

OCD Artesia

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

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.

5. Lease Serial No.
NMNM67106

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

7. If Unit or CA/Agreement, Name and/or No.
NMNM124833

8. Well Name and No.
HOOFPRIINT FEDERAL COM 1H

9. API Well No.
30-015-41620-00-X1

10. Field and Pool, or Exploratory
MESA VERDE

11. County or Parish, and State
EDDY COUNTY, NM

1. Type of Well
 Oil Well Gas Well Other

2. Name of Operator
COG OPERATING LLC
Contact: MAYTE X REYES
E-Mail: mreyes1@concho.com

3a. Address
ONE CONCHO CENTER 600 W ILLINOIS AVENUE
MIDLAND, TX 79701

3b. Phone No. (include area code)
Ph: 575-748-6945

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
Sec 12 T24S R31E SWSW 330FSL 430FWL
32.225422 N Lat, 103.738193 W Lon

12. CHECK 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"/> Fracture Treat	<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 checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Change to Original A PD
	<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 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 shall 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 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Accepted for record
NMOCDC *tes 11/17/14*
NM OIL CONSERVATION
ARTESIA DISTRICT
NOV 17 2014

COG Operating LLC, respectfully requests approval for the following changes to the original approved APD.

SHL
From: 330' FSL & 430' FWL
To: 330' FSL & 480' FWL

Directional plan attached. Please referenced approved sundry dated 10/14/2014 for casing and cement information.

Drilling - Original COG still stand - JAM 11/7/14

14. I hereby certify that the foregoing is true and correct.
Electronic Submission #272763 verified by the BLM Well Information System For COG OPERATING LLC, sent to the Carlsbad Committed to AFMSS for processing by JENNIFER MASON on 10/22/2014 (15JAM0029SE)

Name (Printed/Typed) MAYTE X REYES	Title REGULATORY ANALYST
Signature (Electronic Submission)	Date 10/22/2014

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By *Stephen J. Coffey* Title *FOR* FIELD MANAGER Date *11/13/14*

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 CARLSBAD FIELD OFFICE

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.

DISTRICT I
1525 N. FRANCHIS DR., WOODS, NM 87540
Phone: (505) 334-6101 Fax: (505) 334-6720

DISTRICT II
1331 W. GRAND AVENUE, ALBUQUERQUE, NM 87102
Phone: (505) 748-1203 Fax: (505) 748-0720

DISTRICT III
1000 RIO BRAZOS RD., AZTEC, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV
11009 S. ST. FRANCIS DR., SANTA FE, NM 87505
Phone: (505) 478-3400 Fax: (505) 478-3402

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
11885 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-41620	Pool Code 13367	Pool Name Cotton Draw; Bone Spring
Property Code 40040	Property Name HOOFPRINT FEDERAL COM	Well Number 1H
OGRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 3560.5

Surface Location

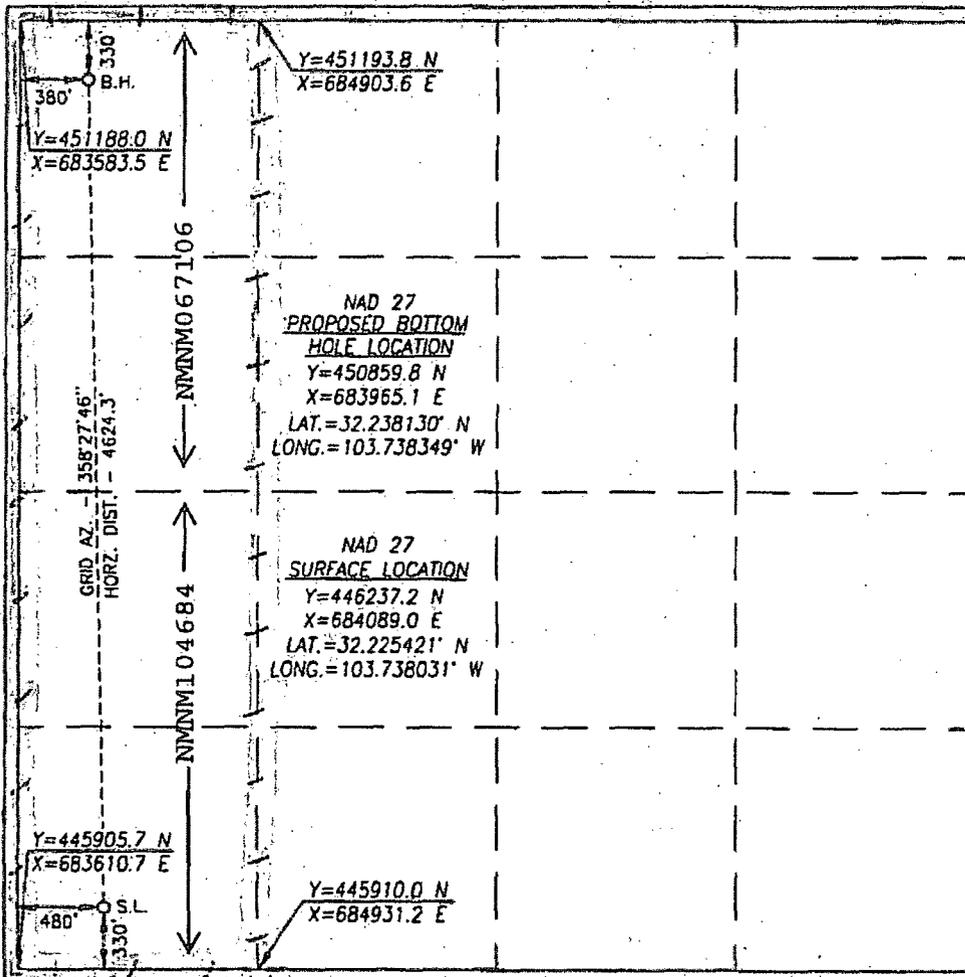
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	12	24-S	31-E		330	SOUTH	480	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	12	24-S	31-E		330	NORTH	380	WEST	EDDY

Dedicated Acres 160	Joint or Infill	Consolidation Code	Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION
I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Melanie J Parker 10/22/14
Signature Date
Printed Name
mparker@concho.com
E-mail Address

SURVEYOR CERTIFICATION
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

MARCH 15, 2013
Date of Survey

Signature & Seal of Professional Surveyor
Chad L. Hargrow 3/22/13
Certificate No. CHAD HARGROW 17777
W.O. # 13-147 DRAWN BY: VD

COG Operating, LLC.

Eddy County, N.M.

Section 12-24S-31E Hoofprint Federal Com #1H

Hoofprint Federal Com #1H

Original Hole

Plan: Plan #1

Standard Planning Report

22 October, 2014

Stryker Directional Planning Report

Database:	Stryker_EDM	Local Co-ordinate Reference:	Well Hoofprint Federal Com #1H
Company:	COG Operating, LLC.	TVD Reference:	GL 3561+18 @ 3579.0usft (Silver Oak 7)
Project:	Eddy County, N.M.	MD Reference:	GL 3561+18 @ 3579.0usft (Silver Oak 7)
Site:	Section 12-24S-31E Hoofprint Federal Com #1H	North Reference:	Grid
Well:	Hoofprint Federal Com #1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	Plan #1		

Project	Eddy County, N.M.		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Ground Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Section 12-24S-31E Hoofprint Federal Com #1H		
Site Position:	Northing:	446,237.20 usft	Latitude: 32° 13' 31.516 N
From: Map	Easting:	684,089.00 usft	Longitude: 103° 44' 16.913 W
Position Uncertainty: 0.0 usft	Slot Radius:	13-3/16"	Grid Convergence: 0.32°

Well	Hoofprint Federal Com #1H		
Well Position	+N/-S	0.0 usft	Northing: 446,237.20 usft
	+E/-W	0.0 usft	Easting: 684,089.00 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	0.0 usft
			Ground Level: 3,561.0 usft

Wellbore	Original Hole		
Magnetics	Model Name	Sample Date	Declination
	IGRF2010	10/2/2014	(°) 7.26
			Dip Angle (°) 60.08
			Field Strength (nT) 48,268

Design	Plan #1		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction (°) 359.63

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
7,852.5	0.00	0.00	7,852.5	0.0	0.0	0.00	0.00	0.00	0.00	
8,606.0	90.41	358.46	8,330.0	480.7	-12.9	12.00	12.00	-0.20	358.46	
12,749.4	90.41	358.46	8,300.0	4,622.6	-123.9	0.00	0.00	0.00	0.00	0.00 PBHL Hoofprint Fed

