

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED
OMB No. 1004-0137
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 page 2.

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		5. Lease Serial No. NMNM54291
2. Name of Operator Marbob Energy Corporation		6. If Indian, Allottee, or Tribe Name
3a. Address P.O. Box 227 Artesia, NM 88211-0227	3b. Phone No. (include area code) 575-748-3303	7. If Unit or CA. Agreement Name and/or No.
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) SHL 430' FSL & 330' FEL, Unit P (SESE) Sec 9-T26S-R29E		8. Well Name and No. Gehrig Federal #5H
Lat. Long.		9. API Well No. 30-015-37678
		10. Field and Pool, or Exploratory Area
		11. County or Parish, State Eddy NM

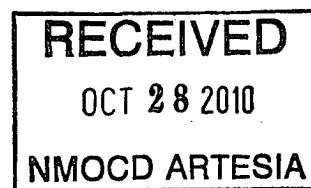
12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/ Resume)	☐ Water Shut-off
☐ Subsequent Report	☐ Altering Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☒ Change Plans	☐ Plug and abandon	☐ Temporarily Abandon	<u>Change from vertical</u>
	☐ Convert to Injection	☐ Plug back	☐ Water Disposal	<u>well to horizontal well</u>

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 or pertinent markers and sands. Attach the Bond under which the work will performed or provide the Bond No. on file with the 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 Notice shall be filed only after all requirements, including reclamantion, have been completed, and the operator has determined that the site is ready for final inspection.)

Marbob Energy Corporation would like to change the Bottom Hole Location for the above-referenced well. The bottom hole location will now be 330 FNL & 380 FEL. Attached is the Drilling and Operations Plan, and necessary survey.

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**



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

Name (Printed/ Typed)

Rand French

Title: **Regulatory Coordinator**

Signature: *Rand French*

Date: **10/25/10**

APPROVED

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by: *Dustin Winkler*

Title:

OCT 26 2010

Date:

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:

/s/ Dustin Winkler

Title 18 U.S.C. Section 1001 AND Title 43 U.S.C. Section 1212, make it a crime for any person to knowingly and willfully make any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE**

K-2

DISTRICT I
1625 N. FRENCH DR., HOBBS, NM 88240

DISTRICT II
1301 W. GRAND AVENUE, ARTESIA, NM 88210

DISTRICT III
1000 RIO BRAZOS RD., AZTEC, NM 87410

DISTRICT IV
11885 S. ST. FRANCIS DR., SANTA FE, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

11885 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

Form C-102

Revised October 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 3001537678	Pool Code 13354	Pool Name CORRAL CANYON; BONE SPRING SOUTH
Property Code 308091	Property Name GEHRIG FEDERAL	Well Number 5H
GRID No. 229137	Operator Name COG OPERATING LLC	Elevation 2949'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	9	26-S	29-E		430	SOUTH	330	EAST	EDDY

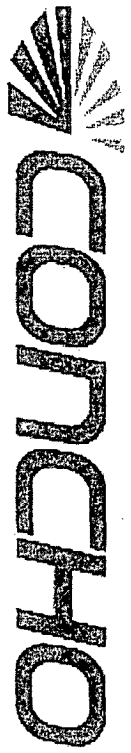
Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	9	26-S	29-E		330	NORTH	380	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.

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 SURFACE LOCATION Y=382369.9 N X=609158.6 E LAT.=32.050763° N LONG.=103.981009° W BOTTOM HOLE LOCATION Y=386932.8 N X=609141.1 E 2957.0' 2945.6' 600' 2962.4' 2942.7' DETAIL GRID: AZ=359°46'42" HORZ DIST=4564.7' S.L. 330' SEE DETAIL	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>Seth Wild</i> 10-13-10 Signature Date Seth Wild Printed Name 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. DECEMBER 10, 2009 Date Surveyed Signature & Seal of Professional Surveyor 12641 10-13-10 Certificate No. GARY EIDSON 12641 RON EIDSON 3239
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COG Operating LLC

Eddy County(NAD27)

