

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.***SUBMIT IN TRIPLICATE - Other instructions on reverse side.**

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		5. Lease Serial No. NMNM115411
2. Name of Operator COG OPERATING LLC Contact: MAYTE X REYES E-Mail: mreyes1@conchoresources.com		6. If Indian, Allottee or Tribe Name
3a. Address 550 WEST TEXAS AVENUE SUITE 1300 MIDLAND, TX 79701	3b. Phone No. (include area code) Ph: 575-748-6945 Fx: 575-748-6950	7. If Unit or CA/Agreement, Name and/or No.
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 33 T24S R28E SESW 430FSL 2310FWL 32.167730 N Lat, 104.093480 W Lon		8. Well Name and No. REALLY SCARY FEDERAL 3H
		9. API Well No. 30-015-36372-00-X1
		10. Field and Pool, or Exploratory WILLOW LAKE
		11. County or Parish, and State EDDY COUNTY, NM

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 respectfully request approval for the following change in BHL.

Bottom Hole Location

From: 430' FSL & 330' FWL
TO: 330' FNL & 2260' FWL

A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales.



14. Thereby certify that the foregoing is true and correct. Electronic Submission #105548 verified by the BLM Well Information System For COG OPERATING LLC, sent to the Carlsbad Committed to AFMSS for processing by KURT SIMMONS on 03/31/2011 (11KMS1261SE)	
Name (Printed/Typed) MAYTE X REYES	Title REGULATORY ANALYST
Signature (Electronic Submission)	Date 03/30/2011

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By CHRISTOPHER WALLS	Title PETROLEUM ENGINEER	Date 04/19/2011
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 ****

m2

Drill 7 7/8" hole f/2450' - 11,144' (6755' TVD)

Run 5 1/2" 17# P110 LTC CSG to 11,144"

CMT with the following Design:

1st Stag: 400 SX of class H & acid soluble @ 15.0 ppg/2.62 cuft/sx

2nd Stag: Lead= 400 sx class H + Bentonite + HALAD-322 @ 12.7 ppg/1.89 cuft/sx

Tail: 100 sx class H neat @ 15.6 ppg/1.18 cuft/sx

3rd Stag: Lead= 350 sx class C + Bentonite + HALAD-322 @ 12.7 ppg/1.89 cuft/sx

Tail= 100 sx class C @ 14.8 ppg/1.34 cuft/sx

DVT @ 6275' DVT/ECP @ 2550'

Drill 12 1/4" to 2450'

Run 9 5/8" 36# J55 LTC csg

Cmt w/ the following Design:

Lead = 400 sx class C + Gilsonite + HR - 800 @ 12.7 ppg/1.89 cuft/sx

Tail = 250 sx class C + 1% CaCL2 @ 14.8 ppg/1.34 cuft/sx



Cog Operating LLC- Eastern NM

Eddy County

Really Scary Federal

#3H

OH

Plan: Plan #1

Pathfinder X & Y Planning Report

13 April, 2011

PATHFINDER

A Schlumberger Company



Pathfinder
Pathfinder X & Y Planning Report



Company: Cog Operating LLC- Eastern NM
Project: Eddy County
Site: Really Scary Federal
Well: #3H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #3H
TVD Reference: EST RKB @ 3006.00usft
MD Reference: EST RKB @ 3006.00usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Project	Eddy County		
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		Really Scary Federal				
Site Position:		Northing:	424,763.800	usft	Latitude:	32° 10' 3.232 N
From:	Map	Easting:	574,345.700	usft	Longitude:	104° 5' 35.040 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16	"	Grid Convergence:	0.13 °

Well		#3H				
Well Position	+N/-S	0.00 usft	Northing:	424,763.800 usft	Latitude:	32° 10' 3.232 N
	+E/-W	0.00 usft	Easting:	574,345.700 usft	Longitude:	104° 5' 35.040 W
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,006.00 usft	

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	04/13/11	7.83	60.07	48,581

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	359.09

Survey Tool Program		Date	04/13/11		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	11,144.83	Plan #1 (OH)	MWD	MWD - Standard	



Pathfinder
Pathfinder X & Y Planning Report



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Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
0.00	0.00	0.00	0.00	3,006.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
100.00	0.00	0.00	100.00	2,906.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
200.00	0.00	0.00	200.00	2,806.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
300.00	0.00	0.00	300.00	2,706.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
400.00	0.00	0.00	400.00	2,606.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
500.00	0.00	0.00	500.00	2,506.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
600.00	0.00	0.00	600.00	2,406.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
700.00	0.00	0.00	700.00	2,306.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
800.00	0.00	0.00	800.00	2,206.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
900.00	0.00	0.00	900.00	2,106.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
1,000.00	0.00	0.00	1,000.00	2,006.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
1,100.00	0.00	0.00	1,100.00	1,906.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
1,200.00	0.00	0.00	1,200.00	1,806.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
1,300.00	0.00	0.00	1,300.00	1,706.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
1,400.00	0.00	0.00	1,400.00	1,606.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
1,500.00	0.00	0.00	1,500.00	1,506.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
1,600.00	0.00	0.00	1,600.00	1,406.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
1,700.00	0.00	0.00	1,700.00	1,306.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
1,800.00	0.00	0.00	1,800.00	1,206.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
1,900.00	0.00	0.00	1,900.00	1,106.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
2,000.00	0.00	0.00	2,000.00	1,006.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
2,100.00	0.00	0.00	2,100.00	906.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
2,200.00	0.00	0.00	2,200.00	806.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
2,300.00	0.00	0.00	2,300.00	706.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
2,400.00	0.00	0.00	2,400.00	606.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
2,500.00	0.00	0.00	2,500.00	506.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
2,600.00	0.00	0.00	2,600.00	406.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70



Pathfinder
Pathfinder X & Y Planning Report



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Wellbore: OH
Design: Plan #1

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2,700.00	0.00	0.00	2,700.00	306.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70	
2,800.00	0.00	0.00	2,800.00	206.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70	
2,900.00	0.00	0.00	2,900.00	106.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70	
3,000.00	0.00	0.00	3,000.00	6.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70	
3,100.00	0.00	0.00	3,100.00	-94.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70	
3,200.00	0.00	0.00	3,200.00	-194.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70	
3,300.00	0.00	0.00	3,300.00	-294.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70	
3,400.00	0.00	0.00	3,400.00	-394.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70	
3,500.00	0.00	0.00	3,500.00	-494.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70	
3,600.00	0.00	0.00	3,600.00	-594.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70	
3,700.00	0.00	0.00	3,700.00	-694.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70	
3,800.00	0.00	0.00	3,800.00	-794.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70	
3,900.00	0.00	0.00	3,900.00	-894.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70	
4,000.00	0.00	0.00	4,000.00	-994.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70	
4,100.00	0.00	0.00	4,100.00	-1,094.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70	
4,200.00	0.00	0.00	4,200.00	-1,194.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70	
4,300.00	0.00	0.00	4,300.00	-1,294.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70	
4,400.00	0.00	0.00	4,400.00	-1,394.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70	
4,500.00	0.00	0.00	4,500.00	-1,494.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70	
4,600.00	0.00	0.00	4,600.00	-1,594.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70	
4,700.00	0.00	0.00	4,700.00	-1,694.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70	
4,800.00	0.00	0.00	4,800.00	-1,794.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70	
4,900.00	0.00	0.00	4,900.00	-1,894.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70	
5,000.00	0.00	0.00	5,000.00	-1,994.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70	
5,100.00	0.00	0.00	5,100.00	-2,094.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70	
5,200.00	0.00	0.00	5,200.00	-2,194.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70	
5,300.00	0.00	0.00	5,300.00	-2,294.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70	



Pathfinder
Pathfinder X & Y Planning Report



Company: Cog Operating LLC- Eastern NM
Project: Eddy County
Site: Really Scary Federal
Well: #3H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #3H
TVD Reference: EST RKB @ 3006.00usft
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North Reference: Grid
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Database: EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
5,400.00	0.00	0.00	5,400.00	-2,394.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
5,500.00	0.00	0.00	5,500.00	-2,494.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
5,600.00	0.00	0.00	5,600.00	-2,594.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
5,700.00	0.00	0.00	5,700.00	-2,694.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
5,800.00	0.00	0.00	5,800.00	-2,794.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
5,900.00	0.00	0.00	5,900.00	-2,894.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
6,000.00	0.00	0.00	6,000.00	-2,994.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
6,100.00	0.00	0.00	6,100.00	-3,094.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
6,200.00	0.00	0.00	6,200.00	-3,194.00	0.00	0.00	0.00	0.00	424,763.80	574,345.70
6,277.50	0.00	0.00	6,277.50	-3,271.50	0.00	0.00	0.00	0.00	424,763.80	574,345.70
6,300.00	2.70	359.09	6,299.99	-3,293.99	0.53	-0.01	0.53	12.00	424,764.33	574,345.69
6,325.00	5.70	359.09	6,324.92	-3,318.92	2.36	-0.04	2.36	12.00	424,766.16	574,345.66
6,350.00	8.70	359.09	6,349.72	-3,343.72	5.49	-0.09	5.49	12.00	424,769.29	574,345.61
6,375.00	11.70	359.09	6,374.32	-3,368.32	9.92	-0.16	9.92	12.00	424,773.72	574,345.54
6,400.00	14.70	359.09	6,398.66	-3,392.66	15.63	-0.25	15.63	12.00	424,779.43	574,345.45
6,425.00	17.70	359.09	6,422.67	-3,416.67	22.60	-0.36	22.60	12.00	424,786.40	574,345.34
6,450.00	20.70	359.09	6,446.27	-3,440.27	30.82	-0.49	30.82	12.00	424,794.62	574,345.21
6,475.00	23.70	359.09	6,469.42	-3,463.42	40.26	-0.64	40.27	12.00	424,804.06	574,345.06
6,500.00	26.70	359.09	6,492.04	-3,486.04	50.90	-0.81	50.91	12.00	424,814.70	574,344.89
6,525.00	29.70	359.09	6,514.07	-3,508.07	62.71	-1.00	62.72	12.00	424,826.51	574,344.70
6,550.00	32.70	359.09	6,535.45	-3,529.45	75.66	-1.20	75.67	12.00	424,839.46	574,344.50
6,575.00	35.70	359.09	6,556.12	-3,550.12	89.71	-1.42	89.72	12.00	424,853.51	574,344.28
6,600.00	38.70	359.09	6,576.03	-3,570.03	104.82	-1.66	104.83	12.00	424,868.62	574,344.04
6,625.00	41.70	359.09	6,595.13	-3,589.13	120.95	-1.92	120.96	12.00	424,884.75	574,343.78
6,650.00	44.70	359.09	6,613.35	-3,607.35	138.06	-2.19	138.07	12.00	424,901.86	574,343.51
6,675.00	47.70	359.09	6,630.65	-3,624.65	156.10	-2.48	156.11	12.00	424,919.90	574,343.22
6,700.00	50.70	359.09	6,646.99	-3,640.99	175.01	-2.78	175.04	12.00	424,938.81	574,342.92



