

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
11885 S. ST. FRANCIS DR., SANTA FE, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

RECEIVED

OCT 19 2012

NM OCD ARTESIA

Form C-102
Revised July 16, 2010
Submit to Appropriate
District Office

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-40814	Pool Code 50270	Pool Name Penasco Draw; SA-Yeso (assoc)
Property Code 38873	Property Name FALABELLA 31 FEE	Well Number 1H
OGRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 3440'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
4	31	18-S	26-E		150	SOUTH	380	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
1	31	18-S	26-E		330	NORTH	380	WEST	EDDY

Dedicated Acres 156	Joint or Infill	Consolidation Code	Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

Project Area Producing Area LOT 1: 39.00 AC. LOT 2: 39.00 AC. LOT 3: 39.00 AC. LOT 4: 39.00 AC. Estimated Completed Interval: 330 FSL 380 FWL	GEODETIC COORDINATES NAD 27 NME SURFACE LOCATION Y=617365.4 N X=470934.8 E LAT.=32.697200° N LONG.=104.427815° W BOTTOM HOLE LOCATION Y=622202.5 N X=470948.0 E TABLE OF SECTION, QUARTER & SIXTEENTH CORNER COORDINATES ④ - Y=622530.7 N, X=470569.0 E ⑤ - Y=622536.3 N, X=471842.3 E ⑥ - Y=617216.7 N, X=470554.5 E ⑦ - Y=617212.5 N, X=471839.4 E	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. 10-19-12 Date Kelly J. Holly Printed Name kholly@concho.com E-mail Address
	SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. SEPTEMBER 8, 2011 Date of Survey Signature & Seal of Professional Surveyor: Certificate Number: 12641 Professional Surveyor: 3239 DSS JWSC W.O.: 11.11.1878	

30-015-40814



COG Operating LLC

Eddy County, NM (NAN27 NME)

Falabella 31 Fee #1H

OH

Plan #1 8-3/4" Hole

Surface: 150' FSL, 380' FWL, Sec 31, T18S, R26E, Lot 4

PP: 330' FSL, 380' FWL, Sec 31, T18S, R26E, Lot 4

BHL: 330' FNL, 380' FWL, Sec 31, T18S, R26E, Lot 1

Standard Planning Report

16 October, 2012





Scientific Drilling
Planning Report



Database: EDM 5000.1 Single User Db
Company: COG Operating LLC
Project: Eddy County, NM (NAN27 NME)
Site: Falabella 31 Fee
Well: #1H
Wellbore: OH
Design: Plan #1 8-3/4" Hole

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Well #1H
GL Elev @ 3440.00usft
GL Elev @ 3440.00usft
Grid
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 Using geodetic scale factor

Site: Falabella 31 Fee
Site Position: Northing: 617,365.40 usft Latitude: 32° 41' 49.921 N
From: Map Easting: 470,934.80 usft Longitude: 104° 25' 40.136 W
Position Uncertainty: 0 00 usft Slot Radius: 13-3/16 " Grid Convergence: -0 05 °

Well: #1H
Well Position: +N/-S 0 00 usft Northing: 617,365.40 usft Latitude: 32° 41' 49.921 N
+E/-W 0 00 usft Easting: 470,934.80 usft Longitude: 104° 25' 40.136 W
Position Uncertainty: 0 00 usft Wellhead Elevation: Ground Level: 3,440 00 usft

Wellbore: OH
Magnetics: Model Name Sample Date Declination Dip Angle Field Strength
(°) (°) (nT)
IGRF2010 10/16/2012 7.85 60 44 48,671

Design: Plan #1 8-3/4" Hole
Audit Notes:
Version: Phase: PLAN Tie On Depth: 0 00
Vertical Section: Depth From (TVD) +N/-S +E/-W Direction
(usft) (usft) (usft) (°)
0 00 0 00 0 00 0 16

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	
2,272.54	0 00	0 00	2,272.54	0 00	0 00	0 00	0 00	0 00	0 00	
3,022.54	90 00	0.16	2,750 00	477 46	1 30	12.00	12.00	0 00	0 16	
7,382.62	90 00	0.16	2,750 00	4,837 54	13 20	0.00	0.00	0.00	0 00 PBHL	



Scientific Drilling
Planning Report



Database: EDM 5000.1 Single User Db
Company: COG Operating LLC
Project: Eddy County, NM (NAN27 NME)
Site: Falabella 31 Fee
Well: #1H
Wellbore: OH
Design: Plan #1 8-3/4" Hole

Local Co-ordinate Reference:
TYD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Well #1H
GL Elev @ 3440.00usft
GL Elev @ 3440.00usft
Grid
Minimum Curvature

