

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010**Carlsbad Field Office**
Artesia
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.
MLC029342C

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.
JENKINS B FEDERAL COM 22H9. API Well No.
30-015-43598-00-X110. Field and Pool, or Exploratory
LOCO HILLS11. 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: ROBYN RUSSELL
E-Mail: rrussell@concho.com3a. Address
600 W ILLINOIS AVENUE
MIDLAND, TX 797013b. Phone No. (include area code)
Ph: 432-685-4385

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

Sec 20 T17S R30E NWNW 990FNL 150FWL

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

TYPE OF SUBMISSION

TYPE OF ACTION

☒ Notice of Intent☐ Subsequent Report☐ Final Abandonment Notice☐ Acidize☐ Alter Casing☐ Casing Repair☐ Change Plans☐ Convert to Injection☐ Deepen☐ Fracture Treat☐ New Construction☐ Plug and Abandon☐ Plug Back☐ Production (Start/Resume)☐ Reclamation☐ Recomplete☐ Temporarily Abandon☐ Water Disposal☐ Water Shut-Off☐ Well Integrity☒ Other
Change to Original A
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 respectfully requests to change the TVD of this well
From: 5075'TVD, 9731'MD, EOC:5150'TVD
To: 4875'TVD, 9532'MD, EOC: 4950'TVD

Attached is a revised directional plan.

Accepted for record - NMOCD

NM OIL CONSERVATION
ARTESIA DISTRICT

JUN 20 2016

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

RECEIVED

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #341133 verified by the BLM Well Information System

For COG OPERATING LLC, sent to the Carlsbad

Committed to AFMSS for processing by PRISCILLA PEREZ on 06/13/2016 (16PP1478SE)

Name (Printed/Typed) ROBYN RUSSELL

Title REGULATORY ANALYST

Signature (Electronic Submission)

Date 06/06/2016

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By (BLM Approver Not Specified) Mustafa HaqueTitle **PETROLEUM ENGINEER**

Date 06/16/2016

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 **

F-3
6/21/16

**PECOS DISTRICT
CONDITIONS OF APPROVAL**

OPERATOR'S NAME:	COG Operating LLC
LEASE NO.:	NMLC029342C
WELL NAME & NO.:	22H-Jenkins B Federal Com
SURFACE HOLE FOOTAGE:	990'/N & 150'/W
BOTTOM HOLE FOOTAGE	758'/N & 330'/E
LOCATION:	Section 20, T. 17 S., R. 30 E., NMPM
COUNTY:	Eddy County, New Mexico

All previous COAs still apply.

MHH 06162016



COG Operating LLC

Eddy County, NM (NAD-27 2015)

Jenkins B Federal Com #22H

SHL: 990' FNL, 150' FWL, Sec 20, T17S, R30E, Unit D

PP: 970' FNL, 330' FWL, Sec 20, T17S, R30E, Unit D

BHL: 800' FNL, 330' FEL, Sec 20, T17S, R30E, Unit A

Plan: Design #1

Standard Planning Report

07 February, 2016



Database: EDM 5000.1 Single User Db

Local Co-ordinate Reference:

Well SHL: 990' FNL, 150' FWL, Sec 20, T17S, R30E, Unit D

Company: COG Operating LLC

TVD Reference:

KB @ 3653.00usft (Silver Oak 3)

Project: Eddy County, NM (NAD-27 2015)

MD Reference:

KB @ 3653.00usft (Silver Oak 3)

Site: Jenkins B Federal Com #22H

North Reference:

Grid

Well: SHL: 990' FNL, 150' FWL, Sec 20, T17S, R30E, Unit D

Survey Calculation Method:

Minimum Curvature

Wellbore: BHL: 800' FNL, 330' FEL, Sec 20, T17S, R30E, Unit A

Design: Design #1

Project:	Eddy County, NM (NAD-27 2015)		
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	Jenkins B Federal Com #22H		
Site Position:	Northings:	663,806.89 usft	Latitude: 32° 49' 28.031 N
From: Map	Easting:	601,858.88 usft	Longitude: 104° 0' 6.301 W
Position Uncertainty:	0.00 usft	Slot Radius: 13.20 in	Grid Convergence: 0.18 °

