

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTOCD-ARTESIA  
AUG 19 2009  
FORM APPROVED  
OMB No 1004-0137  
Expires: March 31, 2007

## 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 reverse side.

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No LC-029420A
2. Name of Operator COG Operating LLC Agent		6. If Indian, Allottee or Tribe Name
3a. Address 550 W. Texas, Suite 1300 Midland, TX 79701	3b. Phone No. (include area code) 432-685-4340	7. If Unit or CA/Agreement, Name and/or No. NM 71030C
4. Location of Well (Footage, Sec., T., R., M, or Survey Description) SHL 2495 FNL & 1280 FWL BHL 2310 FNL & 990 FWL		8. Well Name and No. SKELLY UNIT #637
Section 15, T17S R31E, UL E Section 15, T17S R31E, UL E		9. API Well No. 30-015-37089
		10. Field and Pool, or Exploratory Area FREN; Glorieta-Yeso 26770
		11. County or Parish, State EDDY, NM

## 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 <b>Change Surface</b>
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	<b>Location</b>
	<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 recompleat 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 recompleat 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.)

COG Operating LLC respectfully requests permission to change the SHL to:

2465 FNL &amp; 1300 FWL Section 15, T17S R31E, UL E

BHL would remain the same at: 2310 FNL &amp; 990 FWL Section 15, T17S R31E, UL E

This request is made to accomodate proper pad size.

Revised plat and directional plan are attached.

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct Name (Printed/Typed) Phyllis A. Edwards		Title Regulatory Analyst
Signature <i>Phyllis A. Edwards</i>	Date 07/07/2009	
THIS SPACE FOR FEDERAL OR STATE OFFICE USE		
Approved by Is/ Don Peterson	Title FIELD MANAGER	Date AUG 14 2009
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.

(Instructions on page 2)

7W2

## State of New Mexico

## DISTRICT I

1625 N. FRENCH DR., HOBBS, NM 88240

Energy, Minerals and Natural Resources Department

Form C-102

## DISTRICT II

1301 W. GRAND AVENUE, ARTESIA, NM 88210

## OIL CONSERVATION DIVISION

1220 SOUTH ST. FRANCIS DR.  
Santa Fe, New Mexico 87505

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

## DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

## DISTRICT IV

1220 S. ST. FRANCIS DR., SANTA FE, NM 87505

## WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-015-37089		Pool Code 26770	Pool Name FRÉN; GLORIETA-YESO
Property Code 305607	Property Name SKELLY UNIT		Well Number 637
OGRID No. 229137	Operator Name COG OPERATING, LLC		Elevation 3870'

## Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	15	17-S	31-E		2465	NORTH	1300	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
E	15	17-S	31-E		2310	NORTH	990	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
40			

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

	<p><b>OPERATOR CERTIFICATION</b></p> <p>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.</p> <p><i>Robyn Odom</i> 7/7/2009 Signature Date Robyn Odom Printed Name</p> <p><b>SURVEYOR CERTIFICATION</b></p> <p>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.</p> <p>DATE SURVEYED: JUNE 17, 2009 Signature &amp; Seal of Professional Surveyor: Ronald J. Eidson Certificate No. GARY EIDSON 12641 RONALD J. EIDSON 3239</p>
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30.015.37089



## **COG Operating LLC**

Eddy County, NM (NAN27 NME)

Skelly Unit #637

Skelly Unit #637

OH

Plan: Plan #2 - 7-7/8" Hole

SHL = 2465' FNL & 1300' FWL

BHL = 2300' FNL & 980' FWL

Top of Paddock 5075' TVD = 2300' FNL & 980' FWL

## **Standard Planning Report**

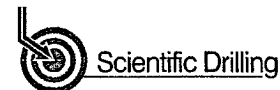
07 July, 2009



**Scientific Drilling**



Scientific Drilling  
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Skelly Unit #637
Company:	COG Operating LLC	TVD Reference:	Ground Elev @ 3870.00ft (Rig ?)
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	Ground Elev @ 3870.00ft (Rig ?)
Site:	Skelly Unit #637	North Reference:	Grid
Well:	Skelly Unit #637	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 - 7-7/8" Hole		

