

FORM
6Rev
12/05State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 Phone: (303) 894-2100 Fax: (303) 894-2109



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|-------------------------------|----|----|----|
| DE | ET | OE | ES |
| Document Number: 400997479 | | | |
| Date Received: 03/02/2016 | | | |

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: 100322 | Contact Name: BEN DANIELL |
| Name of Operator: NOBLE ENERGY INC | Phone: (720) 587-2487 |
| Address: 1625 BROADWAY STE 2200 | Fax: |
| City: DENVER State: CO Zip: 80202 | Email: BEN.DANIELL@NBLENERGY.COM |
| For "Intent" 24 hour notice required, Name: Carlile, Craig Tel: (970) 629-8279 | |
| COGCC contact: Email: craig.carlile@state.co.us | |

| | |
|--|--|
| API Number 05-123-29678-00 | Well Number: 26-23D |
| Well Name: HARSH H | |
| Location: QtrQtr: NWSE Section: 26 Township: 3N Range: 65W Meridian: 6 | |
| County: WELD | Federal, Indian or State Lease Number: |
| Field Name: WATTENBERG | Field Number: 90750 |

☒ Notice of Intent to Abandon ☐ Subsequent Report of Abandonment

Only Complete the Following Background Information for Intent to Abandon

| | |
|--|-------------------------------|
| Latitude: 40.194791 | Longitude: -104.627834 |
| GPS Data: | |
| Date of Measurement: 06/19/2009 | PDOP Reading: 2.5 |
| GPS Instrument Operator's Name: BRAIN DEROSE | |
| Reason for Abandonment: <input type="checkbox"/> Dry <input type="checkbox"/> Production Sub-economic <input type="checkbox"/> Mechanical Problems | |
| <input checked="" type="checkbox"/> Other BRADENHEAD | |
| Casing to be pulled: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Estimated Depth: 1900 |
| Fish in Hole: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | If yes, explain details below |
| Wellbore has Uncemented Casing leaks: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | If yes, explain details below |
| Details: | |

Current and Previously Abandoned Zones

| Formation | Perf. Top | Perf. Btm | Abandoned Date | Method of Isolation | Plug Depth |
|-----------|-----------|-----------|----------------|---------------------|------------|
| CODELL | 7224 | 7239 | | | |
| NIOBRARA | 6973 | 7140 | | | |

Total: 2 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 | 677 | 291 | 677 | 13 | VISU |
| 1ST | 7+7/8 | 4+1/2 | 11.6 | 7,413 | 760 | 7,413 | 1,977 | CBL |

Plugging Procedure for Intent and Subsequent Report

CIBP #1: Depth 6846 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 50 sks cmt from 4500 ft. to 4000 ft. Plug Type: CASING Plug Tagged: ☐
Set 150 sks cmt from 1900 ft. to 900 ft. Plug Type: STUB PLUG 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 255 sacks half in. half out surface casing from 777 ft. to 0 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 Plugging Date: _____

*Wireline Contractor: _____ *Cementing Contractor: _____

Type of Cement and Additives Used: _____

Flowline/Pipeline has been abandoned per Rule 1103 ☐ 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: ANGELA FIORE

Title: ENGINEERING TECHNICIAN Date: 3/2/2016 Email: ANGELA.FIORE@NBLENERGY.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: McCoy, Diane Date: 3/24/2016

CONDITIONS OF APPROVAL, IF ANY: _____

Expiration Date: 9/23/2016

| COA Type | Description |
|----------|--|
| | <p>1) Provide 48 hour notice of plugging MIRU via electronic Form 42.</p> <p>2) Properly abandon flowlines as per Rule 1103. File electronic Form 42 once abandonment complete.</p> <p>3) For stub plug- Leave 50' plug in casing stub, pull out to continue plug, after pumping stub plug, shut down and wait on cement at minimum 4 hours. Check surface casing pressure, if pressure remains call COGCC for an update to plugging orders in order to verify gas migration has been eliminated.</p> <p>If surface casing is plug not circulated to surface then tag plug – must be 562' or shallower and provide 10 sx plug at the surface. Leave at least 100' cement in the casing for each plug.</p> |
| | <p>The operator will collect both production and bradenhead gas samples for laboratory analysis of gas composition and stable carbon isotopes. The compositional analysis at a minimum shall include Hydrogen, Argon, Oxygen, Carbon Dioxide, Nitrogen, Carbon Monoxide, Methane, Ethene, Ethane, Propene, Propane, Isobutane, Butane, Isopentane, Pentane, Hexanes +, Specific Gravity and British Thermal Units (BTU). Stable carbon isotope analysis shall include delta DC1, delta 13C1, delta 13C2, delta 13C3, delta 13C4, delta 13NC4, delta 13C5 (If Possible), delta 13NC5 (If Possible), delta 13C6+ (If Possible). And stable isotopes of CO2 if possible (delta 13 CO2 and Delta 18O CO2). Copies of all final laboratory analytical results shall be provided to the COGCC within three (3) months of collecting the samples. The analytical results shall be submitted to the COGCC in an approved electronic data deliverable format.</p> <p>If water is present in the bradenhead operators shall collect production and bradenhead water samples for laboratory analysis of Volatile Organic Compounds (VOCs) via EPA Method 8260 or similar and for Semi volatile Organic Compounds (SVOCs) via EPA method 8270 or similar. In addition, operators shall have the samples analyzed for the major cations and anions so that an evaluation of the water source may be conducted. The analysis shall include Na, K, Ca and Mg for cations and sulfate, chloride, bromide and total alkalinity (including bicarbonate, carbonate and total alkalinity) for anions, plus a measurement of total dissolved solids.</p> <p>In addition, field water analysis should be carried out according to API RP 45. Below is the list of measurements that should be carried out immediately in the field after collecting a sample of oilfield waters:</p> <p>pH Temperature Alkalinity Dissolved oxygen CO2 H2S Total and soluble iron Turbidity on an unfiltered sample Total suspended solids with at least primary filtration and washing performed in the field Bacteria with filtering and/or culturing in the field and incubation and counting performed in the laboratory</p> <p>Copies of all final laboratory analytical results shall be provided to the COGCC within three (3) months of collecting the samples. The analytical results shall be submitted to the COGCC in an approved electronic data deliverable format.</p> |

Attachment Check List

| Att Doc Num | Name |
|-------------|-----------------------------|
| 400997479 | FORM 6 INTENT SUBMITTED |
| 400999001 | WELLBORE DIAGRAM |
| 400999006 | PROPOSED PLUGGING PROCEDURE |
| 400999008 | WELLBORE DIAGRAM |

Total Attach: 4 Files

General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|-------------------|---|-------------------------|
| Public Room | Document verification complete 03/03/16 | 3/3/2016 12:28:06 PM |

Total: 1 comment(s)