

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

AUG 19 2009

FORM APPROVED
OMB No 1004-0137
Expires: March 31, 2007

LM

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
☒ Oil Well ☐ Gas Well ☐ Other2 Name of Operator
COG Operating LLC Agent3a Address
550 W. Texas, Suite 1300 Midland, TX 797013b. Phone No (include area code)
432-685-4340

4 Location of Well (Footage, Sec., T, R., M, or Survey Description)

SHL 1380 FNL & 1890 FWL
BHL 1650 FNL & 1650 FWLSection 15, T17S R31E, UL F
Section 15, T17S R31E, UL F

5 Lease Serial No

LC-029420A

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No
NM 71030C8. Well Name and No
SKELLY UNIT, 6389. API Well No
30-015-3708410. Field and Pool, or Exploratory Area
FREN; Glorieta-Yeso 2677011. 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 Change Surface
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Location & TD
	<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:

1310 FNL & 1865 FWL Section 15, T17S R31E, UL C

BHL would remain the same at: 1650 FNL & 1650 FWL Section 15, T17S R31E, UL F

This request is made to accomodate proper pad size.

Revised plat and directional plan are attached.

This location was permitted to: 6700' TVD & 6722' MD.

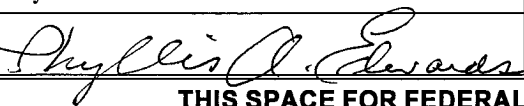
COG Operating LLC respectfully requests permission to change the permitted depth to: 7000' TVD & 7028' MD.

14. I hereby certify that the foregoing is true and correct
-
- Name (Printed/Typed)

Phyllis A. Edwards

Title Regulatory Analyst

Signature



Date

07/13/2009

THIS SPACE FOR FEDERAL OR STATE OFFICE USEApproved by /s/ Don Peterson**FIELD MANAGER**

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.

Title

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)

WZ

DISTRICT I
1625 N. FRENCH DR., HOBBS, NM 88240

DISTRICT II
1301 W. GRAND AVENUE, ARTESIA, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

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

State of New Mexico
Energy, Minerals and Natural Resources Department

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

Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-015-37084	Pool Code 26770	Pool Name FREN; GLORIETA-YESO
Property Code 305607	Property Name SKELLY UNIT	Well Number 638
OGRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 3878'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	15	17-S	31-E		1310	NORTH	1865	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
F	15	17-S	31-E		1650	NORTH	1650	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>OPERATOR CERTIFICATION</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>Phyllis A. Edwards</i> 7/13/09 Signature Date</p> <p>PHYLLIS A. EDWARDS Printed Name</p> <p>REGULATORY ANALYST</p> <p>SURVEYOR CERTIFICATION</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><i>Ronald J. Eidson</i> 07-08-09 Date Surveyed Signature & Seal Professional Surveyor</p> <p>Certificate No. GARY EIDSON 12641 RONALD J. EIDSON 3239</p>
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COG Operating LLC

Eddy County, NM (NAN27 NME)

Skelly Unit #638

Skelly Unit #638

OH

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

SHL = 1310' FNL & 1865' FWL

BHL = 1660' FNL & 1660' FWL

Top of Paddock 5075' TVD = 1660' FNL & 1660' FWL

Standard Planning Report

10 July, 2009





Scientific Drilling
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Skelly Unit #638
Company:	COG Operating LLC	TVD Reference:	Grond Elev @ 3878 00ft (Rig ?)
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	Grond Elev @ 3878 00ft (Rig ?)
Site:	Skelly Unit #638	North Reference:	Grid:
Well:	Skelly Unit #638	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 #638		
Site Position:	From: Map	Northing:	668,951 00 ft
		Easting:	645,534 10 ft
		Latitude:	32° 50' 17 286 N
		Longitude:	103° 51' 34 207 W
Position Uncertainty:	0.00 ft	Slot Radius:	0 "
		Grid Convergence:	0 26 °

Well:	Skelly Unit #638					
Well Position	+N/-S	0 00 ft	Northing:	668,951 00 ft	Latitude:	32° 50' 17.286 N
	+E/-W	0 00 ft	Easting:	645,534.10 ft	Longitude:	103° 51' 34 207 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	3,878.00 ft

Wellbore:	OH
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	2009/07/10	7.99	60 77	49,174

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	210.01

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
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	
2,319 04	8 38	210 01	2,317 54	-26 49	-15.30	2.00	2.00	0.00	210.01	
4,684.21	8 38	210.01	4,657 46	-325.01	-187 70	0.00	0.00	0 00	0 00	
5,103 24	0 00	0 01	5,075 00	-351 50	-203.00	2 00	-2.00	0 00	180.00	PP-SU #638
7,028 24	0 00	0.01	7,000 00	-351 50	-203 00	0.00	0.00	0 00	0.01	PBHL-SU #638



Scientific Drilling
Planning Report



Database:	EDM.5000.1 Single User Db	Local Co-ordinate Reference:	Site Skelly Unit #638
Company:	COG Operating LLC	TVD Reference:	Grond Elev @ 3878.00ft (Rig:?)
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	Grond Elev @ 3878.00ft (Rig:?)
Site:	Skelly Unit #638	North Reference:	Grid
Well:	Skelly Unit #638	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
West HL-SU #638 - North HL-SU #638									
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									
1,898.00	0.00	0.00	1,898.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP Start Build 2.00°/100'									
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	2.00	210.01	1,999.98	-1.51	-0.87	1.75	2.00	2.00	0.00
2,100.00	4.00	210.01	2,099.84	-6.04	-3.49	6.98	2.00	2.00	0.00
2,200.00	6.00	210.01	2,199.45	-13.59	-7.85	15.69	2.00	2.00	0.00
2,266.17	7.32	210.01	2,265.18	-20.24	-11.69	23.37	2.00	2.00	0.00
EOC hold 7.36°									
2,300.00	8.00	210.01	2,298.70	-24.14	-13.94	27.88	2.00	2.00	0.00
2,319.04	8.38	210.01	2,317.54	-26.49	-15.30	30.59	2.00	2.00	0.00
2,400.00	8.38	210.01	2,397.64	-36.71	-21.20	42.39	0.00	0.00	0.00
2,500.00	8.38	210.01	2,496.57	-49.33	-28.49	56.97	0.00	0.00	0.00
2,600.00	8.38	210.01	2,595.51	-61.95	-35.78	71.54	0.00	0.00	0.00
2,700.00	8.38	210.01	2,694.44	-74.57	-43.07	86.12	0.00	0.00	0.00
2,800.00	8.38	210.01	2,793.37	-87.20	-50.36	100.69	0.00	0.00	0.00
2,900.00	8.38	210.01	2,892.30	-99.82	-57.65	115.27	0.00	0.00	0.00
3,000.00	8.38	210.01	2,991.24	-112.44	-64.94	129.84	0.00	0.00	0.00
3,100.00	8.38	210.01	3,090.17	-125.06	-72.23	144.42	0.00	0.00	0.00
3,200.00	8.38	210.01	3,189.10	-137.68	-79.51	158.99	0.00	0.00	0.00
3,300.00	8.38	210.01	3,288.03	-150.30	-86.80	173.57	0.00	0.00	0.00
3,400.00	8.38	210.01	3,386.96	-162.92	-94.09	188.14	0.00	0.00	0.00
3,500.00	8.38	210.01	3,485.90	-175.55	-101.38	202.72	0.00	0.00	0.00
3,600.00	8.38	210.01	3,584.83	-188.17	-108.67	217.29	0.00	0.00	0.00
3,700.00	8.38	210.01	3,683.76	-200.79	-115.96	231.87	0.00	0.00	0.00
3,800.00	8.38	210.01	3,782.69	-213.41	-123.25	246.44	0.00	0.00	0.00
3,900.00	8.38	210.01	3,881.62	-226.03	-130.54	261.02	0.00	0.00	0.00
4,000.00	8.38	210.01	3,980.56	-238.65	-137.83	275.59	0.00	0.00	0.00
4,100.00	8.38	210.01	4,079.49	-251.27	-145.12	290.17	0.00	0.00	0.00
4,200.00	8.38	210.01	4,178.42	-263.90	-152.41	304.74	0.00	0.00	0.00
4,300.00	8.38	210.01	4,277.35	-276.52	-159.70	319.32	0.00	0.00	0.00
4,400.00	8.38	210.01	4,376.29	-289.14	-166.98	333.89	0.00	0.00	0.00
4,500.00	8.38	210.01	4,475.22	-301.76	-174.27	348.47	0.00	0.00	0.00
4,600.00	8.38	210.01	4,574.15	-314.38	-181.56	363.04	0.00	0.00	0.00
4,684.21	8.38	210.01	4,657.46	-325.01	-187.70	375.32	0.00	0.00	0.00
4,700.00	8.06	210.01	4,673.09	-326.96	-188.83	377.57	2.00	-2.00	0.00
4,727.15	7.52	210.01	4,699.98	-330.15	-190.67	381.26	2.00	-2.00	0.00
Start Drop 2.00°/100'									
4,800.00	6.06	210.01	4,772.32	-337.61	-194.98	389.87	2.00	-2.00	0.00
4,900.00	4.06	210.01	4,871.93	-345.26	-199.40	398.70	2.00	-2.00	0.00
5,000.00	2.06	210.01	4,971.78	-349.89	-202.07	404.05	2.00	-2.00	0.00
5,095.32	0.16	210.01	5,067.08	-351.49	-202.99	405.90	2.00	-2.00	0.00
EOC hold 0.00°									
5,100.00	0.06	210.01	5,071.76	-351.50	-203.00	405.91	2.00	-2.00	0.00
5,103.24	0.00	0.01	5,075.00	-351.50	-203.00	405.91	2.00	-2.00	0.00
PP-SU #638									
7,028.24	0.00	0.01	7,000.00	-351.50	-203.00	405.91	0.00	0.00	0.00
PBHL-SU #638									