Project:	Eddy County, NM (NAN27 NME)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site:	Skelly Unit #637		
Site Position:	Map	Northings:	667,791.90 ft
From:		Easting:	644,976.00 ft
Position Uncertainty:	0.00 ft	Slot Radius:	0"
		Latitude:	32° 50' 5.841 N
		Longitude:	103° 51' 40.809 W
		Grid Convergence:	0.26°

Well	Skelly Unit #637					
Well Position	+N/-S	0.00 ft	Northings:	667,791.90 ft	Latitude:	32° 50' 5.841 N
	+E/-W	0.00 ft	Easting:	644,976.00 ft	Longitude:	103° 51' 40.809 W
Position Uncertainty	0.00 ft	Wellhead Elevation:		Ground Level:	3,870.00 ft	

Wellbore:	OH		
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Magnetics:	Model Name	Sample Date	Declination	Dip/Angle	Field Strength
			(°)	(°)	(nT)
	IGRF200510	2009/07/07	7.99	60.77	49,172

Design:	Plan #2 - 7-7/8" Hole			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0 00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0 00	0.00	0 00	296 89

Plan Sections										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Dogleg Rate	Build Rate	Turn Rate	TFO	Target
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)	(°)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,264.87	7.30	296.89	2,263.88	10.49	-20.70	2.00	2.00	0.00	296.89	
4,732.09	7.30	296.89	4,711.12	152.21	-300.20	0.00	0.00	0.00	0.00	
5,096.95	0.00	0.00	5,075.00	162.70	-320.90	2.00	-2.00	0.00	180.00	PP-SU #637
6,721.95	0.00	0.00	6,700.00	162.70	-320.90	0.00	0.00	0.00	0.00	PBHL-SU #637



