

JAN 16 2009

OCD-ARTESIA

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM 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
☒ Oil Well ☐ Gas Well ☐ Other2 Name of Operator
COG Operating LLC3a Address
550 W. Texas Ave., Suite 1300 Midland, TX 797013b Phone No. (include area code).
432-685-4385

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

500' FSL & 2310' FEL
SEC. 9, T17S, R30E, UNIT O

5 Lease Serial No.

NMLC-029342B

6 If Indian, Allottee or Tribe Name

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

8. Well Name and No.

POLARIS B FEDERAL #29

9. API Well No

30-015-36665

10. Field and Pool, or Exploratory Area

Loco Hills; Glorieta Yeso 96718

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			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Request to drill directionally
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ 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.)

This well was approved at the location: 500 FSL & 2310 FEL, Section 9, R17S, R30E, UL O.

COG Operating LLC respectfully requests permission to drill this well directionally.

SHL 500 FSL & 2310 FEL, Section 9, R17S, R30E, UL O

BHL 990 FSL & 2310 FEL, Section 9, R17S, R30E, UL O

A directional plan and a revised C-102 attached for your review.

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

Robyn Odom

Title Agent

Signature

Date

12/01/2008

APPROVED

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date

JAN 13 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

WESLEY W. INGRAM

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)

Accepted for record - NMOCD

State of New Mexico

Energy, Minerals and Natural Resources Department

DISTRICT I

1625 N. FRENCH DR., ROSS, 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

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 30-015-3665	Pool Code 96718	Pool Name LOCO HILLS; GLORIETA YESO
Property Code 302547	Property Name POLARIS B FEDERAL	Well Number 29
OGRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 3682'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	9	17-S	30-E		500	SOUTH	2310	EAST	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
0	9	17-S	30-E		990	SOUTH	2310	EAST	EDDY
Dedicated Acres 40	Joint or Infill	Consolidation Code	Order No.						

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. Signature _____ Date 12/01/2008 Printed Name Robyn Odom
	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. Date Surveyed AUGUST 11, 2008 Signature & Seal of Professional Surveyor
	Certificate No. GARY EIDSON 12641 RONALD J. EIDSON 3239

COG Operating

Eddy County, NM (NAN27 NME)

Polaris B Federal #29

Polaris B Federal #29

OH

Plan: Plan #1 - 7-7/8" Hole

Standard Planning Report

06 January, 2009



Scientific Drilling
Directional Drilling Operations

Scientific Drilling Planning Report



Database: EDM 2003 16 Single User Db
Company: COG Operating
Project: Eddy County, NM (NAN27 NME)
Site: Polaris B Federal #29
Well: Polaris B Federal #29
Wellbore: OH
Design: Plan #1 - 7-7/8" Hole

Local Co-ordinate Reference: Well Polaris B Federal #29
TVD Reference: Ground Elev @ 3682 00ft (Rig ?)
MD Reference: Ground Elev @ 3682 00ft (Rig ?)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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: Polaris B Federal #29
Site Position: Northing: 670,597 300 ft Latitude: 32° 50' 34.963 N
From: Map Easting: 609,939 200 ft Longitude: 103° 58' 31.339 W
Position Uncertainty: 0 00 ft Slot Radius: " Grid Convergence: 0.19 °

Well: Polaris B Federal #29
Well Position +N-S 0 00 ft Northing: 670,597.300 ft Latitude: 32° 50' 34 963 N
+E-W 0 00 ft Easting: 609,939.200 ft Longitude: 103° 58' 31 339 W
Position Uncertainty 0 00 ft Wellhead Elevation: ft Ground Level: 3,682 00 ft

Wellbore: OH
Magnetics Model Name Sample Date Declination Dip Angle Field Strength
(°) (°) (nT)
IGRF200510 1/6/2009 8 10 60 76 49,212

Design: Plan #1 - 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 0.00 359.80

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	
1,450.00	0.00	0.00	1,450.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,039.07	11.78	359.80	2,034.93	60.35	-0.21	2.00	2.00	0.00	359.80	
3,847.31	11.78	359.80	3,805.07	429.55	-1.49	0.00	0.00	0.00	0.00	
4,436.38	0.00	0.00	4,390.00	489.90	-1.70	2.00	-2.00	0.03	180.00	PP-PBF #29
6,046.38	0.00	0.00	6,000.00	489.90	-1.70	0.00	0.00	0.00	0.00	PBHL-PBF #29

Scientific Drilling

Planning Report



Database: EDM 2003 16 Single User Db
 Company: COG Operating
 Project: Eddy County, NM (NAN27 NME)
 Site: Polaris B Federal #29
 Well: Polaris B Federal #29
 Wellbore: OH
 Design: Plan #1 - 7-7/8" Hole