Same as previous ✓

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Database:	Stryker EDM	Local Co-ordinate Reference:	Well Hooprint Federal Com #1H
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Project:	Eddy County, N.M.	MD Reference:	GL 3561+18 @ 3579.0usft (Silver Oak 7)
Site:	Section 12-24S-31E Hooprint Federal Com #1H	North Reference:	Grid
Well:	Hooprint Federal Com #1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00

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Wellbore:	Original Hole		
Design:	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,100.0	0.00	0.00	6,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,300.0	0.00	0.00	6,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,400.0	0.00	0.00	6,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,500.0	0.00	0.00	6,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,600.0	0.00	0.00	6,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,700.0	0.00	0.00	6,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,800.0	0.00	0.00	6,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,900.0	0.00	0.00	6,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,000.0	0.00	0.00	7,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,100.0	0.00	0.00	7,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,200.0	0.00	0.00	7,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,300.0	0.00	0.00	7,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,400.0	0.00	0.00	7,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,500.0	0.00	0.00	7,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,600.0	0.00	0.00	7,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,700.0	0.00	0.00	7,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,800.0	0.00	0.00	7,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,852.5	0.00	0.00	7,852.5	0.0	0.0	0.0	0.00	0.00	0.00	
7852.5' MD KOP										
7,875.0	2.70	358.46	7,875.0	0.5	0.0	0.5	12.00	12.00	0.00	
7,900.0	5.70	358.46	7,899.9	2.4	-0.1	2.4	12.00	12.00	0.00	
7,925.0	8.70	358.46	7,924.7	5.5	-0.1	5.5	12.00	12.00	0.00	
7,950.0	11.70	358.46	7,949.3	9.9	-0.3	9.9	12.00	12.00	0.00	
7,975.0	14.70	358.46	7,973.7	15.6	-0.4	15.6	12.00	12.00	0.00	
8,000.0	17.70	358.46	7,997.7	22.6	-0.6	22.6	12.00	12.00	0.00	
8,025.0	20.70	358.46	8,021.3	30.8	-0.8	30.8	12.00	12.00	0.00	
8,050.0	23.70	358.46	8,044.4	40.3	-1.1	40.3	12.00	12.00	0.00	
8,075.0	26.70	358.46	8,067.0	50.9	-1.4	50.9	12.00	12.00	0.00	
8,100.0	29.70	358.46	8,089.1	62.7	-1.7	62.7	12.00	12.00	0.00	
8,125.0	32.70	358.46	8,110.4	75.6	-2.0	75.7	12.00	12.00	0.00	
8,150.0	35.70	358.46	8,131.1	89.7	-2.4	89.7	12.00	12.00	0.00	
8,175.0	38.70	358.46	8,151.0	104.8	-2.8	104.8	12.00	12.00	0.00	
8,200.0	41.70	358.46	8,170.1	120.9	-3.2	120.9	12.00	12.00	0.00	
8,225.0	44.70	358.46	8,188.3	138.0	-3.7	138.1	12.00	12.00	0.00	
8,250.0	47.70	358.46	8,205.6	156.1	-4.2	156.1	12.00	12.00	0.00	
8,275.0	50.70	358.46	8,222.0	175.0	-4.7	175.0	12.00	12.00	0.00	
8,300.0	53.70	358.46	8,237.3	194.7	-5.2	194.8	12.00	12.00	0.00	
8,325.0	56.70	358.46	8,251.6	215.2	-5.8	215.3	12.00	12.00	0.00	
8,350.0	59.70	358.46	8,264.7	236.5	-6.3	236.5	12.00	12.00	0.00	
8,375.0	62.70	358.46	8,276.8	258.4	-6.9	258.4	12.00	12.00	0.00	
8,400.0	65.70	358.46	8,287.7	280.9	-7.5	280.9	12.00	12.00	0.00	
8,425.0	68.70	358.46	8,297.3	303.9	-8.1	304.0	12.00	12.00	0.00	
8,450.0	71.70	358.46	8,305.8	327.4	-8.8	327.5	12.00	12.00	0.00	
8,475.0	74.70	358.46	8,313.0	351.3	-9.4	351.4	12.00	12.00	0.00	