Scientific Drilling  
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Skelly Unit #637
Company:	COG Operating LLC	TVD Reference:	Ground Elev. @ 3870 00ft (Rig.?)
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	Ground Elev. @ 3870 00ft (Rig.?)
Site:	Skelly Unit #637	North Reference:	Grid
Well:	Skelly Unit #637	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 - 7-7/8" Hole		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0 00	0 00	0 00	0 00	0.00	0 00	0 00	0 00	0 00
North HL-SU #637 - West HL-SU #637									
1,800.00	0 00	0 00	1,800 00	0 00	0.00	0 00	0 00	0 00	0 00
8 5/8" Casing									
1,900.00	0 00	0 00	1,900 00	0 00	0 00	0 00	0 00	0 00	0 00
KOP Start Build 2.00°/100'									
2,000 00	2 00	296.89	1,999.98	0 79	-1 56	1.75	2.00	2 00	0 00
2,100 00	4 00	296.89	2,099.84	3 16	-6 22	6.98	2 00	2 00	0 00
2,200 00	6 00	296.89	2,199.45	7 10	-14 00	15.69	2.00	2 00	0 00
2,264.87	7 30	296.89	2,263.88	10.49	-20 70	23.20	2 00	2 00	0 00
EOC hold 7.30°									
2,300 00	7 30	296.89	2,298.73	12 51	-24 68	27.67	0 00	0 00	0 00
2,400 00	7 30	296.89	2,397.92	18 25	-36 00	40.37	0 00	0 00	0 00
2,500 00	7 30	296.89	2,497.11	24 00	-47 33	53.07	0 00	0 00	0 00
2,600 00	7 30	296.89	2,596.30	29 74	-58 66	65.77	0 00	0 00	0 00
2,700 00	7 30	296.89	2,695.49	35 49	-69 99	78.47	0 00	0 00	0 00
2,800.00	7 30	296.89	2,794.68	41 23	-81 32	91.18	0 00	0 00	0 00
2,900 00	7 30	296.89	2,893.87	46 97	-92 65	103.88	0 00	0 00	0 00
3,000.00	7 30	296.89	2,993.06	52 72	-103.98	116.58	0 00	0 00	0 00
3,100 00	7 30	296.89	3,092.25	58.46	-115.31	129.28	0 00	0 00	0 00
3,200.00	7 30	296.89	3,191.44	64.21	-126.64	141.98	0 00	0 00	0 00
3,300 00	7 30	296.89	3,290.63	69.95	-137.96	154.68	0 00	0 00	0 00
3,400 00	7 30	296.89	3,389.82	75.69	-149.29	167.39	0 00	0 00	0 00
3,500 00	7 30	296.89	3,489.01	81.44	-160.62	180.09	0 00	0 00	0 00
3,600.00	7 30	296.89	3,588.20	87.18	-171.95	192.79	0 00	0 00	0 00
3,700 00	7 30	296.89	3,687.39	92.93	-183.28	205.49	0 00	0 00	0 00
3,800 00	7 30	296.89	3,786.58	98.67	-194.61	218.19	0 00	0 00	0 00
3,900 00	7 30	296.89	3,885.77	104.41	-205.94	230.90	0 00	0 00	0 00
4,000 00	7 30	296.89	3,984.96	110.16	-217.27	243.60	0 00	0 00	0 00
4,100 00	7 30	296.89	4,084.15	115.90	-228.60	256.30	0 00	0 00	0 00
4,200 00	7 30	296.89	4,183.34	121.64	-239.92	269.00	0 00	0 00	0 00
4,300 00	7 30	296.89	4,282.53	127.39	-251.25	281.70	0 00	0 00	0 00
4,400 00	7 30	296.89	4,381.72	133.13	-262.58	294.40	0 00	0 00	0 00
4,500.00	7 30	296.89	4,480.91	138.88	-273.91	307.11	0 00	0 00	0 00
4,600 00	7 30	296.89	4,580.10	144.62	-285.24	319.81	0 00	0 00	0 00
4,700 00	7 30	296.89	4,679.29	150.36	-296.57	332.51	0 00	0 00	0 00
4,732.09	7 30	296.89	4,711.12	152.21	-300.20	336.59	0 00	0 00	0 00
Start Drop 2.00°/100'									
4,800 00	5 94	296.89	4,778.58	155.75	-307.19	344.41	2 00	-2 00	0 00
4,900.00	3 94	296.89	4,878.20	159.64	-314.86	353.02	2 00	-2 00	0 00
5,000 00	1 94	296.89	4,978.06	161.96	-319.44	358.15	2 00	-2 00	0 00
5,096.95	0 00	296.89	5,075.00	162.70	-320.90	359.79	2 00	-2 00	0 00
EOC hold 0.00° - PP-SU #637									
6,721.95	0 00	0 00	6,700 00	162.70	-320.90	359.79	0 00	0 00	0 00
PBHL-SU #637									



Scientific Drilling  
Planning Report



Database:	EDM 5000 1 Single User Db	Local Co-ordinate Reference:	Site Skelly Unit #637
Company:	COG Operating LLC	TVD Reference:	Ground Elev @ 3870 00ft (Rig ?)
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	Ground Elev @ 3870 00ft (Rig ?)
Site:	Skelly Unit #637	North Reference:	Grid
Well:	Skelly Unit #637	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 - 7-7/8" Hole		

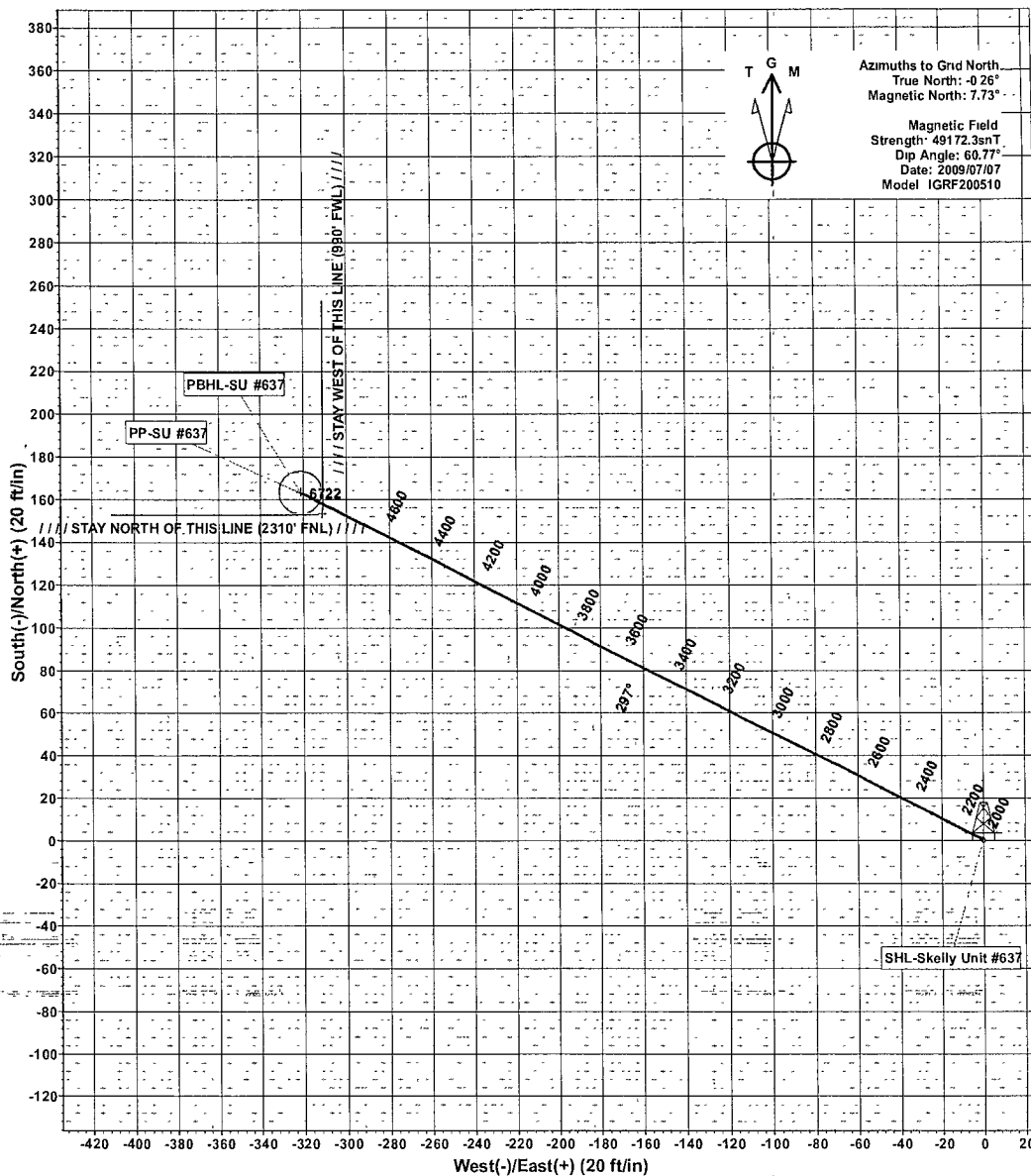
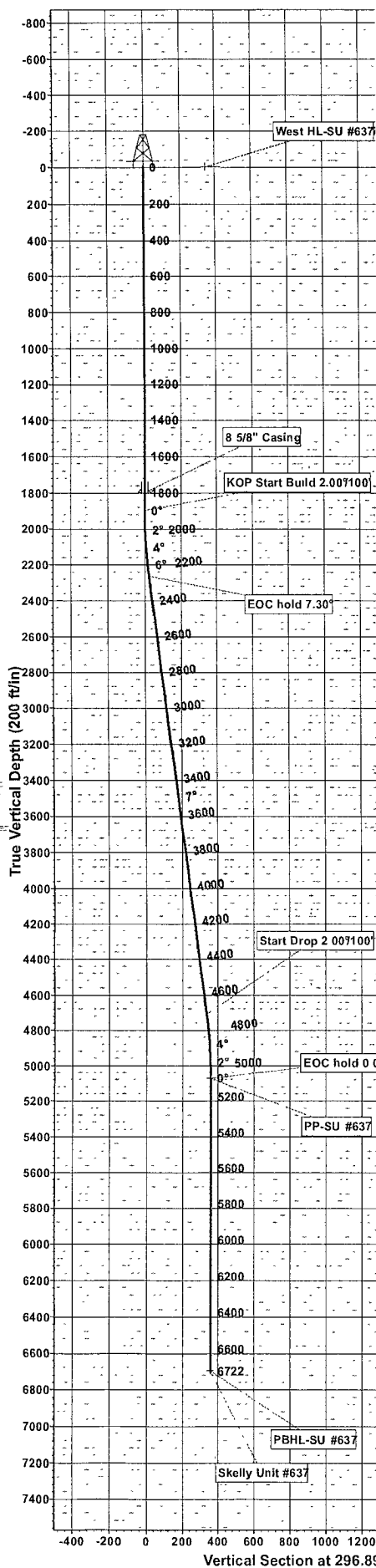
Design Targets									
Target Name	hit/miss target	Dip Angle	Dip Dir	TVD	+N/-S	+E/-W	Northing	Easting	
Shape		(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	Latitude Longitude
North HL-SU #637		0 00	0 01	0.00	152 70	-310 90	667,944.60	644,665.10	32° 50' 7 366 N 103° 51' 44 445 W
- plan misses target center by 346 38ft at 0.00ft MD (0 00 TVD, 0 00 N, 0 00 E)									
- Rectangle (sides W100 00 H0 00 D0 00)									
West HL-SU #637		0 00	0 01	0.00	152 70	-310 90	667,944.60	644,665 10	32° 50' 7 366 N 103° 51' 44.445 W
- plan misses target center by 346 38ft at 0 00ft MD (0 00 TVD, 0 00 N, 0 00 E)									
- Rectangle (sides W0 00 H100 00 D0 00)									
PP-SU #637		0 00	0 01	5,075 00	162 70	-320 90	667,954 60	644,655 10	32° 50' 7 465 N 103° 51' 44 562 W
- plan hits target center									
- Point									
PBHL-SU #637		0 00	0 01	6,700 00	162 70	-320 90	667,954 60	644,655 10	32° 50' 7 465 N 103° 51' 44 562 W
- plan hits target center									
- Circle (radius 10 00)									