Local Co-ordinate Reference: Well Polaris B Federal #29
 TVD Reference: Ground Elev @ 3682 00ft (Rig ?)
 MD Reference: Ground Elev @ 3682 00ft (Rig ?)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

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
1,350 00	0 00	0 00	1,350 00	0.00	0 00	0 00	0 00	0 00	0 00
8 5/8" Casing									
1,450 00	0 00	0 00	1,450.00	0.00	0 00	0 00	0 00	0 00	0 00
KOP Start Build 2.00°/100'									
2,039 07	11 78	359 80	2,034 93	60 35	-0.21	60 35	2 00	2 00	0 00
EOC hold 11.78°									
3,847 31	11 78	359 80	3,805 07	429.55	-1 49	429 55	0 00	0 00	0.00
Start drop 2.00°/100'									
4,436 38	0 00	0 00	4,390.00	489 90	-1 70	489.90	2 00	-2 00	0 03
EOC hold 11.78°									
6,046 38	0 00	0 00	6,000 00	489.90	-1 70	489 90	0 00	0.00	0 00

Targets

Target Name	hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
PBHL-PBF #29	- plan hits target - Point	0 00	0 00	6,000 00	489 90	-1 70	671,087.200	609,937 500	32° 50' 39.810 N	103° 58' 31 339 W
PP-PBF #29	- plan hits target - Point	0 00	0 00	4,390 00	489.90	-1 70	671,087 200	609,937 500	32° 50' 39 810 N	103° 58' 31 339 W

Casing Points

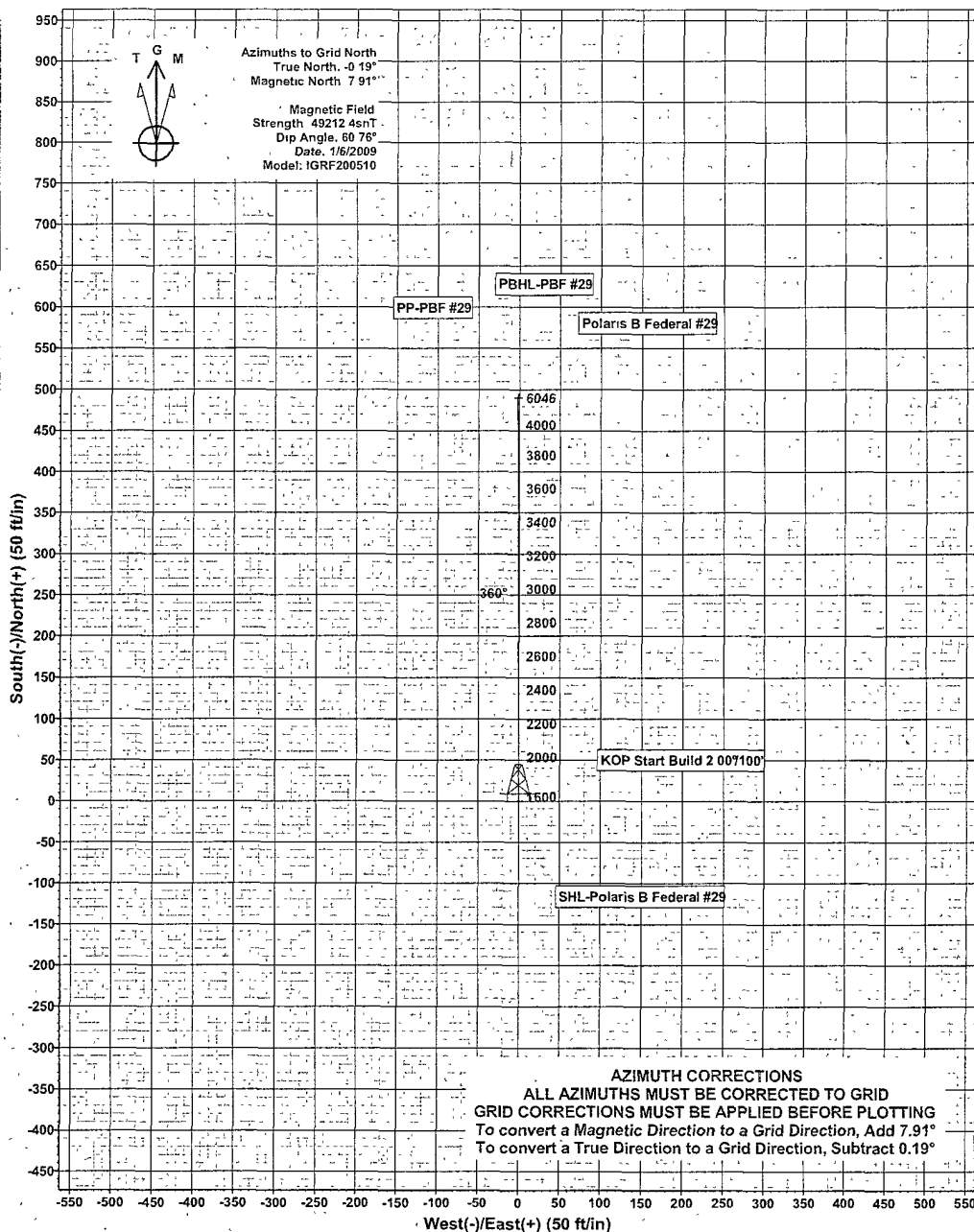
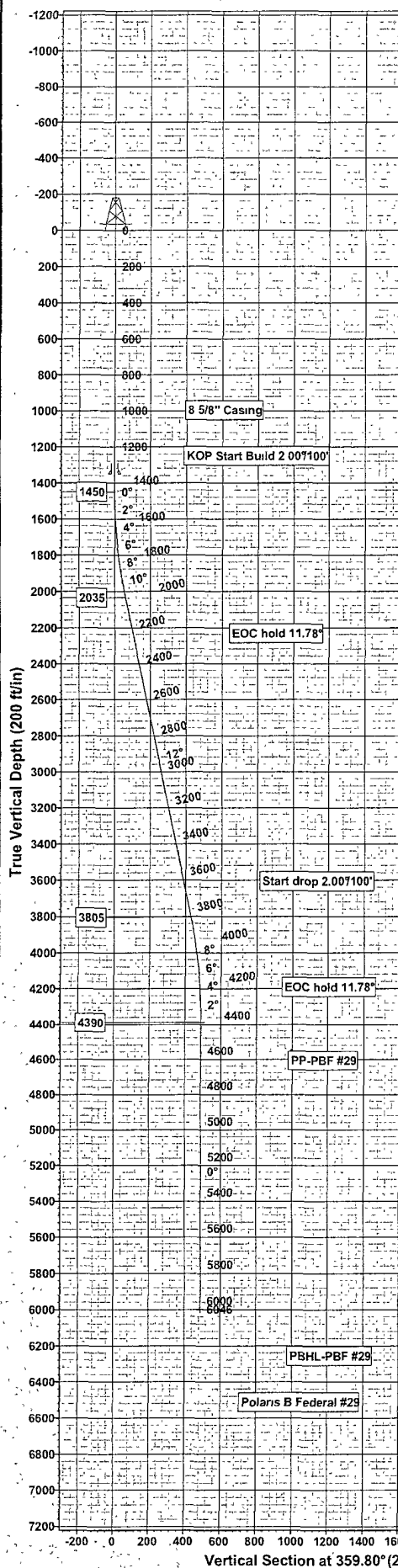
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
1,350.00	1,350.00	8 5/8" Casing	8-5/8	10-5/8

