

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED
OMB NO. 1004-0135
Expires July 31, 2010**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.**5 Lease Serial No.
NMLC029415B

6 If Indian, Allottee or Tribe Name

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

8 Well Name and No.
PUCKETT 13 FEDERAL COM 7H9 API Well No
30-015-39178-00-X110 Field and Pool, or Exploratory
FREN11 County or Parish, and State
EDDY COUNTY, NM**SUBMIT IN TRIPLICATE - Other instructions on reverse side.**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other2 Name of Operator
COG OPERATING LLCContact KELLY J HOLLY
E-Mail: kholly@conchoresources.com3a. Address
ONE CONCHO CENTER 600 W ILLINOIS AVENUE
MIDLAND, TX 797013b Phone No. (include area code)
Ph: 432-685-4384

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

Sec 13 T17S R31E NENE 83FNL 970FEL

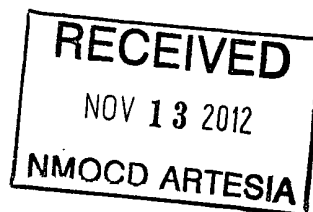
12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

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
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Change to Original A
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	PD

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 proposes to change the production casing program for this well from a straight 5 1/2" casing design to a 7" X 5 1/2" tapered design. The 7" 26# L80 LTC casing will be run from surface to KOP of 5979' and changed over to 5 1/2" 17# L80 LTC at this point. The 5 1/2" will be run through curve to TD of 11134' MD/6425' TVD. Isolation in the curve and lateral will be obtained with external casing packers. A 7" DV tool and ECP will be installed in 7" casing string at the KOP and the 7" will be cemented from KOP to surface in a single stage as follows: LEAD SLURRY of 400 sks 35:65:6 Poz Gel with 5% salt, 5 pps LCM, 0.2% SMS, 0.3% FL-52A, 0.125 pps CF, yield 2.01 cf/sk, wt. 12.5 ppg followed with TAIL SLURRY of 400 sks 50:50:2.C.Poz Gel with 5% salt, 3 pps LCM, 0.6% SMS, 1% FL-25, 1% BA-58, 0.125 pps CF, yield 1.37 cf/sk, wt 14.0 ppg. 47% excess. Minimum tieback is 200' above 9 5/8" casing shoe however, cement volumes are calculated to surface.

A revised directional plan is attached for your review

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**Accepted for record
NMOCD

14 I hereby certify that the foregoing is true and correct

Electronic Submission #157196 verified by the BLM Well Information System

For COG OPERATING LLC, sent to the Carlsbad

Committed to AFMSS for processing by KURT SIMMONS on 11/08/2012 (13KMS3747SE)

Name (Printed/Typed) KELLY J HOLLY

Title PERMITTING TECH

Signature (Electronic Submission)

Date 11/01/2012

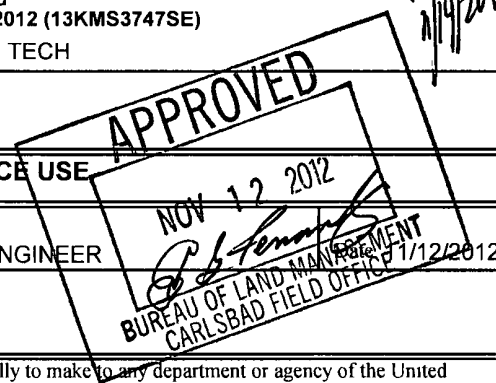
THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By EDWARD FERNANDEZ

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 Carlsbad



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.

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ******SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

Archer

COG Operating, LLC

Eddy County(NM27E)

Sec.13-T17S-R31E

Puckett 13 Federal Com #7H

Wellbore #1

Plan: Design #1

Standard Planning Report

12 October, 2012

SEE ATTACHED FOR
CONDITIONS OF APPROVAL



Database: EDMDBBW
Company: COG Operating, LLC
Project: Eddy County(NM27E)
Site: Sec.13-T17S-R31E
Well: Puckett 13 Federal #7H
Wellbore: Wellbore #1
Design: Design #1

Local Co-ordinate Reference: Well Puckett 13 Federal #7H
TVD Reference: WELL @ 3980.0usft (Original Well Elev)
MD Reference: WELL @ 3980.0usft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Project	Eddy County(NM27E), Surface Location. 915°FSL & 400°FWL, Top of Paddock 4000TVD		
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.13-T17S-R31E		
Site Position:		Northing:	670,270.30 usft
From:	Map	Easting:	658,534.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"
		Latitude:	32° 50' 29.738 N
		Longitude:	103° 49' 1.766 W
		Grid Convergence:	0.28 °

