

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018HOBBS OCD
SEP 26 2017
RECEIVEDSUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to recomplete an abandoned well. Use form 3160-3 (APD) for such proposals.Carlsbad Field Office
OCD Hobbs

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		5. Lease Serial No. NMNM120908
2. Name of Operator COG PRODUCTION LLC		6. If Indian, Allottee or Tribe Name
3a. Address 2208 WEST MAIN STREET ARTESIA, NM 88210		7. If Unit or CA/Agreement, Name and/or No.
3b. Phone No. (include area code) Ph: 575-748-6945		8. Well Name and No. AZORES FEDERAL 6H
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 29 T24S R32E SWSE 210FSL 1850FEL		9. API Well No. 30-025-43845
		10. Field and Pool or Exploratory Area WC-025 G-06 S253206M: BS
		11. County or Parish, State LEA COUNTY, NM

12. CHECK THE 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	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☐ 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 must 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 must be filed once testing has been completed. Final Abandonment Notices must 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 Production LLC, respectfully requests approval for the following changes to the original approved APD.

Final depth is calculated at 14,178ft on the new directional plan. We will plan to drill to this depth and set 5 1/2" 17# P110 long string as we had planned in the original APD.

See attached.

- All previous COAs will apply. Additional COA is not required.

14. I hereby certify that the foregoing is true and correct. Electronic Submission #387458 verified by the BLM Well Information System For COG PRODUCTION LLC, sent to the Hobbs Committed to AFMSS for processing by MUSTAFA HAQUE on 09/18/2017 ()	
Name (Printed/Typed) MAYTE X REYES	Title REGULATORY ANALYST
Signature (Electronic Submission)	Date 09/05/2017
THIS SPACE FOR FEDERAL OR STATE OFFICE USE	
Approved By Mustafa Haque	Title PETROLEUM ENGINEER
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 BUREAU OF LAND MANAGEMENT CARLSBAD FIELD OFFICE	
Date 9-20-2017	
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)

** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED **

KZ



Azores Federal #6H
Lea County, NM
Q170*** & WT-170***
Design #1

Company Name: COG Operating, LLC
Azores Federal #6H
Lea County, NM
Rig: Noram 21
Created By: Shelly Peterkin
Date: 9/5/2017

WELL DETAILS: Azores Federal #6H

+N/-S	+E/-W	Northing	Ground Level: Easting	3496.6	Latitude	Longitude	Spot
33.3	2971.3	430389.10	697906.90		32° 10' 53.891 N	103° 41' 37.167 W	

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
FTP Azores Federal #6H	0.0	0.0	155.5	3178.3	430510.38	32° 10' 53.888 N	103° 41' 34.832 W
LTP Azores Federal #6H	0.0	0.0	4777.6	3138.3	435132.42	32° 11' 48.830 N	103° 41' 34.908 W
PlatL Azores Federal #6H	9547.8		4887.4	3135.4	435282.20	32° 11' 42.114 N	103° 41' 34.910 W

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSeet	Departure	Annotation
9904.8	0.00	0.00	9904.8	33.3	2971.3	0.0	0.0	KOP: Build 12°/100' @ 9904.8' MD
9748.5	89.26	16.63	9482.0	484.9	3106.2	471.3	471.3	EOC: 9748.5' MD, 89.26° Inc, 16.63° Azm / Turn 4°/100'
10175.2	89.26	359.56	9487.5	305.8	3166.1	878.5	898.0	Hold 89.26° Inc, 359.56° Azm
11287.7	89.26	359.56	9502.0	3028.2	3157.5	2089.0	3020.4	Drop 2°/100'
11319.4	89.85	359.56	9502.3	2048.9	3157.3	2020.7	2041.1	Hold 89.85° Inc, 359.56° Azm
12288.7	89.85	359.56	9522.0	3029.0	3149.8	3006.0	3021.3	Build 2°/100'
12342.9	89.73	359.56	9522.5	3073.1	3148.4	3044.1	3065.4	Hold 89.73° Inc, 359.56° Azm
13289.8	89.73	359.56	9527.0	4029.8	3142.1	4009.0	4022.1	Drop 2°/100'
13393.2	88.66	359.56	9527.7	4083.4	3141.7	4053.6	4075.7	Hold 88.66° Inc, 359.56° Azm
14177.5	88.66	359.56	9547.8	4907.4	3135.4	4876.9	4899.7	TD @ 14177.5' MD/9547.8' TVD

