

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OIL CONS. DIV DIST. 3

OCT 20 2017

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. NMNM33015
2. Name of Operator COLEMAN OIL & GAS INCORPORATED		6. If Indian, Allottee or Tribe Name
3a. Address FARMINGTON, NM 87499		7. If Unit or CA/Agreement, Name and/or No.
3b. Phone No. (include area code) Ph: 505-327-0356 Ext: 106 Fx: 505-327-9425		8. Well Name and No. WEST FORK 1
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 14 T26N R12W NENW 0940FNL 1560FWL 36.492800 N Lat, 108.084060 W Lon		9. API Well No. 30-045-25632-00-S1
		10. Field and Pool or Exploratory Area BASIN FRUITLAND COAL GALLEGOS GALLUP
		11. County or Parish, State SAN JUAN COUNTY, NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
MK <input checked="" type="checkbox"/> Notice of Intent <input type="checkbox"/> Subsequent Report <input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
	<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	

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 recomple 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 recomple 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.

Coleman Oil & Gas proposes to P&A this well per the attached procedure. Reclamation Plan will be submitted following onsite. Onsite scheduled for Friday September 20, 2017 and Tuesday September 26, 2017.

**Notify NMOCD 24 hrs
prior to beginning
operations**

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

**Electronic Submission #390048 verified by the BLM Well Information System
For COLEMAN OIL & GAS INCORPORATED, sent to the Farmington
Committed to AFMSS for processing by JACK SAVAGE on 10/18/2017 (18JWS0011SE)**

Name (Printed/Typed) MICHAEL T HANSON	Title ENGINEER
Signature (Electronic Submission)	Date 09/27/2017

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By <u>JACK SAVAGE</u>	Title <u>PETROLEUM ENGINEER</u>	Date <u>10/18/2017</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 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 ****

NMOCD

PLUG AND ABANDONMENT PROCEDURE

September 7, 2017

West Fork #1

Basin Fruitland Coal / Gallegos Gallup
940' FNL and 1560' FWL, Section 14, T26N, R12W
San Juan County, New Mexico / API 30-045-25632

Note: All cement volumes use 100% excess outside pipe and 50' excess inside. The stabilizing wellbore fluid will be 8.3 ppg, sufficient to balance all exposed formation pressures. All cement will be Class B, mixed at 15.6 ppg with a 1.18 cf/sx yield.

1. This project will use of an A-Plus steel waste tank to contain waste fluids circulated from the well and cement wash up.
2. Install and test location rig anchors. Comply with all NMOCD, BLM, and Operator safety regulations. MOL and RU daylight pulling unit. Conduct safety meeting for all personnel on location. Record casing, tubing and bradenhead pressures. NU relief line and blow down well. Kill well with water as necessary and at least pump tubing capacity of water down the tubing. ND wellhead and NU BOP. Function test BOP.
3. Rods: Yes , No , Unknown
Tubing: Yes , No , Unknown , Size 2-3/8", Length 5210'
Packer: Yes , No , Unknown , Type Arrowset 1X packer at 1539.79
If this well has rods or a packer, then modify the work sequence in step #2 as appropriate.
4. **NOTE: BLM requires a CBL log to be run on all wells where the cement did not circulate to surface or where a CBL log was not previously run. This procedure is prepared with the understanding that it may be modified based on the TOC from the CBL.**
5. **Plug #1 (Gallup perforations and top, 5033' – 4855')**: Round trip mill or casing scraper to 5033', or as deep as possible. RIH and set 4.5" cement retainer 5033'. Pressure test tubing to 1000 PSI. Load casing with water and circulate well clean. Pressure test casing to 800#. If casing does not test then spot or tag subsequent plugs as appropriate. Mix 20 sxs Class B cement (excess due to open FtC perfs) inside casing from 5033' to isolate the Gallup perforations and top. PUH and WOC. TIH and tag cement. If necessary top off plug.
6. **Plug #2 (Mancos top, 3955' - 3855')**: Spot 15 sxs-Class B cement (excess due to open FtC perfs) and spot an underbalanced plug inside casing to cover the Mancos top. PUH and WOC. TIH and tag cement. If necessary top off plug.
7. **Plug #3 (Mesaverde and Chacra tops, 2320' – 1785')**: Spot 47 sxs Class B cement (excess due to open FtC perfs) and spot an underbalanced plug inside casing to cover the Mesaverde and Chacra tops. PUH and WOC. TIH and tag cement. If necessary top off plug.

