

New Mexico Oil Conservation Division, District I
1625 N. French Drive
Hobbs, NM 88240

Form 3160-5
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No 1004-0137
Expires: March 31, 2007

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

2. Name of Operator
COG Operating LLC

3a Address
550 W. Texas Ave., Suite 1300 Midland, TX 79701

3b Phone No. (include area code)
432-685-4385

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

SHL: 330 FSL & 330 FWL SEC. 10, T15S, R31E, UNIT M
BHL: 330 FSL & 330 FEL SEC. 10, T15S, R31E, UNIT P

5. Lease Serial No
SHL:NMNM-105885 BHL:State of NM

6. If Indian, Allottee or Tribe Name
N/A

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

8. Well Name and No.
Taurus 10 Federal Com #1

9. API Well No.
30-005-28000

10. Field and Pool, or Exploratory Area
Wildcat; Wolfcamp

11. County or Parish, State
Chaves, 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 location
	☐ 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 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 permitted this well at this location:

SHL: 330 FSL & 330 FWL SEC. 10, T15S, R31E, UNIT M
BHL: 330 FSL & 330 FEL SEC. 10, T15S, R31E, UNIT P

COG respectfully requests permission to move this location to:

*** SHL: 330 FSL & 330 FWL SEC. 10, T15S, R31E, UNIT M ***
*** BHL: 990 FSL & 330 FEL SEC. 10, T15S, R31E, UNIT P ***

This move is requested based on information from offset wells.
An original C-102 is attached for your review.

RECEIVED
MAY 18 2010
HOBBSOCD

14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed)

Robyn M. Odom

Title **Regulatory Analyst**

Signature



Date

04/29/2010

MAY 20 2010

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

/S/ DAVID R. GLASS

PROLEUM ENGINEER

Date

MAY 05 2010

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

ROSWELL FIELD OFFICE

Title 18 USC Section 1001 and Title 43 USC 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)

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
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised October 12, 2005

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

RECEIVED
MAY 18 2010
HOBBSOCD

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-005-28000	Pool Code	Pool Name WILDCAT; WOLFCAMP
Property Code 36894	Property Name TAURUS "10" FEDERAL COM	Well Number 1
OGRID No. 229137	Operator Name C.O.G. OPERATING L.L.C.	Elevation 4415'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	10	15 S	31 E		330	SOUTH	330	WEST	CHAVES

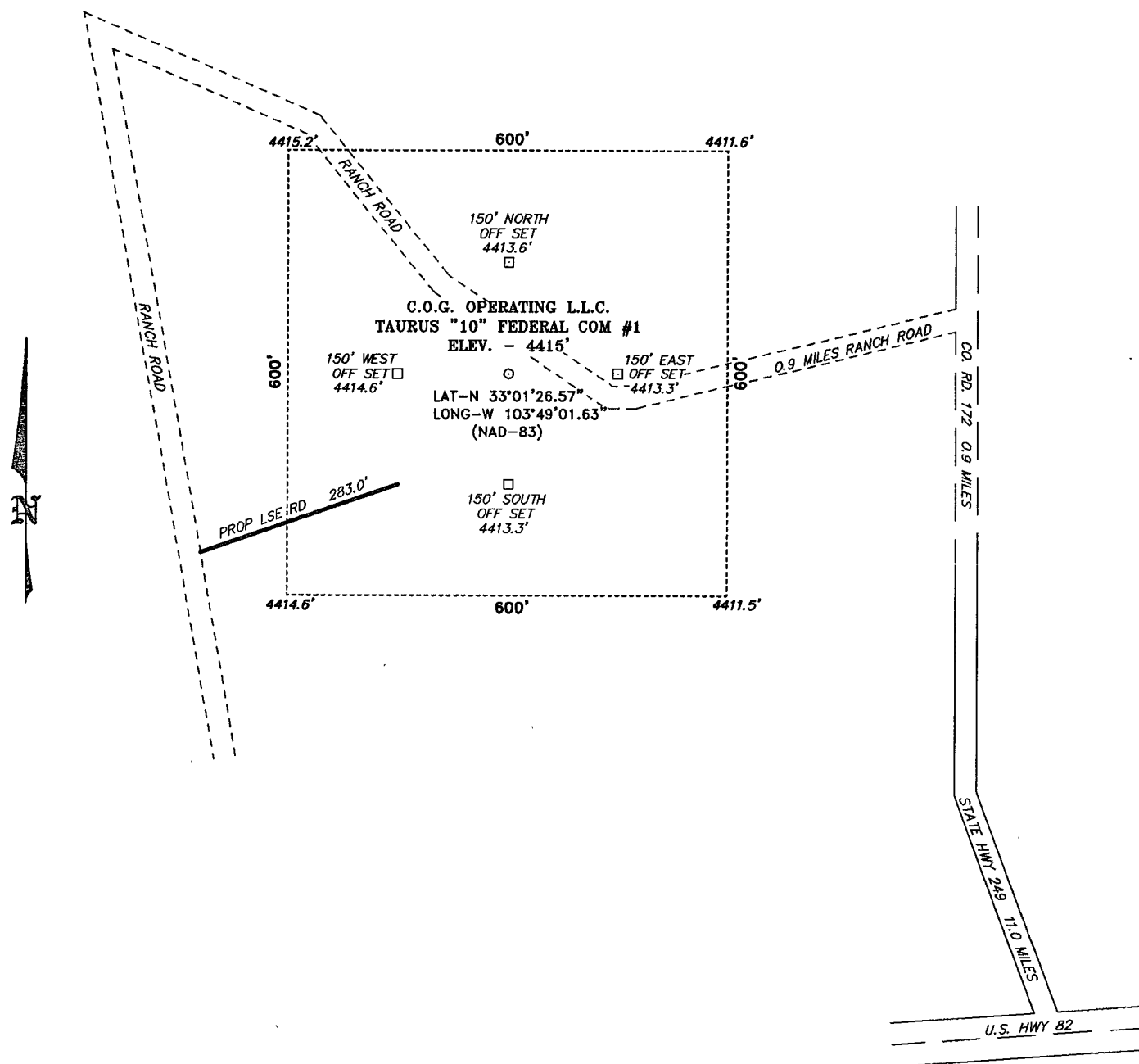
Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	10	15 S	31 E		990	SOUTH	330	EAST	CHAVES
Dedicated Acres 160	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

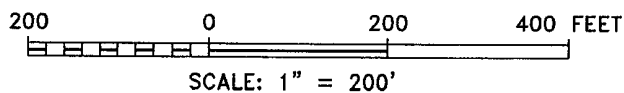
	<u>SURFACE LOCATION</u> LAT.: N 33°01'26.57" LONG.: W103°49'01.63" SPC- N.: 736670.6 E.: 699556.0 (NAD-83)	<u>BOTTOM HOLE LOCATION</u> LAT.: N 33°01'33.24" LONG.: W103°48'07.22" SPC- N.: 737371.509 E.: 704183.284 (NAD-83)	OPERATOR CERTIFICATION I hereby certify that the information contained herein is 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 pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Robyn Odom</i> 4/29/2010 Signature Date Robyn Odom 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. JULY 27 2007 Date Surveyed Signature of Gary L. Jones Professional Seal Certificate No. Gary L. Jones 7977 BASIN SURVEYS		

SECTION 10, TOWNSHIP 15 SOUTH, RANGE 31 EAST, N.M.P.M.,
CHAVES COUNTY, NEW MEXICO.



DIRECTIONS TO LOCATION:

FROM THE JUNCTION OF U.S. HWY 82 AND STATE HWY 249, GO NORTH 11 MILES TO CO. RD. 172, CONTINUE NORTH ON CO. RD. 172 FOR 0.9 MILES TO RANCH ROAD, FOLLOW RANCH ROAD WESTERLY 0.9 MILES TO PROPOSED LOCATION.



C.O.G. OPERATING L.L.C.

REF: TAURUS "10" FEDERAL COM #1 / Well Pad Topo

THE TAURUS "10" FEDERAL COM #1 LOCATED 330' FROM

THE SOUTH LINE AND 330' FROM THE WEST LINE OF

SECTION 10, TOWNSHIP 15 SOUTH, RANGE 31 EAST,

N.M.P.M., CHAVES COUNTY, NEW MEXICO.