Well	SHL: 990' FNL, 150' FWL, Sec 20, T17S, R30E, Unit D		
Well Position	+N/-S	0.00 usft	Northings: 663,806.89 usft
	+E/-W	0.00 usft	Easting: 601,858.88 usft
Position Uncertainty	0.00 usft	Wellhead Elevation: 0.00 usft	Ground Level: 3,635.00 usft

Wellbore	BHL: 800' FNL, 330' FEL, Sec 20, T17S, R30E, Unit A		
Magnetics	Model Name	Sample Date	Declination
	IGRF2015	2/7/2016	7.34
			Dip Angle
			60.56
			Field Strength
			48,387

Design	Design #1		
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
			(°)
			87.56

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	
4,429.21	0.00	0.00	4,429.21	0.00	0.00	0.00	0.00	0.00	0.00	
5,256.48	91.00	83.47	4,950.00	60.27	526.52	11.00	11.00	0.00	83.47	
5,412.48	91.00	88.15	4,947.28	71.66	682.04	3.00	0.00	3.00	89.96	
9,532.44	91.00	88.15	4,875.40	204.60	4,799.22	0.00	0.00	0.00	0.00	PBHL (JBFC #22H/L1

Database: EDM 5000.1 Single User Db

Local Co-ordinate Reference:

Well SHL: 990' FNL, 150' FWL, Sec 20,
T17S, R30E, Unit D

Company: COG Operating LLC

TVD Reference:

KB @ 3653.00usft (Silver Oak 3)

Project: Eddy County, NM (NAD-27 2015)

MD Reference:

KB @ 3653.00usft (Silver Oak 3)

Site: Jenkins B Federal Com #22H

North Reference:

Grid

Well: SHL: 990' FNL, 150' FWL, Sec 20, T17S,
R30E, Unit D

Survey Calculation Method:

Minimum Curvature

Wellbore: BHL: 800' FNL, 330' FEL, Sec 20, T17S,
R30E, Unit A

Design: Design #1

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
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,429.21	0.00	0.00	4,429.21	0.00	0.00	0.00	0.00	0.00	0.00
KOP - Start Build 11.00									
4,450.00	2.29	83.47	4,449.99	0.05	0.41	0.41	11.00	11.00	0.00
4,500.00	7.79	83.47	4,499.78	0.55	4.77	4.79	11.00	11.00	0.00
4,550.00	13.29	83.47	4,548.92	1.59	13.85	13.91	11.00	11.00	0.00
4,600.00	18.79	83.47	4,596.96	3.16	27.57	27.68	11.00	11.00	0.00

Database: EDM 5000.1 Single User Db

Local Co-ordinate Reference:

Well SHL: 990' FNL, 150' FWL, Sec 20,
T17S, R30E, Unit D

Company: COG Operating LLC

TVD Reference:

KB @ 3653.00usft (Silver Oak 3)

Project: Eddy County, NM (NAD-27 2015)

MD Reference:

KB @ 3653.00usft (Silver Oak 3)

Site: Jenkins B Federal Com #22H

North Reference:

Grid

Well: SHL: 990' FNL, 150' FWL, Sec 20, T17S,
R30E, Unit D

Survey Calculation Method:

