

DISTRICT I
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DISTRICT III
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Phone: (505) 334-6178 Fax: (505) 334-6170
DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015- 42431	Pool Code 3250	Pool Name Atoka; Glorieta Yeso
Property Code 39962	Property Name BRAGG 10 FEE	Well Number 2H
OGRIID No. 229137	Operator Name COG OPERATING, LLC	Elevation 3333'

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	10	19-S	26-E		150	SOUTH	1655	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
C	10	19-S	26-E		330	NORTH	1672	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			

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

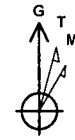
	GEODETIC COORDINATES NAD 27 NME BOTTOM HOLE LOCATION Y=611665.1 N X=487934.9 E LAT.=32.681561° N LONG.=104.372546° W	OPERATOR CERTIFICATION I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest 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. <i>[Signature]</i> 6-12-14 Signature Date Kelly J. Holly Printed Name kholly@concho.com E-mail Address
	CORNER COORDINATES TABLE NAD 27 NME A - Y=611997.8 N, X=487597.1 E B - Y=611986.9 N, X=488941.2 E C - Y=606633.0 N, X=487722.8 E D - Y=606627.3 N, X=489045.2 E	SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. MARCH 27, 2014 Date of Survey Signature & Seal of Professional Surveyor
	GEODETIC COORDINATES NAD 27 NME SURFACE LOCATION Y=606781.6 N X=488051.6 E LAT.=32.668137° N LONG.=104.372161° W	<i>[Signature]</i> 4/22/14 Certificate Number Gary G. Eidson 12641 Ronald U. Eidson 3239 ACK AVSC W.O. 14110315



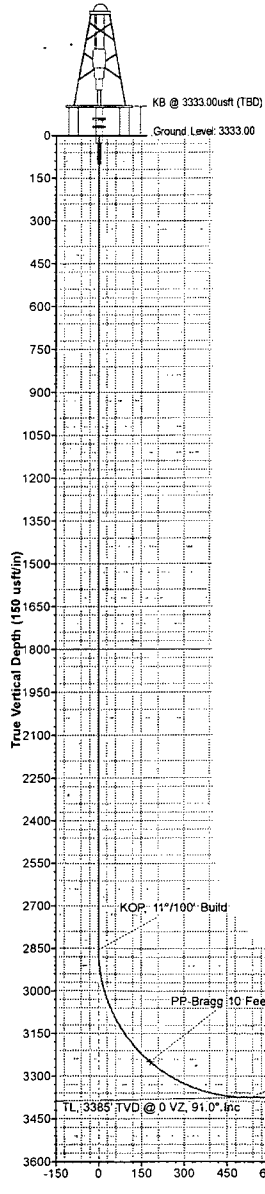
Project: Eddy County, NM (NAD27 NME)
Site: Bragg 10 Fee
Well: #2H
Wellbore: WB1
Design: Plan #1 05-06-14



PHOENIX
TECHNOLOGY SERVICES



Azimuths to Grid North
True North: 0.02°
Magnetic North: 7.65°
Magnetic Field
Strength: 48506.9nT
Dip Angle: 60.39°
Date: 05/06/2014
Model: IGRF2010_14