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,272.54	0.00	0.00	2,272.54	0.00	0.00	0.00	0.00	0.00	0.00
KOP Start Build 12.00°/100'									
2,300.00	3.30	0.16	2,299.98	0.79	0.00	0.79	12.00	12.00	0.00
2,400.00	15.30	0.16	2,398.49	16.91	0.05	16.91	12.00	12.00	0.00
2,500.00	27.30	0.16	2,491.49	53.17	0.15	53.17	12.00	12.00	0.00
2,600.00	39.30	0.16	2,574.93	107.96	0.29	107.96	12.00	12.00	0.00
2,700.00	51.30	0.16	2,645.14	178.91	0.49	178.91	12.00	12.00	0.00
2,701.42	51.47	0.16	2,646.03	180.01	0.49	180.01	12.00	12.00	0.00
PP=330° FSL									
2,800.00	63.30	0.16	2,699.07	262.90	0.72	262.90	12.00	12.00	0.00
2,900.00	75.30	0.16	2,734.36	356.27	0.97	356.27	12.00	12.00	0.00
3,000.00	87.30	0.16	2,749.47	454.94	1.24	454.94	12.00	12.00	0.00
3,022.54	90.00	0.16	2,750.00	477.47	1.30	477.47	12.00	12.00	0.00
Land EOC hold 90.00°									
3,100.00	90.00	0.16	2,750.00	554.93	1.51	554.93	0.00	0.00	0.00
3,200.00	90.00	0.16	2,750.00	654.93	1.79	654.93	0.00	0.00	0.00
3,300.00	90.00	0.16	2,750.00	754.93	2.06	754.93	0.00	0.00	0.00
3,400.00	90.00	0.16	2,750.00	854.93	2.33	854.93	0.00	0.00	0.00
3,500.00	90.00	0.16	2,750.00	954.93	2.61	954.93	0.00	0.00	0.00
3,600.00	90.00	0.16	2,750.00	1,054.93	2.88	1,054.93	0.00	0.00	0.00
3,700.00	90.00	0.16	2,750.00	1,154.93	3.15	1,154.93	0.00	0.00	0.00
3,800.00	90.00	0.16	2,750.00	1,254.93	3.42	1,254.93	0.00	0.00	0.00
3,900.00	90.00	0.16	2,750.00	1,354.92	3.70	1,354.93	0.00	0.00	0.00
4,000.00	90.00	0.16	2,750.00	1,454.92	3.97	1,454.93	0.00	0.00	0.00
4,100.00	90.00	0.16	2,750.00	1,554.92	4.24	1,554.93	0.00	0.00	0.00
4,200.00	90.00	0.16	2,750.00	1,654.92	4.52	1,654.93	0.00	0.00	0.00
4,300.00	90.00	0.16	2,750.00	1,754.92	4.79	1,754.93	0.00	0.00	0.00
4,400.00	90.00	0.16	2,750.00	1,854.92	5.06	1,854.93	0.00	0.00	0.00
4,500.00	90.00	0.16	2,750.00	1,954.92	5.33	1,954.93	0.00	0.00	0.00
4,600.00	90.00	0.16	2,750.00	2,054.92	5.61	2,054.93	0.00	0.00	0.00
4,700.00	90.00	0.16	2,750.00	2,154.92	5.88	2,154.93	0.00	0.00	0.00
4,800.00	90.00	0.16	2,750.00	2,254.92	6.15	2,254.93	0.00	0.00	0.00
4,900.00	90.00	0.16	2,750.00	2,354.92	6.43	2,354.93	0.00	0.00	0.00
5,000.00	90.00	0.16	2,750.00	2,454.92	6.70	2,454.93	0.00	0.00	0.00
5,100.00	90.00	0.16	2,750.00	2,554.92	6.97	2,554.93	0.00	0.00	0.00
5,200.00	90.00	0.16	2,750.00	2,654.92	7.25	2,654.93	0.00	0.00	0.00
5,300.00	90.00	0.16	2,750.00	2,754.92	7.52	2,754.93	0.00	0.00	0.00
5,400.00	90.00	0.16	2,750.00	2,854.92	7.79	2,854.93	0.00	0.00	0.00
5,500.00	90.00	0.16	2,750.00	2,954.92	8.06	2,954.93	0.00	0.00	0.00
5,600.00	90.00	0.16	2,750.00	3,054.92	8.34	3,054.93	0.00	0.00	0.00
5,700.00	90.00	0.16	2,750.00	3,154.92	8.61	3,154.93	0.00	0.00	0.00
5,800.00	90.00	0.16	2,750.00	3,254.92	8.88	3,254.93	0.00	0.00	0.00
5,900.00	90.00	0.16	2,750.00	3,354.92	9.16	3,354.93	0.00	0.00	0.00
6,000.00	90.00	0.16	2,750.00	3,454.92	9.43	3,454.93	0.00	0.00	0.00
6,100.00	90.00	0.16	2,750.00	3,554.92	9.70	3,554.93	0.00	0.00	0.00
6,200.00	90.00	0.16	2,750.00	3,654.92	9.97	3,654.93	0.00	0.00	0.00
6,300.00	90.00	0.16	2,750.00	3,754.92	10.25	3,754.93	0.00	0.00	0.00
6,400.00	90.00	0.16	2,750.00	3,854.92	10.52	3,854.93	0.00	0.00	0.00
6,500.00	90.00	0.16	2,750.00	3,954.92	10.79	3,954.93	0.00	0.00	0.00
6,600.00	90.00	0.16	2,750.00	4,054.91	11.07	4,054.93	0.00	0.00	0.00
6,700.00	90.00	0.16	2,750.00	4,154.91	11.34	4,154.93	0.00	0.00	0.00
6,800.00	90.00	0.16	2,750.00	4,254.91	11.61	4,254.93	0.00	0.00	0.00