Scientific Drilling
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Skelly Unit #638
Company:	COG Operating LLC	TVD Reference:	Grond Elev. @ 3878.00ft (Rig ?)
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	Grond Elev. @ 3878.00ft (Rig ?)
Site:	Skelly Unit #638	North Reference:	Grid
Well:	Skelly Unit #638	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	Latitude	Longitude
Shape		(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
West HL-SU #638		0.00	0.00	0.00	-341.50	-213.00	668,609.50	645,321.10	32° 50' 13.916 N	103° 51' 36.722 W
- plan misses target center by 402.48ft at 0.00ft MD (0.00 TVD, 0.00 N, 0.00 E)										
- Rectangle (sides W0.00 H100.00 D0.00)										
North HL-SU #638		0.00	0.00	0.00	-341.50	-213.00	668,609.50	645,321.10	32° 50' 13.916 N	103° 51' 36.722 W
- plan misses target center by 402.48ft at 0.00ft MD (0.00 TVD, 0.00 N, 0.00 E)										
- Rectangle (sides W200.00 H0.00 D0.00)										
PP-SU #638		0.00	0.01	5,075.00	-351.50	-203.00	668,599.50	645,331.10	32° 50' 13.817 N	103° 51' 36.605 W
- plan hits target center										
- Point										
PBHL-SU #638		0.00	0.01	7,000.00	-351.50	-203.00	668,599.50	645,331.10	32° 50' 13.817 N	103° 51' 36.605 W
- plan hits target center										
- Circle (radius 10.00)										