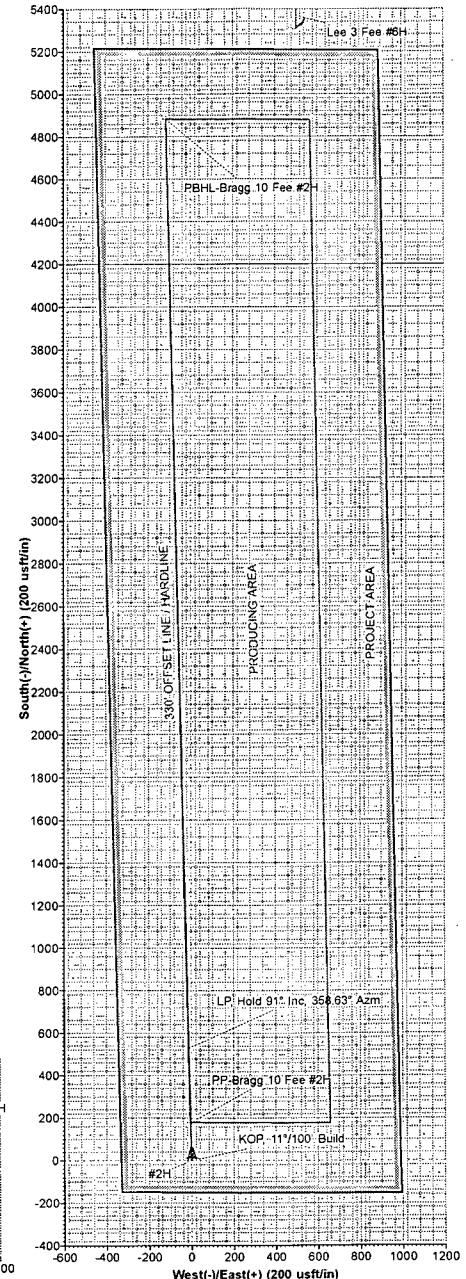
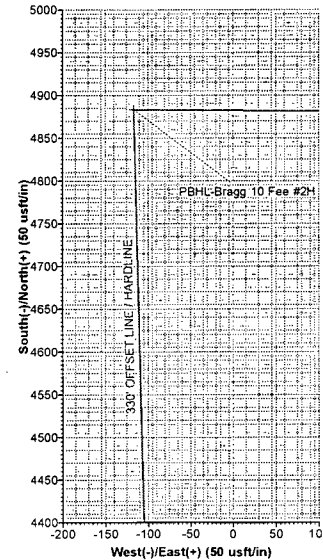
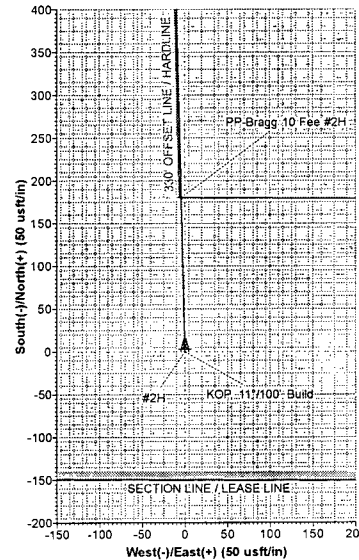


WELL DETAILS									
+N/-S		+E/-W		Northing	Ground Level: 3333.00	Easting	Latitude	Longitude	
0.00		0.00		606781.60	488051.60	32° 40' 5.29362 N	104° 22' 19.78106 W		

SECTION DETAILS									
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	2854.96	0.00	0.00	2854.96	0.00	0.00	0.00	0.00	0.00
3	3682.24	91.00	358.63	3375.76	529.81	-12.86	11.00	358.63	529.96
4	8037.83	91.00	358.63	3299.74	4883.50	-116.70	0.00	4884.89	PBHL-Bragg 10 Fee #2H

DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	
PP-Bragg 10 Fee #2H	3248.65	180.00	-4.30	606961.60	488047.30	32° 40' 7.07483 N	104° 22' 19.83215 W	Point	
plan hits target center									
PBHL-Bragg 10 Fee #2H	3299.74	4883.50	-116.70	611865.10	487934.90	32° 40' 53.61867 N	104° 22' 21.16741 W	Point	
plan hits target center									

LEGEND									
— #6H, WB1/Job #1311177, Surveys (Silver Oak 3) V0									
— #6H, WB2/Job #1311177, Surveys (Silver Oak 3) V0									
— Plan #1 05-06-14									



Created By: Ju60 Pfae Date: 16:44, May 06 2014



COG Operating LLC

Eddy County, NM (NAD27 NME)

Bragg 10 Fee

#2H

WB1

Plan: Plan #1 05-06-14

Surface: 150' FSL, 1655' FWL, Sec 10, T19S, R26E, Unit N

PP: 330' FSL, 1655' FWL, Sec 10, T19S, R26E, Unit N

BHL: 330' FNL, 1672' FWL, Sec 10, T19S, R26E, Unit C

Standard Planning Report

06 May, 2014





Phoenix Technology Services
Planning Report



Database:	GCR DB	Local Co-ordinate Reference:	Well: #2H
Company:	COG Operating LLC	TVD Reference:	KB @ 3333.00usft (TBD)
Project:	Eddy County, NM (NAD27 NME)	MD Reference:	KB @ 3333.00usft (TBD)
Site:	Bragg 10 Fee	North Reference:	Grid
Well:	#2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	WB1		
Design:	Plan #1 05-06-14		

Project	Eddy County, NM (NAD27 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	Bragg 10 Fee		
Site Position:		Northing:	606,787.30 usft
From:	Map	Easting:	486,726.30 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 40' 5.34496 N
		Longitude:	104° 22' 35.28540 W
		Grid Convergence:	-0.02 °

Well	#2H		
Well Position	+N/-S	-5.70 usft	Northing:
	+E/-W	1,325.30 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	
		Latitude:	32° 40' 5.29362 N
		Longitude:	104° 22' 19.78106 W
		Ground Level:	3,333.00 usft

Wellbore	WB1		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2010_14	05/06/14	7.63
			Dip Angle
			(°)
			60.39
			Field Strength
			(nT)
			48,507

Design	Plan #1 05-06-14		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°)
			358.63