Casing Points					
Measured Depth	Vertical Depth	Name		Casing Diameter	Hole Diameter
(ft)	(ft)			(")	(")
1,800 00	1,800.00	8 5/8" Casing		8-5/8	10-5/8

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S	+E/-W	
(ft)	(ft)	(ft)	(ft)	
1,900 00	1,900.00	0 00	0 00	KOP Start Build 2 00°/100'
2,264 87	2,263 88	10 49	-20 70	EOC hold 7 30°
4,732 09	4,711 12	152 21	-300 20	Start Drop 2 00°/100'
5,096 95	5,075 00	162 70	-320 90	EOC hold 0 00°



Scientific Drilling for COG Operating LLC  
Site: Eddy County, NM (NAN27 NME)  
Well: Skelly Unit #637  
Wellbore: OH  
Design: Plan #2 - 7-7/8" Hole



WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
North HL-SU #637	0.00	152.70	-310.90	667944.60	644665.10	32° 50' 7.366 N	103° 51' 44.445 W	Rectangle (Sides: L 0.00 W 100.00)
West HL-SU #637	0.00	152.70	-310.90	667944.60	644665.10	32° 50' 7.366 N	103° 51' 44.445 W	Rectangle (Sides: L 1.00 0.00 W 0.00)
PP-SU #637	5075.00	162.70	-320.90	667954.60	644655.10	32° 50' 7.465 N	103° 51' 44.562 W	Point
PBHL-SU #637	6700.00	162.70	-320.90	667954.60	644655.10	32° 50' 7.465 N	103° 51' 44.562 W	Circle (Radius: 10.0 0)

**AZIMUTH CORRECTIONS**  
ALL AZIMUTHS MUST BE CORRECTED TO GRID  
GRID CORRECTIONS MUST BE APPLIED BEFORE PLOTTING  
To convert a Magnetic Direction to a Grid Direction, Add 7.73°  
To convert a True Direction to a Grid Direction, Subtract 0.26°

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1900.00	0.00	0.00	1900.00	0.00	0.00	0.00	0.00	0.00	
3	2264.87	7.30	296.89	2263.88	10.49	-20.70	2.00	296.89	23.20	
4	4732.09	7.30	296.89	4711.12	152.21	-300.20	0.00	0.00	336.59	
5	5096.95	0.00	0.00	5075.00	162.70	-320.90	2.00	180.00	359.79	PP-SU #637
6	6721.95	0.00	0.00	6700.00	162.70	-320.90	0.00	0.00	359.79	PBHL-SU #637