BASIN SURVEYS

P.O. BOX 1786-HOBBS, NEW MEXICO

W.O. Number: 18370

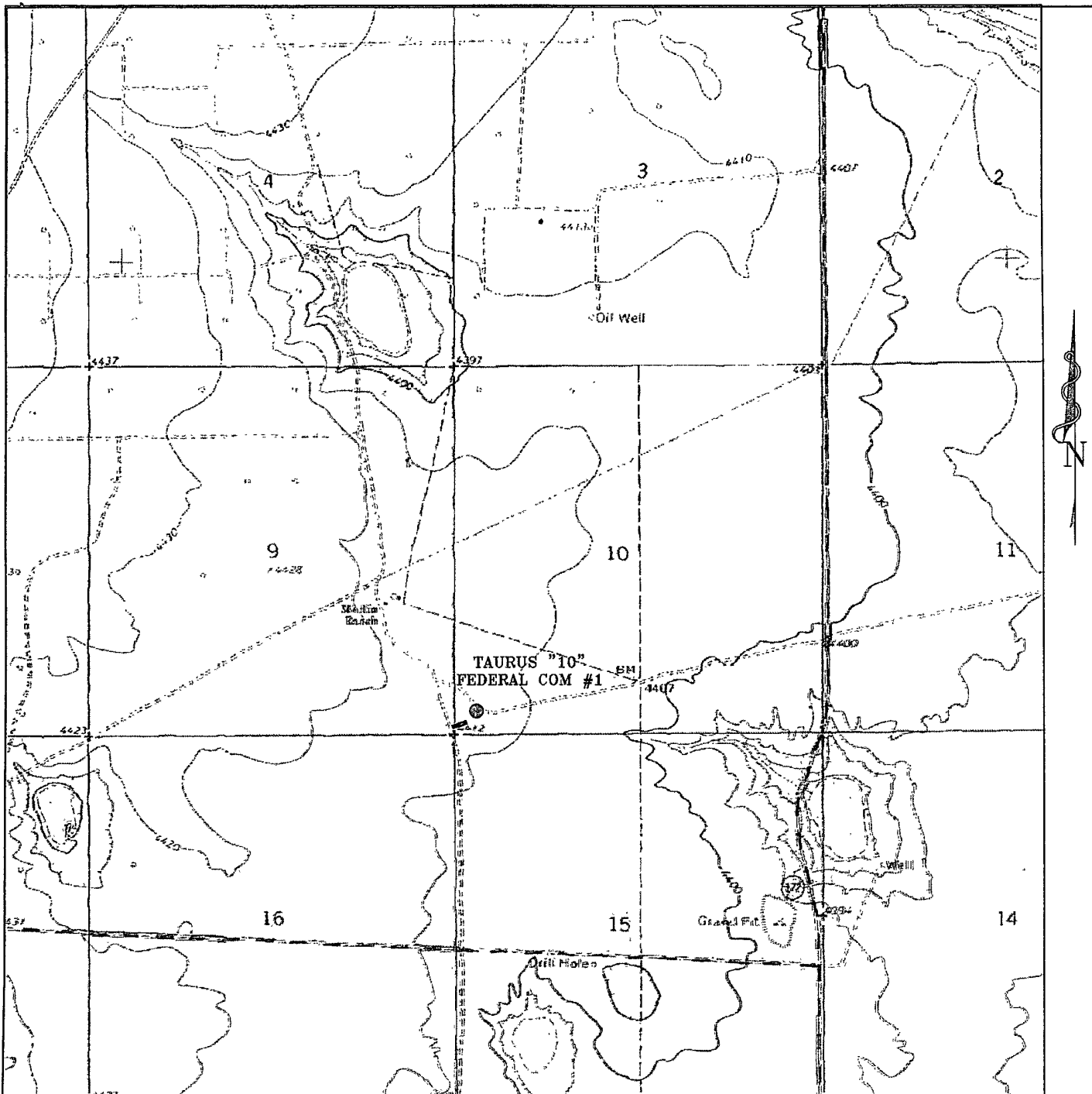
Drawn By: J. M. SMALL

Date: 07-30-2007

Disk: JMS 18370W

Survey Date: 07-27-2007

Sheet 1 of 1 Sheets



TAURUS "10" FEDERAL COM #1
 Located at 330' FSL and 330 FWL
 Section 10, Township 15 South, Range 31 East,
 N.M.P.M., Chaves County, New Mexico.