PROJECT DETAILS: Lea County, NM

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



Azimuths to Grid North

Correction: 6.65°

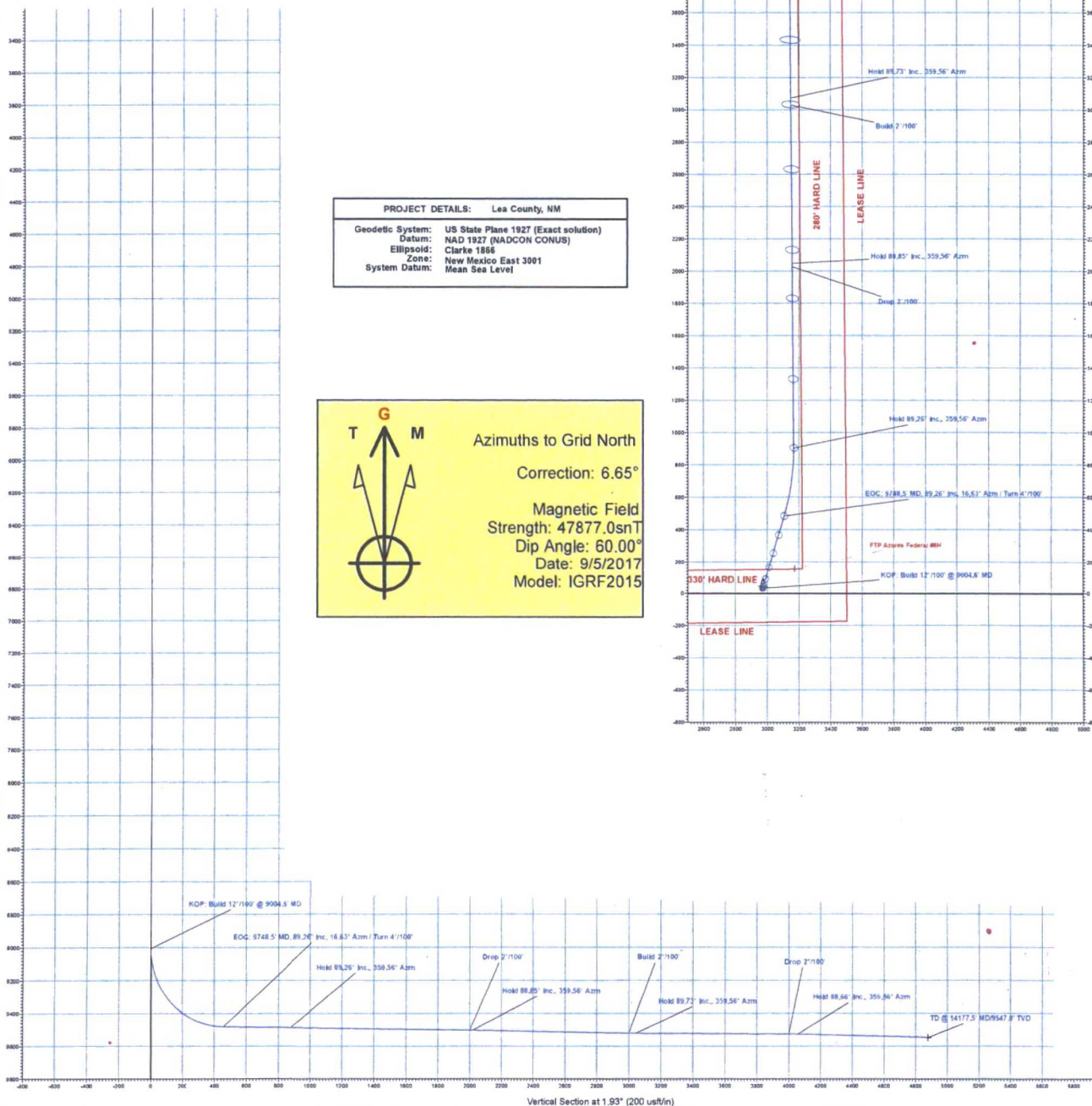
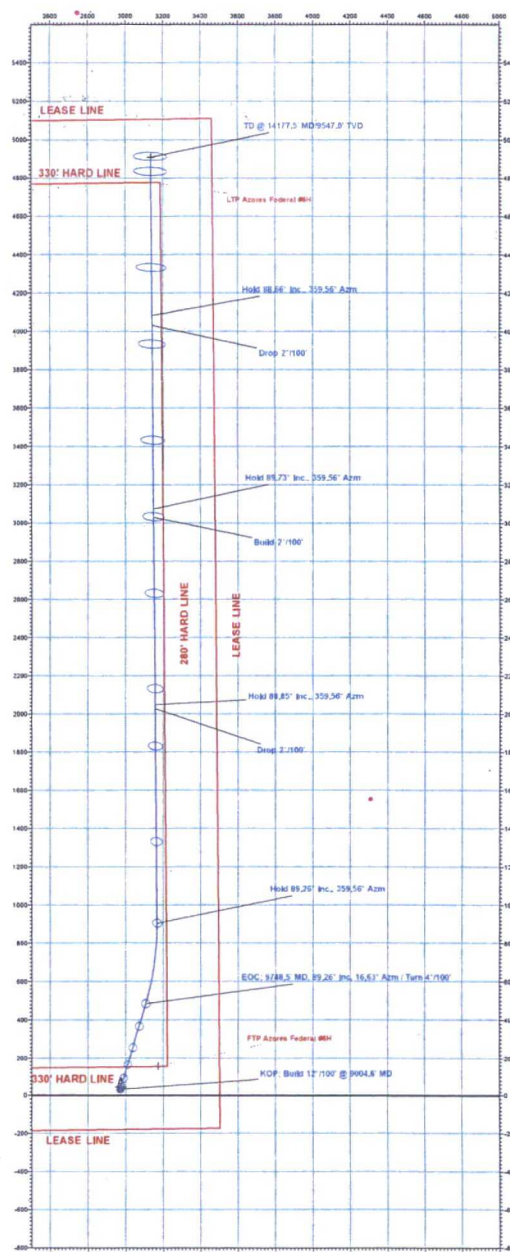
Magnetic Field