WELL DETAILS: Skelly Unit #637

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	667791.90	644976.00	32° 50' 5.841 N	103° 51' 4 0 809 W	

PROJECT DETAILS: Eddy County, NM (NAN27 NME)				Plan: Plan #2 - 7-7/8" Hole (Skelly Unit #637/OH)			
Geodetic System	US State Plane 1927 (Exact solution)	Created By	Julio Pina	Date	07-Jul-09		
Datum	NAD 1927 (NADCON CONUS)	Checked		Date			
Ellipsoid	Clarke 1866	Reviewed		Date			
Zone	New Mexico East 3001	Approved		Date			
System Datum	Mean Sea Level						

# PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	COG Operating LLC
LEASE NO.:	LC-029420A
WELL NAME & NO.:	Skelly Unit #637
SURFACE HOLE FOOTAGE:	2495' FNL & 1280' FWL
BOTTOM HOLE FOOTAGE:	2310' FNL & 990' FWL
LOCATION:	Section 15, T. 17 S., R 31 E., NMPM
COUNTY:	Eddy County, New Mexico

## TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
  - Lesser Prairie Chicken
  - Unit Plan of Development
  - Ground-level Abandoned Well Marker
  - APD expiration date
- ☒ **Construction**
  - Notification
  - Topsoil
  - Closed Loop System
  - Federal Mineral Material Pits
  - Well Pads
  - Roads
- ☒ **Road Section Diagram**
- ☒ **Drilling**
  - Onshore Order 6 – H2S requirements
  - BOP/BOPE test
- ☒ **Production (Post Drilling)**
  - Well Structures & Facilities
  - Pipelines
- ☒ **Closed Loop System/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.

If present, the spraying of noxious weeds must be completed by a licensed or certified applicator. In order to attempt to kill or remove noxious weeds, the proper mix of chemical is needed. Noxious weeds must be sprayed two weeks prior to any dirt working activities or disturbances to the site being sprayed. This will allow proper time to ensure the plants mortality.

## **V. SPECIAL REQUIREMENT(S)**

**Mitigation Measures:** The mitigation measures include Pecos District Conditions of Approval, the standard stipulations for permanent resource roads, the standard stipulations for surface flow lines, and the standard stipulation for the lesser prairie chicken.

1. **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, geophysical exploration other than 3-D operations, and 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 ft. from the source of the noise.
2. **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.
3. The original APD was approved 05/19/2009. If the well has not been spudded by 05/18/2014, this APD will expire and the operator is to cease all operations related to preparing to drill the well.

**Skelly Unit # 637:** Closed loop system: V- Door North

**Unit Plan of Development has not been received for 2009.**

## **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) 234-5972 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 stockpile the topsoil of the well pad. The topsoil shall not be used to backfill the reserve pit and will be used for interim and final reclamation.

### **C. Closed Loop System**

**Skelly Unit # 637:** Closed loop system: V- Door North

*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**

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. 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. 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 thirty (30) 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**

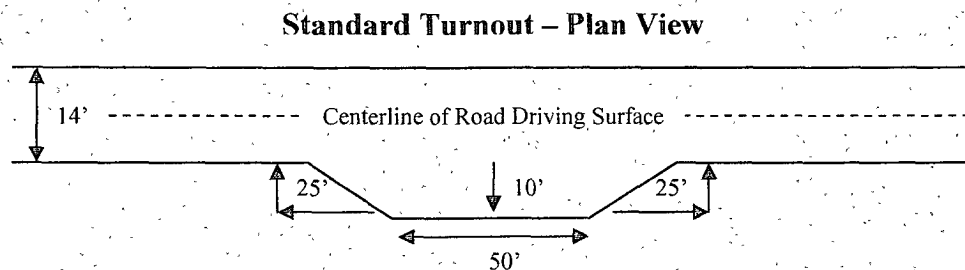
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

### **Ditching**

Ditching shall be required on both sides of the road.