Well	Puckett 13 Federal #7H		
Well Position	+N-S	0.0 usft	Northing:
	+E-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 50' 29.738 N
		Longitude:	103° 49' 1.766 W
		Ground Level:	3,963.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/12/12	7.58	60.68	48,824

Design	Design #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)
	0.0	0.0	0.0	179.79

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	0.0	0.0	0.00	0.00	0.00	0.00	
5,979.2	0.00	0.00	5,979.2	0.0	0.0	0.00	0.00	0.00	0.00	
6,806.5	91.00	179.79	6,500.0	-530.0	2.0	11.00	11.00	0.00	179.79	Puckett 13 FED 7H PI
11,134.4	91.00	179.79	6,424.5	-4,857.2	18.0	0.00	0.00	0.00	0.00	Puckett 13 FED 7H PI

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MID Reference: WELL @ 3980.0usft (Original Well Elev)
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	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00



Archer
Planning Report



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MD Reference: WELL @ 3980.0usft (Original Well Elev)
North Reference: Grd
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)
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP/ Build 11.00									
5,979.2	0.00	0.00	5,979.2	0.0	0.0	0.0	0.00	0.00	0.00
6,000.0	2.29	179.79	6,000.0	-0.4	0.0	0.4	11.00	11.00	0.00
6,050.0	7.78	179.79	6,049.8	-4.8	0.0	4.8	11.00	11.00	0.00
6,100.0	13.29	179.79	6,098.9	-13.9	0.1	13.9	11.00	11.00	0.00
6,150.0	18.79	179.79	6,147.0	-27.8	0.1	27.8	11.00	11.00	0.00
6,200.0	24.29	179.79	6,193.4	-46.1	0.2	46.1	11.00	11.00	0.00
6,250.0	29.79	179.79	6,238.0	-68.8	0.3	68.8	11.00	11.00	0.00
6,300.0	35.29	179.79	6,280.1	-95.7	0.4	95.7	11.00	11.00	0.00
6,350.0	40.79	179.79	6,319.5	-126.5	0.5	126.5	11.00	11.00	0.00
6,400.0	46.29	179.79	6,355.7	-160.9	0.6	160.9	11.00	11.00	0.00
6,450.0	51.79	179.79	6,388.5	-198.7	0.7	198.7	11.00	11.00	0.00
6,500.0	57.29	179.79	6,417.5	-239.4	0.9	239.4	11.00	11.00	0.00
6,550.0	62.79	179.79	6,442.4	-282.7	1.0	282.7	11.00	11.00	0.00
6,600.0	68.29	179.79	6,463.1	-328.2	1.2	328.2	11.00	11.00	0.00
6,650.0	73.79	179.79	6,479.4	-375.4	1.4	375.4	11.00	11.00	0.00
6,700.0	79.29	179.79	6,491.0	-424.1	1.6	424.1	11.00	11.00	0.00
6,750.0	84.79	179.79	6,497.9	-473.6	1.8	473.6	11.00	11.00	0.00
6,800.0	90.29	179.79	6,500.1	-523.5	1.9	523.5	11.00	11.00	0.00
EOC/Start 4327.9 hold at 6806.5 MD									
6,806.5	91.00	179.79	6,500.0	-530.0	2.0	530.0	11.00	11.00	0.00
6,900.0	91.00	179.79	6,498.4	-623.5	2.3	623.5	0.00	0.00	0.00
7,000.0	91.00	179.79	6,496.6	-723.5	2.7	723.5	0.00	0.00	0.00
7,100.0	91.00	179.79	6,494.9	-823.4	3.1	823.4	0.00	0.00	0.00
7,200.0	91.00	179.79	6,493.1	-923.4	3.4	923.4	0.00	0.00	0.00
7,300.0	91.00	179.79	6,491.4	-1,023.4	3.8	1,023.4	0.00	0.00	0.00
7,400.0	91.00	179.79	6,489.6	-1,123.4	4.2	1,123.4	0.00	0.00	0.00
7,500.0	91.00	179.79	6,487.9	-1,223.4	4.5	1,223.4	0.00	0.00	0.00
7,600.0	91.00	179.79	6,486.1	-1,323.4	4.9	1,323.4	0.00	0.00	0.00
7,700.0	91.00	179.79	6,484.4	-1,423.3	5.3	1,423.4	0.00	0.00	0.00
7,800.0	91.00	179.79	6,482.7	-1,523.3	5.6	1,523.3	0.00	0.00	0.00
7,900.0	91.00	179.79	6,480.9	-1,623.3	6.0	1,623.3	0.00	0.00	0.00
8,000.0	91.00	179.79	6,479.2	-1,723.3	6.4	1,723.3	0.00	0.00	0.00
8,100.0	91.00	179.79	6,477.4	-1,823.3	6.8	1,823.3	0.00	0.00	0.00
8,200.0	91.00	179.79	6,475.7	-1,923.3	7.1	1,923.3	0.00	0.00	0.00
8,300.0	91.00	179.79	6,473.9	-2,023.2	7.5	2,023.3	0.00	0.00	0.00
8,400.0	91.00	179.79	6,472.2	-2,123.2	7.9	2,123.2	0.00	0.00	0.00
8,500.0	91.00	179.79	6,470.4	-2,223.2	8.2	2,223.2	0.00	0.00	0.00
8,600.0	91.00	179.79	6,468.7	-2,323.2	8.6	2,323.2	0.00	0.00	0.00
8,700.0	91.00	179.79	6,466.9	-2,423.2	9.0	2,423.2	0.00	0.00	0.00
8,800.0	91.00	179.79	6,465.2	-2,523.2	9.4	2,523.2	0.00	0.00	0.00
8,900.0	91.00	179.79	6,463.5	-2,623.2	9.7	2,623.2	0.00	0.00	0.00
9,000.0	91.00	179.79	6,461.7	-2,723.1	10.1	2,723.2	0.00	0.00	0.00
9,100.0	91.00	179.79	6,460.0	-2,823.1	10.5	2,823.1	0.00	0.00	0.00
9,200.0	91.00	179.79	6,458.2	-2,923.1	10.8	2,923.1	0.00	0.00	0.00
9,300.0	91.00	179.79	6,456.5	-3,023.1	11.2	3,023.1	0.00	0.00	0.00
9,400.0	91.00	179.79	6,454.7	-3,123.1	11.6	3,123.1	0.00	0.00	0.00