Stryker Directional Planning Report

Database:	Stryker_EDM	Local Co-ordinate Reference:	Well Hoofprint-Federal Com #1H
Company:	COG Operating, LLC	TVD Reference:	GL 3561+18 @ 3579.0usft (Silver Oak 7)
Project:	Eddy County, N.M.	MD Reference:	GL 3561+18 @ 3579.0usft (Silver Oak 7)
Site:	Section 12-24S-31E Hoofprint Federal Com #1H	North Reference:	Grid
Well:	Hoofprint Federal Com #1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
8,500.0	77.70	358.46	8,319.0	375.6	-10.1	375.7	12.00	12.00	0.00	
8,525.0	80.70	358.46	8,323.7	400.2	-10.7	400.2	12.00	12.00	0.00	
8,550.0	83.70	358.46	8,327.1	424.9	-11.4	425.0	12.00	12.00	0.00	
8,575.0	86.70	358.46	8,329.2	449.8	-12.1	449.9	12.00	12.00	0.00	
8,600.0	89.70	358.46	8,330.0	474.8	-12.7	474.9	12.00	12.00	0.00	
8,606.0	90.41	358.46	8,330.0	480.8	-12.9	480.9	11.90	11.90	0.00	
8606' MD LP										
8,700.0	90.41	358.46	8,329.3	574.8	-15.4	574.8	0.00	0.00	0.00	
8,800.0	90.41	358.46	8,328.5	674.7	-18.1	674.8	0.00	0.00	0.00	
8,900.0	90.41	358.46	8,327.8	774.7	-20.8	774.8	0.00	0.00	0.00	
9,000.0	90.41	358.46	8,327.1	874.6	-23.4	874.8	0.00	0.00	0.00	
9,100.0	90.41	358.46	8,326.4	974.6	-26.1	974.8	0.00	0.00	0.00	
9,200.0	90.41	358.46	8,325.7	1,074.6	-28.8	1,074.7	0.00	0.00	0.00	
9,300.0	90.41	358.46	8,324.9	1,174.5	-31.5	1,174.7	0.00	0.00	0.00	
9,400.0	90.41	358.46	8,324.2	1,274.5	-34.2	1,274.7	0.00	0.00	0.00	
9,500.0	90.41	358.46	8,323.5	1,374.4	-36.8	1,374.7	0.00	0.00	0.00	
9,600.0	90.41	358.46	8,322.8	1,474.4	-39.5	1,474.6	0.00	0.00	0.00	
9,700.0	90.41	358.46	8,322.0	1,574.4	-42.2	1,574.6	0.00	0.00	0.00	
9,800.0	90.41	358.46	8,321.3	1,674.3	-44.9	1,674.6	0.00	0.00	0.00	
9,900.0	90.41	358.46	8,320.6	1,774.3	-47.6	1,774.6	0.00	0.00	0.00	
10,000.0	90.41	358.46	8,319.9	1,874.3	-50.2	1,874.5	0.00	0.00	0.00	
10,100.0	90.41	358.46	8,319.2	1,974.2	-52.9	1,974.5	0.00	0.00	0.00	
10,200.0	90.41	358.46	8,318.4	2,074.2	-55.6	2,074.5	0.00	0.00	0.00	
10,300.0	90.41	358.46	8,317.7	2,174.1	-58.3	2,174.5	0.00	0.00	0.00	
10,400.0	90.41	358.46	8,317.0	2,274.1	-61.0	2,274.4	0.00	0.00	0.00	
10,500.0	90.41	358.46	8,316.3	2,374.1	-63.6	2,374.4	0.00	0.00	0.00	
10,600.0	90.41	358.46	8,315.5	2,474.0	-66.3	2,474.4	0.00	0.00	0.00	
10,700.0	90.41	358.46	8,314.8	2,574.0	-69.0	2,574.4	0.00	0.00	0.00	
10,800.0	90.41	358.46	8,314.1	2,673.9	-71.7	2,674.4	0.00	0.00	0.00	
10,900.0	90.41	358.46	8,313.4	2,773.9	-74.3	2,774.3	0.00	0.00	0.00	
11,000.0	90.41	358.46	8,312.6	2,873.9	-77.0	2,874.3	0.00	0.00	0.00	
11,100.0	90.41	358.46	8,311.9	2,973.8	-79.7	2,974.3	0.00	0.00	0.00	
11,200.0	90.41	358.46	8,311.2	3,073.8	-82.4	3,074.3	0.00	0.00	0.00	
11,300.0	90.41	358.46	8,310.5	3,173.8	-85.1	3,174.2	0.00	0.00	0.00	
11,400.0	90.41	358.46	8,309.8	3,273.7	-87.7	3,274.2	0.00	0.00	0.00	
11,500.0	90.41	358.46	8,309.0	3,373.7	-90.4	3,374.2	0.00	0.00	0.00	
11,600.0	90.41	358.46	8,308.3	3,473.6	-93.1	3,474.2	0.00	0.00	0.00	
11,700.0	90.41	358.46	8,307.6	3,573.6	-95.8	3,574.1	0.00	0.00	0.00	
11,800.0	90.41	358.46	8,306.9	3,673.6	-98.5	3,674.1	0.00	0.00	0.00	
11,900.0	90.41	358.46	8,306.1	3,773.5	-101.1	3,774.1	0.00	0.00	0.00	
12,000.0	90.41	358.46	8,305.4	3,873.5	-103.8	3,874.1	0.00	0.00	0.00	
12,100.0	90.41	358.46	8,304.7	3,973.4	-106.5	3,974.1	0.00	0.00	0.00	
12,200.0	90.41	358.46	8,304.0	4,073.4	-109.2	4,074.0	0.00	0.00	0.00	
12,300.0	90.41	358.46	8,303.2	4,173.4	-111.9	4,174.0	0.00	0.00	0.00	
12,400.0	90.41	358.46	8,302.5	4,273.3	-114.5	4,274.0	0.00	0.00	0.00	
12,500.0	90.41	358.46	8,301.8	4,373.3	-117.2	4,374.0	0.00	0.00	0.00	
12,600.0	90.41	358.46	8,301.1	4,473.3	-119.9	4,473.9	0.00	0.00	0.00	
12,700.0	90.41	358.46	8,300.4	4,573.2	-122.6	4,573.9	0.00	0.00	0.00	
12,748.4	90.41	358.46	8,300.0	4,622.6	-123.9	4,622.3	0.00	0.00	0.00	
12748.4' MD PBHL										
12,749.4	90.41	358.46	8,300.0	4,622.6	-123.9	4,623.3	0.00	0.00	0.00	