Casing Points

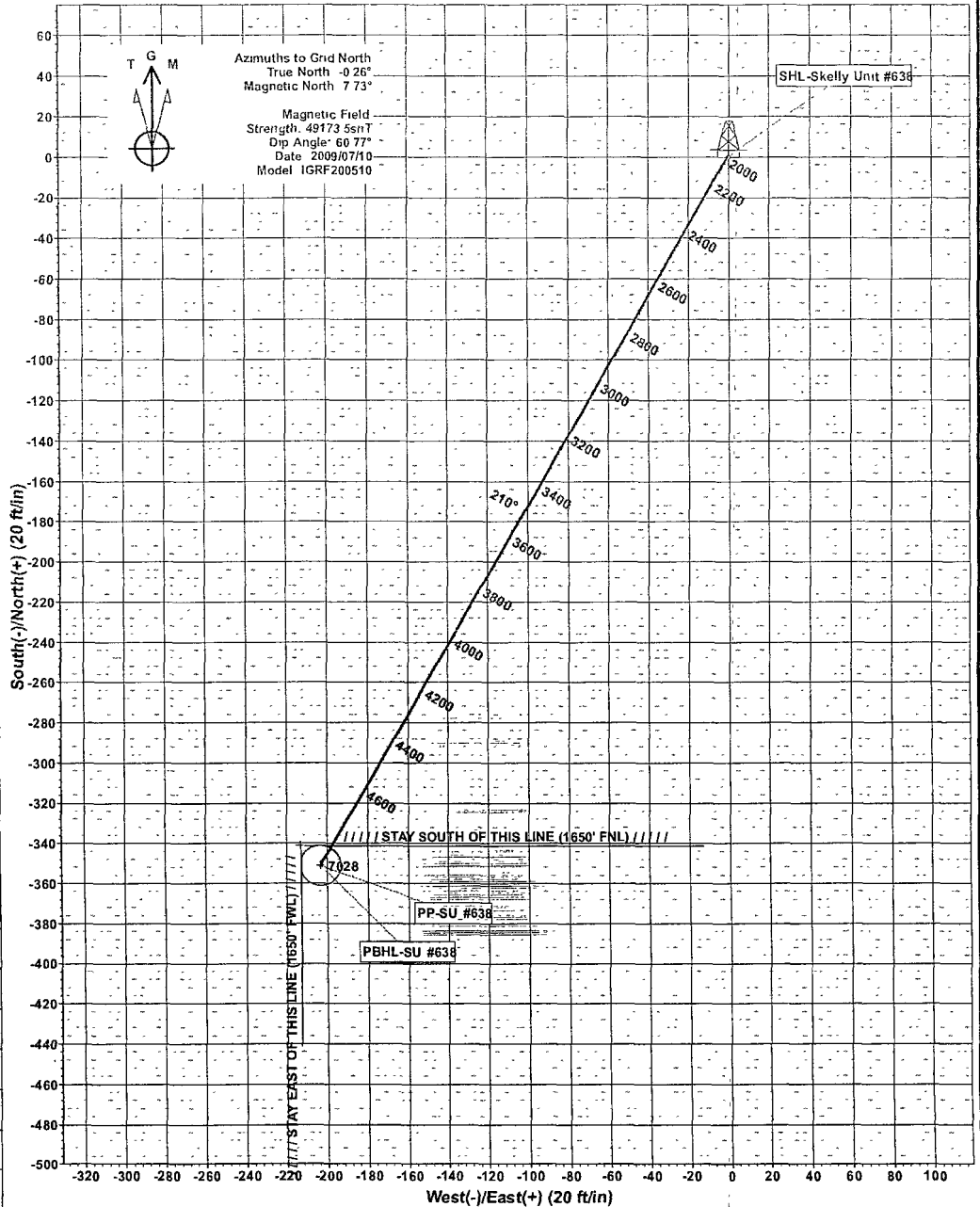
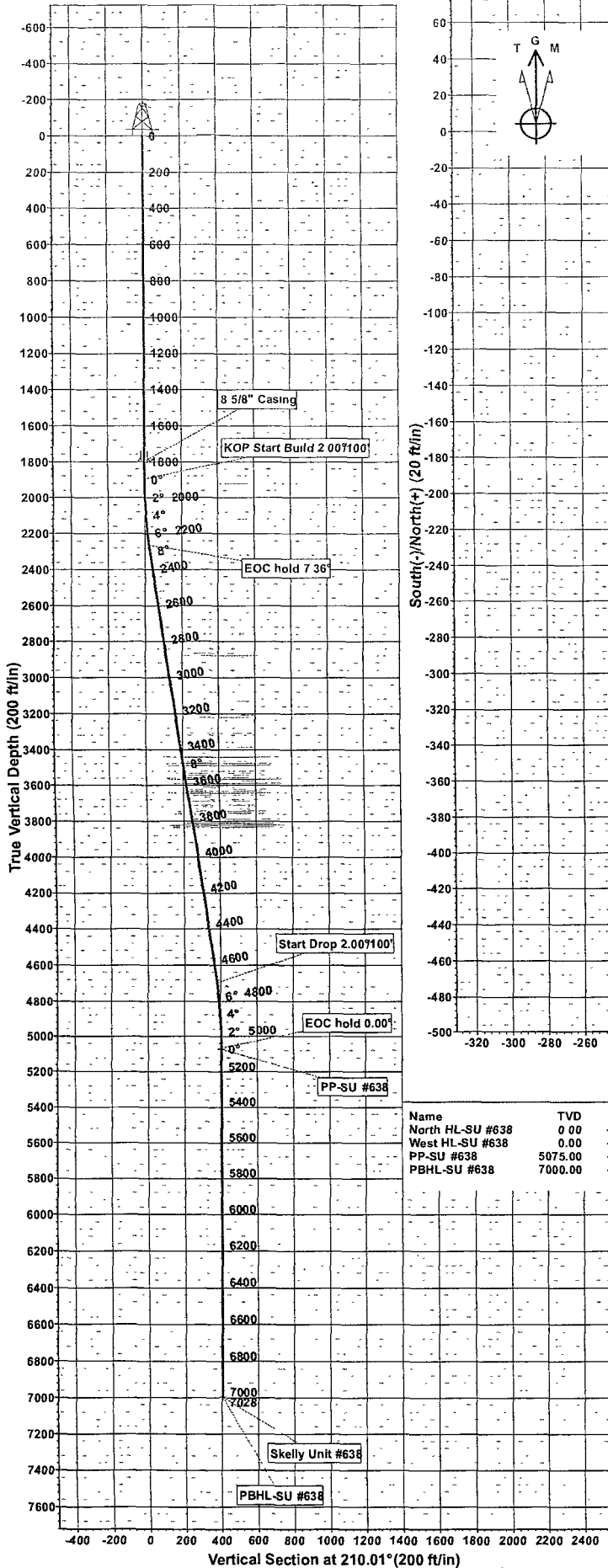
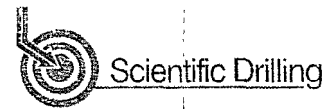
Measured Depth	Vertical Depth		Casing Diameter	Hole Diameter
(ft)	(ft)	Name	(")	(")
1,800.00	1,800.00	8 5/8" Casing	8-5/8	12-1/4

