State of New Mexico
Energy, Minerals and Natural Resources Department

New Mexico Oil Conservation Division approval and conditions listed below are made in accordance with OCD Rule 19.15.7.11 and are in addition to the actions approved by BLM on the following 3160-4 or 3160-5 form.

Operator Signature Date: 4/3/2020
Well information:

30-039-24412 CARRACAS 22A #013

SOUTHLAND ROYALTY COMPANY LLC

Application Type:

☒ P&A ☐ Drilling/Casing Change ☐ Location Change

☐ Recomplete/DHC (For hydraulic fracturing operations review EPA Underground injection control Guidance #84; Submit Gas Capture Plan form prior to spudding or initiating recompletion operations)

☐ Other:

Conditions of Approval:

- Notify NMOCD 24 Hours prior to commencing activities
- In addition to the BLM approved plugs:

- Add a Nacimiento plug: 1850'-1750'. OCD Nacimiento pick @ 1800'.

Brandon Powell 4/15/20

NMOCD Approved by Signature Date

Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2

5. Lease Serial No.
NMNM30351

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

1. Type of Well
☐ Oil Well ☐ Gas Well ☒ Other: COAL BED METHANE

8. Well Name and No.
CARRACAS 22A 13

2. Name of Operator
SOUTHLAND ROYALTY COMPANY LLC
Contact: ERIC KITTINGER
E-Mail: EKITTINGER@MSPARTNERS.COM

9. API Well No.
30-039-24412-01-S1

3a. Address
400 W 7TH STREET
FORT WORTH, TX 76102

3b. Phone No. (include area code)
Ph: 817-334-8302

10. Field and Pool or Exploratory Area
BASIN FRUITLAND COAL

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 22 T32N R5W SWSW 0620FSL 0540FWL
36.960160 N Lat, 107.356280 W Lon

11. County or Parish, State
RIO ARRIBA COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☐ Change Plans	☒ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

KP

BLM Cover Sheet

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

Southland Royalty Company LLC requests approval to plug and abandon the Carracas 22A13.
Attached are the Proposed Procedure, WBDs, and Reclamation Plan.

OCD Received
4/3/2020

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #509612 verified by the BLM Well Information System
For SOUTHLAND ROYALTY COMPANY LLC, sent to the Farmington
Committed to AFMSS for processing by JOE KILLINS on 04/03/2020 (20JK0143SE)

Name *(Printed/Typed)* CONNIE BLAYLOCK — Title REGULATORY ANALYST

Signature (Electronic Submission) — Date 04/03/2020

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By JOE KILLINS — Title ENGINEER — Date 04/03/2020

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office Farmington

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

AV

PROPOSED P&A PROCEDURE

CARRACAS 22A #13

1. MIRU.
2. POOH w/ rods and tubing.
3. Run a casing scraper to 3,450’
4. Set CIBP @ 3,450’
5. Spot 12 sx Class B Cement on top of plug. (est’d TOC @ 3,350’). WOC. Tag TOC.
6. RU and run CBL.
7. Circulate hole with mud laden fluid.
8. Spot balanced cement plug from 3,000’ – 3,250’ with 30 sx Class B cement. WOC. Tag TOC.
9. Spot balanced cement plug from 400’ to surface with 50 sx cement. Ensure cement at surface on all strings of casing.
10. Cut off wellhead below surface casing flange. Install P&A marker.

Carracas 32-5 22A-13

API: 30-039-24412

Last Update: 04/25/2013

Elevation
GL = 7022’
KB = 7034’
Corr = 13’

Spud Date: 08/21/1989
Rig Release: 08/28/1989
Days to drill: 7
Completion Date: 10/12/1989
Mill Csg & Cavitate: 05/19/1999
Completion Date: 06/23/1999
Sidetrack Spud Date: 09/28/2007
New Commingled Date: 10/26/2007

12¼" HOLE

8 ¾" HOLE

9⅝", 36# csg 8 jts set@ 326’kb.
LEAD: 30sx (60 ft^3) 65/35poz w/ 6% gel, 2%$CaCl_2$ & ¼#/SX floseal.
TAIL: 100sx (118 ft^3) Class B w/ 2%$CaCl_2$.
Total (178 ft^3), Circ 5bbls cmt to surface.

5.5", 15.5#, K-55, lt&c 99jts csg set @ 3,946’ KB.
Lead: 450sx (1180 ft^3) 65/35poz w/ 12% gel, ¼#/sx celloflake.
Tail: 100sx (139 ft^3) 50/50 w/ 2%gel, ¼ #/sx celloflake, 6-¼ #/sk coal seal.
Total (1319 ft^3) Circ 34 bbls cmt to surface. PBTD= 3908’

TBG/capstring: Notched collar, 1-2.375” mud joint, 8’ perf sub, 1.78” SN, 114jts 2.375” jts. Capstring banded to the top of perf’d sub.
SN @ 3585’ EOT @ 3625’

RODS: pump, 1-7/8”x4’ stabilizer, 2-1.25”x25’ Kbars, 140-3/4”x25’ plain d rods, 8’-6’-4’ ¾” pony rods, 1¼"x22' PR w/1½"x15' liner.

PUMP: 2”x1.5”x16’ RWAC pump w/ gas (ENR #686).

8/15/07:
Csg leak squeeze = 3230’-3260’

6/2008: Csg Caliper showed 3220’-3260’ bad.

4/2013: Test csg and leaks found 2873’-3447’+

Window Top = 3473’
Window Bottom = 3479’

3½", 9.3#, 75 jts star seal flush joint , 3694’-3735’.
Perf’d: 3695’-3730’, 4spf 140holes.
59perf’d, 16 blank.

9/28/07:
Wrong window squeeze = 3515’-3522’

4 ¾" HOLE
TD = 5905’md, 3654’tvd

10/12/1989:
Perfs: 3695’-3720’, 3728’-30’, 3749’52’. 4 spf 0.50" dia 120 holes.
Frac: 500gal 15% HCl acid, 48,000# 40/70 sand, 170,000# 20/40 sand, 1757 bbls 35# GWX-9 fluid. ATP=1200#, ATR=53bpm, ISIP=800#.

05/19/1999 Mill, Under-Ream,& Cavitate:
Milled 5.5” csg 3695’-3730’. Under-ream same interval to 8.5”. Cavitate coal cycling 1400-0 psig.
Ran Baker liner hanger, XOsub, 3 jts 3.5” 9.3# J-55, bit sub w/ float, 4.75” rock bit.
Liner Hanger @ 3639’. PBTD inside 3.5” liner 3733’.
Perforate liner: 3695’-3730’, 4spf 140 holes.

PBTD = 3908’
TD = 3950’

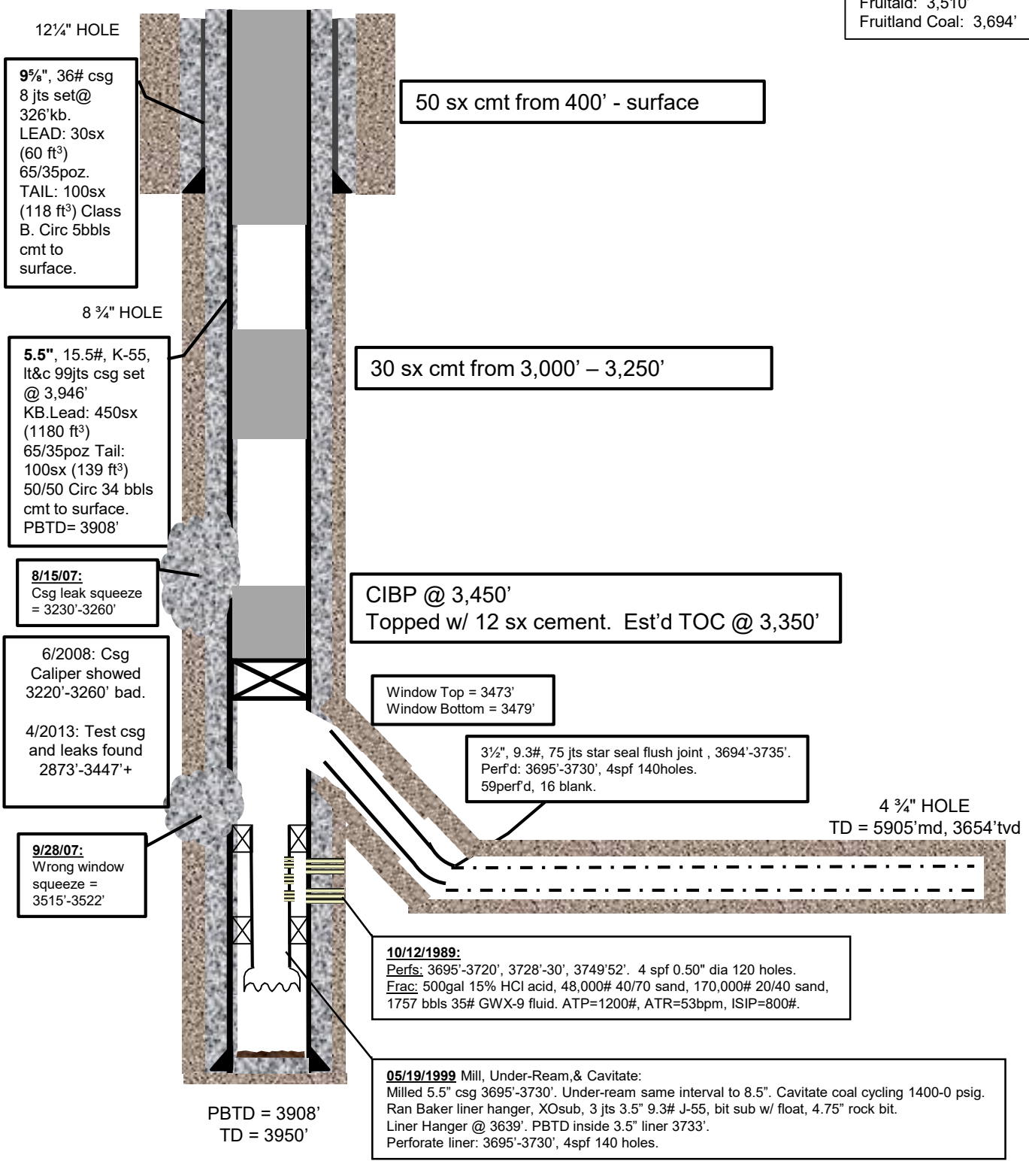
Carracas 32-5 22A-13

API: 30-039-24412
Rio Arriba County, NM
PROPOSED P&A – 09/03/2019

Spud Date: 08/21/1989
Completion Date: 10/12/1989
Mill Csg & Cavitate: 05/19/1999
Completion Date: 06/23/1999
Sidetrack Spud Date: 09/28/2007
New Commingled Date: 10/26/2007

GL = 7022’
KB = 7034’

Ojo Alamo: 3,050’
Kirtland: 3,175’
Fruitald: 3,510’
Fruitland Coal: 3,694’



GENERAL REQUIREMENTS FOR
PERMANENT ABANDONMENT OF WELLS ON FEDERAL AND INDIAN LEASES
FARMINGTON FIELD OFFICE

1.0 The approved plugging plans may contain variances from the following minimum general requirements.

1.1 Modification of the approved plugging procedure is allowed only with the prior approval of the Authorized Officer, Farmington Field Office.

1.2 Requirements may be added to address specific well conditions.

2.0 Materials used must be accurately measured. (densometer/scales)

3.0 A tank or lined pit must be used for containment of any fluids from the wellbore during plugging operations and all pits are to be fenced with woven wire. These pits will be fenced on three sides and once the rig leaves location, the fourth side will be fenced.

3.1 Pits are not to be used for disposal of any hydrocarbons. If hydrocarbons are present in the pit, the fluids must be removed prior to filling in.

4.0 All cement plugs are to be placed through a work string. Cement may be bull-headed down the casing with prior approval. Cement caps on top of bridge plugs or cement retainers may be placed by dump bailer.

4.1 The cement shall be as specified in the approved plugging plan.

4.2 All cement plugs placed inside casing shall have sufficient volume to fill a minimum of 100' of the casing, or annular void(s) between casings, plus an excess volume sufficient to provide for 50 linear feet of fill above the plug.

4.3 Surface plugs may be no less than 50' in length.

4.4 All cement plugs placed to fill annular void(s) between casing and the formation shall be of sufficient volume to fill a minimum of 100' of the annular space plus 100% excess, calculated using the bit size, or 100' of annular capacity, determined from a caliper log, plus an excess volume sufficient to provide for 50 linear feet of fill above the plug.

4.5 All cement plugs placed to fill an open hole shall be of sufficient volume to fill a minimum of 100' of hole, as calculated from a caliper log, plus an excess volume sufficient to provide for 50 linear feet of fill above the plug. In the absence of a caliper log, an excess of 100% shall be required.

