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 <u>3160-4 or 3160-5</u> form.

Operator Signature Date: 1/23/2020 Well information:

30-045-05844 BALLARD #010

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 BLM-approved tops:
 - o Include a plug 1714'-1614.' OCD Fruitland pick @ 1664.'
 - Include a plug 1234'-969.' OCD Kirtland pick @ 1184' Ojo Alamo pick
 @ 1019.'

NMOCD Approved by Signature

6/4/2020

Date

Form 3160-5 (June 2015) SUNDRY Do not use of abandoned w SUBMIT IN 1. Type of Well Oil Well Gas Well O 2. Name of Operator SOUTHLAND ROYALTY CO 3a. Address 400 W 7TH STREET	ON Expi 5. Lease Serial N NMNM0315 6. If Indian, Allo 7. If Unit or CA 8. Well Name an BALLARD 10 9. API Well No. 30-045-058 10. Field and Po	FORM APPROVED OMB NO. 1004-0137 Expires: January 31, 2018 5. Lease Serial No. NMNM03154 6. If Indian, Allottee or Tribe Name 7. If Unit or CA/Agreement, Name and/or No. 8. Well Name and No. BALLARD 10 9. API Well No. 30-045-05844-00-S1 10. Field and Pool or Exploratory Area					
FORT WORTH, TX 76102		n: 817-334-8302		PICTURED CLIFFS			
4. Location of Well (<i>Footage, Sec.,</i> Sec 15 T26N R9W NWSW 36.485947 N Lat, 107.78193	SAN JUAN	11. County or Parish, State SAN JUAN COUNTY, NM					
12. CHECK THE	APPROPRIATE BOX(ES) TO	INDICATE NATURE OF	F NOTICE, REPORT, OR	OTHER DATA			
TYPE OF SUBMISSION		TYPE OF	ACTION				
Import Section Import Section Import Section Import Sec							
	Electronic Submission #5005	TY COMPANY LLC, sent to ALBERTA WETHINGTON	o the Farmington	SE)			
Signature (Electroni	c Submission)	Date 01/23/20					
Approved ByJOE KILLINS Conditions of approval, if any, are attaccertify that the applicant holds legal or of which would entitle the applicant to con	hed. Approval of this notice does not vequitable title to those rights in the subj		2	Date 04/21/2020			
			110 11 4 1 4 1	C.1 TT 1. 1			

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.

KP

(Instructions on page 2) ** BLM REVISED **

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: Ballard 10

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.
- Submit electronic copy of the CBL for verification to the following addresses: jkillins@blm.gov, jhoffman@blm.gov and Brandon.Powell@state.nm.us.
 Based on CBL review inside/outside plugs and volumes may be adjusted accordingly. Please review the General Requirements document to ensure volumes meet required excess inside and outside casing.
 - a. BLM tops are based on the attached geologic report. Plugs will be adjusted based on cement coverage indicated by the CBL. Do not proceed with any plugging operations prior to reviewing CBL results with BLM and revising plug depths.
- 4. Ensure all plugs cover 50 feet above and below indicated formation tops with plugs meeting General requirements. Minimum inside plug to include 50' excess cement. See attached BLM geologic report.
 - a. Adjust plug 2 to cover 1210 1310 ft plus additional 50 ft excess plug volume. BLM Fruitland formation top (1260 ft md).
- Onshore Order 2 does not allow for annular space that extends to the surface. Determine free pipe for 2-7/8 inch casing and recover free pipe at least to 161 feet. Perforate 5-1/2 inch casing and place inside outside plug at least 161 feet to surface.

BLM FLUID MINERALS Geologic Report

Date Completed: 4/10/20

Well No.	Ballard #10			Location	1850′	FSL	&	790′	FWL
Lease No.	NMNM03154			Sec. 15]	Г26N			R9W
Operator	Southland			County	San Ju	an	State	New M	exico
Total Depth	2063'	PBTD 2048'		Formation Ballard Pictured Cliffs					
Elevation (GL) 6326'		Elevation (KB) 6339' (est.)							

Geologic Formations	Est. Top	Est. Bottom	Log Top	Log Bottom	Remarks
San Jose Fm					Surface/Fresh water sands
Nacimiento Fm			Surface	892'	Fresh water sands
Ojo Alamo Ss			892'	990'	Aquifer (fresh water)
Kirtland Shale			990′	1260′	
Fruitland Fm			1260′	1976′	Coal/Gas/Possible water
Pictured Cliffs Ss			1976′	2060'	Gas
Lewis Shale			2060'		
Chacra					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 tops of the Pictured Cliffs and Fruitland formations 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)Hilcorp Fm. Tops Ballard #500 1960' FSL, 1330' FWL T26N, R9W, Sec 15 GL= 6332'

Prepared by: Walter Gage

PROPOSED P&A PROCEDURE

BALLARD #10

- 1. MIRU.
- 2. POOH w/ tubing.
- 3. Run a casing scraper to 1,900'
- 4. Set CIBP @ 1,900'
- 5. Spot 3 sx Class G Cement on top of plug. (est'd TOC @ 1,800). WOC. Tag TOC.
- 6. RU and run CBL.
- 7. Circulate hole with mud laden fluid.
- 8. Spot balanced cement plug from 1,400' 1,500' with 3 sx Class G cement. WOC. Tag TOC.
- 9. Perf squeeze hole @ 390'.
- 10. Cement into annulus with 30 sx Class G cement and inside 2-7/8" casing w/ 12 sx Class G cement. Total cement 42 sx. Ensure cement at surface.
- 11. Cut off wellhead below surface casing flange. Install P&A marker.



Ballard #10 San Juan County, NM

TD - 2,063'; PBTD - 2,048' Surface Csg: 8 5/8", 32# Setting Depth: 111'

Cement 100 sx Cement Cmt circulated?

Intermediate Csg: 5-1/2", 15.5# Setting Depth: 1,980'

Cement: 150 sx cement TOC @ ?

Production Casing: 2-7/8", 6.4#, J-55 Set @ 2,060'

Cement: 100 sx TOC @ 395' by ?

> OH Picture Cliffs Interval (1954): Solidified Nitro Glycerin 1,988' – 2,060'

Recompletion 1971: Ran 68 jts 2-7/8", 6.4#, J-55 Production Casing set at 2,060' w/ 100 sx cmt. TOC @ 395'. PBTD @ 2,048'. Perf 1,980' – 2,000' & 2,024' – 2,034'. Frac'd w/ 30k# sand & 30k gal water.

Current

Prepared by: D. Poindexter Date: 01/23/2020

> GL = 6,336' API# 30-045-05844

Spud Date: 05/08/1954 Date Completed: 05/22/1954

Tubing (1999): 61 jts, 1-¼", 2.33#, J-55 tubing set @ 2,000'



Ballard #10 San Juan County, NM

TD - 2,063'; PBTD - 2,048' Surface Csg: 8 5/8", 32# Setting Depth: 111'

Cement 100 sx Cement Cmt circulated?

Intermediate Csg: 5-1/2", 15.5# Setting Depth: 1,980'

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Prepared by: D. Poindexter Date: 01/23/2020

> GL = 6,336' API# 30-045-05844

Spud Date: 05/08/1954 Date Completed: 05/22/1954

Plug 3: Perf @ 390' 30 sx cmt in annulus 12 sx cmt inside 2-7/8" casing Total cmt: 42 sx Cmt 390' - Sfc

> Plug 2: 3 sx cmt from 1,400' – 1,500'

Plug 1: CIBP @ 1,900' 3 sx cmt on top TOC @ 1,800'