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6,725.00	53.70	359.09	6,662.31	-3,656.31	194.76	-3.09	194.79	12.00	424,958.56	574,342.61
6,750.00	56.70	359.09	6,676.58	-3,670.58	215.29	-3.42	215.31	12.00	424,979.09	574,342.28
6,775.00	59.70	359.09	6,689.75	-3,683.75	236.53	-3.76	236.56	12.00	425,000.33	574,341.94
6,800.00	62.70	359.09	6,701.80	-3,695.80	258.43	-4.10	258.46	12.00	425,022.23	574,341.60
6,825.00	65.70	359.09	6,712.68	-3,706.68	280.93	-4.46	280.97	12.00	425,044.73	574,341.24
6,850.00	68.69	359.09	6,722.37	-3,716.37	303.97	-4.83	304.01	12.00	425,067.77	574,340.87
6,875.00	71.69	359.09	6,730.84	-3,724.84	327.49	-5.20	327.53	12.00	425,091.29	574,340.50
6,900.00	74.69	359.09	6,738.06	-3,732.06	351.41	-5.58	351.46	12.00	425,115.21	574,340.12
6,925.00	77.69	359.09	6,744.03	-3,738.03	375.68	-5.97	375.73	12.00	425,139.48	574,339.73
6,950.00	80.69	359.09	6,748.72	-3,742.72	400.23	-6.36	400.29	12.00	425,164.03	574,339.34
6,975.00	83.69	359.09	6,752.11	-3,746.11	425.00	-6.75	425.05	12.00	425,188.80	574,338.95
7,000.00	86.69	359.09	6,754.21	-3,748.21	449.90	-7.15	449.96	12.00	425,213.70	574,338.55
7,025.00	89.69	359.09	6,754.99	-3,748.99	474.88	-7.54	474.94	12.00	425,238.68	574,338.16
7,027.56	90.00	359.09	6,755.00	-3,749.00	477.44	-7.58	477.50	12.00	425,241.24	574,338.12
7,100.00	90.00	359.09	6,755.00	-3,749.00	549.88	-8.73	549.94	0.00	425,313.68	574,336.97
7,200.00	90.00	359.09	6,755.00	-3,749.00	649.86	-10.32	649.94	0.00	425,413.66	574,335.38
7,300.00	90.00	359.09	6,755.00	-3,749.00	749.85	-11.91	749.94	0.00	425,513.65	574,333.79
7,400.00	90.00	359.09	6,755.00	-3,749.00	849.84	-13.50	849.94	0.00	425,613.64	574,332.20
7,500.00	90.00	359.09	6,755.00	-3,749.00	949.82	-15.09	949.94	0.00	425,713.62	574,330.61
7,600.00	90.00	359.09	6,755.00	-3,749.00	1,049.81	-16.68	1,049.94	0.00	425,813.61	574,329.02
7,700.00	90.00	359.09	6,755.00	-3,749.00	1,149.80	-18.26	1,149.94	0.00	425,913.60	574,327.44
7,800.00	90.00	359.09	6,755.00	-3,749.00	1,249.79	-19.85	1,249.94	0.00	426,013.59	574,325.85
7,900.00	90.00	359.09	6,755.00	-3,749.00	1,349.77	-21.44	1,349.94	0.00	426,113.57	574,324.26
8,000.00	90.00	359.09	6,755.00	-3,749.00	1,449.76	-23.03	1,449.94	0.00	426,213.56	574,322.67
8,100.00	90.00	359.09	6,755.00	-3,749.00	1,549.75	-24.62	1,549.94	0.00	426,313.55	574,321.08
8,200.00	90.00	359.09	6,755.00	-3,749.00	1,649.74	-26.20	1,649.94	0.00	426,413.54	574,319.50
8,300.00	90.00	359.09	6,755.00	-3,749.00	1,749.72	-27.79	1,749.94	0.00	426,513.52	574,317.91