Gehrig Federal

#5

OH

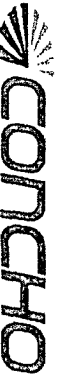
Plan: Plan #2

Pathfinder X & Y Planning Report

14 October, 2010



A Schlumberger Company



Pathfinder
Pathfinder X & Y Planning Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #5
Project:	Eddy County(NAD27)	TVD Reference:	WELL @ 2971.00ft (Original Well Elev)
Site:	Gehrig Federal	MD Reference:	WELL @ 2971.00ft (Original Well Elev)
Well:	#5	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	Database:	Midland Database
Project:	Eddy County(NAD27)		
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		

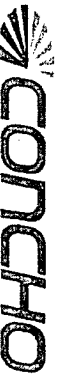
Site:	Gehrig Federal	Northing:	382,369.900 ft	Latitude:	32° 3' 2.737 N
Site Position:		Easting:	609,158.600 ft	Longitude:	103° 58' 51.634 W
From:	Map	Slot Radius:	"	Grid Convergence:	0.19°
Position Uncertainty:	0.00 ft				

Well:	#5	Northing:	382,369.900 ft	Latitude:	32° 3' 2.737 N
Well Position:	+N/S	Easting:	609,158.600 ft	Longitude:	103° 58' 51.634 W
	+E/W	Wellhead Elevation:	ft	Ground Level:	2,949.00 ft
Position Uncertainty:	0.00 ft				

Wellbore:	OH				
Magnetics:	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (mT)
	IGRF200510	10/14/10	7.83	59.99	48.569

Design:	Plan #2	Phase:	PLAN	Tie On Depth:	0.00
Audit Notes:					
Version:					
Vertical Section:	Depth From (ft)	+N/S (ft)	+E/W (ft)	Difference (ft)	
	0.00	0.00	0.00	359.79	

Survey Tool Program:	Date:	10/14/10			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	11,457.99	Plan #2 (OH)	MWD	MWD - Standard	



Pathfinder
Pathfinder X & Y Planning Report



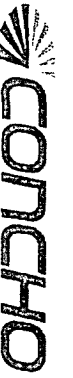
A Schlumberger Company

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MD Reference: WELL @ 2971.00ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E-W (ft)	V. Sec (ft)	Dleg (°/100ft)	Northing (ft)	Easting (ft)
0.00	0.00	0.00	0.00	-2,971.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
100.00	0.00	0.00	100.00	-2,871.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
200.00	0.00	0.00	200.00	-2,771.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
300.00	0.00	0.00	300.00	-2,671.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
400.00	0.00	0.00	400.00	-2,571.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
500.00	0.00	0.00	500.00	-2,471.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
600.00	0.00	0.00	600.00	-2,371.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
700.00	0.00	0.00	700.00	-2,271.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
800.00	0.00	0.00	800.00	-2,171.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
900.00	0.00	0.00	900.00	-2,071.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
1,000.00	0.00	0.00	1,000.00	-1,971.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
1,100.00	0.00	0.00	1,100.00	-1,871.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
1,200.00	0.00	0.00	1,200.00	-1,771.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
1,300.00	0.00	0.00	1,300.00	-1,671.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
1,400.00	0.00	0.00	1,400.00	-1,571.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
1,500.00	0.00	0.00	1,500.00	-1,471.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
1,600.00	0.00	0.00	1,600.00	-1,371.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
1,700.00	0.00	0.00	1,700.00	-1,271.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
1,800.00	0.00	0.00	1,800.00	-1,171.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
1,900.00	0.00	0.00	1,900.00	-1,071.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
2,000.00	0.00	0.00	2,000.00	-971.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
2,100.00	0.00	0.00	2,100.00	-871.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
2,200.00	0.00	0.00	2,200.00	-771.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
2,300.00	0.00	0.00	2,300.00	-671.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
2,400.00	0.00	0.00	2,400.00	-571.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
2,500.00	0.00	0.00	2,500.00	-471.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
2,600.00	0.00	0.00	2,600.00	-371.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60



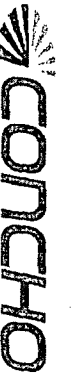
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Pathfinder X & Y Planning Report



Company: COG Operating LLC
Project: Eddy County(NAD27)
Site: Gehrig Federal
Well: #5
Wellbore: OH
Design: Plan #2

Local Co-ordinate Reference: Well #5
TVL Reference: WELL @ 2971.00ft (Original Well Elev)
MD Reference: WELL @ 2971.00ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Planned Survey	MD (ft)	Inc (°)	Azi (°)	TVL (ft)	TVLSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	Dleg (°/100ft)	Northing (ft)	Eastng (ft)
	2,700.00	0.00	0.00	2,700.00	-271.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	2,800.00	0.00	0.00	2,800.00	-171.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	2,900.00	0.00	0.00	2,900.00	-71.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	3,000.00	0.00	0.00	3,000.00	29.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	3,100.00	0.00	0.00	3,100.00	129.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	3,200.00	0.00	0.00	3,200.00	229.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	3,300.00	0.00	0.00	3,300.00	329.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	3,400.00	0.00	0.00	3,400.00	429.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	3,500.00	0.00	0.00	3,500.00	529.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	3,600.00	0.00	0.00	3,600.00	629.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	3,700.00	0.00	0.00	3,700.00	729.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	3,800.00	0.00	0.00	3,800.00	829.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	3,900.00	0.00	0.00	3,900.00	929.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	4,000.00	0.00	0.00	4,000.00	1,029.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	4,100.00	0.00	0.00	4,100.00	1,129.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	4,200.00	0.00	0.00	4,200.00	1,229.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	4,300.00	0.00	0.00	4,300.00	1,329.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	4,400.00	0.00	0.00	4,400.00	1,429.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	4,500.00	0.00	0.00	4,500.00	1,529.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	4,600.00	0.00	0.00	4,600.00	1,629.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	4,700.00	0.00	0.00	4,700.00	1,729.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	4,800.00	0.00	0.00	4,800.00	1,829.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	4,900.00	0.00	0.00	4,900.00	1,929.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	5,000.00	0.00	0.00	5,000.00	2,029.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	5,100.00	0.00	0.00	5,100.00	2,129.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	5,200.00	0.00	0.00	5,200.00	2,229.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	5,300.00	0.00	0.00	5,300.00	2,329.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60



Pathfinder
Pathfinder X & Y Planning Report



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Wellbore: OH
Design: Plan #2

Local Co-ordinate Reference: Well #5
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Planned Survey	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	EW (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Eastng (ft)
	5,400.00	0.00	0.00	5,400.00	2,429.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	5,500.00	0.00	0.00	5,500.00	2,529.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	5,600.00	0.00	0.00	5,600.00	2,629.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	5,700.00	0.00	0.00	5,700.00	2,729.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	5,800.00	0.00	0.00	5,800.00	2,829.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	5,900.00	0.00	0.00	5,900.00	2,929.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	6,000.00	0.00	0.00	6,000.00	3,029.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	6,100.00	0.00	0.00	6,100.00	3,129.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	6,200.00	0.00	0.00	6,200.00	3,229.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	6,300.00	0.00	0.00	6,300.00	3,329.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	6,400.00	0.00	0.00	6,400.00	3,429.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	6,500.00	0.00	0.00	6,500.00	3,529.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	6,600.00	0.00	0.00	6,600.00	3,629.00	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	6,622.50	0.00	0.00	6,622.50	3,661.50	0.00	0.00	0.00	0.00	382,369.90	609,158.60
	6,625.00	0.30	359.79	6,625.00	3,664.00	0.01	0.00	0.01	12.00	382,369.91	609,158.60
	6,650.00	3.30	359.79	6,649.98	3,678.98	0.79	0.00	0.79	12.00	382,370.69	609,158.60
	6,675.00	6.30	359.79	6,674.89	3,703.89	2.88	-0.01	2.88	12.00	382,372.78	609,158.59
	6,700.00	9.30	359.79	6,699.66	3,728.66	6.28	-0.02	6.28	12.00	382,376.18	609,158.58
	6,725.00	12.30	359.79	6,724.21	3,753.21	10.96	-0.04	10.96	12.00	382,380.86	609,158.56
	6,750.00	15.30	359.79	6,748.49	3,777.49	16.92	-0.06	16.92	12.00	382,386.82	609,158.54
	6,775.00	18.30	359.79	6,772.42	3,801.42	24.15	-0.09	24.15	12.00	382,394.05	609,158.51
	6,800.00	21.30	359.79	6,795.94	3,824.94	32.61	-0.12	32.61	12.00	382,402.51	609,158.48
	6,825.00	24.30	359.79	6,818.98	3,847.98	42.30	-0.16	42.30	12.00	382,412.20	609,158.44
	6,850.00	27.30	359.79	6,841.49	3,870.49	53.18	-0.19	53.18	12.00	382,423.08	609,158.41
	6,875.00	30.30	359.79	6,863.40	3,892.40	65.22	-0.24	65.22	12.00	382,435.12	609,158.36
	6,900.00	33.30	359.79	6,884.64	3,913.64	78.39	-0.29	78.39	12.00	382,448.29	609,158.31
	6,925.00	36.30	359.79	6,905.17	3,934.17	92.66	-0.34	92.66	12.00	382,462.56	609,158.26



Pathfinder
Pathfinder X & Y Planning Report



Company: COG Operating LLC
Project: Eddy County(NAD27)
Site: Gehrig Federal
Well: #5
Wellbore: OH
Design: Plan #2

Local Co-ordinate Reference: Well #5
TVD Reference: WELL @ 2971.00ft (Original Well Elev)
MD Reference: WELL @ 2971.00ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Planned Survey	Inc	Azi	TVD	TVDSS	N/S	E/W	V. Sec	D Leg	Northing	Easting
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	(ft)	(ft)
6,950.00	39.30	359.79	6,924.92	3,953.92	107.98	-0.40	107.98	12.00	382,477.88	609,158.20
6,975.00	42.30	359.79	6,943.84	3,972.84	124.31	-0.46	124.31	12.00	382,494.21	609,158.14
7,000.00	45.30	359.79	6,961.89	3,990.89	141.61	-0.52	141.61	12.00	382,511.51	609,158.08
7,025.00	48.30	359.79	6,979.00	4,008.00	159.83	-0.59	159.83	12.00	382,529.73	609,158.01
7,050.00	51.30	359.79	6,995.14	4,024.14	178.92	-0.66	178.92	12.00	382,548.82	609,157.94
7,075.00	54.30	359.79	7,010.25	4,039.25	198.83	-0.73	198.83	12.00	382,568.73	609,157.87
7,100.00	57.30	359.79	7,024.30	4,053.30	219.50	-0.80	219.51	12.00	382,589.40	609,157.80
7,125.00	60.30	359.79	7,037.25	4,066.25	240.88	-0.88	240.89	12.00	382,610.78	609,157.72
7,150.00	63.30	359.79	7,049.07	4,078.07	262.91	-0.96	262.92	12.00	382,632.81	609,157.64
7,175.00	66.30	359.79	7,059.71	4,088.71	285.53	-1.05	285.53	12.00	382,655.43	609,157.55
7,200.00	69.29	359.79	7,069.16	4,098.16	308.67	-1.13	308.68	12.00	382,678.57	609,157.47
7,225.00	72.29	359.79	7,077.38	4,106.38	332.28	-1.22	332.28	12.00	382,702.18	609,157.38
7,250.00	75.29	359.79	7,084.36	4,113.36	356.28	-1.31	356.29	12.00	382,726.18	609,157.29
7,275.00	78.29	359.79	7,090.07	4,119.07	380.62	-1.40	380.62	12.00	382,750.52	609,157.20
7,300.00	81.29	359.79	7,094.50	4,123.50	405.22	-1.49	405.22	12.00	382,775.12	609,157.11
7,325.00	84.29	359.79	7,097.63	4,126.63	430.02	-1.58	430.02	12.00	382,799.92	609,157.02
7,350.00	87.29	359.79	7,099.47	4,128.47	454.95	-1.67	454.95	12.00	382,824.85	609,156.93
7,372.56	90.00	359.79	7,100.00	4,129.00	477.50	-1.75	477.50	12.00	382,847.40	609,156.85
7,400.00	90.00	359.79	7,100.00	4,129.00	504.94	-1.85	504.94	0.00	382,874.84	609,156.75
7,500.00	90.00	359.79	7,100.00	4,129.00	604.94	-2.22	604.94	0.00	382,974.84	609,156.38
7,600.00	90.00	359.79	7,100.00	4,129.00	704.94	-2.58	704.94	0.00	383,074.84	609,156.02
7,700.00	90.00	359.79	7,100.00	4,129.00	804.94	-2.95	804.94	0.00	383,174.84	609,155.65
7,800.00	90.00	359.79	7,100.00	4,129.00	904.94	-3.32	904.94	0.00	383,274.84	609,155.28
7,900.00	90.00	359.79	7,100.00	4,129.00	1,004.94	-3.68	1,004.94	0.00	383,374.84	609,154.92
8,000.00	90.00	359.79	7,100.00	4,129.00	1,104.94	-4.05	1,104.94	0.00	383,474.84	609,154.55
8,100.00	90.00	359.79	7,100.00	4,129.00	1,204.94	-4.42	1,204.94	0.00	383,574.84	609,154.18
8,200.00	90.00	359.79	7,100.00	4,129.00	1,304.94	-4.78	1,304.94	0.00	383,674.84	609,153.82



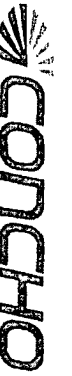
Pathfinder
Pathfinder X & Y Planning Report



A Schlumberger Company

Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #5
Project:	Eddy County(NAB27)	TVD-Reference:	WELL @ 2971.00ft (Original Well Elev)
Site:	Gehrig Federal	MD-Reference:	WELL @ 2971.00ft (Original Well Elev)
Well:	#5	North-Reference:	Grid
Wellbore:	OH	Survey-Calculation Method:	Minimum Curvature
Design:	Plan #2	Database:	Midland Database

Planned Survey	MD (ft)	Incl (%)	AZI (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	IEW (ft)	V-Sec (ft)	DLog (°/100ft)	Northg (ft)	Eastng (ft)
	8,300.00	90.00	359.79	7,100.00	4,129.00	1,404.94	-5.15	1,404.94	0.00	383,774.84	609,153.45
	8,400.00	90.00	359.79	7,100.00	4,129.00	1,504.93	-5.52	1,504.94	0.00	383,874.83	609,153.08
	8,500.00	90.00	359.79	7,100.00	4,129.00	1,604.93	-5.88	1,604.94	0.00	383,974.83	609,152.72
	8,600.00	90.00	359.79	7,100.00	4,129.00	1,704.93	-6.25	1,704.94	0.00	384,074.83	609,152.35
	8,700.00	90.00	359.79	7,100.00	4,129.00	1,804.93	-6.62	1,804.94	0.00	384,174.83	609,151.98
	8,800.00	90.00	359.79	7,100.00	4,129.00	1,904.93	-6.98	1,904.94	0.00	384,274.83	609,151.62
	8,900.00	90.00	359.79	7,100.00	4,129.00	2,004.93	-7.35	2,004.94	0.00	384,374.83	609,151.25
	9,000.00	90.00	359.79	7,100.00	4,129.00	2,104.93	-7.72	2,104.94	0.00	384,474.83	609,150.88
	9,100.00	90.00	359.79	7,100.00	4,129.00	2,204.93	-8.08	2,204.94	0.00	384,574.83	609,150.52
	9,200.00	90.00	359.79	7,100.00	4,129.00	2,304.93	-8.45	2,304.94	0.00	384,674.83	609,150.15
	9,300.00	90.00	359.79	7,100.00	4,129.00	2,404.93	-8.81	2,404.94	0.00	384,774.83	609,149.79
	9,400.00	90.00	359.79	7,100.00	4,129.00	2,504.93	-9.18	2,504.94	0.00	384,874.83	609,149.42
	9,500.00	90.00	359.79	7,100.00	4,129.00	2,604.93	-9.55	2,604.94	0.00	384,974.83	609,149.05
	9,600.00	90.00	359.79	7,100.00	4,129.00	2,704.93	-9.91	2,704.94	0.00	385,074.83	609,148.69
	9,700.00	90.00	359.79	7,100.00	4,129.00	2,804.93	-10.28	2,804.94	0.00	385,174.83	609,148.32
	9,800.00	90.00	359.79	7,100.00	4,129.00	2,904.93	-10.65	2,904.94	0.00	385,274.83	609,147.95
	9,900.00	90.00	359.79	7,100.00	4,129.00	3,004.92	-11.01	3,004.94	0.00	385,374.82	609,147.59
	10,000.00	90.00	359.79	7,100.00	4,129.00	3,104.92	-11.38	3,104.94	0.00	385,474.82	609,147.22
	10,100.00	90.00	359.79	7,100.00	4,129.00	3,204.92	-11.75	3,204.94	0.00	385,574.82	609,146.85
	10,200.00	90.00	359.79	7,100.00	4,129.00	3,304.92	-12.11	3,304.94	0.00	385,674.82	609,146.49
	10,300.00	90.00	359.79	7,100.00	4,129.00	3,404.92	-12.48	3,404.94	0.00	385,774.82	609,146.12
	10,400.00	90.00	359.79	7,100.00	4,129.00	3,504.92	-12.85	3,504.94	0.00	385,874.82	609,145.75
	10,500.00	90.00	359.79	7,100.00	4,129.00	3,604.92	-13.21	3,604.94	0.00	385,974.82	609,145.39
	10,600.00	90.00	359.79	7,100.00	4,129.00	3,704.92	-13.58	3,704.94	0.00	386,074.82	609,145.02
	10,700.00	90.00	359.79	7,100.00	4,129.00	3,804.92	-13.95	3,804.94	0.00	386,174.82	609,144.65
	10,800.00	90.00	359.79	7,100.00	4,129.00	3,904.92	-14.31	3,904.94	0.00	386,274.82	609,144.29
	10,900.00	90.00	359.79	7,100.00	4,129.00	4,004.92	-14.68	4,004.94	0.00	386,374.82	609,143.92