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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)
9,500.0	91.00	179.79	6,453.0	-3,223.1	11.9	3,223.1	0.00	0.00	0.00
9,600.0	91.00	179.79	6,451.2	-3,323.0	12.3	3,323.1	0.00	0.00	0.00
9,700.0	91.00	179.79	6,449.5	-3,423.0	12.7	3,423.0	0.00	0.00	0.00
9,800.0	91.00	179.79	6,447.7	-3,523.0	13.1	3,523.0	0.00	0.00	0.00
9,900.0	91.00	179.79	6,446.0	-3,623.0	13.4	3,623.0	0.00	0.00	0.00
10,000.0	91.00	179.79	6,444.3	-3,723.0	13.8	3,723.0	0.00	0.00	0.00
10,100.0	91.00	179.79	6,442.5	-3,823.0	14.2	3,823.0	0.00	0.00	0.00
10,200.0	91.00	179.79	6,440.8	-3,922.9	14.5	3,923.0	0.00	0.00	0.00
10,300.0	91.00	179.79	6,439.0	-4,022.9	14.9	4,023.0	0.00	0.00	0.00
10,400.0	91.00	179.79	6,437.3	-4,122.9	15.3	4,122.9	0.00	0.00	0.00
10,500.0	91.00	179.79	6,435.5	-4,222.9	15.6	4,222.9	0.00	0.00	0.00
10,600.0	91.00	179.79	6,433.8	-4,322.8	16.0	4,322.9	0.00	0.00	0.00
10,700.0	91.00	179.79	6,432.0	-4,422.9	16.4	4,422.9	0.00	0.00	0.00
10,800.0	91.00	179.79	6,430.3	-4,522.8	16.8	4,522.9	0.00	0.00	0.00
10,900.0	91.00	179.79	6,428.5	-4,622.8	17.1	4,622.9	0.00	0.00	0.00
11,000.0	91.00	179.79	6,426.8	-4,722.8	17.5	4,722.8	0.00	0.00	0.00
11,100.0	91.00	179.79	6,425.1	-4,822.8	17.9	4,822.8	0.00	0.00	0.00
TD at 11134.4									
11,134.4	91.00	179.79	6,424.5	-4,857.2	18.0	4,857.2	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N-S (usft)	+E-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hits target									
- Shape									
Puckett 13 FED 7H PBH	0.00	0.00	6,424.5	-4,857.2	18.0	665,413.10	658,552.00	32° 49' 41.675 N	103° 49' 1.833 W
- plan hits target center									
- Point									