basin
surveys
 focused on excellence
 in the oilfield

P.O. Box 1786
 1120 N. West County Rd.
 Hobbs, New Mexico 88241
 (505) 393-7316 - Office
 (505) 392-3074 - Fax
 basin-surveys.com

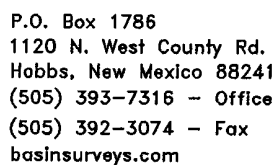
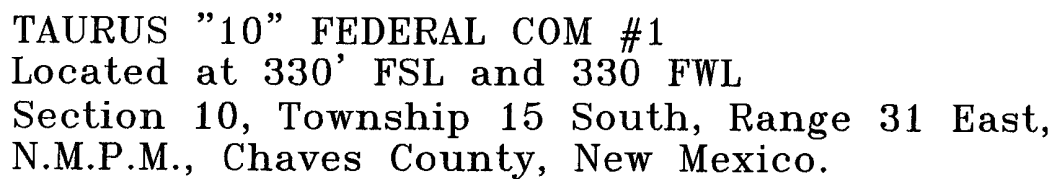
W.O. Number: JMS 18370T

Survey Date: 07-27-2007

Scale: 1" = 2000'

Date: 07-30-2007

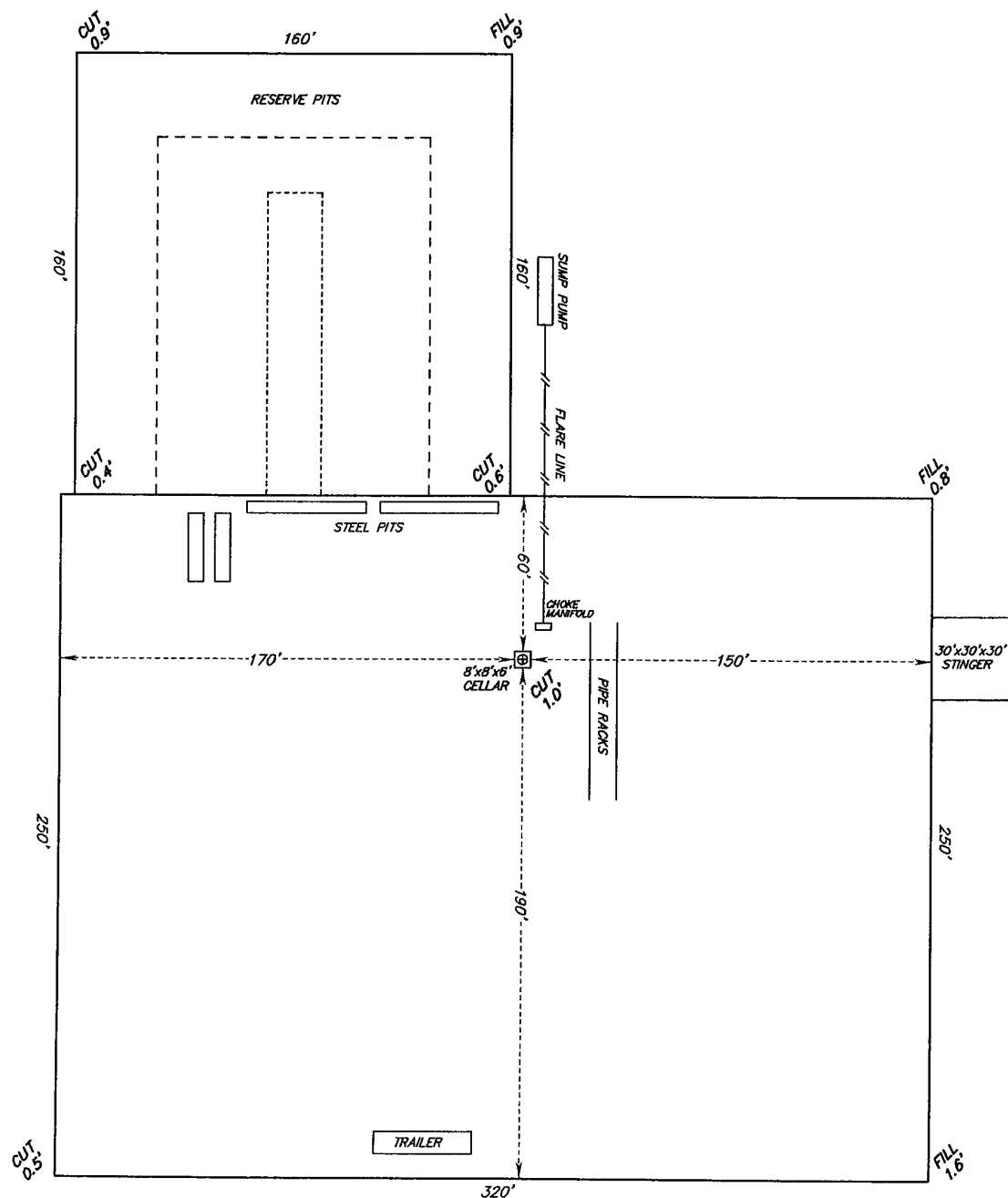
C.O.G.
 OPERATING
 L.L.C.