8. **Plug #4 (Pictured Cliffs and Fruitland tops, 1332' – 1080')**: RIH and set 4.5" CR at 1332'. Spot 23 sxs Class B cement and spot a balanced plug inside casing to cover the Pictured Cliffs and Fruitland tops. PUH.
9. **Plug #5 (8.625" casing shoe, 475' – 0')**: Perforate squeeze holes at 475'. Establish circulation our bradenhead with water and circulate the BH annulus clean. Mix approximately 155 sxs Class B cement and pump down the 4.5" casing and circulate good cement out BH to surface. Shut in well and WOC.
10. ND cementing valves and cut off wellhead. Fill annuli with cement as necessary. Install P&A marker to comply with regulations. Record GPS coordinate for P&A marker on tower report. Photograph P&A marker in place. RD, MOL and cut off anchors. Restore location per BLM stipulations

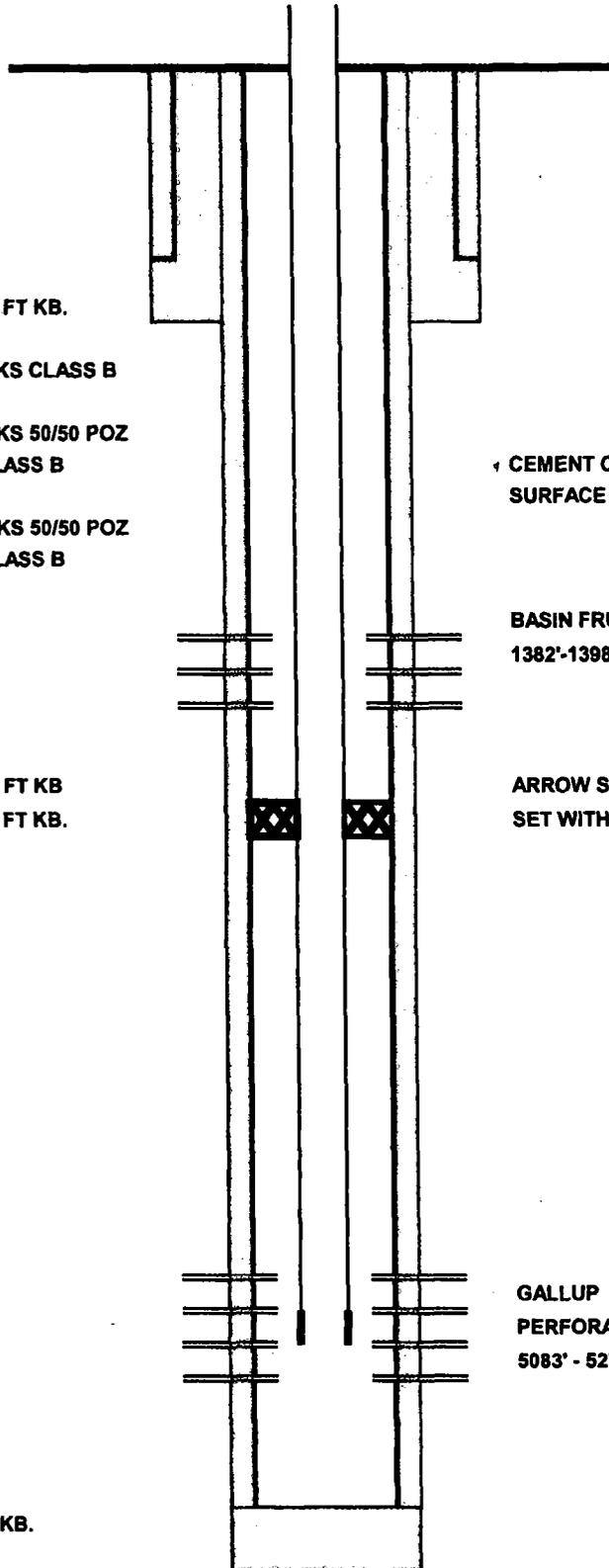
**COLEMAN OIL GAS, INC.
WEST FORK #1**

SURFACE CASING
8 5/8" CSG. @ 226 FT. KB
CEMENTED WITH 150 SXS

PRODUCTION CASING
4 1/2", 10.50#, J-55, @ 5364 FT KB.
STAGE #1
CEMENTED WITH 105 SACKS CLASS B
STAGE #2
CEMENTED WITH 670 SACKS 50/50 POZ
TAILED WITH 50 SACKS CLASS B
STAGE #3
CEMENTED WITH 545 SACKS 50/50 POZ
TAILED WITH 50 SACKS CLASS B

TBG STRING
47 JOINTS 1528.79 FT.
ARROW SET 1X PACKER
112 JOINTS 3664.81 FT.
SEATING NIPPLE
ARROW SET 1X @ 1539.79 FT KB
2 3/8" BTM TBG @ 5209.70 FT KB.
SN CUP TYPE 2.28 I.D.