4.6 **A cement bond log or other accepted cement evaluation tool is required to be run if one had not been previously ran or cement did not circulate to surface during the original casing cementing job or subsequent cementing jobs.**

5.0 All cement plugs spotted across, or above, any exposed zone(s), when; the wellbore is not full of fluid or the fluid level will not remain static, and in the case of lost circulation or partial returns during cement placement, shall be tested by tagging with the work string.

5.1 The top of any cement plug verified by tagging must be at or above the depth specified in the approved plan, without regard to any excess.

5.2 Testing will not be required for any cement plug that is mechanically contained by use of a bridge plug and/or cement retainer, if casing integrity has been established.

5.3 Any cement plug which is the only isolating medium, for a fresh water interval or a zone containing a prospectively valuable deposit of minerals, shall be tested by tagging.

5.4 If perforations are required below the surface casing shoe, a 30 minute minimum wait time will be required to determine if gas and/or water flows are present. If flow is present, the well will be shut-in for a minimum of one hour and the pressure recorded. Short or long term venting may be necessary to evacuate trapped gas. If only a water flow occurs with no associated gas, shut well in and record the pressures. Contact the Engineer as it may be necessary to change the cement weight and additives.

6.0 Before setting any cement plugs the hole needs to be rolled. All wells are to be controlled by means of a fluid that is to be of a weight and consistency necessary to stabilize the wellbore. This fluid shall be left in place as filler between all plugs.

6.1 Drilling mud may be used as the wellbore fluid in open hole plugging operations.

6.2 The wellbore fluid used in cased holes shall be of sufficient weight to balance known pore pressures in all exposed formations.

7.0 A blowout preventer and related equipment (BOPE) shall be installed and tested prior to working in a wellbore with any exposed zone(s); (1) that are over pressured, (2) where the pressures are unknown, or (3) known to contain H_2S.

8.0 Within 30 days after plugging work is completed, file a Sundry Notice, Subsequent Report of Abandonment (Form 3160-5), five copies, with the Field Manager, Bureau of Land Management, 6251 College Blvd., Suite A, Farmington, NM 87402. The report should show the manner in which the plugging work was carried out, the extent, by depth(s), of cement plugs placed, and the size and location, by depth(s), of casing left in the well. Show date well was plugged.

9.0 All permanently abandoned wells are to be marked with a permanent monument as specified in 43 CFR 3162.6(d). Unless otherwise approved.

10.0 If this well is located in a Specially Designated Area (SDA), compliance with the appropriate seasonal closure requirements will be necessary.

All of the above are minimum requirements. Failure to comply with the above conditions of approval may result in an assessment for noncompliance and/or a Shut-in Order being issued pursuant to 43 CFR 3163.1. You are further advised that any instructions, orders or decisions issued by the Bureau of Land Management are subject to administrative review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4 and 43 CFR 4.700.

BLM FLUID MINERALS
Geologic Report

Date Completed: 4/1/20

Well No.	Carracas 22A # 13		Location	620′ FSL	&	540′ FWL	
Lease No.	NMNM30351		Sec. 22	T332N		R5W	
Operator	Southland		County	Rio Arriba	State	New Mexico	
Total Depth	3950′	PBTD 3908′	Formation	Basin Fruitland Coal			
Elevation (GL) 7022′			Elevation (KB) 7034′ (est.)				

Geologic Formations	Est. Top	Est. Bottom	Log Top	Log Bottom	Remarks
San Jose Fm			Surface	1422′	Surface/Fresh water sands
Nacimiento Fm			1422′	3050′	Fresh water sands
Ojo Alamo Ss			3050′	3175′	Aquifer (fresh water)
Kirtland Shale			3175′	3510′	
Fruitland Fm			3510′	3758’	Coal/Gas/Possible water
Pictured Cliffs Ss			3758′		Gas
Lewis Shale					
Chacra (upper)					Probable water or dry
La Ventana Tongue					Probable water or dry
Cliff House Ss (main)					Water/Possible gas
Menefee Fm					Coal/Ss/Water/Possible O&G
Point Lookout Ss					Probable water/Possible O&G
Mancos Shale					Source rock
Gallup					O&G/Water
Dakota					O&G/Water

Remarks:
P & A

- Please ensure that the top of the Fruitland formation as well as the entire Ojo Alamo aquifer, identified in this report, are isolated by proper placement of cement plugs. This will protect the freshwater sands in this well bore.

Reference Well:
1)Southland Fm. Tops
Same

Prepared by: *Walter Gage*