Minimum Curvature

Wellbore: BHL: 800' FNL, 330' FEL, Sec 20, T17S,
R30E, Unit A

Design: Design #1

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)
4,650.00	24.29	83.47	4,643.45	5.24	45.80	45.98	11.00	11.00	0.00
4,700.00	29.79	83.47	4,687.97	7.83	68.37	68.64	11.00	11.00	0.00
4,750.00	35.29	83.47	4,730.10	10.88	95.08	95.46	11.00	11.00	0.00
4,800.00	40.79	83.47	4,769.47	14.39	125.68	126.17	11.00	11.00	0.00
4,850.00	46.29	83.47	4,805.70	18.30	159.88	160.51	11.00	11.00	0.00
4,900.00	51.79	83.47	4,838.47	22.59	197.38	198.16	11.00	11.00	0.00
4,950.00	57.29	83.47	4,867.46	27.22	237.82	238.77	11.00	11.00	0.00
5,000.00	62.79	83.47	4,892.43	32.15	280.84	281.96	11.00	11.00	0.00
5,050.00	68.29	83.47	4,913.12	37.32	326.04	327.33	11.00	11.00	0.00
5,100.00	73.79	83.47	4,929.37	42.70	373.00	374.48	11.00	11.00	0.00
5,150.00	79.29	83.47	4,941.00	48.22	421.29	422.97	11.00	11.00	0.00
5,200.00	84.79	83.47	4,947.93	53.85	470.47	472.34	11.00	11.00	0.00
5,250.00	90.29	83.47	4,950.07	59.53	520.08	522.15	11.00	11.00	0.00
5,256.48	91.00	83.47	4,950.00	60.27	526.52	528.61	11.00	11.00	0.00
EOC/TURN - Start DLS 3.00 TFO 89.96									
5,300.00	91.00	84.78	4,949.24	64.72	569.80	572.04	3.00	0.00	3.00
5,400.00	91.00	87.78	4,947.50	71.22	669.57	671.99	3.00	0.00	3.00
5,412.48	91.00	88.15	4,947.28	71.66	682.04	684.47	3.00	0.00	3.00
END TURN - Start 4119.96 hold at 5412.48 MD									
5,500.00	91.00	88.15	4,945.75	74.49	769.50	771.97	0.00	0.00	0.00
5,600.00	91.00	88.15	4,944.01	77.71	869.43	871.95	0.00	0.00	0.00
5,700.00	91.00	88.15	4,942.26	80.94	969.36	971.93	0.00	0.00	0.00
5,800.00	91.00	88.15	4,940.52	84.17	1,069.30	1,071.91	0.00	0.00	0.00
5,900.00	91.00	88.15	4,938.77	87.39	1,169.23	1,171.89	0.00	0.00	0.00
6,000.00	91.00	88.15	4,937.03	90.62	1,269.16	1,271.87	0.00	0.00	0.00
6,100.00	91.00	88.15	4,935.28	93.85	1,369.09	1,371.85	0.00	0.00	0.00
6,200.00	91.00	88.15	4,933.54	97.07	1,469.03	1,471.83	0.00	0.00	0.00
6,300.00	91.00	88.15	4,931.80	100.30	1,568.96	1,571.81	0.00	0.00	0.00
6,400.00	91.00	88.15	4,930.05	103.53	1,668.89	1,671.79	0.00	0.00	0.00
6,500.00	91.00	88.15	4,928.31	106.75	1,768.82	1,771.77	0.00	0.00	0.00
6,600.00	91.00	88.15	4,926.56	109.98	1,868.76	1,871.75	0.00	0.00	0.00
6,700.00	91.00	88.15	4,924.82	113.21	1,968.69	1,971.73	0.00	0.00	0.00
6,800.00	91.00	88.15	4,923.07	116.43	2,068.62	2,071.70	0.00	0.00	0.00
6,900.00	91.00	88.15	4,921.33	119.66	2,168.56	2,171.68	0.00	0.00	0.00
7,000.00	91.00	88.15	4,919.58	122.89	2,268.49	2,271.66	0.00	0.00	0.00
7,100.00	91.00	88.15	4,917.84	126.11	2,368.42	2,371.64	0.00	0.00	0.00
7,200.00	91.00	88.15	4,916.09	129.34	2,468.35	2,471.62	0.00	0.00	0.00
7,300.00	91.00	88.15	4,914.35	132.57	2,568.29	2,571.60	0.00	0.00	0.00
7,400.00	91.00	88.15	4,912.61	135.79	2,668.22	2,671.58	0.00	0.00	0.00
7,500.00	91.00	88.15	4,910.86	139.02	2,768.15	2,771.56	0.00	0.00	0.00
7,600.00	91.00	88.15	4,909.12	142.25	2,868.08	2,871.54	0.00	0.00	0.00
7,700.00	91.00	88.15	4,907.37	145.47	2,968.02	2,971.52	0.00	0.00	0.00
7,800.00	91.00	88.15	4,905.63	148.70	3,067.95	3,071.50	0.00	0.00	0.00
7,900.00	91.00	88.15	4,903.88	151.93	3,167.88	3,171.48	0.00	0.00	0.00
8,000.00	91.00	88.15	4,902.14	155.15	3,267.82	3,271.46	0.00	0.00	0.00
8,100.00	91.00	88.15	4,900.39	158.38	3,367.75	3,371.44	0.00	0.00	0.00
8,200.00	91.00	88.15	4,898.65	161.61	3,467.68	3,471.42	0.00	0.00	0.00
8,300.00	91.00	88.15	4,896.90	164.83	3,567.61	3,571.40	0.00	0.00	0.00
8,400.00	91.00	88.15	4,895.16	168.06	3,667.55	3,671.38	0.00	0.00	0.00
8,500.00	91.00	88.15	4,893.42	171.29	3,767.48	3,771.36	0.00	0.00	0.00
8,600.00	91.00	88.15	4,891.67	174.51	3,867.41	3,871.33	0.00	0.00	0.00