### **Turnouts**

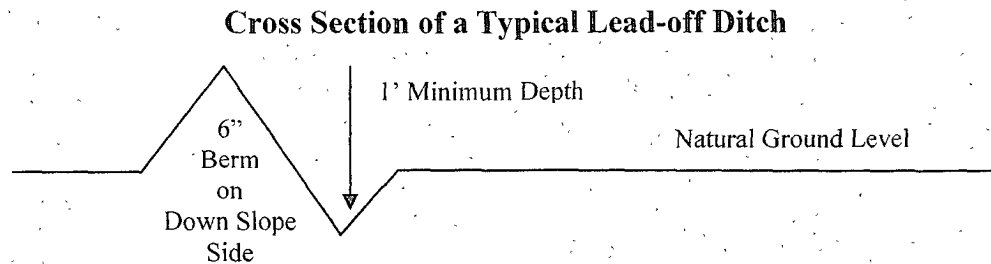
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



### **Drainage**

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outslowing and inslaping, 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.



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:

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

#### **Culvert Installations**

Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

#### **Cattleguards**

An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road 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 cattleguard(s) that are in place and are utilized during lease operations.

A gate shall be constructed and fastened securely to H-braces.

#### **Fence Requirement**

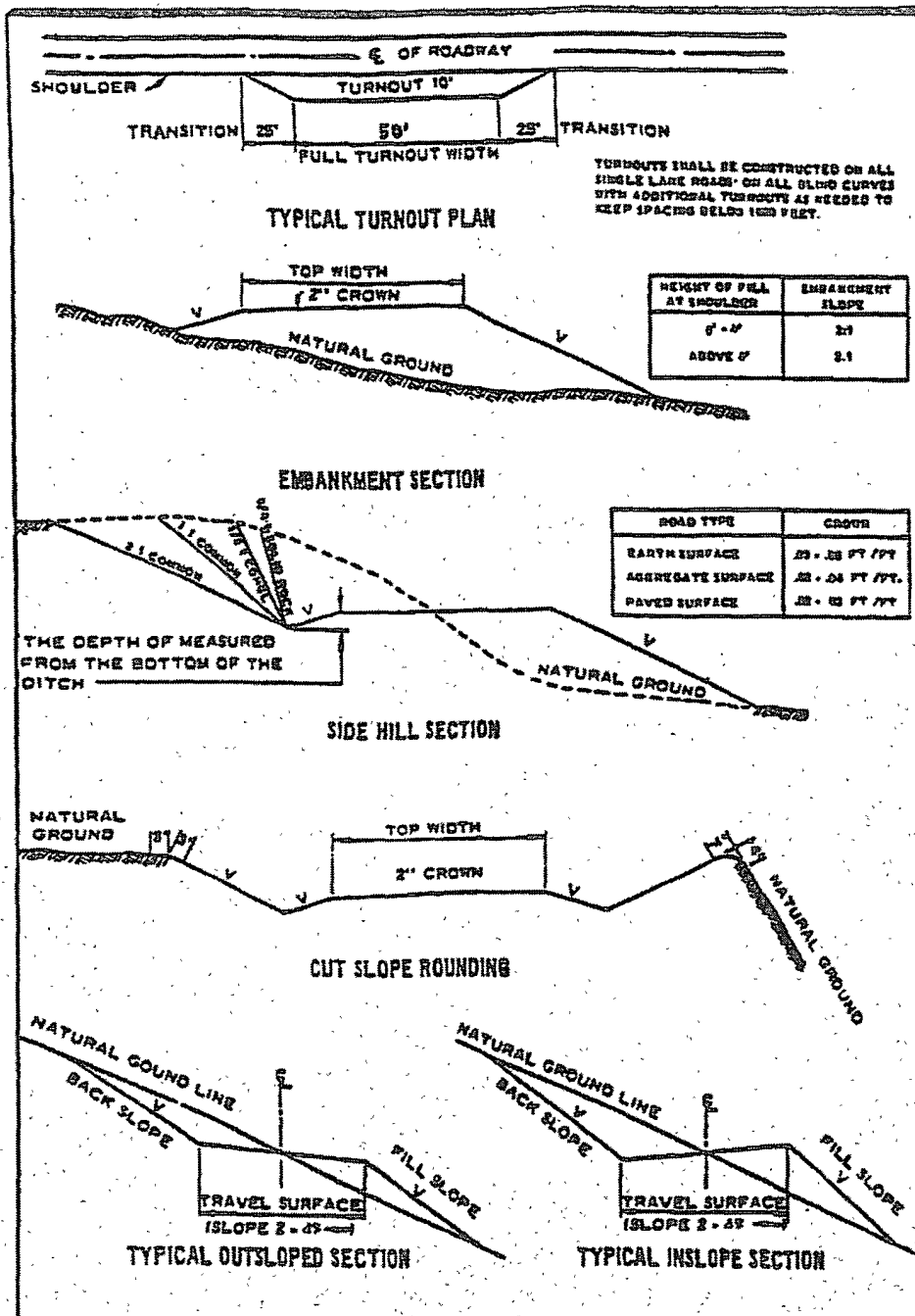
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