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,854.96	0.00	0.00	2,854.96	0.00	0.00	0.00	0.00	0.00	0.00	
3,682.24	91.00	358.63	3,375.76	529.81	-12.66	11.00	11.00	0.00	358.63	
8,037.83	91.00	358.63	3,299.74	4,883.50	-116.70	0.00	0.00	0.00	0.00	PBHL-Bragg 10 Fee #



Phoenix Technology Services

Planning Report



Database:	GCR DB	Local Co-ordinate Reference:	Well #2H
Company:	COG Operating LLC	TVD Reference:	KB @ 3333.00usft (TBD)
Project:	Eddy County, NM (NAD27 NME)	MD Reference:	KB @ 3333.00usft (TBD)
Site:	Bragg 10 Fee	North Reference:	Grid
Well:	#2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	WB1		
Design:	Plan #1 05-06-14		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,854.96	0.00	0.00	2,854.96	0.00	0.00	0.00	0.00	0.00	0.00	
KOP, 11°/100' Build										
2,900.00	4.95	358.63	2,899.94	1.95	-0.05	1.95	11.00	11.00	0.00	
3,000.00	15.95	358.63	2,998.13	20.06	-0.48	20.06	11.00	11.00	0.00	
3,100.00	26.95	358.63	3,091.06	56.57	-1.35	56.58	11.00	11.00	0.00	
3,200.00	37.95	358.63	3,175.31	110.13	-2.63	110.16	11.00	11.00	0.00	
3,300.00	48.95	358.63	3,247.80	178.78	-4.27	178.83	11.00	11.00	0.00	
3,301.61	49.13	358.63	3,248.85	180.00	-4.30	180.05	11.00	11.00	0.00	
PP-Bragg 10 Fee #2H										
3,400.00	59.95	358.63	3,305.84	260.00	-6.21	260.07	11.00	11.00	0.00	
3,500.00	70.95	358.63	3,347.32	350.80	-8.38	350.90	11.00	11.00	0.00	
3,600.00	81.95	358.63	3,370.71	447.84	-10.70	447.96	11.00	11.00	0.00	
3,679.71	90.72	358.63	3,375.79	527.28	-12.60	527.43	11.00	11.00	0.00	
TL, 3385' TVD @ 0 VZ, 91.0° Inc										
3,682.24	91.00	358.63	3,375.76	529.81	-12.66	529.96	11.00	11.00	0.00	
LP, Hold 91° Inc, 358.63° Azm										
3,700.00	91.00	358.63	3,375.45	547.57	-13.09	547.72	0.00	0.00	0.00	
3,800.00	91.00	358.63	3,373.70	647.52	-15.47	647.71	0.00	0.00	0.00	
3,900.00	91.00	358.63	3,371.96	747.48	-17.86	747.69	0.00	0.00	0.00	
4,000.00	91.00	358.63	3,370.21	847.43	-20.25	847.68	0.00	0.00	0.00	
4,100.00	91.00	358.63	3,368.46	947.39	-22.64	947.66	0.00	0.00	0.00	
4,200.00	91.00	358.63	3,366.72	1,047.35	-25.03	1,047.65	0.00	0.00	0.00	
4,300.00	91.00	358.63	3,364.97	1,147.30	-27.42	1,147.63	0.00	0.00	0.00	
4,400.00	91.00	358.63	3,363.23	1,247.26	-29.81	1,247.61	0.00	0.00	0.00	
4,500.00	91.00	358.63	3,361.48	1,347.22	-32.19	1,347.60	0.00	0.00	0.00	
4,600.00	91.00	358.63	3,359.74	1,447.17	-34.58	1,447.58	0.00	0.00	0.00	
4,700.00	91.00	358.63	3,357.99	1,547.13	-36.97	1,547.57	0.00	0.00	0.00	
4,800.00	91.00	358.63	3,356.25	1,647.08	-39.36	1,647.55	0.00	0.00	0.00	
4,900.00	91.00	358.63	3,354.50	1,747.04	-41.75	1,747.54	0.00	0.00	0.00	
5,000.00	91.00	358.63	3,352.76	1,847.00	-44.14	1,847.52	0.00	0.00	0.00	
5,100.00	91.00	358.63	3,351.01	1,946.95	-46.53	1,947.51	0.00	0.00	0.00	
5,200.00	91.00	358.63	3,349.27	2,046.91	-48.91	2,047.49	0.00	0.00	0.00	
5,300.00	91.00	358.63	3,347.52	2,146.86	-51.30	2,147.48	0.00	0.00	0.00	
5,400.00	91.00	358.63	3,345.78	2,246.82	-53.69	2,247.46	0.00	0.00	0.00	
5,500.00	91.00	358.63	3,344.03	2,346.78	-56.08	2,347.45	0.00	0.00	0.00	
5,600.00	91.00	358.63	3,342.29	2,446.73	-58.47	2,447.43	0.00	0.00	0.00	
5,700.00	91.00	358.63	3,340.54	2,546.69	-60.86	2,547.42	0.00	0.00	0.00	
5,800.00	91.00	358.63	3,338.80	2,646.65	-63.25	2,647.40	0.00	0.00	0.00	
5,900.00	91.00	358.63	3,337.05	2,746.60	-65.63	2,747.39	0.00	0.00	0.00	
6,000.00	91.00	358.63	3,335.31	2,846.56	-68.02	2,847.37	0.00	0.00	0.00	
6,100.00	91.00	358.63	3,333.56	2,946.51	-70.41	2,947.36	0.00	0.00	0.00	
6,200.00	91.00	358.63	3,331.81	3,046.47	-72.80	3,047.34	0.00	0.00	0.00	
6,300.00	91.00	358.63	3,330.07	3,146.43	-75.19	3,147.33	0.00	0.00	0.00	
6,400.00	91.00	358.63	3,328.32	3,246.38	-77.58	3,247.31	0.00	0.00	0.00	
6,500.00	91.00	358.63	3,326.58	3,346.34	-79.97	3,347.30	0.00	0.00	0.00	
6,600.00	91.00	358.63	3,324.83	3,446.30	-82.36	3,447.28	0.00	0.00	0.00	
6,700.00	91.00	358.63	3,323.09	3,546.25	-84.74	3,547.26	0.00	0.00	0.00	
6,800.00	91.00	358.63	3,321.34	3,646.21	-87.13	3,647.25	0.00	0.00	0.00	
6,900.00	91.00	358.63	3,319.60	3,746.16	-89.52	3,747.23	0.00	0.00	0.00	
7,000.00	91.00	358.63	3,317.85	3,846.12	-91.91	3,847.22	0.00	0.00	0.00	
7,100.00	91.00	358.63	3,316.11	3,946.08	-94.30	3,947.20	0.00	0.00	0.00	
7,200.00	91.00	358.63	3,314.36	4,046.03	-96.69	4,047.19	0.00	0.00	0.00	
7,300.00	91.00	358.63	3,312.62	4,145.99	-99.08	4,147.17	0.00	0.00	0.00	