PBTD @ 5320 FT. KB.
PIPE LANDED @ 5364 FT. KB.
T.D. @ 5364 FT. KB.



CEMENT CIRCULATED TO SURFACE ON SURFACE AND PRODUCTION CASING

BASIN FRUITLAND COAL PERFORATIONS
1382'-1398'

ARROW SET 1X PRODUCTION PACKER
SET WITH 10,000 COMPRESSION

GALLUP
PERFORATIONS @
5083' - 5278'

West Fork #1

Proposed P&A

Basin Fruitland Coal / Gallegos Gallup

940' FNL, 1560' FWL, Section 14, T-26-N, R-12-W

San Juan County, NM, API #30-045-25632

Today's Date: 9/7/17
Spud: 4/1/83
Completed: 11/9/97
Elevation: 6173' GL
6187' KB

Ojo Alamo @ 270'

Kirtland @ 425'

Fruitland @ 1130'

Pictured Cliffs @ 1400'

Chacra @ 1835'

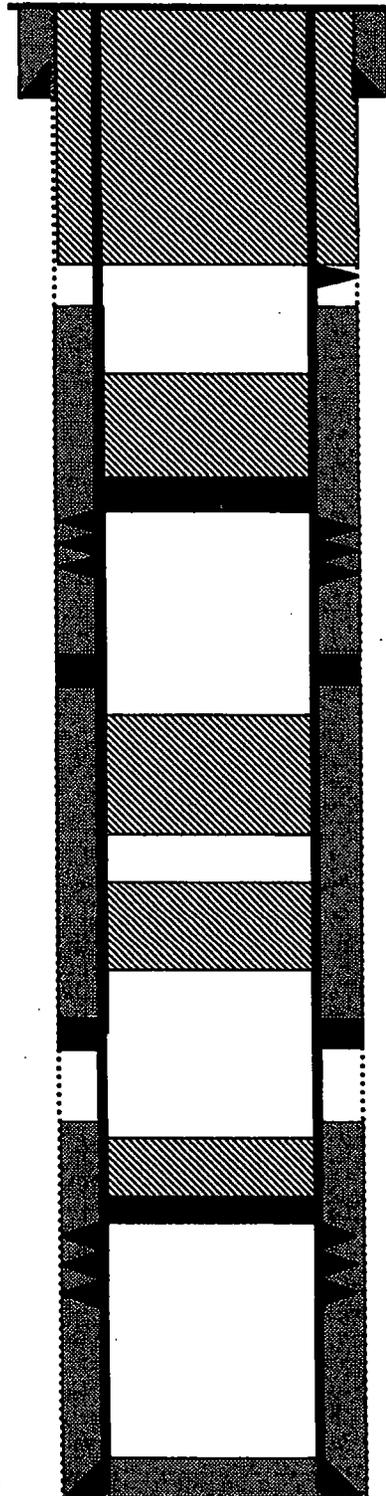
Mesaverde @ 2270'

Mancos @ 3905'

Gallup @ 4905'

12.25" hole

7-7/8" hole



8-5/8" 24#, Casing set @ 225'
Cement with 177 cf, circulated

Plug #5: 475' - 0'
Class B cement, 155 sxs

Perforate @ 450'
TOC based on T.S. 450'

Set CR @ 1332' Plug #4: 1332' - 1080'
Class B cement, 23 sxs

Fruitland Coal Perforations:
1382' - 1398'

DV Tool at 1669'
3rd Stage: Cement with 595 sxs

Plug #3: 2320' - 1785'
Class B cement, 47 sxs
(excess due to open perms)

Plug #2: 3955' - 3855'
Class B cement, 15 sxs
(excess due to open perms)

DV Tool at 4213'
2nd Stage: Cement with 720 sxs

TOC unknown, did not circulate

Set CR @ 5033' Plug #1: 5033' - 4855'
Class B cement, 20 sxs
(excess due to open perms)

Gallup Perforations:
5083' - 5278'

4.5" 10.5# Casing set @ 5364'
1st Stage: Cement with 105 sxs

TD 5365'
PBD 5320'

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil well gas well other

2. NAME OF OPERATOR
Southland Royalty Company

3. ADDRESS OF OPERATOR
P.O. Drawer 570, Farmington, NM 87499

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 940' FNL & 1560' FWL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH:

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:

- TEST WATER SHUT-OFF
- FRACTURE TREAT
- SHOOT OR ACIDIZE
- REPAIR WELL
- PULL OR ALTER CASING
- MULTIPLE COMPLETE
- CHANGE ZONES
- ABANDON*

(other) Spud & Surface Casing

SUBSEQUENT REPORT OF

RECEIVED
APR 12 1983
U. S. GEOLOGICAL SURVEY
FARMINGTON, N. M.

5. LEASE

NM - 33015

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

West Fork

9. WELL NO.

#1

10. FIELD OR WILDCAT NAME

Gallegos Gallup *Prop. Est*

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA

Section 14, T 26N, R12W

12. COUNTY OR PARISH

San Juan

13. STATE

New Mexico

14. API NO.

15. ELEVATIONS (SHOW DF, KDB, AND WD)

6153' GI

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

4-1-83 Spudded 12-1/4" surface hole on 4-1-83 at 1:30 pm and drilled to a TD of 230'. Set five joints (212') of 8-5/8", 24#, casing at 226'. Cemented with 177 cubic feet of Class "B" containing 3% CaCL2. Plug down at 7:30 pm on 4-1-83. Cement circulated to surface.

RECEIVED
APR 12 1983
GEOLOGICAL DIV.
DIST. 3

Subsurface Safety Valve: Manu. and Type _____

Set @ _____

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

SIGNED Sherry Shirley TITLE Secretary DATE April 8, 1983

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

ACCEPTED FOR RECORD



*See Instructions on Reverse Side

APR 14 1983

FARMINGTON DISTRICT

NMOCC

BY SK

**UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY**

SUBMIT IN DUPLICATE*

(See other instructions on reverse side)

Form approved
Budget Bureau No. 49-2355.5

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. TYPE OF WELL: OIL WELL GAS WELL DRY Other 2583

b. TYPE OF COMPLETION: NEW WELL WORK OVER DEEP-EN FLTG BACK DIFF. RESVR. Other CON. DIV.

2. NAME OF OPERATOR
Southland Royalty Company

3. ADDRESS OF OPERATOR
P.O. Drawer 570, Farmington, New Mexico

4. LOCATION OF WELL (Report location clearly and in accordance with State requirements)
At surface 940' FNL & 1560' FWL
At top prod. interval reported below
At total depth

RECEIVED
MAY 27 1983
U. S. GEOLOGICAL SURVEY
FARMINGTON, N. M.

5. LEASE DESIGNATION AND SERIAL NO.
NM-33015

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
West Fork

9. WELL NO.
1

10. FIELD AND POOL, OR WILDCAT
Gallegos Gallup

11. SEC., T., R., N., OR BLOCK AND SURVEY OR AREA
Section 14, T26N, R12W

12. COUNTY OR PARISH
San Juan

13. STATE
New Mexico

14. PERMIT NO. 8746 DATE ISSUED

15. DATE SPUNDED 4-01-83 16. DATE T.D. REACHED 4-09-83 17. DATE COMPL. (Ready for prod.) 4-14-83 18. ELEVATIONS (DP, RES. BT, OR, ETC.)* 6220' KB 19. ELEV. CASINGHEAD 6173' GL

20. TOTAL DEPTH, MD & TVD 5365' 21. FLOG. BACK T.D., MD & TVD 5333' 22. IF MULTIPLE COMPL., HOW MANY*

23. INTERVALS DRILLED BY 0-5365' 24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*
5083'-5278' (Gallup)

25. WAS DIRECTIONAL SURVEY MADE
Deviation

26. TYPE ELECTRIC AND OTHER LOGS RUN
CDL/CNL, GR-Induction and CBL

27. WAS WELL CORED
No

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT FILLED
8-5/8"	24#	236'	12-1/4"	177 cu. ft. (Circulate to surface)	
4-1/2"	10.5#	5364'	7-7/8"	1775 cu. ft. Three stages Top of cement @ 450'	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)
---	---	---	---	---

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2-3/8"	5247'	--

31. PERFORATION RECORD (Interval, size and number)
Gallup: Total of 12 holes
5083', 5150', 5159', 5200', 5207', 5219', 5226', 5231', 5236', 5258', 5264', 5278'

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
<u>5083'-5278'</u>	<u>Frac'd with 68,000 gals of frac fluid and 66,500# 20/40 sand.</u>

33. PRODUCTION

DATE FIRST PRODUCTION 5-25 to 5/26, 1983 PRODUCTION METHOD (Flowing, gas lift, pumping—also and type of pump) Pumping WELL STATUS (Producing or shut-in) Producing

DATE OF TEST	HOURS TESTED	CHOKED SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
<u>5/25-5/26</u>	<u>24</u>	<u>--</u>	<u>→</u>	<u>2</u>	<u>59</u>	<u>26</u>	<u>29500</u>

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
<u>---</u>	<u>21 psig</u>	<u>→</u>	<u>2</u>	<u>59</u>	<u>26</u>	<u>--</u>

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)
To be sold TEST WITNESSED BY Tom Wagner

35. LIST OF ATTACHMENTS

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records FOR RECORD

SIGNED R. E. Fields TITLE District Engineer DATE May 27, 1983

*(See Instructions and Spaces for Additional Data on Reverse Side)

NMOCC

FARMINGTON DISTRICT
BY K. [Signature]

United States Department of the Interior
Bureau of Land Management

Reclamation Plan

Coleman Oil & Gas, Inc

West Fork #1
Plug and Abandonment Project

Prepared by

Michael T. Hanson

Coleman Oil & Gas, Inc.
6540 East Main
Farmington, New Mexico 87402

Friday, September 29, 2017

U.S. Department of the Interior
Bureau of Land Management
Farmington District
Farmington Field Office
6251 N. College Blvd., Ste. A
Farmington, NM 87402
Phone: (505) 564-7600
FAX: (505) 564-7608

BLM



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Reclamation Plan (Procedure B)

Applicant	Coleman Oil & Gas, Inc.
Project Type	Reclamation of a natural gas well site.
Well, Oil and Gas Lease, or Right-of-Way (ROW) Name	West Fork #1
Legal Location	NENW Section 14 (940' FNL, 1560' FWL), Township 26 North, Range 12 West, New Mexico Principal Meridian, in San Juan County, New Mexico
Lease Number(s)	NMNM33015

Introduction

This reclamation plan has been prepared to meet the requirements and guidelines of the Bureau of Land Management (BLM) Farmington Field Office (FFO) Bare Soil Reclamation Procedures (BLM 2013a) and Onshore Oil and Gas Order No. 1.

The Coleman Oil & Gas, Inc contact person for this Reclamation Plan is:

Michael T. Hanson
Coleman Oil & Gas, Inc.
6540 East Main
Farmington, New Mexico 87402
Phone: (505) 327-0356

Vegetation Reclamation Procedure B

Completion of a Vegetation Reclamation Plan in accordance with Procedure B of the BLM/FFO Bare Soil Reclamation Procedures is required for surface disturbing actions, grants, or permits authorized by the BLM/FFO resulting in bare mineral soil **across an area greater than or equal to 1 acre**, not including a BLM/FFO approved working area. Working areas include areas routinely used to operate and maintain facilities or improvements. The FFO makes no distinction between interim and final revegetation processes; revegetation processes and standards are the same for all revegetation activities.

Revision of the Reclamation Plan

Coleman Oil & Gas, Inc may submit a request to the BLM/FFO to revise the Reclamation Plan at any time during the life of the project in accordance to page 44 of the Gold Book (USDI-USDA 2007). Coleman Oil & Gas, Inc will include justification for the revision request.

Project Description

Coleman Oil & Gas, Inc is proposing to plug and abandon the West Fork #1 wellbore and reclaim the well pad and access road. This location and access are located on public lands managed by the BLM Southeast of Bloomfield NM. The following reclamation plan will apply to this proposed future work.

Estimated Total Area of Disturbance

The existing West Fork #1 well pad is approximately 270-foot by 180-foot location with a Maximum of a 2 foot cut and a maximum of a 2 foot fill. The access road is approximately 50 feet by 15 feet wide. The well location is located on allotted surface managed by the BLM. Total surface disturbance as a result of well pad, and access road would be approximately 1.11 acres on public lands managed by the BLM.

The pre-disturbance site visit occurred on September 20, 2017 and again on September 26, 2017. The following persons were present at the site visit (Table 1).

Table 1.

Name	Affiliat	Contact Info
Robert K. Switzer	BLM/FFO	505-564-7709 rswitzer@blm.gov
James Hellekson	Consolidated	505-320-0049
Bruce Taylor	Coleman Oil & Gas, Inc.	505-320-0049 blt5@earthlink.net
Bertha Spencer	BIA Gallup	505-863-8336 bertha.spencer@bia.gov

Vegetation Community

Based on observations made during the pre-disturbance site visit, it has been determined that the vegetation community which best represents the proposed project area is Sagebrush Community. This community is comprised primarily of Wyoming big sage with lesser amounts of basin big sage and minor areas of black sage. It is found on all aspects from about 5,000 to 7,200 feet but is most common on southerly and western aspects. Soils vary from clayey to fine sandy loam to loamy in texture with loamy sites being more pervasive.

Proposed Reclamation Seed Mix

Disturbance will be re-contoured and topsoil will be redistributed and prepared for seeding by the construction contractor. Ripping, disking, and seeding of the site will be done by Coleman Oil & Gas, Inc. (or its contractor) using the BLM-approved seed mix, which is shown in Table 2. The proposed reclamation seed mix takes into account the existing vegetation on the proposed project site.

Table 2. Sagebrush Community Seed Mix

Common Name	Scientific Name	Variety	Season	Form	PLS lbs/acre ¹
Fourwing saltbush	<i>Atriplex canescens</i>	VNS	Cool	Shrub	2.0
Winterfat	<i>Krascheninnikovia lanata</i>	VNS	Cool	Shrub	2.0
Indian ricegrass	<i>Achnatherum hymenoides</i>	Paloma or Rimrock	Cool	Bunch	4.0
Blue grama	<i>Bouteloua gracilis</i>	Alma or Hachita	Warm	Sod-forming	2.0
Sand dropseed	<i>Sporobolus cryptandrus</i>	VNS	Warm	Bunch	0.5
Bottlebrush squirreltail	<i>Elymus elymoides</i>	Tusas or VNS	Cool	Bunch	3.0
Small burnet	<i>Sanguisorba minor</i>	Delar	Cool	Forb	2.0
Lewis flax	<i>Linum lewisii</i>	Apar	Cool	Forb	0.25

¹Based on 60 pure live seeds (PLS) per square foot, drill seeded; double this rate (120 PLS per square foot) if broadcast or hydroseeded; "lbs" refers to pounds.

Vegetation Reclamation Standards

Requirements for determining reclamation and if it is successfully completed for the selected vegetation community are determined by the reclamation percent cover standards for the community, as outline in Table 3. These standards must be met during post-disturbance monitoring procedures in order for the BLM/FFO to sign off on the attainment of vegetation reclamation standards.

Table 3. Reclamation Goal for Sagebrush/Grass Community Cover

Functional Group	Percent (%) Foliar Cover	Common Species
Trees/Shrubs/Grasses/Forbs	≥35	Utah Juniper, pin on pine; big sagebrush, four-wing saltbush, antelope bitterbrush, alkali sacaton, Western wheatgrass, Indian ricegrass, galleta, sand dropseed, scarlet globemallow, wooly Indianwheat, fleabane, Penstemon sp., buckwheat, threadleaf groundsel
Invasive/undesirables 10% allowed toward meeting standard of 35%.	≤10	Plants that have the potential to become a dominant species on a site where its presence is a detriment to revegetation efforts or the native plant community. Examples of invasive species include cheatgrass, Russian thistle, and kochia.

Weed Survey

During the site visit, the proposed action area was surveyed for noxious weeds listed on the New Mexico Department of Agriculture's Class A and Class B list. During the survey, noxious weeds were documented within the proposed action area. Noxious Weeds will be sprayed prior to reclamation activity.

Soil Evaluation

The BLM/FFO representative and Coleman Oil & Gas, Inc representative collaboratively decided at the site visit that no soil testing is necessary for the proposed project area.

Reclamation Techniques for Successful Revegetation

Site Clearing

After the well is plugged the wellhead will be cut-off 3' below ground level and a 4" diameter P&A marker will be welded to the casing stub. All flow lines and anchors will be cut-off at least 3' below ground level or removed completely. Cathodic Protection will be dug out 4 feet from surface and if cased will be filled cemented and capped at surface. Well site will be kept free of debris. All material and possible contaminated soils will be disposed at an approved disposal site.

Topsoil Replacement

The soil will be moved from the fill side of the pad to the cut side to re-establish the natural contours of the area. Coleman Oil & Gas, Inc. (or its contractor) will take care not to mix topsoil with the underlying subsoil horizons. Topsoil and sub-surface soils will be replaced in the proper order, prior to final seedbed preparation.

Water Management/Erosion Control Features

The BLM/FFO representative and the Coleman Oil & Gas, Inc representative will work in collaboration to develop site-specific erosion control or water management features and to identify installation locations. Sediment basins, sediment traps, check dams, silt fencing, erosion control blankets or geotextiles, and straw wattles will be placed as deemed necessary.

Coleman Oil & Gas, Inc (or its contractors) will use erosion control blankets, straw bales, or straw wattles as appropriate to limit erosion and sediment transport from any stockpiled soils.

Seedbed Preparation

For cut and fill slopes, initial seedbed preparation will consist of backfilling and re-contouring to achieve a configuration as close to pre-disturbance conditions as possible. Areas to be reclaimed will be re-contoured to blend with the surrounding landscape, emphasizing restoration of existing drainage patterns and landform to pre-construction condition, to the extent practicable.

Seedbed preparation of compacted areas will be ripped to a minimum depth of 12 inches, with a maximum furrow spacing of 2 feet. Where practicable, ripping will be conducted in two passes at perpendicular directions. Disking will be conducted if large clumps or clods remain after ripping. Any tilling or disking that occurs along the contour of the slope and seed drills will also be run along the contour to provide terracing and prevent rapid run-off and erosion. If broadcast seeding is used, a dozer or other tracked equipment will track perpendicular to the slope prior to broadcast seeding.

Following final contouring, the backfilled or ripped surfaces will be covered evenly with stockpiled topsoil. Final seedbed preparation will consist of raking or harrowing the spread topsoil prior to seeding to promote a firm (but not compacted) seedbed without surface crusting.

Soil Amendments

Off of information gathered at the onsite inspection and as a result of any soil testing conducted for the proposed project area, the Coleman Oil & Gas, Inc. and BLM/FFO representatives have decided collaboratively that no soil amendments will be used during reclamation of the affected environment.

Seeding Requirements

The seed mix chosen for this project is listed in Table 2. Seeding will occur in late July, August, or September, unless authorized by BLM Farmington Field Office, after the well has been plugged and abandoned.

A Truax seed drill or modified rangeland drill that allows for seeding species from different seed boxes at different planting depths will be used to seed the disturbed areas of the project area. Thompson Engineering & Production or its reclamation contractor will ensure that perennial grasses and shrubs are planted at the appropriate depth. Intermediate size seeds (such as wheatgrasses and shrubs) will be planted at a depth of 1 to 2 inches. Small seeds (such as alkali sacaton and sand dropseed) will be planted at a depth of 0.25 inch. In situations where differing planting depths are not practicable using available equipment, the entire seed mix will be planted no deeper than 0.25 inch.

Drill seeding may be used on well-packed and stable soils that occur on gentler slopes and where equipment and drills can safely operate. Where drill seeding is not practicable due to topography, the reclamation contractor will hand-broadcast seed using a "cyclone" hand seeder or similar broadcast seeder. Broadcast application of seed requires a doubling of the drill-seeding rate. The seed will then be raked into the ground so the seed is planted no deeper than 0.25 inch below the surface.

Mulching

Hand seeding with hydro-mulch, excelsior netting, and/or mulch with netting may be required on cut and fill slopes. Mulch should be grass or straw spread at 2,000 to 3,000 pounds per acre, or approximately 1 to 2 inches deep. Mulching will consist of crimping certified weed-free straw or certified weed-free native grass hay into the soil.

Straw or native grass hay mulch can be applied by hand broadcasting or blowing to a relatively uniform depth of 2 to 3 inches, equivalent to a rate of approximately 2 tons per acre (one 74-pound bale per 800 square feet). When applied properly, approximately 20 to 40 percent of the original ground surface will be visible.

Straw or native grass hay mulch will then be anchored using one of the following methods:

- Hand Punching – a spade or shovel is used to punch mulch into the topsoil at 1-foot intervals until all areas have mulch standing perpendicular to the slope and the mulch is embedded at least 4 inches into the soil.
- Roller Punching – a roller is used to spread mulch over an area; the roller is equipped with straight studs not less than 6 inches long, from 4 to 6 inches wide, and approximately 1 inch thick.
- Crimper Punching – similar to roller punching, a crimper is used over the soil. The crimper has serrated disk blades about 4 to 8 inches apart that force the mulch into the soil. Crimping should be done in two directions with the final pass across the slope.

Mulch applications in extremely clayey soils should be evaluated carefully to avoid developing an adobe mixture. In these cases, a soil amendment may be beneficial.

Noxious and Invasive Weed Control

Should noxious or invasive weeds be documented before or after earthwork and seeding activities, the BLM/FFO weed coordinator will provide Coleman Oil & Gas, Inc with specific requirements and instructions for weed treatments, including the period of treatment, approved herbicides that may be used, required documentation to be submitted to the BLM/FFO after treatment, and any other site-specific instructions that may be applicable.

Monitoring Requirements

Monitoring will be completed according to BLM/FFO Bare Soil Reclamation Procedure B (BLM 2013b). Monitoring activities will be initiated after the project is completed, during the post-disturbance earthwork and seeding inspection process.

Post-Reclamation Monitoring Initiation

After the well has been plugged and the reclamation work and seeding have been completed, a post-disturbance inspection at the project site will occur. The BLM/FFO representative (in collaboration with Coleman Oil & Gas, Inc) will determine site-specific monitoring locations for photo point monitoring and vegetation line point intercept transects, if necessary. The BLM/FFO will collect GPS data on the monitoring locations, take the initial monitoring photographs, and complete the initial monitoring report within 60 days of the post-disturbance earthwork and seeding inspection. The initial report will be available from the BLM/FFO.

Post-Reclamation Monitoring Photographs

The minimum photo points necessary to document post-disturbance monitoring (including annual monitoring and long-term monitoring) are described in Table 5. Photographs will be taken with a digital camera without zoom or wide-angle adjustments. GPS coordinates for each photo point will be provided by the BLM/FFO in the initial monitoring report and subsequently included with each photograph in the annual monitoring report.