Plan Annotations

Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S	+E/-W	
1,898.00	1,898.00	0.00	0.00	KOP Start Build 2.00°/100'
2,266.17	2,265.18	-20.24	-11.69	EOC hold 7.36°
4,727.15	4,699.98	-330.15	-190.67	Start Drop 2.00°/100'
5,095.32	5,067.08	-351.49	-202.99	EOC hold 0.00°



Scientific Drilling for COG Operating LLC
Site: Eddy County, NM (NAN27 NME)
Well: Skelly Unit #638
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 #638	0.00	-341.50	-213.00	668609.50	645321.10	32° 50' 13.916 N 103° 51' 36.722 W		Rectangle (Sides: L0.00 W200.00)
West HL-SU #638	0.00	-341.50	-213.00	668609.50	645321.10	32° 50' 13.916 N 103° 51' 36.722 W		Rectangle (Sides: L100.00 W0.00)
PP-SU #638	5075.00	-351.50	-203.00	668599.50	645331.10	32° 50' 13.817 N 103° 51' 36.605 W		Point
PBHL-SU #638	7000.00	-351.50	-203.00	668599.50	645331.10	32° 50' 13.817 N 103° 51' 36.605 W		Circle (Radius: 10.00)

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	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	2319.04	8.38	210.01	2317.54	-26.49	-15.30	2.00	210.01	30.59	
4	4684.21	8.38	210.01	4657.46	-325.01	-187.70	0.00	0.00	375.32	
5	5103.24	0.00	0.00	5075.00	-351.50	-203.00	2.00	180.00	405.91	PP-SU #638
6	7028.24	0.00	0.00	7000.00	-351.50	-203.00	0.00	0.00	405.91	PBHL-SU #638

WELL DETAILS: Skelly Unit #638

+N/-S	+E/-W	Northing	Easting	Ground Level:	Latitude	Longitude	Slot
0.00	0.00	668951.00	645534.10	3878.00	32° 50' 17.286 N	103° 51' 34.207 W	

PROJECT DETAILS: Eddy County, NM (NAN27 NME)

Plan: Plan #2 - 7-7/8" Hole (Skelly Unit #638/OH)

Geodetic System: US State Plane 1927 (Exact solution) Created By: Julio Pina Date: 10-Jul-09
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level
Checked: _____ Date: _____
Reviewed: _____ Date: _____
Approved: _____ Date: _____

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	COG Operating
LEASE NO.:	LC029420A
WELL NAME & NO.:	638 Skelly Unit
SURFACE HOLE FOOTAGE:	1380' FNL & 1890' FWL
BOTTOM HOLE FOOTAGE:	1650' FNL & 1650' 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
 - Expiration deadline for spudding
- ☒ **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**

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. **Skelly Unit # 638:** Closed loop system: V- Door Northwest
4. 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.

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 # 638: Closed loop system: V- Door Northwest

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.

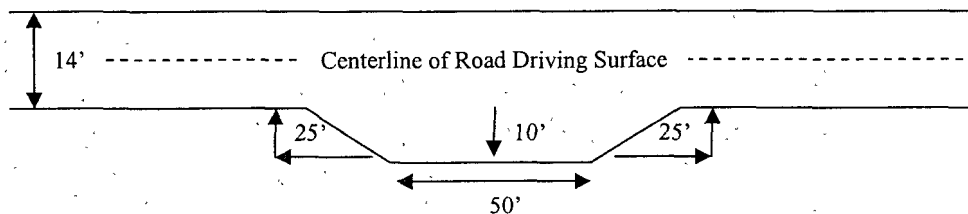
Ditching

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:

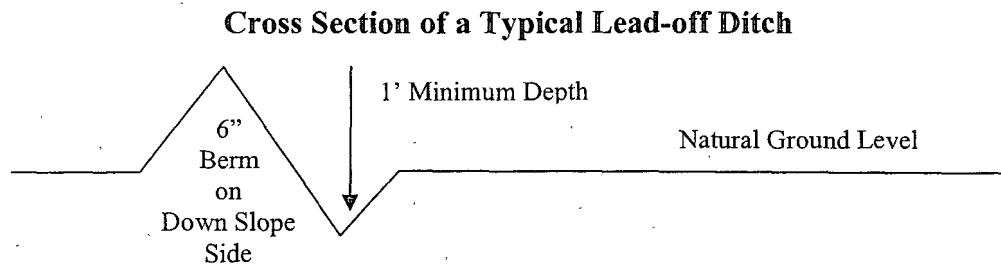
Standard Turnout – Plan View



Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill out sloping 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.