Date: 07-30-2007

C.O.G.
OPERATING
L.L.C.

SECTION 10, TOWNSHIP 15 SOUTH, RANGE 31 EAST, N.M.P.M.,
CHAVES COUNTY, NEW MEXICO.



COG OPERATING, LLC

REF: TAURUS "10" FEDERAL COM #1 / CUT AND FILL

THE TAURUS "10" FEDERAL COM #1 LOCATED 330' FROM
THE SOUTH LINE AND 330' FROM THE WEST LINE OF
SECTION 10, TOWNSHIP 15 SOUTH, RANGE 31 EAST,
N.M.P.M., CHAVES COUNTY, NEW MEXICO.

BASIN SURVEYS P.O. BOX 1786 - HOBBS, NEW MEXICO

W.O. Number: 18370CF Drawn By: J. M. SMALL

Date: 08-05-2007 Disk: JMS 18370CF

Survey Date: 07-25-2007 Sheet 1 of 1 Sheets



COG Operating LLC
Chaves County
Taurus "10" Federal Com
#1
OH

RECEIVED
MAY 18 2010
HOBBSOCD

Plan: Plan #1

Pathfinder X & Y Planning Report

30 April, 2010

PATHFINDER



Pathfinder
Pathfinder X & Y Planning Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #1
Project:	Chaves County	TVD Reference:	WELL @ 4433.50ft (18.5' KB Correction)
Site:	Taurus "10" Federal Com	MD Reference:	WELL @ 4433.50ft (18.5' KB Correction)
Well:	#1	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	Midland Database

Project:	Chaves County		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site:	Taurus "10" Federal Com
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Site Position:		Northing:	736,670.600 ft	Latitude:	33° 1' 26.537 N
From:	Map	Easting:	699,556.000 ft	Longitude:	103° 49' 1.613 W
Position Uncertainty:	0.00 ft	Slot Radius:	"	Grid Convergence:	0.28 °

Well:	#1					
Well Position	+N/-S	0.00 ft	Northing:	736,670.600 ft	Latitude:	33° 1' 26.537 N
	+E/-W	0.00 ft	Easting:	699,556.000 ft	Longitude:	103° 49' 1.613 W
Position Uncertainty	0.00 ft		Wellhead Elevation:	ft	Ground Level:	4,415.00 ft

Wellbore:	OH
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Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF200510	04/30/2010	(°) 7.88	(°) 60.93	(nT) 49,208

Design:	Plan #1
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Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth: 0 00

Vertical Section	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.00	0.00	0.00	81.39

Survey Tool Program		Date: 04/30/2010		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	13,225.50	Plan #1 (OH)		