Strength: 47877.0snT

Dip Angle: 60.00°

Date: 9/5/2017

Model: IGRF2015





COG Operating, LLC

Lea County, NM

Sec 29, T24S, R32E

Azores Federal #6H

Wellbore #1

Plan: Design #1

QES Well Planning Report

05 September, 2017



Database: EDM 5000.1 Single User Db
Company: COG Operating, LLC
Project: Lea County, NM
Site: Sec 29, T24S, R32E
Well: Azores Federal #6H
Wellbore: Wellbore #1
Design: Design #1

Local Co-ordinate Reference: Site Sec 29, T24S, R32E
TVD Reference: KB @ 3525.6usft (Noram 21)
MD Reference: KB @ 3525.6usft (Noram 21)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Project	Lea County, NM		
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	Sec 29, T24S, R32E		
Site Position:		Northing:	430,354.80 usft
From:	Map	Easting:	694,935.60 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 10' 53.735 N
		Longitude:	103° 42' 11.731 W
		Grid Convergence:	0.34 °

Well	Azores Federal #6H		
Well Position	+N/-S	33.3 usft	Northing: 430,388.10 usft
	+E/-W	2,971.3 usft	Easting: 697,906.90 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	Latitude: 32° 10' 53.891 N
			Longitude: 103° 41' 37.157 W
			Ground Level: 3,496.6 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
	IGRF2015	9/5/2017	(°)
			6.98
			Dip Angle
			(°)
			60.00
			Field Strength
			(nT)
			47,876.97107754

Design	Design #1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	33.3	2,971.3
			Direction
			(°)
			1.93

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
0.0	0.00	0.00	0.0	33.3	2,971.3	0.00	0.00	0.00	0.00	
9,004.6	0.00	0.00	9,004.6	33.3	2,971.3	0.00	0.00	0.00	0.00	
9,748.5	89.26	16.63	9,482.0	484.9	3,106.2	12.00	12.00	0.00	16.63	
10,175.2	89.26	359.56	9,487.5	905.8	3,166.1	4.00	0.00	-4.00	-90.11	PBHL Azores Federal
11,297.7	89.26	359.56	9,502.0	2,028.2	3,157.5	0.00	0.00	0.00	0.00	
11,318.4	88.85	359.56	9,502.3	2,048.9	3,157.3	2.00	-2.00	0.00	180.00	PBHL Azores Federal
12,298.7	88.85	359.56	9,522.0	3,029.0	3,149.8	0.00	0.00	0.00	0.00	
12,342.9	89.73	359.56	9,522.5	3,073.1	3,149.4	2.00	2.00	0.00	0.00	PBHL Azores Federal
13,299.6	89.73	359.56	9,527.0	4,029.8	3,142.1	0.00	0.00	0.00	0.00	
13,353.2	88.66	359.56	9,527.7	4,083.4	3,141.7	2.00	-2.00	0.00	180.00	
14,177.5	88.66	359.56	9,547.0	4,907.4	3,135.4	0.00	0.00	0.00	0.00	PBHL Azores Federal

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North Reference: Grid
Survey Calculation Method: 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)
0.0	0.00	0.00	0.0	33.3	2,971.3	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	33.3	2,971.3	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	33.3	2,971.3	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	33.3	2,971.3	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	33.3	2,971.3	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	33.3	2,971.3	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	33.3	2,971.3	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	33.3	2,971.3	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	33.3	2,971.3	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	33.3	2,971.3	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	33.3	2,971.3	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	33.3	2,971.3	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	33.3	2,971.3	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	33.3	2,971.3	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	33.3	2,971.3	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	33.3	2,971.3	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	33.3	2,971.3	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	33.3	2,971.3	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	33.3	2,971.3	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	33.3	2,971.3	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	33.3	2,971.3	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	33.3	2,971.3	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	33.3	2,971.3	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	33.3	2,971.3	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	33.3	2,971.3	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	33.3	2,971.3	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	33.3	2,971.3	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	33.3	2,971.3	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	33.3	2,971.3	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	33.3	2,971.3	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	33.3	2,971.3	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	33.3	2,971.3	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	33.3	2,971.3	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	33.3	2,971.3	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	33.3	2,971.3	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	33.3	2,971.3	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	33.3	2,971.3	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	33.3	2,971.3	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	33.3	2,971.3	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	33.3	2,971.3	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	33.3	2,971.3	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	33.3	2,971.3	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	33.3	2,971.3	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	33.3	2,971.3	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	33.3	2,971.3	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	33.3	2,971.3	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	33.3	2,971.3	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	33.3	2,971.3	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	33.3	2,971.3	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	33.3	2,971.3	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	33.3	2,971.3	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	33.3	2,971.3	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	33.3	2,971.3	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	33.3	2,971.3	0.0	0.00	0.00	0.00