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
1,450.00	1,450 00	0.00	0 00	KOP Start Build 2 00°/100'
2,039.07	2,034 93	60 35	-0 21	EOC hold 11 78°
3,847 31	3,805.07	429.55	-1 49	Start drop 2 00°/100'
4,436 38	4,390 00	489 90	-1 70	EOC hold 11 78°

COG Operating

Scientific Drilling for COG Operating
Site: Eddy County, NM (NAN27 NME)
Well: Polaris B Federal #29
Wellbore: OH
Design: Plan #1 - 7-7/8" Hole



WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PP-PBF #29	4390.00	489.90	-1.70	671087.200	609937.500	32° 50' 39.810 N	103° 58' 31.339 W	Point
PBHL-PBF #29	6000.00	489.90	-1.70	671087.200	609937.500	32° 50' 39.810 N	103° 58' 31.339 W	Point

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	1450.00	0.00	0.00	1450.00	0.00	0.00	0.00	0.00	0.00	
3	2039.07	11.78	359.80	2034.93	60.35	-0.21	2.00	359.80	60.35	
4	3847.31	11.78	359.80	3805.07	429.55	-1.49	0.00	0.00	429.55	
5	4436.38	0.00	0.00	4390.00	489.90	-1.70	2.00	180.00	489.90	PP-PBF #29
6	6046.38	0.00	0.00	6000.00	489.90	-1.70	0.00	0.00	489.90	PBHL-PBF #29

WELL DETAILS: Polaris B Federal #29

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	670597.300	609939.200	32° 50' 34.963 N	103° 58' 31.339 W	

PROJECT DETAILS: Eddy County, NM (NAN27 NME) Plan: Plan #1 - 7-7/8" Hole (Polaris B Federal #29/OH)

Geodetic System: US State Plane 1927 (Exact solution) Created By: Julio Pina Date: 06-Jan-09
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866 Checked: Date:
Zone: New Mexico East 3001 Reviewed: Date:
System Datum: Mean Sea Level Approved: Date: