

FORM
2
Rev
08/13

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:
400701260

APPLICATION FOR PERMIT TO:

Drill Deepen Re-enter Recomplete and Operate

TYPE OF WELL OIL GAS COALBED OTHER _____
ZONE TYPE SINGLE ZONE MULTIPLE ZONES COMMINGLE ZONES

Refiling
Sidetrack

Date Received:
10/21/2014

Well Name: McIntyre Well Number: 1-3R
Name of Operator: SANTA FE NATURAL RESOURCES INC COGCC Operator Number: 10525
Address: 4833 FRONT STREET UNIT B 506
City: CASTLE ROCK State: CO Zip: 80104
Contact Name: Joe Mazotti Phone: (720)226-5791 Fax: ()
Email: ogp-co@comcast.net

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20140076

WELL LOCATION INFORMATION

QtrQtr: NESE Sec: 3 Twp: 7N Rng: 94W Meridian: 6
Latitude: 40.585596 Longitude: -107.925312

Footage at Surface: 2195 feet FNL/FSL FSL 427 feet FEL/FWL FEL

Field Name: WILDCAT Field Number: 99999

Ground Elevation: 7077 County: MOFFAT

GPS Data:
Date of Measurement: 09/18/2014 PDOP Reading: 1.8 Instrument Operator's Name: Leo Hiltner

If well is Directional Horizontal (highly deviated) **submit deviated drilling plan.**

Footage at Top of Prod Zone: FNL/FSL FEL/FWL Bottom Hole: FNL/FSL FEL/FWL

Sec: Twp: Rng: Sec: Twp: Rng:

LOCATION SURFACE & MINERALS & RIGHT TO CONSTRUCT

Surface Ownership: Fee State Federal Indian

The Surface Owner is: is the mineral owner beneath the location.
(check all that apply) is committed to an Oil and Gas Lease.
 has signed the Oil and Gas Lease.
 is the applicant.

The Mineral Owner beneath this Oil and Gas Location is: Fee State Federal Indian

The Minerals beneath this Oil and Gas Location will be developed by this Well: Yes

The right to construct the Oil and Gas Location is granted by: oil and gas lease

Surface damage assurance if no agreement is in place: Surface Surety ID:

LEASE INFORMATION

Using standard QtrQtr, Sec, Twp, Rng format, describe one entire mineral lease that will be produced by this well (Describe lease beneath surface location if produced. Attach separate description page or map if necessary.)

T7N - R94W: Sec. 2, Lot 8, SWNW, Sec. 3: N2/SE, E2SW, Sec. 10: NENW

Total Acres in Described Lease: 321 Described Mineral Lease is: Fee State Federal Indian

Federal or State Lease # _____

Distance from Completed Portion of Wellbore to Nearest Lease Line of described lease: 427 Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 5280 Feet

Building Unit: 5280 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 5280 Feet

Above Ground Utility: 5280 Feet

Railroad: 5280 Feet

Property Line: 454 Feet

INSTRUCTIONS:

- All measurements shall be provided from center of the Proposed Well to nearest of each cultural feature as described in Rule 303.a.(5).

- 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, High Occupancy Building Unit, and Designated Outside Activity Area - as defined in 100-Series Rules.

DESIGNATED SETBACK LOCATION INFORMATION

Check all that apply. This location is within a: Buffer Zone
 Exception Zone
 Urban Mitigation Area

- Buffer Zone – as described in Rule 604.a.(2), within 1,000' of a Building Unit

- Exception Zone - as described in Rule 604.a.(1), within 500' of a Building Unit.

- Urban Mitigation Area - as defined in 100-Series Rules.

Pre-application Notifications (required if location is within 1,000 feet of a building unit):

Date of Rule 305.a.(1) Urban Mitigation Area Notification to Local Government: _____

Date of Rule 305.a.(2) Buffer Zone Notification to Building Unit Owners: _____

SPACING and UNIT INFORMATION

Distance from Completed Portion of Wellbore to Nearest Wellbore Permitted or Completed in the same formation: 1503 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 454 Feet (Enter 5280 for distance greater than 1 mile.)

Federal or State Unit Name (if appl): Ridgeline Unit Unit Number: COC 075391

SPACING & FORMATIONS COMMENTS

Unit consists of Sec. 2: W2SW4, Sec. 3: E2SE4, Sec. 10: E2NE4, Sec. 11: W2NW4

OBJECTIVE FORMATIONS

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
MANCOS	MNCS	534-1	320	S.3 E2SE;S.2 E2SE4

DRILLING PROGRAM

Proposed Total Measured Depth: 10600 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 1541 Feet (Including plugged wells)

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 Operations Plan)

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

GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 609

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Methods: Commercial Disposal

Cuttings Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

Drilling fluids will be transported via truck to the Dalbo disposal facility in Vernal Utah.
Drill cutting disposal will be to a commercial facility.

Beneficial reuse or land application plan submitted?

Reuse Facility ID: or Document Number:

CASING PROGRAM

Casing Type	Size of Hole	Size of Casing	Wt/Ft	Csg/Liner Top	Setting Depth	Sacks Cmt	Cmt Btm	Cmt Top
CONDUCTOR	25	20	75	0	60			
SURF	17+1/2	13+3/8	61	0	1000	610	1000	0
1ST	12+1/4	7+5/8	33.7	0	9000	2705	9000	800
2ND	6+5/8	5+1/2	17	0	10600	130	10600	8500

Conductor Casing is NOT planned

DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

- Rule 604.a.(1)A. Exception Zone (within 500' of Building Unit)
- Rule 604.b.(1)A. Exception Location (existing or approved Oil & Gas Location now within a Designated Setback as a result of Rule 604.a.)
- Rule 604.b.(1)B. Exception Location (existing or approved Oil & Gas Location is within a Designated Setback due to Building Unit construction after Location approval)
- Rule 604.b.(2) Exception Location (SUA or site-specific development plan executed on or before August 1, 2013)
- Rule 604.b.(3) Exception Location (Building Units constructed after August 1, 2013 within setback per an SUA or site-specific development plan)

GREATER WATTENBERG AREA LOCATION EXCEPTIONS

Check all that apply:

- Rule 318A.a. Exception Location (GWA Windows).
- Rule 318A.c. Exception Location (GWA Twinning).

RULE 502.b VARIANCE REQUEST

Rule 502.b. Variance Request from COGCC Rule or Spacing Order Number

OTHER LOCATION EXCEPTIONS

Check all that apply:

- Rule 318.c. Exception Location from Rule or Spacing Order Number 534-1
- Rule 603.a.(2) Exception Location (Property Line Setback).

ALL exceptions and variances require attached Request Letter(s). Refer to applicable rule for additional required attachments (e.g. waivers, certifications, SUAs).

OPERATOR COMMENTS AND SUBMITTAL

Comments A water/bentonite-based drilling mud will be used from surface (0') to approximately 9000'. A diesel mist drilling mud will be used from 9000' to the proposed total depth of 10,600'.

This application is in a Comprehensive Drilling Plan _____ CDP #: _____

Location ID: _____

Is this application being submitted with an Oil and Gas Location Assessment application? Yes

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

Signed: _____ Print Name: Joe Mazotti

Title: Agent Date: 10/21/2014 Email: ogp-co@comcast.net

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 and applicable orders and is hereby approved.

COGCC Approved:  Director of COGCC Date: 12/27/2014

Expiration Date: 12/26/2016

API NUMBER

05 081 07815 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.

COA Type

Description

	Open hole resistivity and gamma logs shall be run to describe the stratigraphy of the entire well bore and to adequately verify the setting depth of surface casing and aquifer coverage. On a multi-well pad, these open hole logs are only required on one of the first wells drilled on the pad and the Drilling Completion Report - Form 5 for every well on the pad shall identify which well was logged.
	(1) Operator shall comply with the most current revision of the Northwest Notification Policy. See attached notice. (2) Operator shall provide cement coverage from the intermediate casing shoe (7+5/8" First String) to a minimum of 200' above the surface casing shoe to provide isolation of all Cretaceous (including Mesa Verde Group, Lewis, Fox Hills, and Lance) oil, gas, and water-bearing sandstone and coalbed formations that are not otherwise covered by surface casing. Verify intermediate casing cement coverage with a cement bond log. (3) Use of oil-based mud (diesel mist) is approved for the Production hole only (9000' MD to TD). The Surface hole and portions of the Intermediate hole will be drilled through potential freshwater zones, and therefore, water-based drilling mud shall be used for the Surface hole and Intermediate hole. (4) Operator acknowledges the proximity of the offset well McIntyre #1-3 ST (05-081-06608). Operator agrees to plug back the offset well as indicated on Form 4 #400747486 prior to stimulation of this proposed well to mitigate the situation, ensure all applicable documentation is submitted based on the selected mitigation, and submit a Form 42 ("OFFSET MITIGATION COMPLETED") stating that appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of this well.

