

WELL ABANDONMENT REPORT

This form is to be submitted as an Intent to Abandon whenever an abandonment is planned on a borehole. After the abandonment is complete, this form shall again be submitted as a Subsequent Report of the actual work completed. The approved intent shall be valid for six months after the approval date, after that period, a new intent will be required. Attachments required with the Intent to Abandon are wellbore diagrams of the current configuration and the proposed configuration with plugs set. A Subsequent Report of Abandonment shall indicate the actual work completed. Attachments required with a Subsequent Report are a wellbore diagram showing plugs that were set and casing remaining in the hole, the job summaries from all plugging contractors used, including wireline and cementing (third party verification) and any logs that may have been run during abandonment.

Document Number:
 402778231
 Date Received:
 08/23/2021

OGCC Operator Number: 96155 Contact Name: Andrew Fish
 Name of Operator: WHITING OIL & GAS CORPORATION Phone: (303) 357-4021
 Address: 1700 LINCOLN STREET SUITE 4700 Fax: _____
 City: DENVER State: CO Zip: 80290 Email: andrew.fish@whiting.com

For "Intent" 24 hour notice required, Name: Kellerby, Shaun Tel: (970) 285-7235
COGCC contact: Email: shaun.kellerby@state.co.us

Type of Well Abandonment Report: Notice of Intent to Abandon Subsequent Report of Abandonment

API Number 05-103-40249-00
 Well Name: EMERALD Well Number: 117
 Location: QtrQtr: SWSE Section: 6 Township: 1N Range: 102W Meridian: 6
 County: RIO BLANCO Federal, Indian or State Lease Number: _____
 Field Name: RANGELY Field Number: 72370

Only Complete the Following Background Information for Intent to Abandon

Latitude: 40.079385 Longitude: -108.883385
 GPS Data: GPS Quality Value: 1.2 Type of GPS Quality Value: PDOP Date of Measurement: 01/19/2021
 Reason for Abandonment: Dry Production Sub-economic Mechanical Problems
 Other Re-plug by other operator. AL had casing set.
 Casing to be pulled: Yes No Estimated Depth: _____
 Fish in Hole: Yes No If yes, explain details below
 Wellbore has Uncemented Casing leaks: Yes No If yes, explain details below
 Details: _____

Current and Previously Abandoned Zones

Formation	Perf. Top	Perf. Btm	Abandoned Date	Method of Isolation	Plug Depth

Total: 0 zone(s)

Casing History

Casing Type	Size of Hole	Size of Casing	Grade	Wt/Ft	Csg/Liner Top	Setting Depth	Sacks Cmt	Cmt Btm	Cmt Top	Status
SURF	20	7	NA	20	0	8				
OPEN HOLE	9+7/8				8	2500				

Plugging Procedure for Intent and Subsequent Report

CIBP #1: Depth _____ with _____ sacks cmt on top. CIBP #2: Depth _____ with _____ sacks cmt on top.
CIBP #3: Depth _____ with _____ sacks cmt on top. CIBP #4: Depth _____ with _____ sacks cmt on top.
CIBP #5: Depth _____ with _____ sacks cmt on top.

NOTE: Two(2) sacks cement required on all CIBPs.

Set 123 sks cmt from 450 ft. to 600 ft. Plug Type: OPEN HOLE Plug Tagged:
Set 75 sks cmt from 150 ft. to 4 ft. Plug Type: OPEN HOLE Plug Tagged:
Set _____ sks cmt from _____ ft. to _____ ft. Plug Type: _____ Plug Tagged:
Set _____ sks cmt from _____ ft. to _____ ft. Plug Type: _____ Plug Tagged:
Set _____ sks cmt from _____ ft. to _____ ft. Plug Type: _____ Plug Tagged:
Perforate and squeeze at _____ ft. with _____ sacks. Leave at least 100 ft. in casing _____ CICR Depth
Perforate and squeeze at _____ ft. with _____ sacks. Leave at least 100 ft. in casing _____ CICR Depth
Perforate and squeeze at _____ ft. with _____ sacks. Leave at least 100 ft. in casing _____ CICR Depth
(Cast Iron Cement Retainer Depth)
Set _____ sacks half in. half out surface casing from _____ ft. to _____ ft. Plug Tagged:
Set _____ sacks at surface
Cut four feet below ground level, weld on plate Above Ground Dry-Hole Marker: Yes No
Set _____ sacks in rat hole Set _____ sacks in mouse hole

Additional Plugging Information for Subsequent Report Only

Casing Recovered: _____ ft. of _____ inch casing Number of Days from Setting Surface Plug to Capping or Sealing the Well: _____
Surface Plug Setting Date: _____ Cut and Cap Date: _____
*Wireline Contractor: _____ *Cementing Contractor: _____
Type of Cement and Additives Used: _____
Flowline/Pipeline has been abandoned per Rule 1105 Yes No

Technical Detail/Comments:

Wellbore appears bridged off at 786 ft.
Rock & Shale Mix; 9 7/8 in; 600.0 - 786.0ftKB
Rock & Shale Mix; 9 7/8 in; 150.0 - 450.0ftKB

*Note-surface hole size is an estimate. Field personnel stated that it was bigger than the wellbore to 786 ft.