Phoenix Technology Services
Planning Report



Database:	GCR DB	Local Co-ordinate Reference:	Well #2H
Company:	COG Operating LLC	TVD Reference:	KB @ 3333.00usft (TBD)
Project:	Eddy County, NM (NAD27 NME)	MD Reference:	KB @ 3333.00usft (TBD)
Site:	Bragg 10 Fee	North Reference:	Grid
Well:	#2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	WB1		
Design:	Plan #1 05-06-14		

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)
7,400.00	91.00	358.63	3,310.87	4,245.95	-101.46	4,247.16	0.00	0.00	0.00
7,500.00	91.00	358.63	3,309.13	4,345.90	-103.85	4,347.14	0.00	0.00	0.00
7,600.00	91.00	358.63	3,307.38	4,445.86	-106.24	4,447.13	0.00	0.00	0.00
7,700.00	91.00	358.63	3,305.64	4,545.81	-108.63	4,547.11	0.00	0.00	0.00
7,800.00	91.00	358.63	3,303.89	4,645.77	-111.02	4,647.10	0.00	0.00	0.00
7,900.00	91.00	358.63	3,302.15	4,745.73	-113.41	4,747.08	0.00	0.00	0.00
8,000.00	91.00	358.63	3,300.40	4,845.68	-115.80	4,847.07	0.00	0.00	0.00
8,037.83	91.00	358.63	3,299.74	4,883.50	-116.70	4,884.89	0.00	0.00	0.00
TD at 8037.83 - PBHL-Bragg 10 Fee #2H									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PP-Bragg 10 Fee #2H	0.00	0.00	3,248.85	180.00	-4.30	606,961.60	488,047.30	32° 40' 7.07483 N	104° 22' 19.83215 W
- plan hits target center									
- Point									
PBHL-Bragg 10 Fee #2H	0.00	0.00	3,299.74	4,883.50	-116.70	611,665.10	487,934.90	32° 40' 53.61867 N	104° 22' 21.16741 W
- plan hits target center									
- Point									

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,679.71	3,375.79	TL, 3385' TVD @ 0 VZ, 91.0° Inc		-1.00	358.63

Plan Annotations

Measured	Vertical	Local Coordinates		Comment
Depth	Depth	+N/-S	+E/-W	
(usft)	(usft)	(usft)	(usft)	
2,854.96	2,854.96	0.00	0.00	KOP, 11°/100' Build
3,682.24	3,375.76	529.81	-12.66	LP, Hold 91° Inc, 358.63° Azm
8,037.83	3,299.74	4,883.50	-116.70	TD at 8037.83