Pathfinder
Pathfinder X & Y Planning Report

PATHFINDER
A Schlumberger Company

Company: Cog Operating LLC- Eastern NM
Project: Eddy County
Site: Really Scary Federal
Well: #3H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #3H
TVD Reference: EST RKB @ 3006.00usft
MD Reference: EST RKB @ 3006.00usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
8,400.00	90.00	359.09	6,755.00	-3,749.00	1,849.71	-29.38	1,849.94	0.00	426,613.51	574,316.32
8,500.00	90.00	359.09	6,755.00	-3,749.00	1,949.70	-30.97	1,949.94	0.00	426,713.50	574,314.73
8,600.00	90.00	359.09	6,755.00	-3,749.00	2,049.69	-32.56	2,049.94	0.00	426,813.49	574,313.14
8,700.00	90.00	359.09	6,755.00	-3,749.00	2,149.67	-34.15	2,149.94	0.00	426,913.47	574,311.55
8,800.00	90.00	359.09	6,755.00	-3,749.00	2,249.66	-35.73	2,249.94	0.00	427,013.46	574,309.97
8,900.00	90.00	359.09	6,755.00	-3,749.00	2,349.65	-37.32	2,349.94	0.00	427,113.45	574,308.38
9,000.00	90.00	359.09	6,755.00	-3,749.00	2,449.64	-38.91	2,449.94	0.00	427,213.44	574,306.79
9,100.00	90.00	359.09	6,755.00	-3,749.00	2,549.62	-40.50	2,549.94	0.00	427,313.42	574,305.20
9,200.00	90.00	359.09	6,755.00	-3,749.00	2,649.61	-42.09	2,649.94	0.00	427,413.41	574,303.61
9,300.00	90.00	359.09	6,755.00	-3,749.00	2,749.60	-43.67	2,749.94	0.00	427,513.40	574,302.03
9,400.00	90.00	359.09	6,755.00	-3,749.00	2,849.59	-45.26	2,849.94	0.00	427,613.39	574,300.44
9,500.00	90.00	359.09	6,755.00	-3,749.00	2,949.57	-46.85	2,949.94	0.00	427,713.37	574,298.85
9,600.00	90.00	359.09	6,755.00	-3,749.00	3,049.56	-48.44	3,049.94	0.00	427,813.36	574,297.26
9,700.00	90.00	359.09	6,755.00	-3,749.00	3,149.55	-50.03	3,149.94	0.00	427,913.35	574,295.67
9,800.00	90.00	359.09	6,755.00	-3,749.00	3,249.53	-51.62	3,249.94	0.00	428,013.33	574,294.08
9,900.00	90.00	359.09	6,755.00	-3,749.00	3,349.52	-53.20	3,349.94	0.00	428,113.32	574,292.50
10,000.00	90.00	359.09	6,755.00	-3,749.00	3,449.51	-54.79	3,449.94	0.00	428,213.31	574,290.91
10,100.00	90.00	359.09	6,755.00	-3,749.00	3,549.50	-56.38	3,549.94	0.00	428,313.30	574,289.32
10,200.00	90.00	359.09	6,755.00	-3,749.00	3,649.48	-57.97	3,649.94	0.00	428,413.28	574,287.73
10,300.00	90.00	359.09	6,755.00	-3,749.00	3,749.47	-59.56	3,749.94	0.00	428,513.27	574,286.14
10,400.00	90.00	359.09	6,755.00	-3,749.00	3,849.46	-61.14	3,849.94	0.00	428,613.26	574,284.56
10,500.00	90.00	359.09	6,755.00	-3,749.00	3,949.45	-62.73	3,949.94	0.00	428,713.25	574,282.97
10,600.00	90.00	359.09	6,755.00	-3,749.00	4,049.43	-64.32	4,049.94	0.00	428,813.23	574,281.38
10,700.00	90.00	359.09	6,755.00	-3,749.00	4,149.42	-65.91	4,149.94	0.00	428,913.22	574,279.79
10,800.00	90.00	359.09	6,755.00	-3,749.00	4,249.41	-67.50	4,249.94	0.00	429,013.21	574,278.20
10,900.00	90.00	359.09	6,755.00	-3,749.00	4,349.40	-69.09	4,349.94	0.00	429,113.20	574,276.61
11,000.00	90.00	359.09	6,755.00	-3,749.00	4,449.38	-70.67	4,449.94	0.00	429,213.18	574,275.03



Pathfinder
Pathfinder X & Y Planning Report



Company: Cog Operating LLC- Eastern NM
Project: Eddy County
Site: Really Scary Federal
Well: #3H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #3H
TVD Reference: EST RKB @ 3006.00usft
MD Reference: EST RKB @ 3006.00usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
11,100.00	90.00	359.09	6,755.00	-3,749.00	4,549.37	-72.26	4,549.94	0.00	429,313.17	574,273.44
11,144.83	90.00	359.09	6,755.00	-3,749.00	4,594.20	-72.97	4,594.78	0.00	429,358.00	574,272.73
PBHL (copy)										

Checked By: _____ Approved By: _____ Date: _____



Project: Eddy County
Site: Really Scary Feder.
Well: #3H
Wellbore: OH
Plan: Plan #1 (#3H/OH)



Azimuths to Grid North
True North: -0.13°
Magnetic North: 7.70°

Magnetic Field
Strength: 48581.0snT
Dip Angle: 60.07°
Date: 04/13/2011
Model: IGRF200510