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
5,979.2	5,979.2	0.0	0.0	KOP/ Build 11.00
6,806.5	6,500.0	-530.0	2.0	EOC/Start 4327.9 hold at 6806.5 MD
11,134.4	6,424.5	-4,857.2	18.0	TD at 11134.4



Project: Eddy County(NM27E)
Site: Sec.13-T178-R31E
Well: Puckett 13 Federal #7H
Wellbore: Wellbore #1
Design: Design #1
Lat: 32° 50' 29.738 N
Long: 103° 49' 1.766 W
GL: 3863.0
KB: WELL @ 3860.0usft (Original Well Elev)

Archer

SECTION DETAILS

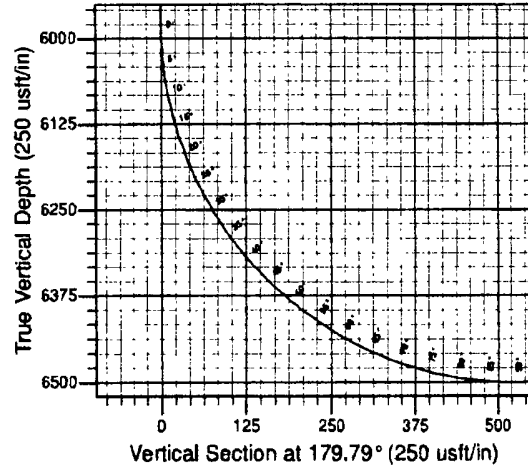
MD	Inc	Azi	TVD	+N-S	+E-W	Diag	TFace	VSecl	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
5979.2	0.00	0.00	5979.2	0.0	0.0	0.00	0.00	0.0	KOP/ Build 11.00
6806.5	91.00	179.79	8500.0	-530.0	2.0	11.00	179.79	530.0	EOC/Start 4327.9 hold at 6806.5 MD
11134.4	91.00	179.79	6424.5	-4857.2	18.0	0.00	0.00	4857.2	TD at 11134.4

WELL DETAILS: Puckett 13 Federal #7H

+N-S	+E-W	Northing	Ground Level:	3863.0	Latitude	Longitude	Spot
0.0	0.0	670270.30	Easting	658534.00	32° 50' 29.738 N	103° 49' 1.766 W	

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N-S	+E-W	Latitude	Longitude	Shape
Puckett 13 FED 7H PBHL	6424.5	-4857.2	18.0	32° 49' 41.875 N	103° 49' 1.833 W	Point