### Public Access

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

Figure 1 – Cross Sections and Plans For Typical Road Sections



## VII. DRILLING

### A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

- a. Spudding well
- b. Setting and/or Cementing of all casing strings
- c. BOPE tests

☒ **Eddy County**

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,  
(575) 361-2822

1. A Hydrogen Sulfide (H<sub>2</sub>S) Drilling Plan should be activated 500 feet prior to drilling into the **Queen** formation. **As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment (well control, etc.) and personnel/public protection items. If Hydrogen Sulfide is encountered, please report measured amounts and formations to the BLM.**
2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

### B. CASING

**Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.**

**Centralizers required on surface casing per Onshore Order 2.III.B.1.f.**

**Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.**

**No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.**

**Possible lost circulation in the Grayburg and San Andres formations.  
Possible water flows in the Salado and Artesia Groups.**

1. The 13-3/8 inch surface casing shall be set at approximately 450 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement.
  - b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry. Not applicable if proposed program used.
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the 8-5/8 inch intermediate casing is:  
☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Casing to be set in the Tansill formation.**
3. The minimum required fill of cement behind the 5-1/2 inch production casing is:  
☒ Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification.
4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

#### **C. PRESSURE CONTROL**

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. The tests shall be done by an independent service company.



- b. The results of the test shall be reported to the appropriate BLM office.
- c. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- d. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.
- e. **Effective November 1, 2008, no variances will be granted on reduced pressure tests on the surface casing and BOP/BOPE. Onshore Order 2 requirements will be in effect.**

#### **D. DRILL STEM TEST**

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

**WWI 041709**

### **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.

##### **Containment Structures**

The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

##### **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, Munsell Soil Color Chart # 5Y 4/2

#### **B. PIPELINES**

## STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

**A copy of the APD and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.**

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.
3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.
4. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:
  - a. Activities of the holder including, but not limited to construction, operation, maintenance, and termination of the facility.
  - b. Activities of other parties including, but not limited to:

- (1) Land clearing.
- (2) Earth-disturbing and earth-moving work.
- (3) Blasting.
- (4) Vandalism and sabotage.

c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars (\$1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any responsibility as provided herein.

6. All construction and maintenance activity will be confined to the authorized right-of-way width of 25 feet.

7. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.

8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky or dune areas, the pipeline will be "snaked" around hummocks and dunes rather than suspended across these features.

9. The pipeline shall be buried with a minimum of 24 inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their

former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.

13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

15. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder 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 will be made by the authorized officer to determine appropriate cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

(March 1989)

## **IX. INTERIM RECLAMATION & RESERVE PIT CLOSURE**

### **A. INTERIM RECLAMATION**

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer. The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting 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.

The operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions 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 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.

### Seed Mixture for LPC Sand/Shinnery Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)\* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed\* per acre:

<u>Species</u>	<u>lb/acre</u>
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A

\*\*Four-winged Saltbush 5lbs/A

\* This can be used around well pads and other areas where caliche cannot be removed.

\*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed  
(Insert Seed Mixture Here)

## **X. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS**

Upon abandonment of the well and/or when the access road is no longer in service the Authorized Officer shall issue instructions and/or orders for surface reclamation and restoration of all disturbed areas.

On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the private surface land owner agreement.