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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)
5,400.0	0.00	0.00	5,400.0	33.3	2,971.3	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	33.3	2,971.3	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	33.3	2,971.3	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,700.0	33.3	2,971.3	0.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,800.0	33.3	2,971.3	0.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,900.0	33.3	2,971.3	0.0	0.00	0.00	0.00
6,000.0	0.00	0.00	6,000.0	33.3	2,971.3	0.0	0.00	0.00	0.00
6,100.0	0.00	0.00	6,100.0	33.3	2,971.3	0.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,200.0	33.3	2,971.3	0.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,300.0	33.3	2,971.3	0.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,400.0	33.3	2,971.3	0.0	0.00	0.00	0.00
6,500.0	0.00	0.00	6,500.0	33.3	2,971.3	0.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,600.0	33.3	2,971.3	0.0	0.00	0.00	0.00
6,700.0	0.00	0.00	6,700.0	33.3	2,971.3	0.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,800.0	33.3	2,971.3	0.0	0.00	0.00	0.00
6,900.0	0.00	0.00	6,900.0	33.3	2,971.3	0.0	0.00	0.00	0.00
7,000.0	0.00	0.00	7,000.0	33.3	2,971.3	0.0	0.00	0.00	0.00
7,100.0	0.00	0.00	7,100.0	33.3	2,971.3	0.0	0.00	0.00	0.00
7,200.0	0.00	0.00	7,200.0	33.3	2,971.3	0.0	0.00	0.00	0.00
7,300.0	0.00	0.00	7,300.0	33.3	2,971.3	0.0	0.00	0.00	0.00
7,400.0	0.00	0.00	7,400.0	33.3	2,971.3	0.0	0.00	0.00	0.00
7,500.0	0.00	0.00	7,500.0	33.3	2,971.3	0.0	0.00	0.00	0.00
7,600.0	0.00	0.00	7,600.0	33.3	2,971.3	0.0	0.00	0.00	0.00
7,700.0	0.00	0.00	7,700.0	33.3	2,971.3	0.0	0.00	0.00	0.00
7,800.0	0.00	0.00	7,800.0	33.3	2,971.3	0.0	0.00	0.00	0.00
7,900.0	0.00	0.00	7,900.0	33.3	2,971.3	0.0	0.00	0.00	0.00
8,000.0	0.00	0.00	8,000.0	33.3	2,971.3	0.0	0.00	0.00	0.00
8,100.0	0.00	0.00	8,100.0	33.3	2,971.3	0.0	0.00	0.00	0.00
8,200.0	0.00	0.00	8,200.0	33.3	2,971.3	0.0	0.00	0.00	0.00
8,300.0	0.00	0.00	8,300.0	33.3	2,971.3	0.0	0.00	0.00	0.00
8,400.0	0.00	0.00	8,400.0	33.3	2,971.3	0.0	0.00	0.00	0.00
8,500.0	0.00	0.00	8,500.0	33.3	2,971.3	0.0	0.00	0.00	0.00
8,600.0	0.00	0.00	8,600.0	33.3	2,971.3	0.0	0.00	0.00	0.00
8,700.0	0.00	0.00	8,700.0	33.3	2,971.3	0.0	0.00	0.00	0.00
8,800.0	0.00	0.00	8,800.0	33.3	2,971.3	0.0	0.00	0.00	0.00
8,900.0	0.00	0.00	8,900.0	33.3	2,971.3	0.0	0.00	0.00	0.00
KOP: Build 12°/100' @ 9004.6' MD									
9,004.6	0.00	0.00	9,004.6	33.3	2,971.3	0.0	0.00	0.00	0.00
9,025.0	2.45	16.63	9,025.0	33.7	2,971.4	0.4	12.00	12.00	0.00
9,050.0	5.45	16.63	9,049.9	35.4	2,971.9	2.1	12.00	12.00	0.00
9,075.0	8.45	16.63	9,074.7	38.3	2,972.8	5.0	12.00	12.00	0.00
9,100.0	11.45	16.63	9,099.4	42.4	2,974.0	9.2	12.00	12.00	0.00
9,125.0	14.45	16.63	9,123.7	47.8	2,975.6	14.6	12.00	12.00	0.00
9,150.0	17.45	16.63	9,147.8	54.3	2,977.6	21.2	12.00	12.00	0.00
9,175.0	20.45	16.63	9,171.4	62.1	2,979.9	29.1	12.00	12.00	0.00
9,200.0	23.45	16.63	9,194.6	71.1	2,982.6	38.1	12.00	12.00	0.00
9,225.0	26.45	16.63	9,217.3	81.2	2,985.6	48.3	12.00	12.00	0.00
9,250.0	29.45	16.63	9,239.3	92.4	2,989.0	59.7	12.00	12.00	0.00
9,275.0	32.45	16.63	9,260.8	104.7	2,992.6	72.1	12.00	12.00	0.00
9,300.0	35.45	16.63	9,281.5	118.1	2,996.6	85.6	12.00	12.00	0.00
9,325.0	38.45	16.63	9,301.5	132.5	3,000.9	100.1	12.00	12.00	0.00
9,350.0	41.45	16.63	9,320.7	147.9	3,005.5	115.7	12.00	12.00	0.00
9,375.0	44.45	16.63	9,339.0	164.2	3,010.4	132.1	12.00	12.00	0.00