Best Management Practices

No	<u>BMP/COA Type</u>	<u>Description</u>
1	General Housekeeping	Sewage will be handled in self-contained, chemical-treated portable toilets and contents hauled off location to an authorized Colorado Department of Public Health and Environment (CDPHE) approved sanitary disposal facility in accordance with state and local regulations. • Garbage and other burnable waste will be contained in a portable trash cage that will be totally enclosed with small mesh wire. Cage and contents will be transported to and trash dumped at a CDPHE-approved Sanitary Landfill upon completion of operations.
2	Storm Water/Erosion Control	A CDPS permit has been filed with the Colorado Department of Public Health and Environment (CDPHE). Storm Water Management Plans (SWMP) is in place to comply with both CDPHE and Colorado Oil and Gas Conservation Commission Rules and Regulations. Best Management Practices (BMP) to be installed during initial construction. Note that BMPs may be removed, altered, or replaced with changing conditions in the field and the SWMP will be updated accordingly.
3	Material Handling and Spill Prevention	Spill Prevention Control & Countermeasure Plans (SPCC) are in place to address material releases and to prescribe materials handling BMPs for the facility. "Good house-keeping" measures will be taken to ensure proper waste disposal.

Total: 3 comment(s)

Applicable Policies and Notices to Operators

NW Colorado Notification Policy.

Notice Concerning Operating Requirements for Wildlife Protection.

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
2167914	EXCEPTION LOC REQUEST
2167919	LEASE MAP
400701260	FORM 2 SUBMITTED
400712690	WELL LOCATION PLAT

Total Attach: 4 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	No LGD or public comments. Final Review--passed.	12/26/2014 1:11:40 PM
Permit	Attached lease map as per opr.	12/9/2014 8:21:05 AM
Permit	Attached exception loc waiver as per opr. Opr holds the mineral lease in the encroached upon W2/SW of Sec 2 and waives the need for an exception.	12/1/2014 12:50:41 PM
Permit	Exception location request and waiver sent by opr quote incorrect rule. Opr notified.	11/26/2014 9:10:53 AM
Permit	Location is not a legal location as per spacing order. Opr sending more attachments Surface & minerals section corrected as per opr. Spacing Order corrected as per opr. Federal Unit information entered as per opr. Distance to nearest unit boundary and wellbores corrected as per opr. Opr notified of issues by e-mail.	11/20/2014 9:23:46 AM