Scientific Drilling
Planning Report



Database: EDM 5000.1 Single User Db
Company: COG Operating LLC
Project: Eddy County, NM (NAN27 NME)
Site: Falabella 31 Fee
Well: #1H
Wellbore: OH
Design: Plan #1 8-3/4" Hole

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Well #1H
GL Elev @ 3440.00usft
GL Elev @ 3440.00usft
Grid
Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,900.00	90.00	0.16	2,750.00	4,354.91	11.88	4,354.93	0.00	0.00	0.00
7,000.00	90.00	0.16	2,750.00	4,454.91	12.16	4,454.93	0.00	0.00	0.00
7,100.00	90.00	0.16	2,750.00	4,554.91	12.43	4,554.93	0.00	0.00	0.00
7,200.00	90.00	0.16	2,750.00	4,654.91	12.70	4,654.93	0.00	0.00	0.00
7,300.00	90.00	0.16	2,750.00	4,754.91	12.98	4,754.93	0.00	0.00	0.00
7,382.62	90.00	0.16	2,750.00	4,837.54	13.20	4,837.55	0.00	0.00	0.00
PBHL									

Design Targets

Target Name	Dip Angle (°)	Dip Dir (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
misses target									
Shape									
PP=330' FSL	0.00	360.00	2,646.02	180.02	0.49	617,545.41	470,935.29	32° 41' 51.702 N	104° 25' 40.132 W
- plan misses target center by 0.01usft at 2701.42usft MD (2646.03 TVD, 180.02 N, 0.49 E)									
- Point									
PBHL	0.00	0.00	2,750.00	4,837.54	13.20	622,202.50	470,948.00	32° 42' 37.787 N	104° 25' 40.032 W
- plan hits target center									
- Point									

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,272.54	2,272.54	0.00	0.00	KOP Start Build 12.00°/100°
3,022.54	2,750.00	477.47	1.30	Land EOC hold 90.00°



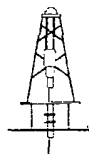
Falabella 31 Fee #1H
Eddy County, NM (NAN27 NME)
Northing: (Y) 617365.40
Easting: (X) 470934.80
Plan #1 8-3/4" Hole



Azimuths to Grid North
True North 0 05°
Magnetic North 7 90°

Magnetic Field
Strength 48671.4 nT
Dip Angle 60.44°
Date 10/15/2012
Model IGRF2010

To convert a Magnetic Direction to a Grid Direction, Add 7.90°
To convert a True Direction to a Grid Direction, Add 0.05°



Ground Level 3440.00

Job File
2010 October 16 2012
Scientific Drilling
2034 Trade Drive
Midland, TX 79703

WELL DETAILS:						
Ground Level: 3440.00						
+N/-S 0 00	+E/-W 0 00	Northing 617365.40	Easting 470934.80	Latitude 32° 41' 49.921 N	Longitude 104° 25' 40.136 W	

SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Diag	TFace	VSect	Target
0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	
2272.54	0.00	0.00	2272.54	0 00	0 00	0 00	0 00	0 00	
3022.54	90.00	0.16	2750.00	477.46	13.20	12.00	0.16	477.46	
7382.62	90.00	0.16	2750.00	4837.54	13.20	0 00	0 00	4837.55	PBHL

DESIGN TARGET DETAILS					
Name	TVD	+N/-S	+E/-W	Northing	Easting
PP=330° FSL	2646.02	180.02	0.49	617545.41	470935.29
PBHL	2750.00	4837.54	13.20	622202.50	470948.00

SITE DETAILS: Falabella 31 Fee	
Site Centre Northing:	617365.40
Easting:	470934.80
Positional Uncertainty	0.00
Convergence	-0.05
Local North	Grid

Map System	US State Plane 1927 (Exact solution)
Datum	NAD 1927 (NADCON CONUS)
Ellipsoid	Clarke 1866
Zone Name	New Mexico East 3001
Local Origin	Well #1H Grid North
Latitude	32° 41' 49.921 N
Longitude	104° 25' 40.136 W
Grid East	470934.80
Grid North	617365.40
Scale Factor	1.000
Geomagnetic Model	IGRF2010
Sample Date	16-Oct-12
Magnetic Declination	7.85°
Dip Angle from Horizontal	60.44°
Magnetic Field Strength	48671
To convert a Magnetic Direction to a Grid Direction, Add 7.90°	
To convert a Magnetic Direction to a True Direction, Add 7.85° East	
To convert a True Direction to a Grid Direction, Add 0.05°	

PROJECT DETAILS: Eddy County, NM (NAN27 NME)	
Geodetic System:	US State Plane 1927 (Exact solution)
Datum:	NAD 1927 (NADCON CONUS)
Ellipsoid:	Clarke 1866
Zone:	New Mexico East 3001
System Datum:	Mean Sea Level