Table 5. List of Minimum Required Post-Disturbance Monitoring Photographs

Photo Point	Photographs	Location Description

Annual Monitoring

Coleman Oil & Gas, Inc will begin annual monitoring of the photo points and the vegetation line point intercept transects 2 calendar years after the completion and approval of the final earthwork and seeding. Monitoring may occur any time of the year. A completed monitoring report of the permanent photo points will be submitted by Coleman Oil & Gas, Inc to the BLM/FFO by December 31 of the year the site is monitored. Within 60 days after receipt, the BLM/FFO will acknowledge that the report has been received and evaluated.

Vegetation line point intercept transects will be monitored annually until attainment of vegetation reclamation cover standards have been met. Coleman Oil & Gas, Inc will keep a record of the monitoring for future submittal to the BLM/FFO at reclamation attainment.

Attainment of Vegetation Reclamation Standards

When vegetation on a reclaimed site appears to meet the required percent revegetation standard, Coleman Oil & Gas, Inc will submit to the BLM/FFO a written request for concurrence that revegetation standards have been attained. The request will include all annual transect data sheets and a current set of monitoring photographs. The BLM/FFO will review the request and approve or deny the request within 60 days of receipt. If the request is denied, the BLM/FFO may initiate a site inspection within 60 days of the denial to analyze the site and determine if remedy actions may be appropriate.

Long-Term Monitoring

After the required percent revegetation standard has been attained, Coleman Oil & Gas, Inc will begin long-term monitoring. Every fifth year after attainment, Coleman Oil & Gas, Inc will monitor the site at all established photo points to ensure the site remains productive and stable. A completed monitoring report of the permanent photo points will be submitted to the BLM/FFO by December 31 of the year the site is monitored. The BLM/FFO will acknowledge that the report has been received and evaluated within 60 days after receipt.

Final Abandonment

If 1 or more acre of bare soil results from earthwork required in preparation for final abandonment, Coleman Oil & Gas, Inc will follow Vegetation Reclamation Plan in accordance with Procedure B of the BLM/FFO Bare Soil Reclamation Procedures (2013a).

Revegetation percent cover standards will be attained, documented, and submitted to the BLM/FFO by Coleman Oil & Gas, Inc or an exception granted before the BLM/FFO will approve a final abandonment notice (FAN) or relinquishment.

Upon final reclamation, the location will be returned to pre-disturbance conditions as practicable.

Cessation of Monitoring

Monitoring requirements will remain in effect as long as the permit, grant, or authorization remains in effect and until all infrastructure or associated facilities are abandoned by established BLM procedure and a FAN or relinquishment is issued by the BLM/FFO. Coleman Oil & Gas, Inc will document that percent cover standards have been attained when submitting a request for a FAN or relinquishment.

References

43 CFR Part 3160, "Onshore Oil and Gas Order No. 1; Onshore Oil and Gas Operations; Federal and Indian Oil and Gas Leases; approval of Operations," 72 Federal Register 44 (march 2007), pp. 10328-10338.

BLM. 2013a. Farmington Field Office Bare Soil Reclamation Procedures. Available at: http://www.blm.gov/nm/st/en/fo/Farmington_Field_Office/ffo_planning/surface_use_plan_of.html. Accessed November 2013.

BLM. 2013b. Updated Reclamation Goals. Available at: http://www.blm.gov/nm/st/en/fo/Farmington_Field_Office/ffo_planning/surface_use_plan_of/updated_reclamation.html. Accessed November 2013.

U.S. Department of the Interior, U.S. Department of Agriculture (USDI, USDA). 2007. Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development. BLM/WO/ST-06/021+307/REV 07. Bureau of Land Management, Denver, Colorado. 84 pp.

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: West Fork #1

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. The following modifications to your plugging program are to be made:

- a) Set Plug #2 (4154-4054) ft. to cover the Mancos top. BLM picks top of Mancos at 4104 ft.
- b) Set Plug #4 (1448-1030) ft. to cover the Pictured Cliffs and Fruitland tops. BLM picks top of Pictured Cliffs at 1398 ft. BLM picks top of Fruitland at 1080 ft.
- c) Set Plug #5 (510-0) ft. to cover the 8.625" casing shoe, the Kirtland top, and the Ojo Alamo top. BLM picks top of Kirtland at 460 ft. BLM picks top of Ojo Alamo at 268 ft.

Operator must run a CBL to verify cement top. Submit the electronic copy of the log for verification to the following addresses: jwsavage@blm.gov aelmdadani@blm.gov Brandon.Powell@state.nm.us

You are also required to place cement excesses per 4.2 and 4.4 of the attached General Requirements.

Office Hours: 7:45 a.m. to 4:30 p.m.