Pathfinder Pathfinder X & Y Planning Report



Company: COG Operating LLC
Project: Eddy County(NAD27)
Site: Gehrig Federal
Well: #5
Wellbore: OH
Design: Plan #2

Local Co-ordinate Reference: Well #5
TVL Reference: WELL @ 2971.00ft (Original Well Elev)
MD Reference: WELL @ 2971.00ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Planned Survey

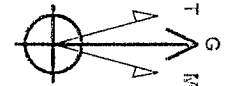
MD (ft)	Inc (°)	AZI (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	EW (ft)	V. Sec (ft)	Dip (°/100ft)	North (ft)	Easting (ft)
11,000.00	90.00	359.79	7,100.00	4,129.00	4,104.92	-15.05	4,104.94	0.00	386,474.82	609,143.55
11,100.00	90.00	359.79	7,100.00	4,129.00	4,204.92	-15.41	4,204.94	0.00	386,574.82	609,143.19
11,200.00	90.00	359.79	7,100.00	4,129.00	4,304.92	-15.78	4,304.94	0.00	386,674.82	609,142.82
11,300.00	90.00	359.79	7,100.00	4,129.00	4,404.92	-16.14	4,404.94	0.00	386,774.82	609,142.46
11,400.00	90.00	359.79	7,100.00	4,129.00	4,504.91	-16.51	4,504.94	0.00	386,874.81	609,142.09
11,457.99	90.00	359.79	7,100.00	4,129.00	4,562.90	-16.72	4,562.93	0.00	386,932.80	609,141.88

PBHL(GER#5)

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	N/S (ft)	EW (ft)	North (ft)	Easting (ft)	Latitude	Longitude
hit/miss target	0.00	0.00	7,100.00	4,562.90	-17.50	386,932.800	609,141.100	32° 3' 47.894 N	103° 58' 51.665 W
PBHL(GER#5)									
- Plan hit target center									
- Point									

Checked By: _____ Approved By: _____ Date: _____



Project: Eddy County(NAD27)
Site: Gehrig Federal
Well: #5
Wellbore: OH
Plan: Plan #2 (#5/OH)

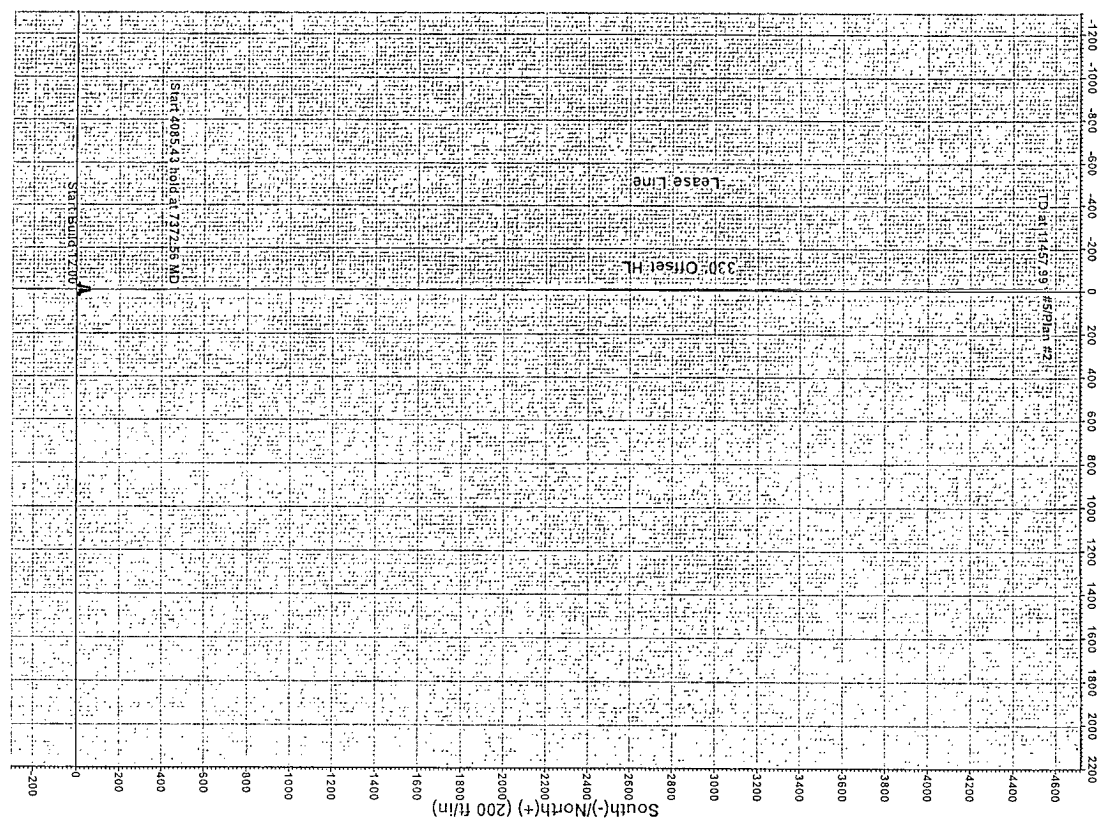
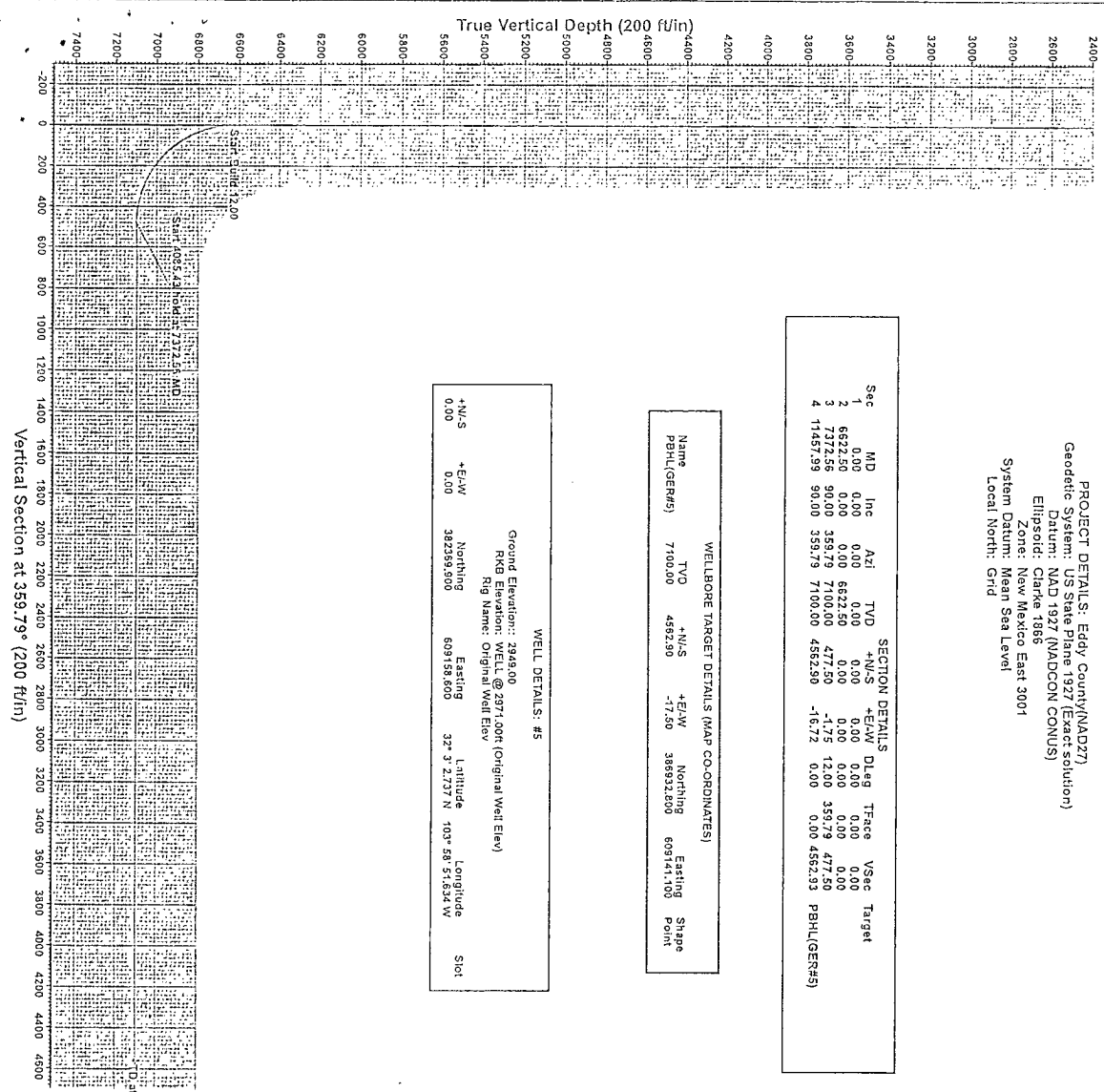
Azinuths to Grid North
True North: -0.19°
Magnetic North: 7.64°
Magnetic Field
Strength: 48569.4nT
Dip Angle: 59.99°
Date: 10/14/2010
Model: IGRF200510