Database: EDM 5000.1 Single User Db
Company: COG Operating LLC
Project: Eddy County, NM (NAD-27 2015)
Site: Jenkins B Federal Corn #22H
Well: SHL: 990' FNL, 150' FWL, Sec 20, T17S, R30E, Unit D
Wellbore: BHL: 800' FNL, 330' FEL, Sec 20, T17S, R30E, Unit A
Design: Design #1

Local Co-ordinate Reference: Well SHL: 990' FNL, 150' FWL, Sec 20, T17S, R30E, Unit D
TVD Reference: KB @ 3653.00usft (Silver Oak 3)
MD Reference: KB @ 3653.00usft (Silver Oak 3)
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)
8,700.00	91.00	88.15	4,889.93	177.74	3,967.34	3,971.31	0.00	0.00	0.00
8,800.00	91.00	88.15	4,888.18	180.97	4,067.28	4,071.29	0.00	0.00	0.00
8,900.00	91.00	88.15	4,886.44	184.19	4,167.21	4,171.27	0.00	0.00	0.00
9,000.00	91.00	88.15	4,884.69	187.42	4,267.14	4,271.25	0.00	0.00	0.00
9,100.00	91.00	88.15	4,882.95	190.65	4,367.07	4,371.23	0.00	0.00	0.00
9,200.00	91.00	88.15	4,881.20	193.87	4,467.01	4,471.21	0.00	0.00	0.00
9,300.00	91.00	88.15	4,879.46	197.10	4,566.94	4,571.19	0.00	0.00	0.00
9,400.00	91.00	88.15	4,877.71	200.33	4,666.87	4,671.17	0.00	0.00	0.00
9,500.00	91.00	88.15	4,875.97	203.55	4,766.81	4,771.15	0.00	0.00	0.00
9,532.44	91.00	88.15	4,875.40	204.60	4,799.22	4,803.58	0.00	0.00	0.00

TD at 9532.44

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
128.67' Radius @ 4875. - hit/miss target - Shape - plan misses target center by 4799.94usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Circle (radius 128.67)	0.00	0.00	0.00	14.61	4,799.92	663,821.50	606,658.80	32° 49' 28.023 N	103° 59' 10.050 W
78.56' Radius @ 4886.6 - plan misses target center by 4192.08usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Circle (radius 78.56)	0.00	0.00	0.00	672.31	4,137.82	664,479.20	605,996.70	32° 49' 34.553 N	103° 59' 17.784 W
KOP (JBFC #22H/L1 De - plan hits target center - Point	0.00	0.00	4,429.21	0.00	0.00	663,806.89	601,858.88	32° 49' 28.031 N	104° 0' 6.301 W
PP (JBFC #22H/L1 Desi - plan hits target center - Point	0.00	0.00	4,824.07	20.60	180.00	663,827.50	602,038.88	32° 49' 28.229 N	104° 0' 4.191 W
PBHL (JBFC #22H/L1) - plan hits target center - Point	0.00	0.00	4,875.40	204.60	4,799.22	664,011.49	606,658.10	32° 49' 29.903 N	103° 59' 10.051 W
END OF TURN (JBFC # - plan hits target center - Point	0.00	0.01	4,947.28	71.66	682.04	663,878.56	602,540.92	32° 49' 28.719 N	103° 59' 58.306 W
EOC (JBFC #22H/L1 De - plan hits target center - Point	0.00	0.00	4,950.00	60.27	526.52	663,867.16	602,385.40	32° 49' 28.611 N	104° 0' 0.128 W

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
4,429.21	4,429.21	0.00	0.00	KOP - Start Build 11.00
5,256.48	4,950.00	60.27	526.52	EOC/TURN - Start DLS 3.00 TFO 89.96
5,412.48	4,947.28	71.66	682.04	END TURN - Start 4119.96 hold at 5412.48 MD
9,532.44	4,875.40	204.60	4,799.22	TD at 9532.44