Stryker Directional Planning Report

Database:	Stryker_EDM	Local Co-ordinate Reference:	Well Hoofprint Federal Com #1H
Company:	COG Operating, LLC	TVD Reference:	GL 3561+18 @ 3579.0usft. (Silver Oak 7)
Project:	Eddy County, N.M.	MD Reference:	GL 3561+18 @ 3579.0usft. (Silver Oak 7)
Site:	Section 12-24S-31E Hoofprint Federal Com #1H	North Reference:	Grid
Well:	Hoofprint Federal Com #1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	Plan #1		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/S	+E/W	Northing	Easting	Latitude	Longitude
hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
Shape									
PBHL Hoofprint Fede:	0.00	0.00	8,300.0	4,622.6	-123.9	450,859.80	683,965.10	32° 14' 17.268 N	103° 44' 18.057 W
- plan hits target center									
- Point									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
758.0	758.0	Rustler		-0.41	359.08	
1,097.0	1,097.0	TOS	Sand	-0.41	359.08	
4,304.0	4,304.0	BOS		-0.41	359.08	
4,531.0	4,531.0	Delaware (Lamar)		-0.41	359.08	
6,700.0	6,700.0	Brushy Cyn (BYCN)		-0.41	359.08	
8,118.0	8,104.5	Brushy A (BYCN-A)		-0.41	359.08	
8,423.6	8,296.8	Brushy A-2 (BC2)		-0.41	359.08	
8,426.3	8,297.8	EOL Target		-0.41	359.08	
8,549.0	8,327.0	EOC Target		-0.41	359.08	

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates		Comment	
(usft)	(usft)	+N/S	+E/W		
		(usft)	(usft)		
7,852.5	7,852.5	0.0	0.0	7852.5' MD KOP	
8,606.0	8,330.0	480.8	-12.9	8606' MD LP	
12,748.4	8,300.0	4,621.6	-123.9	12748.4' MD PBHL	



COMPANY: COG Operating, LLC.
 WELL: Hoofprint Federal Com #1H
 COUNTY: Eddy County, N.M.
 DATUM: NAD 1927 (NADCON CONUS)
 RIG: Silver Oak 7