Database: EDM 5000.1 Single User Db
Company: COG Operating, LLC
Project: Lea County, NM
Site: Sec 29, T24S, R32E
Well: Azores Federal #6H
Wellbore: Wellbore #1
Design: Design #1

Local Co-ordinate Reference: Site Sec 29, T24S, R32E
TVD Reference: KB @ 3525.6usft (Noram 21)
MD Reference: KB @ 3525.6usft (Noram 21)
North Reference: Grid
Survey Calculation Method: 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)
9,400.0	47.45	16.63	9,356.3	181.4	3,015.5	149.5	12.00	12.00	0.00
9,425.0	50.45	16.63	9,372.7	199.5	3,020.9	167.7	12.00	12.00	0.00
9,450.0	53.45	16.63	9,388.2	218.3	3,026.6	186.8	12.00	12.00	0.00
9,475.0	56.45	16.63	9,402.5	237.9	3,032.4	206.6	12.00	12.00	0.00
9,500.0	59.45	16.63	9,415.8	258.2	3,038.5	227.1	12.00	12.00	0.00
9,525.0	62.45	16.63	9,427.9	279.2	3,044.7	248.2	12.00	12.00	0.00
9,550.0	65.45	16.63	9,438.9	300.7	3,051.2	269.9	12.00	12.00	0.00
9,575.0	68.45	16.63	9,448.7	322.7	3,057.7	292.2	12.00	12.00	0.00
9,600.0	71.45	16.63	9,457.3	345.2	3,064.5	314.9	12.00	12.00	0.00
9,625.0	74.45	16.63	9,464.6	368.1	3,071.3	338.0	12.00	12.00	0.00
9,650.0	77.45	16.63	9,470.7	391.4	3,078.2	361.5	12.00	12.00	0.00
9,675.0	80.45	16.63	9,475.4	414.9	3,085.3	385.2	12.00	12.00	0.00
9,700.0	83.45	16.63	9,478.9	438.6	3,092.4	409.1	12.00	12.00	0.00
9,725.0	86.45	16.63	9,481.1	462.5	3,099.5	433.2	12.00	12.00	0.00
EOC: 9748.5' MD, 89.26° Inc, 16.63° Azm / Turn 4°/100'									
9,748.5	89.26	16.63	9,482.0	484.9	3,106.2	455.9	12.00	12.00	0.00
9,800.0	89.26	14.57	9,482.7	534.5	3,120.0	506.0	4.00	-0.01	-4.00
9,900.0	89.26	10.57	9,484.0	632.1	3,141.8	604.2	4.00	0.00	-4.00
10,000.0	89.26	6.57	9,485.3	731.0	3,156.7	703.5	4.00	0.00	-4.00
10,100.0	89.26	2.57	9,486.6	830.6	3,164.7	803.4	4.00	0.00	-4.00
Hold 89.26° Inc., 359.56° Azm									
10,175.2	89.26	359.56	9,487.5	905.8	3,166.1	878.5	4.00	0.01	-4.00
10,200.0	89.26	359.56	9,487.9	930.6	3,165.9	903.3	0.00	0.00	0.00