COG Operating LLC

Project: Eddy County, NM (NAD-27 2015)

Site: Jenkins B Federal Com #22H

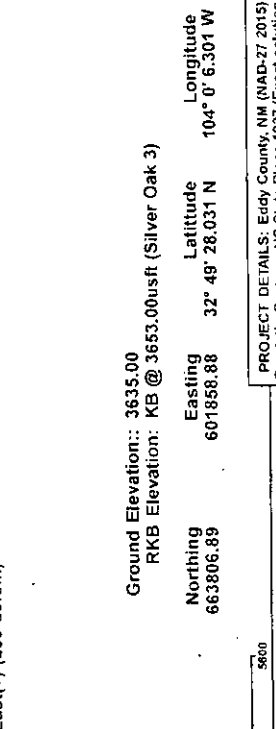
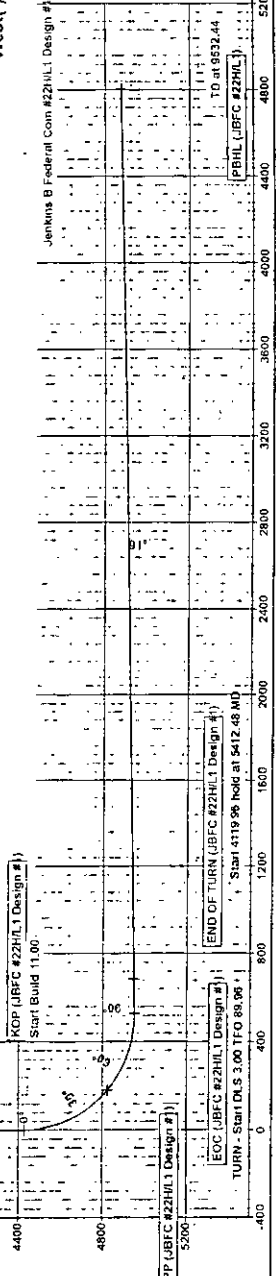
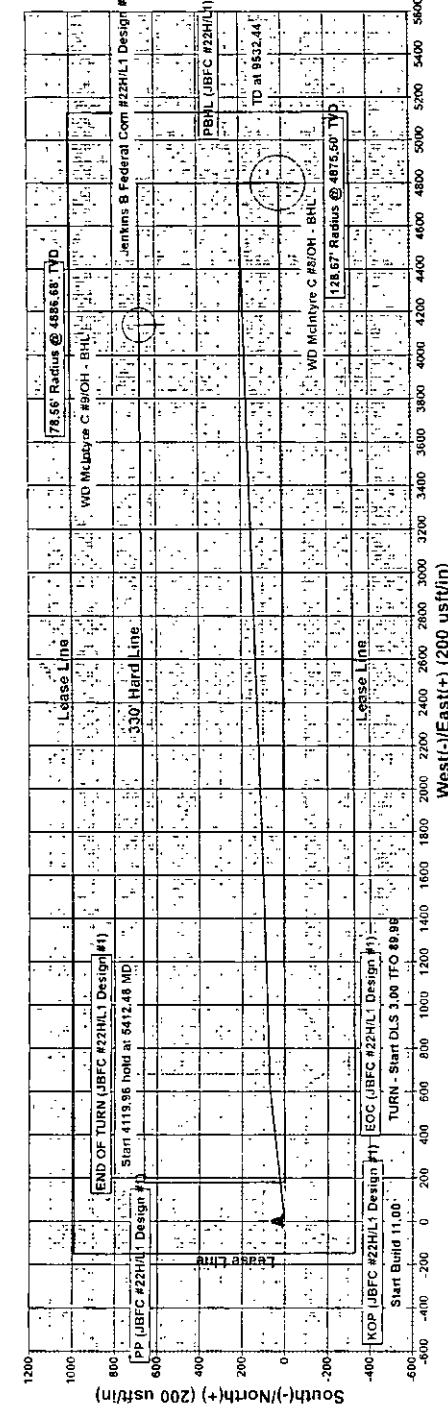
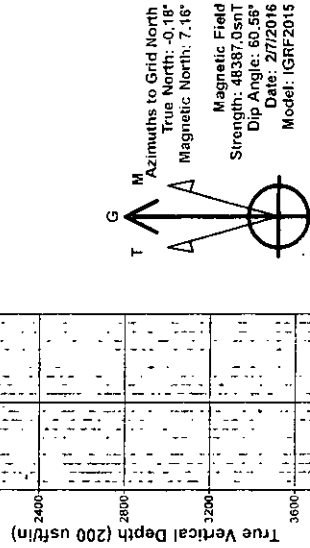
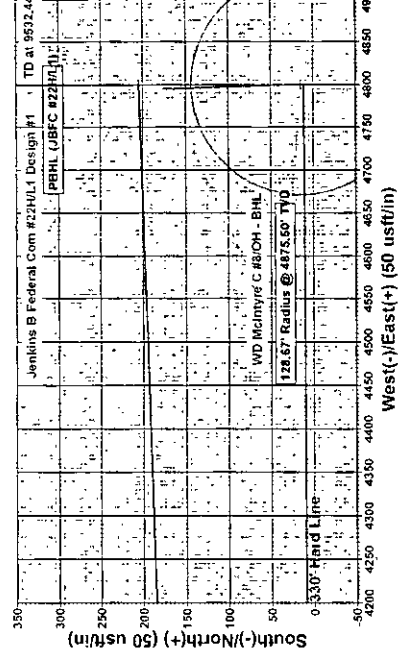
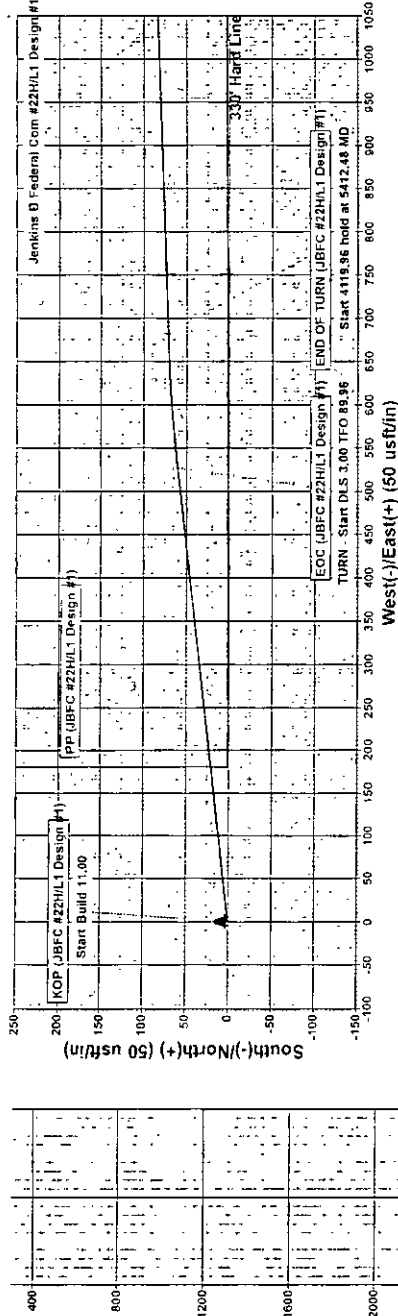
Well: SHL: 990' FNL, 150' FWL, Sec 20, T17S, R30E, Unit D

Wellbore: BHL: 800' FNL, 330' FEL, Sec 20, T17S, R30E, Unit A

Plan: Design #1 (SHL: 990' FNL, 150' FWL, Sec 20, T17S, R30E, Unit DIBHL: 800' FNL, 330' FEL, Sec 20, T17S, R30E, Unit A)

Section Details

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Deg	TFace	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	4429.21	0.00	0.00	4429.21	0.00	0.00	0.00	0.00	0.00	
3	5256.48	91.00	83.47	4950.00	60.27	526.52	11.00	83.47	528.61	
4	5412.48	91.00	88.15	4947.28	71.66	682.04	3.00	89.96	684.47	PBHL (JBFC #22HL1)
5	9532.44	91.00	88.15	4875.40	204.60	4799.22	0.00	0.00	4803.58	PBHL (JBFC #22HL1)



Ground Elevation: 3635.00
RKB Elevation: KB @ 3653.00usft (Silver Oak 3)

Northings: 663806.89
Eastings: 601858.88
Latitude: 32° 49' 28.031 N
Longitude: 104° 0' 6.301 W

PROJECT DETAILS: Eddy County, NM (NAD-27 2015)
Geoid: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level
Local North: Grid



Terra Directional Services LLC
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