

State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

Sarah Cottrell Propst
Cabinet Secretary

Todd E. Leahy, JD, PhD
Deputy Secretary

Adrienne Sandoval, Division Director
Oil Conservation Division



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: 4/18/2019

Well information:

SOUTHLAND ROYALTY COMPANY LLC
30-039-21107 LINDRITH UNIT #085

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 24hrs prior to beginning operations.
- Extend Plug #1 from 2975'-2580' to cover the Ojo Alamo top.
- Extend Plug #2 from 1450'-1175' to cover the Nacimiento top.



NMOCD Approved by Signature

8/6/19
Date

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

1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. NMSF078910
2. Name of Operator SOUTHLAND ROYALTY COMPANY LLC		6. If Indian, Allottee or Tribe Name
3a. Address AZTEC, NM 87410		7. If Unit or CA/Agreement, Name and/or No. 8920007130
3b. Phone No. (include area code) Ph: 817.334.8302		8. Well Name and No. LINDRITH UNIT 85
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 29 T24N R2W NENE 36.286734 N Lat, 107.066599 W Lon		9. API Well No. 30-039-21107-00-S1
		10. Field and Pool or Exploratory Area S BLANCO P
		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			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input checked="" type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

AK

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 recomplate 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 recomplate 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.

SRC requests approval to plug and abandon the Lindrith Unit #85. Attached are the proposed procedure, current and proposed WBDs, Reclamation Plan, and Noxious Weed form.

NMOC
JUN 17 2019
DISTRICT III

14. Thereby certify that the foregoing is true and correct. Electronic Submission #462077 verified by the BLM Well Information System For SOUTHLAND ROYALTY COMPANY LLC, sent to the Rio Puerco Committed to AFMSS for processing by ALBERTA WETHINGTON on 04/22/2019 (19AMW0002SE)	
Name (Printed/Typed) CONNIE BLAYLOCK	Title REGULATORY ANALYST
Signature (Electronic Submission)	Date 04/18/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By <u>JOE KILLINS</u>	Title <u>PETROLEUM ENGINEER</u>	Date <u>06/12/20</u>
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 <u>Rio Puerco</u>

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 ****

NMOC

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
FARMINGTON DISTRICT OFFICE
6251 COLLEGE BLVD.
FARMINGTON, NEW MEXICO 87402

Attachment to notice of
Intention to Abandon:

Re: Permanent Abandonment
Well: Lindrith Unit 85

CONDITIONS OF APPROVAL

1. Plugging operations authorized are subject to the attached "General Requirements for Permanent Abandonment of Wells on Federal and Indian Lease."
2. Farmington Office is to be notified at least 24 hours before the plugging operations commence (505) 564-7750.
3. CBL required from CIBP @2975' to surface to confirm TOC. Submit electronic copy of the log for verification to the following addresses: jkillina@blm.gov and Brandon.Powell@state.nm.us . Based on CBL results inside/outside plugs and volumes may be adjusted accordingly.

**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 H₂S.

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.

**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 H₂S.

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.

P&A PLANNED PROCEDURE

Lindrith Unit #85

1. MIRU.
2. Run a casing scraper to 3,000' - Run CBL
3. Plug 1 Set CIBP @ 2,975'
4. Spot 8 sx Class B Cement on top of plug. (est'd TOC @ 2,700). WOC. Tag TOC.
5. Perforate 3 holes @ 1,500'.
6. Set CICR @ 1,450'. Pump 82 sx Class B cmt into annulus, 2 sx cement underneath retainer, and spot 7 sx on top of retainer. (est'd TOC @ 1,200').
7. Perforate 3 holes @ 175'.
8. Pump 66 sx Class B Cement to fill annulus up through bradenhead and production casing string to surface. If unable to circulate, top off as needed.
9. Cut off wellhead below surface casing flange. Install P&A marker.



Southland Royalty Company

**Lindrith Unit #85
Rio Arriba County, NM**

TD - 3,176'; PBTD - 3,166'