PROJECT DETAILS: Eddy County(NAD27)
Geodetic Datum: 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

Sec	MD	Inc	Azi	TVD	SECTION DETAILS	DLeg	TFace	VSac	Target
1	0.00	0.00	0.00	0.00	+N/S	0.00	0.00	0.00	
2	6522.56	0.00	0.00	6522.56	+E/W	0.00	0.00	0.00	
3	7372.56	90.00	359.79	7100.00		477.50	0.00	477.50	
4	11457.99	90.00	359.79	7100.00		-16.72	0.00	0.00	PBHL(GER#5)

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)				
Name	TVO	+N/S	+E/W	Shape
PBHL(GER#5)	7100.00	4582.90	-17.50	3089312.00
				609141.100

WELL DETAILS: #5				
Ground Elevation: 2945.00				
RKB Elevation: WELL @ 2971.00ft (Original Well Elev)				
Rig Name: Original Well Elev				
+N/S	+E/W	Northing	Easting	Latitude
0.00	0.00	382399.900	609158.600	32° 3' 2.737" N
				103° 59' 51.634" W
				Sit



PATHFINDER
A Schlumberger Company

Marbob Energy Corporation
NM-54291 – Gehrig Federal #5H
API: 30-015-37678
Eddy County, New Mexico

RE: Change to APD – Conditions of Approval

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.

DHW 102610