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402079171

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06/28/2019

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.

OGCC Operator Number: 10112 Contact Name: Wes Wickersham
 Name of Operator: FOUNDATION ENERGY MANAGEMENT LLC Phone: (918) 526-5536
 Address: 5057 KELLER SPRINGS RD STE 650 Fax: (918) 585-1660
 City: ADDISON State: TX Zip: 75001 Email: wwickersham@foundationenergy.com

For "Intent" 24 hour notice required, Name: Moran, Rick Tel: (720) 827-6689
COGCC contact: Email: rick.moran@state.co.us

API Number 05-103-08714-00 Well Number: 2-20-4-103
 Well Name: COLUMBINE SP FED
 Location: QtrQtr: SWSE Section: 20 Township: 4S Range: 103W Meridian: 6
 County: RIO BLANCO Federal, Indian or State Lease Number: 44594
 Field Name: BAXTER PASS Field Number: 5700

Notice of Intent to Abandon Subsequent Report of Abandonment

Only Complete the Following Background Information for Intent to Abandon

Latitude: 39.690770 Longitude: -108.978850
 GPS Data:
 Date of Measurement: 05/06/2009 PDOP Reading: 4.3 GPS Instrument Operator's Name: Chris Sanchez
 Reason for Abandonment: Dry Production Sub-economic Mechanical Problems
 Other _____
 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: 6/14/19 - Failed pre-MIT, CIBP set 50' above perfs, tagged and 2 sx cmt. Will find HIC within 1 jt and set 100' balanced plug across.

Current and Previously Abandoned Zones

Formation	Perf. Top	Perf. Btm	Abandoned Date	Method of Isolation	Plug Depth
MANCOS B	3190	3562			
Total: 1 zone(s)					

Casing History

Casing Type	Size of Hole	Size of Casing	Weight Per Foot	Setting Depth	Sacks Cement	Cement Bot	Cement Top	Status
SURF	12+1/4	8+5/8	24	285	84	285	0	VISU
1ST	6+1/4	4+1/2	10.5	3,748	250	3,748	1,012	CALC

Plugging Procedure for Intent and Subsequent Report

CIBP #1: Depth 3150 with 2 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 25 sks cmt from 1000 ft. to 900 ft. Plug Type: CASING 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:
Set _____ sks cmt from _____ ft. to _____ ft. Plug Type: _____ Plug Tagged:

Perforate and squeeze at 335 ft. with 66 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. _____ inch casing Plugging Date: _____
of _____

*Wireline Contractor: The Perforators *Cementing Contractor: Duco

Type of Cement and Additives Used: _____

Flowline/Pipeline has been abandoned per Rule 1105 Yes No *ATTACH JOB SUMMARY

Technical Detail/Comments:

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

Signed: _____ Print Name: Wes Wickersham

Title: PA Lead Date: 6/28/2019 Email: wwickersham@foundationenergy.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: BURGER, CRAIG Date: 9/4/2019

CONDITIONS OF APPROVAL, IF ANY: _____

Expiration Date: 3/3/2020

COA Type	Description
	<p>1)Provide 48 hour notice of plugging MIRU via electronic Form 42.</p> <p>2)The approved Form 6, Notice of Intent will be at the location during all phases of plugging operations.</p> <p>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.</p> <p>4)Properly abandon flowlines as per Rule 1105. File electronic Form 42 once on location abandonment complete. Within 30 days of an operator completing abandonment requirements for an off-location flowline or crude oil transfer line the operator shall submit a Flowline Report, Form 44.</p> <p>5)Contact COGCC area engineer with the depths of casing leaks. Increase cement quantity to 25 sacks to ensure adequate isolation of casing leak.</p> <p>6)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.</p> <p>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 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).</p> <p>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.</p> <p>If water is encountered in the bradenhead during testing then samples 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.</p> <p>Please refer to Appendix A of the COGCC Operator Instructions for Bradenhead Testing and Reporting for more information regarding testing and sampling protocol. 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 (if applicable). 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.</p>

Attachment Check List

Att Doc Num	Name
2597643	WELLBORE DIAGRAM-PROPOSED
402079171	FORM 6 INTENT SUBMITTED
402091357	OPERATIONS SUMMARY

Total Attach: 3 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Engineer	MIT was due 7/2018. MIT pretest failed 6/14/2019. Emailed operator: Wes, Couple issues with this Form 6 intent to plug: A form 5A needs to be submitted to document the bridge plug placement on 6/14/19 We require perforations 50' below the surface casing shoe and cement inside and outside the casing minimum 50' below the shoe to 50' above. Contact me when the depth of the casing leak is located in case the procedure needs to be revised. Please correct the proposed as plugged wellbore diagram and procedure to reflect the perms 50' below the shoe and email to me. I will replace the ones attached to the submittal. Thanks and call if you have questions.	08/15/2019
Well File Verification	Pass	07/16/2019

Total: 2 comment(s)