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

Signed: _____ Print Name: Bryce Maifeld
Title: Regulatory Specialist Date: 8/23/2021 Email: bryce.maifeld@whiting.com

Based on the information provided herein, this Well Abandonment Report (Form 6) complies with COGCC Rules and applicable orders and is hereby approved.

COGCC Approved: Katz, Aaron Date: 9/20/2021

CONDITIONS OF APPROVAL, IF ANY:

Expiration Date: 3/19/2022

Condition of Approval

COA Type

Description

1) Provide 48 hour notice of plugging MIRU via electronic Form 42.

2) The approved Form 6, Notice of Intent will be at the location during all phases of plugging operations.

3) Operator shall implement measures to control venting and to ensure that vapors and odors from well plugging operations do not constitute a nuisance or hazard.

4) Properly abandon flowlines as per Rule 1105. Pursuant to Rule 911.a. Closure of Oil and Gas Facilities, Operator will submit Site Investigation and Remediation Workplans via Form 27 for COGCC prior approval before cutting and capping the plugged well, conducting flowline abandonment, and removing production equipment. Pursuant to Rule 1105.f. Abandonment Verification, within 90 days of an operator completing abandonment requirements for a flowline or crude oil transfer line, an operator must submit a Field Operations Notice, Form 42-Abandonment of Flowlines for on-location flowlines, and a Flowline Report, Form 44, for off-location flowlines or crude oil transfer lines.

5) Check bradenhead annulus pressure prior to MIRU. Perform a bradenhead test if bradenhead pressure is greater than 25 psi, submit results electronically on a Form 17, and contact COGCC area engineer.

If a well has a bradenhead pressure greater than 25 PSI measured at the time of the test then a sample of both the production and bradenhead gas (if sufficient volume to analyze) shall be collected and submitted for laboratory analysis of the gas composition and stable isotopes. The compositional analysis should include hydrogen, argon, oxygen, carbon dioxide, nitrogen, methane (C1), ethane (C2), ethene, propane (nC3), isobutane (iC4), butane (nC4), isopentane (iC5), pentane (nC5), hexanes +, specific gravity and British Thermal Units (BTU). The stable isotope analysis should include delta DC1, delta 13C1, delta 13C2, delta 13C3, delta 13iC4, delta 13nC4, delta 13iC5 (if possible), delta 13nC5 (if possible), and delta 13C of CO2 (if possible). The analytical results shall be submitted to the COGCC via Form 43 (Analytical Sample Submittal Form).

Gas sample containers should be filled in accordance with container manufacturer or laboratory recommendations; purging multiple container volumes may not be feasible due to limited gas volumes.

If water is encountered in the bradenhead during testing then samples (if sufficient quantity to analyze) should be collected and submitted for the laboratory analysis of major anions (chloride, carbonate, bicarbonate, and sulfate), cations (sodium, potassium, calcium, and magnesium) total dissolved solids (TDS), BTEX, DRO, GRO, and dissolved gasses (RSK 175). If there is a limited amount of water available then anions, cations and BTEX should be given first priority. Data from bradenhead water samples shall be submitted to the COGCC via Form 43.

Please refer to Appendix A of the COGCC Operator Instructions for Bradenhead Testing and Reporting for more information regarding testing and sampling protocol.

If the Bradenhead pressure is greater than 25 psi, the operator shall provide notice to Environmental Supervisor Alex Fischer at alex.fischer@state.co.us or 303-894-2100 X 5138 and COGCC Engineer Craig Burger at craig.burger@state.co.us or 970-319-4194, a minimum of 72 hours prior to conducting field operations. Bradenhead testing and sample collection shall be completed if the Bradenhead pressure is greater than 25 psi. If samples are collected, copies of all final laboratory analytical results shall be provided to the COGCC within three (3) months of collecting the samples.

6) The Operator will not cap or seal the well until 5 days after placing the last plug to allow monitoring for successful plugging and will cap or seal the well within 90 days after placing the last plug.

7) In accordance with the Notice to Operators (NTO): Timing for COGCC Forms adopted on 05/01/2020, this Form 6 Notice of Intent to Abandon is valid for 12 months from the date of approval expiring on 09/20/2022. This NTO does not alter the deadlines for submission of, or compliance with any other Commission rule or Form.

Operator will implement measures to capture, combust, or control emissions to protect health and safety, and to ensure that vapors and odors from well plugging operations do not constitute a nuisance or hazard to public health, welfare and the environment.

2 COAs

Attachment List

<u>Att Doc Num</u>	<u>Name</u>
402778231	FORM 6 INTENT SUBMITTED
402778716	WELLBORE DIAGRAM
402778718	PROPOSED PLUGGING PROCEDURE
402778719	WELLBORE DIAGRAM
402778721	SURFACE OWNER CONSENT

Total Attach: 5 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Engineer	added open hole to casing information. Open hole size is estimated due to lack of documentation for historical well Well bridged off at 786' - Unable to get to bottom Well has minimal documentation due to historical nature of this wellbore There are no water wells within 1 mile	09/20/2021

Total: 1 comment(s)