PATHFINDER
A Schlumberger Company

PROJECT DETAILS: Eddy County
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
Local North: Grid

SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6277.56	0.00	0.00	6277.56	0.00	0.00	0.00	0.00	0.00	
7027.56	90.00	359.09	6755.00	477.44	-7.58	12.00	359.09	477.50	
11144.83	90.00	359.09	6755.00	4594.20	-72.97	0.00	0.00	4594.78	PBHL (copy)

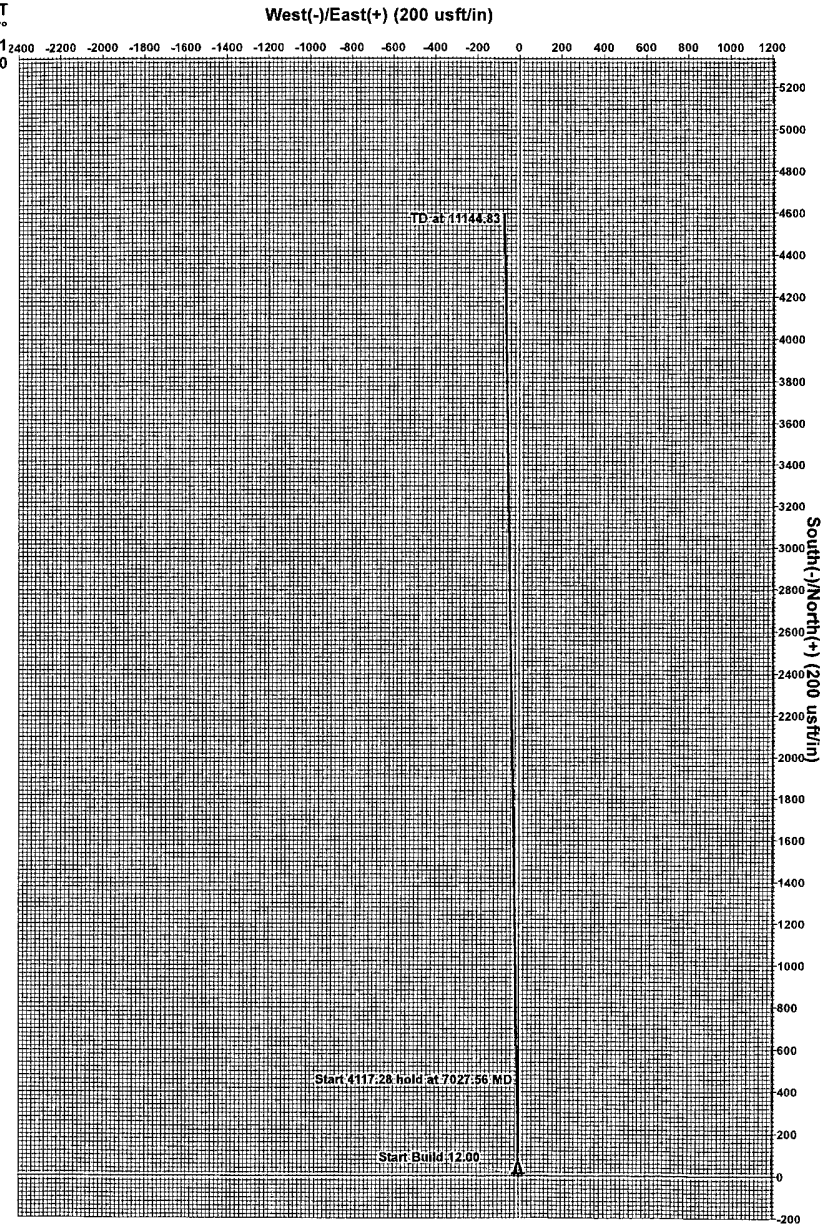
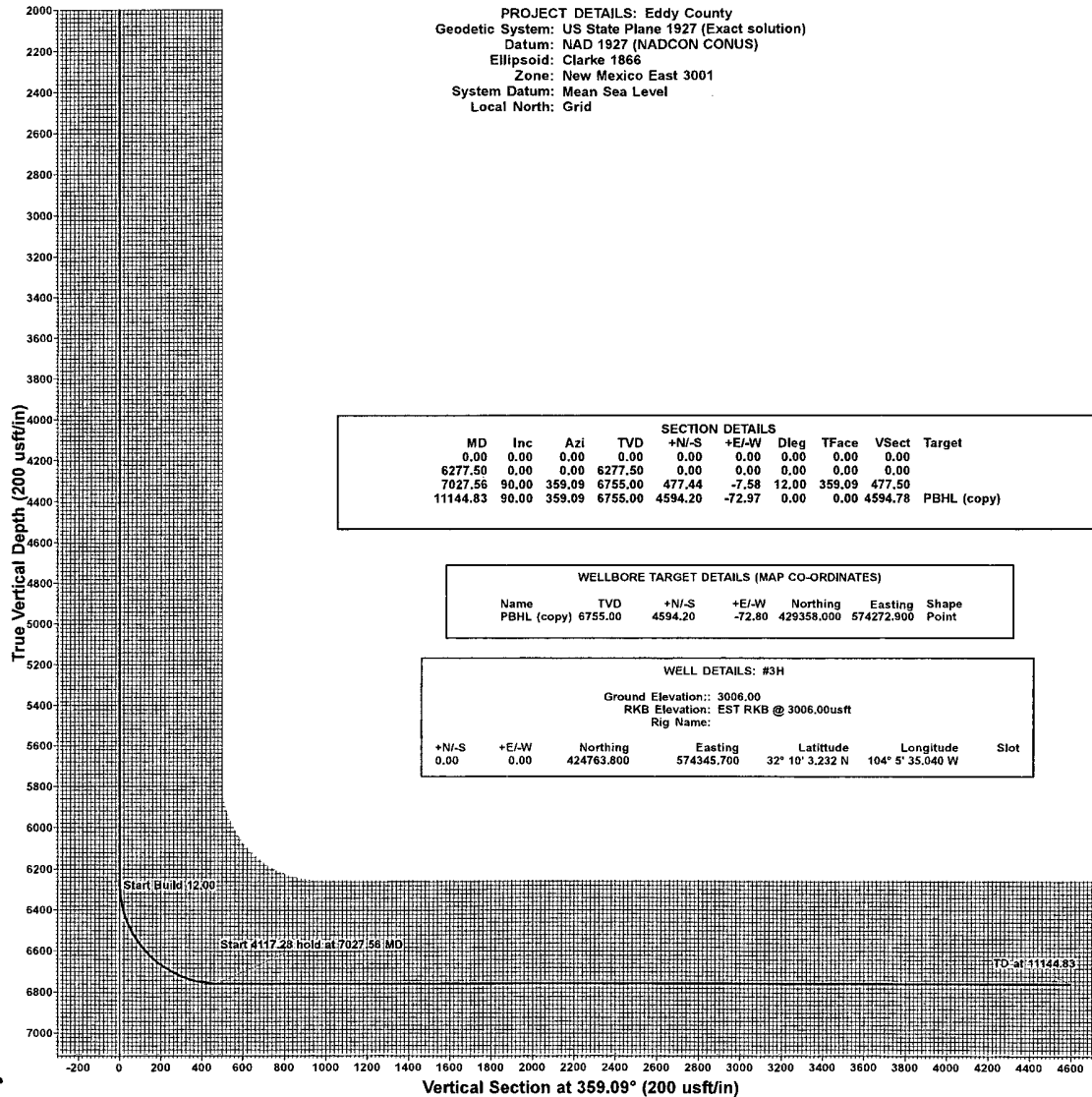
WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL (copy)	6755.00	4594.20	-72.80	429358.000	574272.900	Point

WELL DETAILS: #3H

Ground Elevation:: 3006.00
RKB Elevation: EST RKB @ 3006.00usft
Rig Name:

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	424763.800	574345.700	32° 10' 3.232 N	104° 5' 35.040 W	



Plan: Plan #1 (#3H/OH)

Created By: Nate Bingham Date: 11:15, April 13 2011

Checked: _____ Date: _____