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

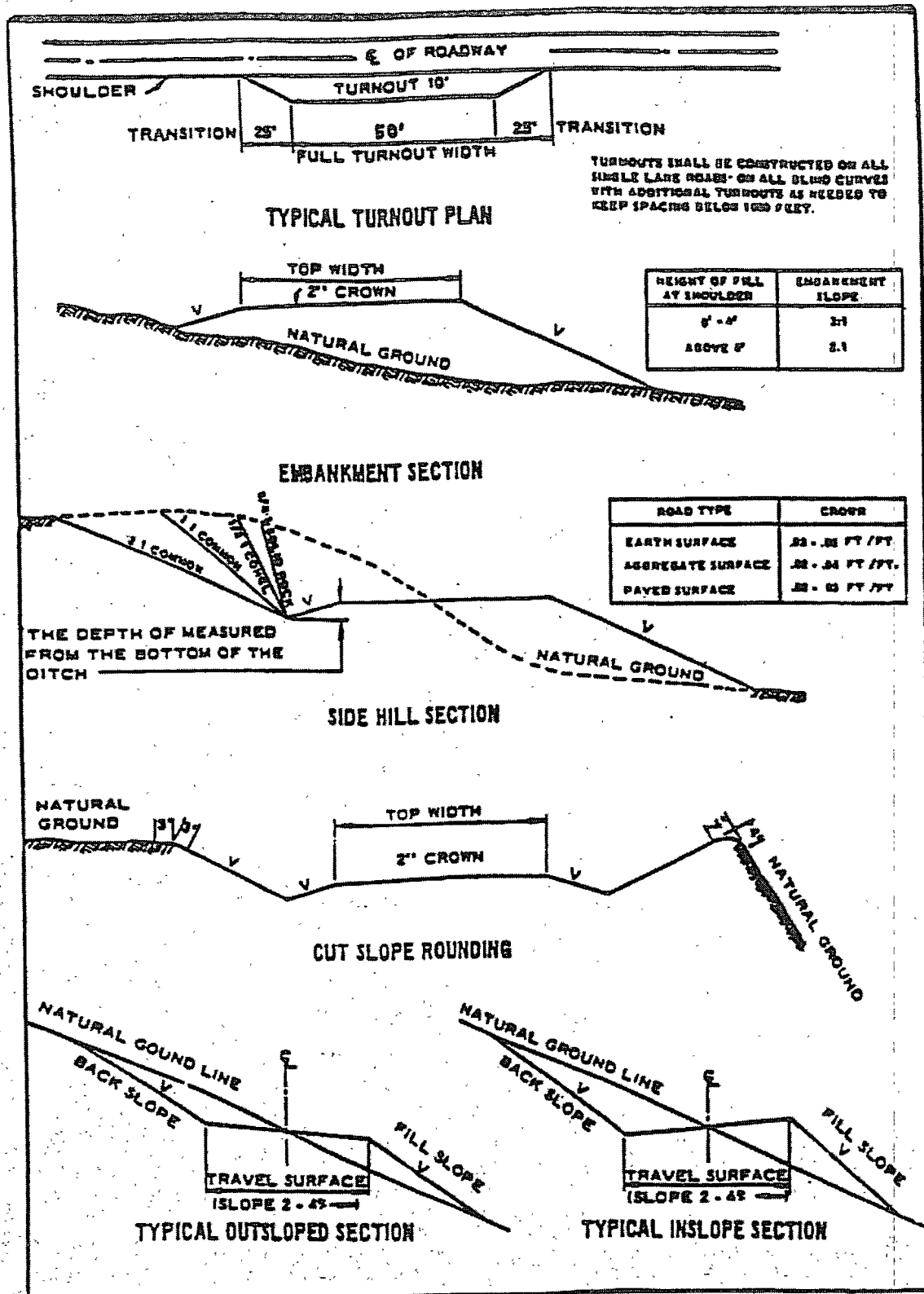
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

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 (H₂S) 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 490 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt)** and cemented to the surface. **Fresh water mud to be used to setting depth.**
 - 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

BLM LEASE NUMBER:

COMPANY NAME:

WELL NO. & NAME:

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.

BLM Serial #:
Company Reference:
Well Name and Number:

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.