10,300.0	89.26	359.56	9,489.2	1,030.6	3,165.1	1,003.2	0.00	0.00	0.00
10,400.0	89.26	359.56	9,490.4	1,130.6	3,164.3	1,103.2	0.00	0.00	0.00
10,500.0	89.26	359.56	9,491.7	1,230.6	3,163.6	1,203.1	0.00	0.00	0.00
10,600.0	89.26	359.56	9,493.0	1,330.6	3,162.8	1,303.0	0.00	0.00	0.00
10,700.0	89.26	359.56	9,494.3	1,430.5	3,162.0	1,402.9	0.00	0.00	0.00
10,800.0	89.26	359.56	9,495.6	1,530.5	3,161.3	1,502.8	0.00	0.00	0.00
10,900.0	89.26	359.56	9,496.9	1,630.5	3,160.5	1,602.7	0.00	0.00	0.00
11,000.0	89.26	359.56	9,498.1	1,730.5	3,159.7	1,702.6	0.00	0.00	0.00
11,100.0	89.26	359.56	9,499.4	1,830.5	3,159.0	1,802.5	0.00	0.00	0.00
11,200.0	89.26	359.56	9,500.7	1,930.5	3,158.2	1,902.4	0.00	0.00	0.00
Drop 2°/100'									
11,297.7	89.26	359.56	9,502.0	2,028.2	3,157.5	2,000.0	0.00	0.00	0.00
11,300.0	89.22	359.56	9,502.0	2,030.5	3,157.4	2,002.3	2.00	-2.00	0.00
Hold 88.85° Inc., 359.56° Azm									
11,318.4	88.85	359.56	9,502.3	2,048.9	3,157.3	2,020.7	2.00	-2.00	0.00
11,400.0	88.85	359.56	9,503.9	2,130.5	3,156.7	2,102.2	0.00	0.00	0.00
11,500.0	88.85	359.56	9,506.0	2,230.4	3,155.9	2,202.1	0.00	0.00	0.00
11,600.0	88.85	359.56	9,508.0	2,330.4	3,155.1	2,302.0	0.00	0.00	0.00
11,700.0	88.85	359.56	9,510.0	2,430.4	3,154.4	2,401.9	0.00	0.00	0.00
11,800.0	88.85	359.56	9,512.0	2,530.4	3,153.6	2,501.8	0.00	0.00	0.00
11,900.0	88.85	359.56	9,514.0	2,630.3	3,152.8	2,601.7	0.00	0.00	0.00
12,000.0	88.85	359.56	9,516.0	2,730.3	3,152.1	2,701.6	0.00	0.00	0.00
12,100.0	88.85	359.56	9,518.0	2,830.3	3,151.3	2,801.5	0.00	0.00	0.00
12,200.0	88.85	359.56	9,520.0	2,930.3	3,150.5	2,901.4	0.00	0.00	0.00
Build 2°/100'									
12,298.7	88.85	359.56	9,522.0	3,029.0	3,149.8	3,000.0	0.00	0.00	0.00
12,300.0	88.88	359.56	9,522.0	3,030.2	3,149.8	3,001.3	2.00	2.00	0.00
Hold 89.73° Inc., 359.56° Azm									
12,342.9	89.73	359.56	9,522.5	3,073.1	3,149.4	3,044.1	2.00	2.00	0.00
12,400.0	89.73	359.56	9,522.8	3,130.2	3,149.0	3,101.2	0.00	0.00	0.00