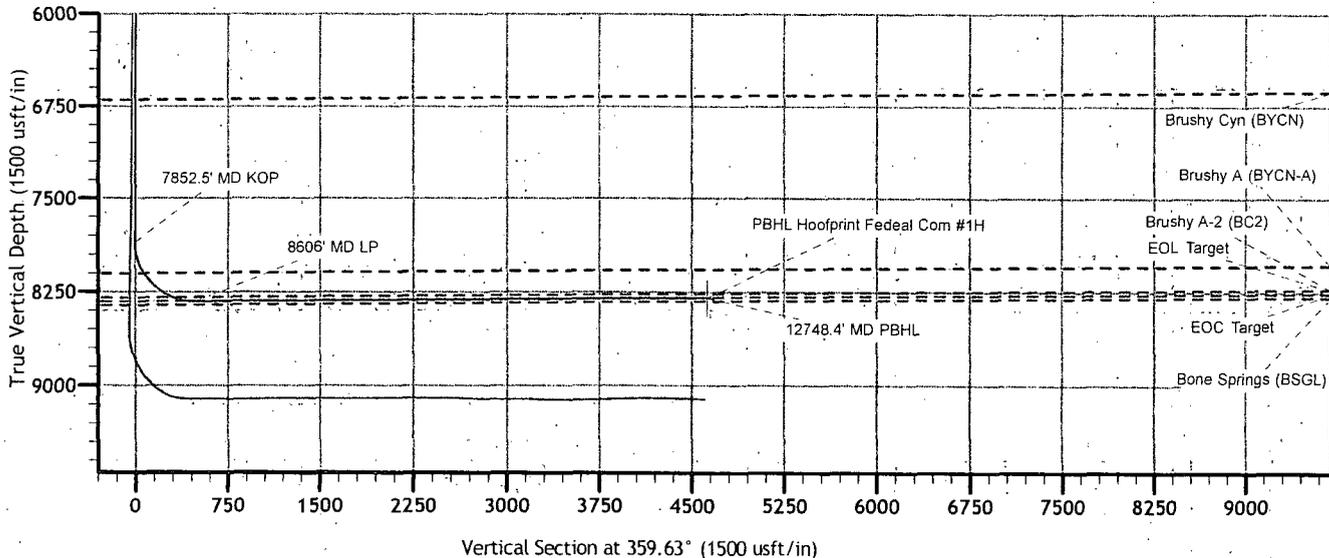
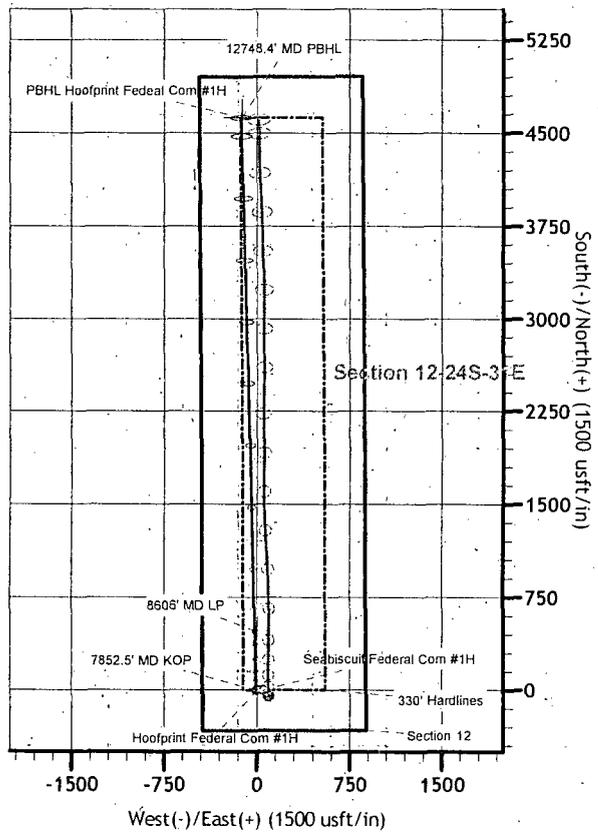
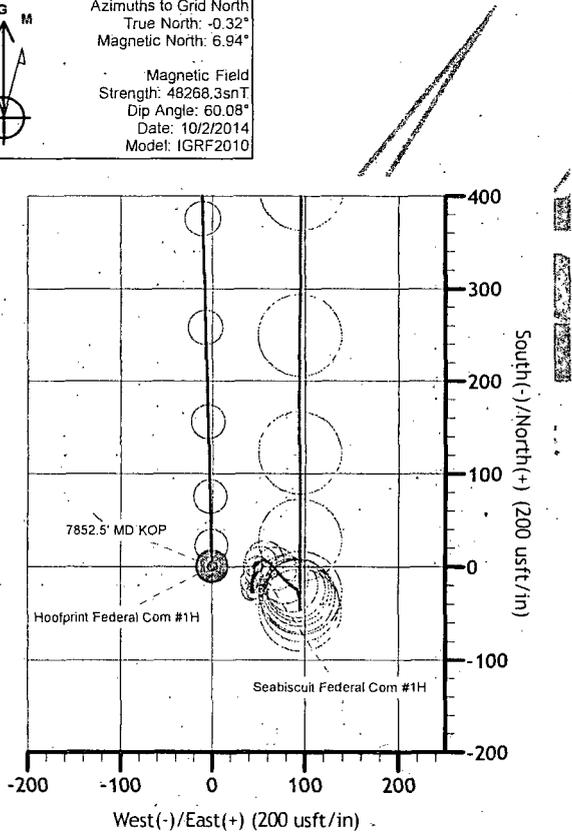
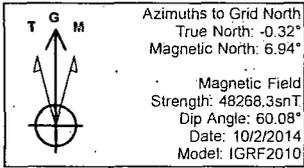


OFFICE: 936.582.7296

GRID CORRECTION: To convert a Magnetic Direction to a Grid Direction, Add 6.94°

GEODETTIC ZONE: New Mexico East 3001							
GL 3561+18 @ 3579.0usft (Silver Oak 7)							
GROUND ELEVATION: 3561.0							
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot	
0.0	0.0	446237.20	684089.00	32° 13' 31.516 N	103° 44' 16.913 W		

PLAN SECTIONS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	7852.5	0.00	0.00	7852.5	0.0	0.0	0.00	0.00	0.0	
3	8606.0	90.41	358.46	8330.0	480.7	-12.9	12.00	358.46	480.8	
4	12749.4	90.41	358.46	6300.0	4622.6	-123.9	0.00	0.00	4623.3	PBHL Hoofprint Fedcal Com #1H



PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	COG Operating, LLC
LEASE NO.:	NMNM67106
WELL NAME & NO.:	Hoofprint Federal Com 1H
SURFACE HOLE FOOTAGE:	330'/S & 430'/W
BOTTOM HOLE FOOTAGE:	330'/S & 480'/W
LOCATION:	Section 12, T.24S., R. 31 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

The Pecos District Conditions of Approval (COA) that were approved with the APD on 03/11/2012 apply to this APD extension. The following conditions apply to the APD extension as well.

- General Provisions
- Permit Expiration
- Archaeology, Paleontology, and Historical Sites
- Noxious Weeds
- Special Requirements
 - Lesser Prairie-Chicken Timing Stipulations
- Interim Reclamation
- Final Abandonment & Reclamation

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken:

Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

This authorization is subject to your Certificate of Participation and/or Certificate of Inclusion under the New Mexico Candidate Conservation Agreement. Because it involves surface disturbing activities covered under your Certificate, your Habitat Conservation Fund Account with the Center of Excellence for Hazardous Materials Management (CEHMM) will be debited according to Exhibit B Part 2 of the Certificate of Participation.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation. The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. EXCLOSURE FENCING (CELLARS & PITS)

Exclosure Fencing

The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

G. ON LEASE ACCESS ROADS**Road Width**

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

Surfacing

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning

Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching

Ditching shall be required on both sides of the road.

Turnouts

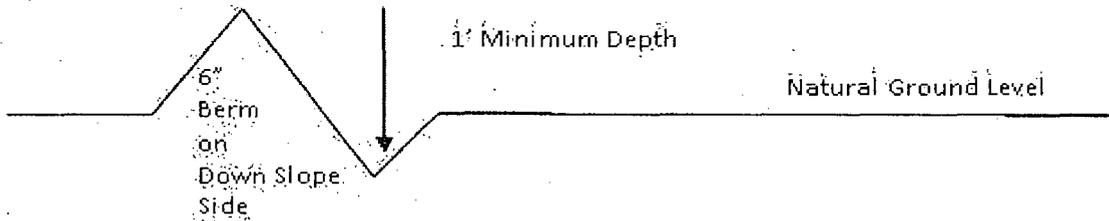
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$400 \text{ foot road with } 4\% \text{ road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

Cattleguards

An appropriately sized cattleguard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattleguards on the access road route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguards that are in place and are utilized during lease operations.

Fence Requirement

Where entry is granted across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

Public Access

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Construction Steps

1. Salvage topsoil
2. Construct road

3. Redistribute topsoil
4. Revegetate slopes

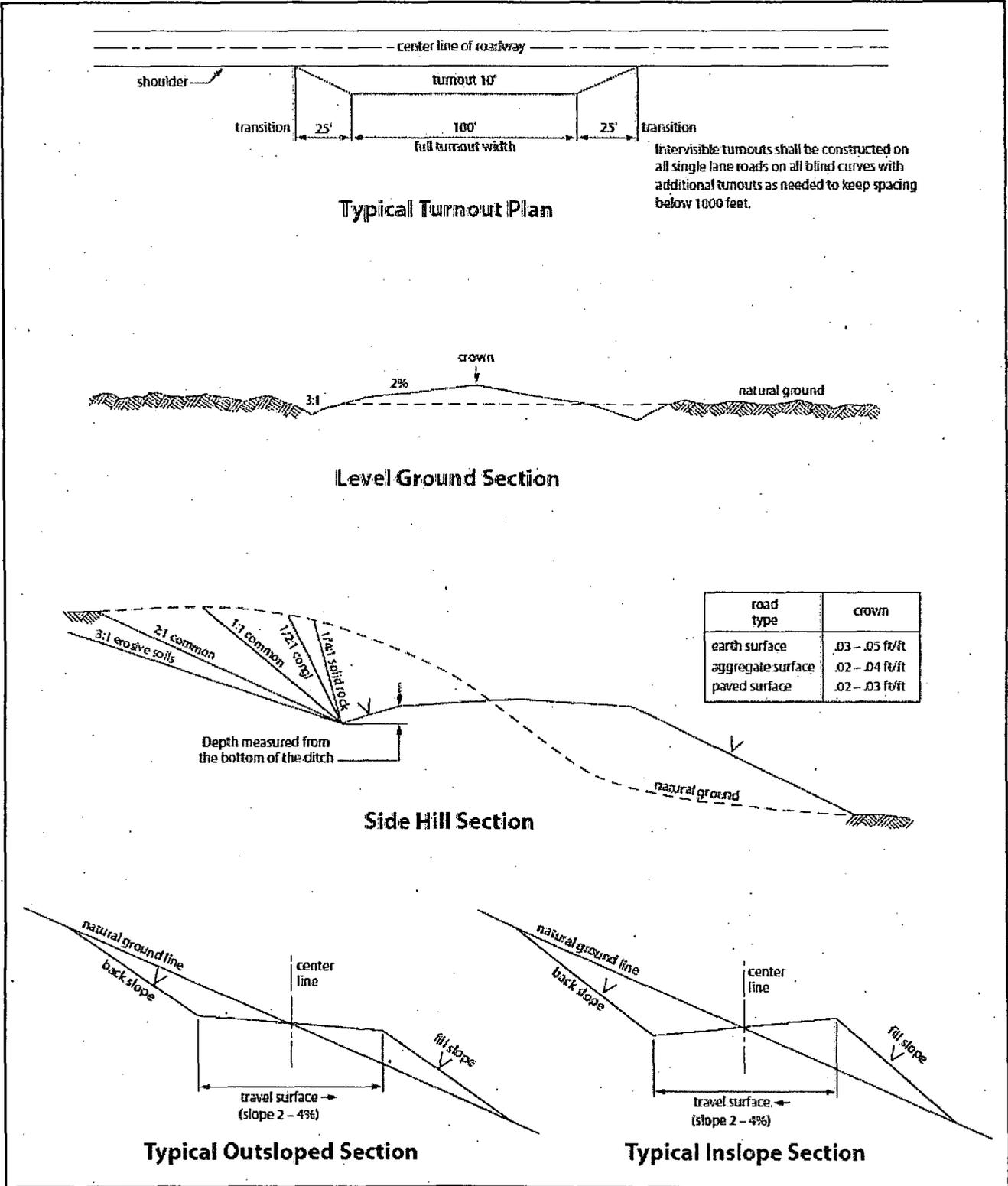


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. DRILLING

Original COAs still stand.

VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Exclosure Netting (Open-top Tanks)

Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

Chemical and Fuel Secondary Containment and Exclosure Screening

The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

Open-Vent Exhaust Stack Exclosures

The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.*) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

Containment Structures

Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the

largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

Painting Requirement

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **Shale Green** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

VRM Facility Requirement

Low-profile tanks not greater than eight-feet-high shall be used.

B. PIPELINES

C. ELECTRIC LINES

IX. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses:

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

X. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.