional BMPs. Pushed to IN PROCESS. OGLA Task is PASSED.	01/13/2023
OGLA	<p>ON HOLD: This application has been reviewed by COGCC staff and cannot be approved based on the information submitted; therefore, the COGCC is placing this form ON HOLD until additional information is received from the applicant.</p> <p>In compliance with § 24-65.1-108(1), C.R.S., the COGCC is providing this written request for all additional information necessary for the COGCC to respond to this application. The applicant may provide all requested additional information to COGCC via email. Upon receipt of all requested information, the COGCC will have 60 days in which to approve, deny, or request all additional information necessary to complete the regulatory review. If the applicant no longer requires this application be approved, the applicant may request to withdraw the application.</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"> 1. The BMPs for the protection of wildlife received via Form 4 Sundry (Document #403273213) need to be stronger. 2. Consultation with CPW regarding the BMPs will be conducted. 	12/29/2022
Permit	With operators concurrence changed from amend to refile, added Fed Financial amount, added Open Hole Logging COA, check Fed minerals and added to mineral lease comment. Permitting Review Complete.	12/14/2022
Permit	Requesting change from amend to refile, add Fed Financial amount, add Open Hole Logging COA, check Fed minerals and add to mineral lease comment.	12/13/2022
Engineer	Offset Wells re-Evaluated with this APD.	11/08/2022

Total: 6 comment(s)