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Design: Design #1

Local Co-ordinate Reference: Site Sec 29, T24S, R32E
TVD Reference: KB @ 3525.6usft (Noram 21)
MD Reference: KB @ 3525.6usft (Noram 21)
North Reference: Grid
Survey Calculation Method: 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)
12,500.0	89.73	359.56	9,523.3	3,230.2	3,148.2	3,201.1	0.00	0.00	0.00
12,600.0	89.73	359.56	9,523.7	3,330.2	3,147.5	3,301.0	0.00	0.00	0.00
12,700.0	89.73	359.56	9,524.2	3,430.2	3,146.7	3,400.9	0.00	0.00	0.00
12,800.0	89.73	359.56	9,524.7	3,530.2	3,145.9	3,500.8	0.00	0.00	0.00
12,900.0	89.73	359.56	9,525.1	3,630.2	3,145.2	3,600.7	0.00	0.00	0.00
13,000.0	89.73	359.56	9,525.6	3,730.2	3,144.4	3,700.6	0.00	0.00	0.00
13,100.0	89.73	359.56	9,526.1	3,830.2	3,143.7	3,800.6	0.00	0.00	0.00
13,200.0	89.73	359.56	9,526.5	3,930.2	3,142.9	3,900.5	0.00	0.00	0.00
Drop 2°/100'									
13,299.6	89.73	359.56	9,527.0	4,029.8	3,142.1	4,000.0	0.00	0.00	0.00
Hold 88.66° Inc., 359.56° Azm									
13,353.2	88.66	359.56	9,527.7	4,083.4	3,141.7	4,053.6	2.00	-2.00	0.00
13,400.0	88.66	359.56	9,528.8	4,130.2	3,141.4	4,100.3	0.00	0.00	0.00
13,500.0	88.66	359.56	9,531.2	4,230.2	3,140.6	4,200.2	0.00	0.00	0.00
13,600.0	88.66	359.56	9,533.5	4,330.1	3,139.8	4,300.1	0.00	0.00	0.00
13,700.0	88.66	359.56	9,535.8	4,430.1	3,139.1	4,399.9	0.00	0.00	0.00
13,800.0	88.66	359.56	9,538.2	4,530.1	3,138.3	4,499.8	0.00	0.00	0.00
13,900.0	88.66	359.56	9,540.5	4,630.0	3,137.5	4,599.7	0.00	0.00	0.00
14,000.0	88.66	359.56	9,542.9	4,730.0	3,136.8	4,699.6	0.00	0.00	0.00
14,100.0	88.66	359.56	9,545.2	4,830.0	3,136.0	4,799.5	0.00	0.00	0.00
TD @ 14177.5' MD/9547.0' TVD									
14,177.5	88.66	359.56	9,547.0	4,907.4	3,135.4	4,876.9	0.00	0.00	0.00

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL Azores Federal #6 - plan hits target center - Point	0.00	0.00	9,547.0	4,907.4	3,135.4	435,262.20	698,071.00	32° 11' 42.114 N	103° 41' 34.910 W

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
9,004.6	9,004.6	33.3	2,971.3	KOP: Build 12°/100' @ 9004.6' MD
9,748.5	9,482.0	484.9	3,106.2	EOC: 9748.5' MD, 89.26° Inc, 16.63° Azm / Turn 4°/100'
10,175.2	9,487.5	905.8	3,166.1	Hold 89.26° Inc., 359.56° Azm
11,297.7	9,502.0	2,028.2	3,157.5	Drop 2°/100'
11,318.4	9,502.3	2,048.9	3,157.3	Hold 88.85° Inc., 359.56° Azm
12,298.7	9,522.0	3,029.0	3,149.8	Build 2°/100'
12,342.9	9,522.5	3,073.1	3,149.4	Hold 89.73° Inc., 359.56° Azm
13,299.6	9,527.0	4,029.8	3,142.1	Drop 2°/100'
13,353.2	9,527.7	4,083.4	3,141.7	Hold 88.66° Inc., 359.56° Azm
14,177.5	9,547.0	4,907.4	3,135.4	TD @ 14177.5' MD/9547.0' TVD