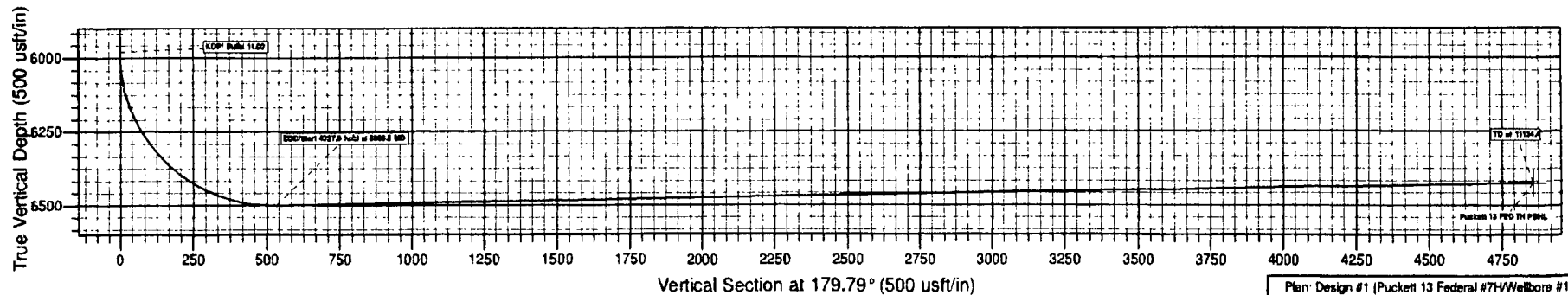
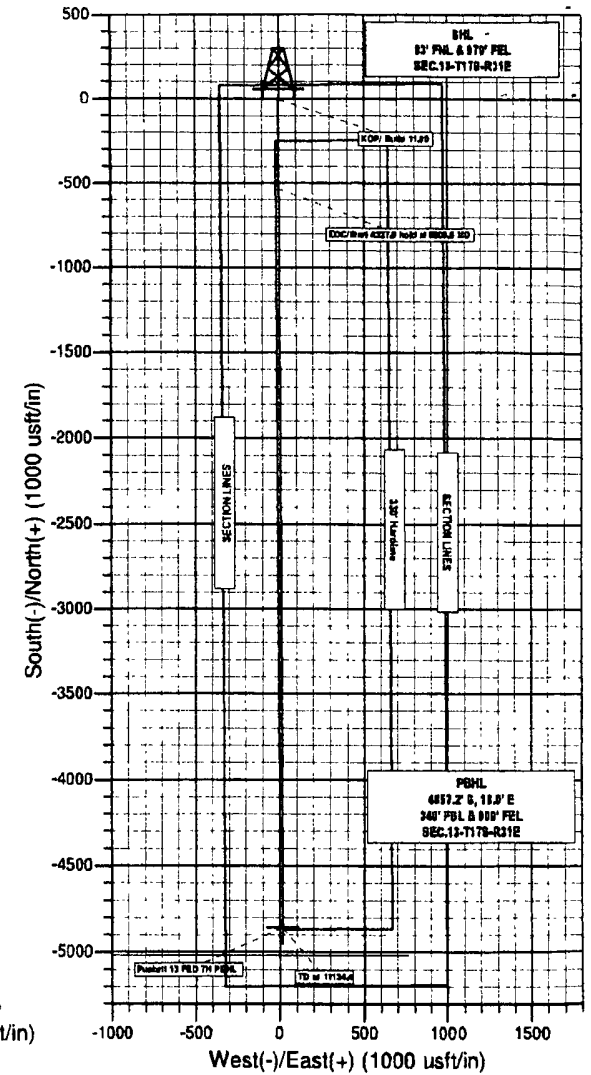
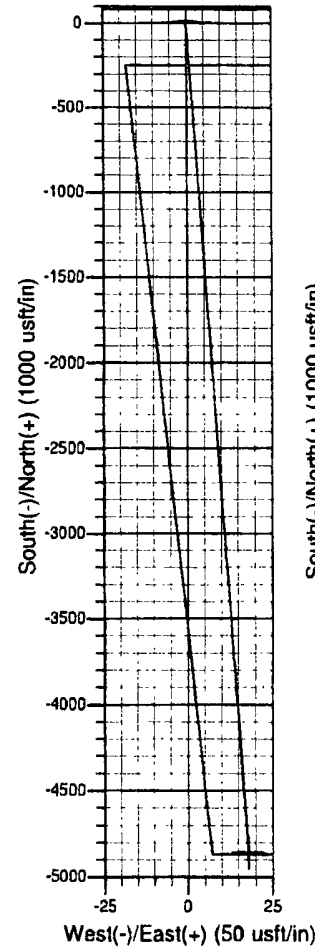
PROJECT DETAILS: Eddy County(NM27E)
Geodetic System: US State Plane 1927 (Exact solution)
Datum: MAD 1927 (MADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level

SITE DETAILS: Sec.13-T178-R31E

Site Centre Latitude: 32° 50' 29.738 N
Longitude: 103° 49' 1.766 W
Positional Uncertainty: 0.0
Convergence: 0.28
Local North: Grid



Azimuths to Grid North
True North: -0.28°
Magnetic North: 7.30°
Magnetic Field
Strength: 6824.2nT
Dip Angle: 60.88°
Date: 10/12/2012
Model: IGRF2010



Plan: Design #1 (Puckett 13 Federal #7H/Wellbore #1)
Created By: Dusty Moyer Date: 10:22, October 12 2012

CONDITIONS OF APPROVAL

Sundry dated 11/01/2012

OPERATOR'S NAME:	COG Operating
LEASE NO.:	LC029415B
WELL NAME & NO.:	Puckett 13 Federal Com 7H 30-015-39178
LOCATION:	Section 13, T.17S., R.31E., NMPM
COUNTY:	Eddy County, New Mexico

Original COA still applies with the following changes:

Operator to install Centralizers: ONE centralizer per joint from KOP to 200 feet above previous casing shoe (9-5/8" casing shoe).

Cement job on the 7" by 5-1/2" tapered string design is approved as written with the new revised directional plan.

EGF 111212