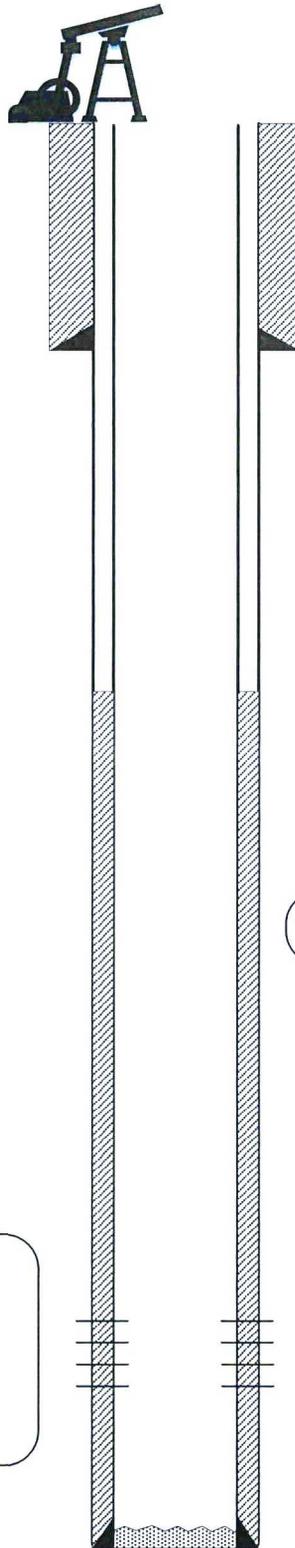
12-1/4" hole to 133' KB.
Surface Csg: 3 jts 8 5/8" 24# K-55
Setting Depth: 123'

Cement
118 ft³ Cmt
Circulated cmt to surface

6-3/4" hole to 3,176'
Production Csg: 99 jts 2-7/8" 6.4# J-55
Setting Depth: 3,166'

Cement:
235 ft³ Cmt
TOC @ 2,400'

CURRENT



PBTD: 3,166'

Prepared by: SThompson
Date: 01/10/2019

KB = 7,143'
GL = 7,131'
API# 30-039-21107

Spud Date: 06/29/1975
Date Completed: 08/20/1975

Ojo Alamo: 2,853'
Kirtland: 2,908'
Fruitland: 2,994'
Pictured Cliffs: 3,108'

Tubingless Completion

Pictured Cliff Frac 08/01/1975:
3024', 35', 54', 68', 78', 90'
1 SPF
3024'-3090'
55,000# 20/40 sand
55,000 gal treated wtr
No balls, flushed with 760 gal wtr



Southland Royalty Company

KB = 7,143'
GL = 7,131'
API# 30-039-21107

Spud Date: 06/29/1975
Date Completed: 08/20/1975

Lindrith Unit #85
Rio Arriba County, NM

PROPOSED P&A

TD - 3,176'; PBTD - 3,166'

12-1/4" hole to 133' KB.
Surface Csg: 3 jts 8 5/8" 24# K-55
Setting Depth: 123'

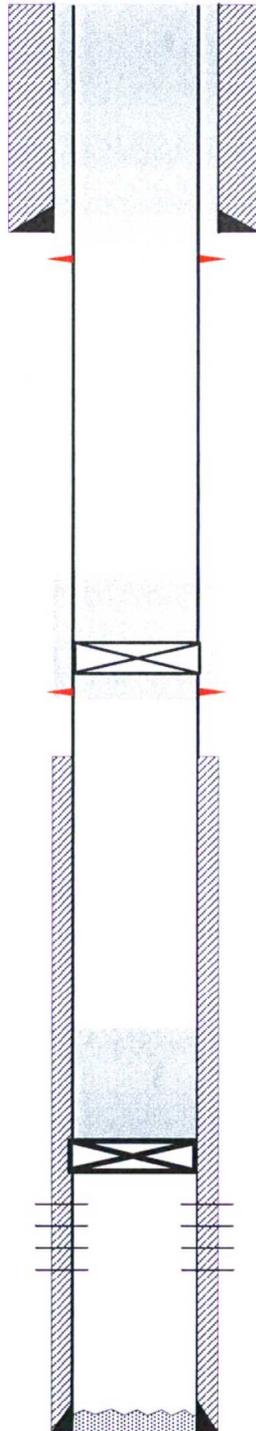
Cement
118 ft³ Cmt
Circulated cmt to surface

6-3/4" hole to 3,176'
Production Csg: 99 jts 2-7/8" 6.4# J-55
Setting Depth: 3,166'

Cement:
235 ft³ Cmt
TOC @ 2,400'

Ojo Alamo: 2,853'
Kirtland: 2,908'
Fruitland: 2,994'
Pictured Cliffs: 3,108'

Pictured Cliff Frac 08/01/1975:
3024', 35', 54', 68', 78', 90'
1 SPF
3024'-3090'
55,000# 20/40 sand
55,000 gal treated wtr
No balls, flushed with 760 gal wtr



PLUG 3:
Perf 3 holes @ 175'
60 sx cement in casing annulus & 6 sx
cement inside 2-7/8" casing. Bring all
cement to surface.

PLUG 2:
Perforate 3 holes @ 1,500'
CICR @ 1,450'
82 sx Cement into annulus, 2 sx
cement under retainer, 7 sx
above retainer.
TOC @ 1,200'

PLUG 1:
Set CIBP @ 2,975'
Top w/ 8 sx Cmt.
TOC @ 2,700'

PBTD: 3,166'