Engineer	Changed the intermediate casing (7+5/8" First String) cement volume from 1650 sacks to 2705 sacks, as the operator agreed to meet the minimum cement coverage objectives shown in Condition of Approval #2, per an email from the operator's designated agent, Joe Mazotti on 11/10/2014.	11/13/2014 3:36:32 PM
Engineer	<p>OFFSET WELL EVALUATION: OFFSET DA WELL MCINTYRE #1-10 (05-081-07612) WAS PERMITTED FOR RE-ENTRY TO COMPLETE A NIOBRARA HORIZONTAL, IN WHICH A PORTION OF THE PLANNED WELLBORE WOULD HAVE PASSED WITHIN 1500' FEET OF THE MCINTYRE 1-3R WELLBORE. HOWEVER, RE-ENTRY OF MCINTYRE 1-10 DID NOT OCCUR PRIOR TO THE EXPIRATION OF THE RE-ENTRY FORM 2'S ON 7/29/2014. NO MITIGATION REQUIRED.</p> <p>OFFSET SI WELL MCINTYRE #1-3 ST (05-081-06608) TD AT 16333' IN THE LODORE FM (CAMBRIAN). ORIGINAL WELLBORE CONFIGURATION: 30" CONDUCTOR SET AT 76' WITH CMT TO SURFACE, 20" SURFACE CSG SET IN LANCE FM AT 612' WITH CMT TO SURFACE, 13+3/8" FIRST STRING SET IN MESA VERDE GROUP AT 4062' WITH CMT TO SURFACE, 9+5/8" SECOND STRING SET IN NIOBRARA FM AT 11045' WITH CMT TO APPROXIMATELY 4100' BY CBL (TOP IS NEAR OR ABOVE 13+3/8" CSG SHOE), 7+5/8" LINER SET IN WEBER FM FROM 10727' TO 13887' (FULLY CEMENTED), AND OPEN HOLE FROM 13887' TO 16333'. OPEN HOLE INTERVAL PLUGGED BACK WITH PLUGS ABOVE THE MOLAS, MORGAN, AND WEBER FORMATIONS UP INTO THE 7+5/8" LINER. PLUGS SET IN THE 7+5/8" LINER ABOVE MOENKOPI PERFORATIONS. DAKOTA PERFORATIONS SQUEEZED. PLUG SET ABOVE NIOBRARA PERFORATIONS. MANCOS PERFORATIONS SQUEEZED PRIOR TO RE-ENTERING THE WELL AND DRILLING OUT PLUGS TO 13266' FOR A SHINARUMP TEST. PLUGS SUBSEQUENTLY SET ABOVE SHINARUMP PERFORATIONS AND ABOVE 7+5/8" LINER TOP. RECOMPLETED MANCOS AND WILLIAMS FORK FORMATIONS THEN SQUEEZED THE SAME PERFORATIONS IN PREPARATION FOR A SIDETRACK. SIDETRACKED WELL FOR A MANCOS HORIZONTAL COMPLETION BY CUTTING A WINDOW IN THE 9+5/8" CSG AT APPROXIMATELY 8500'. A 7" CEMENTED LINER WAS SET THROUGH THE WINDOW, EXTENDING FROM 8077' TO 9578', AND A 4+1/2" UNCEMENTED LINER WAS SET FROM 9506' TO THE SIDETRACK TMD OF 11045'. LAST REPORTED MANCOS PRODUCTION THROUGH THE UNCEMENTED SIDETRACK LINER WAS IN SEPTEMBER 2011. THE TOP OF THE PRODUCTIVE INTERVAL AT 9578' MD (9031' TVD) IS WITHIN 1500' OF THE PROPOSED MCINTYRE 1-3R WELLBORE, LIKELY AT A SIMILAR VERTICAL DEPTH. A SMALL PORTION OF THE MESA VERDE GROUP MAY BE UNCEMENTED ABOVE THE 9+5/8" CSG TOP OF CMT AND BELOW THE 13+3/8" CSG SHOE IN THE MCINTYRE #1-3 ST WELL. OFFSET MITIGATION IS REQUIRED.</p>	11/4/2014 3:14:50 PM
Engineer	The operator's proposed surface casing setting depth will likely provide full coverage of the Fort Union Formation, which outcrops at the surface, near a Fort Union / Lance contact to the south of this location. The operator's proposed intermediate casing (7+5/8" First String) top of cement at 4000' would not adequately cover potential oil, gas, and water-bearing sandstones and coalbeds in formations above the Mancos Formation. Minimum cement coverage requirements for the intermediate casing are shown in Condition of Approval #2. Changed cement top from 4000' to 800' (200' above surface casing shoe). Operator must increase cement volume to satisfy the coverage objective.	10/31/2014 11:29:21 AM
Engineer	THE PROPOSED SURFACE CASING IS MORE THAN 50 FEET BELOW THE DEPTH OF THE DEEPEST WATER WELL WITHIN 1-MILE OF THE SURFACE LOCATION WHEN CORRECTED FOR ELEVATION DIFFERENCES. THE DEEPEST WATER WELL WITHIN 1-MILE IS 300 FEET DEEP.	10/31/2014 11:28:20 AM
Engineer	Changed "Will oil based drilling fluids be used?" from "Yes" to "No" per an email from the operator's designated agent, Joe Mazotti on 10/30/2014. On 12/22/2014 COGCC OGLA Staff informed COGCC Engineering Staff that the operator intends to use diesel mist oil-based mud while drilling through the objective Niobrara Formation. Changed "Will oil based drilling fluids be used?" back to "Yes." Added Condition of Approval #3 regarding the use of oil-based mud.	10/31/2014 11:00:26 AM
Permit	Passed Completeness	10/22/2014 11:55:50 AM

Total: 11 comment(s)