Pathfinder
Pathfinder X & Y Planning Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #1
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Well:	#1	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	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	-4,433.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
100.00	0.00	0.00	100.00	-4,333.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
200.00	0.00	0.00	200.00	-4,233.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
300.00	0.00	0.00	300.00	-4,133.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
400.00	0.00	0.00	400.00	-4,033.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
500.00	0.00	0.00	500.00	-3,933.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
600.00	0.00	0.00	600.00	-3,833.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
700.00	0.00	0.00	700.00	-3,733.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
800.00	0.00	0.00	800.00	-3,633.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
900.00	0.00	0.00	900.00	-3,533.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
1,000.00	0.00	0.00	1,000.00	-3,433.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
1,100.00	0.00	0.00	1,100.00	-3,333.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
1,200.00	0.00	0.00	1,200.00	-3,233.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
1,300.00	0.00	0.00	1,300.00	-3,133.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
1,400.00	0.00	0.00	1,400.00	-3,033.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
1,500.00	0.00	0.00	1,500.00	-2,933.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
1,600.00	0.00	0.00	1,600.00	-2,833.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
1,700.00	0.00	0.00	1,700.00	-2,733.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
1,800.00	0.00	0.00	1,800.00	-2,633.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
1,900.00	0.00	0.00	1,900.00	-2,533.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
2,000.00	0.00	0.00	2,000.00	-2,433.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
2,100.00	0.00	0.00	2,100.00	-2,333.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
2,200.00	0.00	0.00	2,200.00	-2,233.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
2,300.00	0.00	0.00	2,300.00	-2,133.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
2,400.00	0.00	0.00	2,400.00	-2,033.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
2,500.00	0.00	0.00	2,500.00	-1,933.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
2,600.00	0.00	0.00	2,600.00	-1,833.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	



Pathfinder
Pathfinder X & Y Planning Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #1
Project:	Chaves County	TVD Reference:	WELL @ 4433.50ft (18.5' KB Correction)
Site:	Taurus "10" Federal Com	MD Reference:	WELL @ 4433.50ft (18.5' KB Correction)
Well:	#1	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	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)	
2,700.00	0.00	0.00	2,700.00	-1,733.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
2,800.00	0.00	0.00	2,800.00	-1,633.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
2,900.00	0.00	0.00	2,900.00	-1,533.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
3,000.00	0.00	0.00	3,000.00	-1,433.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
3,100.00	0.00	0.00	3,100.00	-1,333.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
3,200.00	0.00	0.00	3,200.00	-1,233.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
3,300.00	0.00	0.00	3,300.00	-1,133.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
3,400.00	0.00	0.00	3,400.00	-1,033.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
3,500.00	0.00	0.00	3,500.00	-933.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
3,600.00	0.00	0.00	3,600.00	-833.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
3,700.00	0.00	0.00	3,700.00	-733.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
3,800.00	0.00	0.00	3,800.00	-633.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
3,900.00	0.00	0.00	3,900.00	-533.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
4,000.00	0.00	0.00	4,000.00	-433.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
4,100.00	0.00	0.00	4,100.00	-333.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
4,200.00	0.00	0.00	4,200.00	-233.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
4,300.00	0.00	0.00	4,300.00	-133.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
4,400.00	0.00	0.00	4,400.00	-33.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
4,500.00	0.00	0.00	4,500.00	66.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
4,600.00	0.00	0.00	4,600.00	166.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
4,700.00	0.00	0.00	4,700.00	266.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
4,800.00	0.00	0.00	4,800.00	366.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
4,900.00	0.00	0.00	4,900.00	466.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
5,000.00	0.00	0.00	5,000.00	566.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
5,100.00	0.00	0.00	5,100.00	666.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
5,200.00	0.00	0.00	5,200.00	766.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
5,300.00	0.00	0.00	5,300.00	866.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	



Pathfinder
Pathfinder X & Y Planning Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #1
Project:	Chaves County	TVD Reference:	WELL @ 4433.50ft (18.5' KB Correction)
Site:	Taurus "10" Federal Com	MD Reference:	WELL @ 4433.50ft (18.5' KB Correction)
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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
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Planned Survey											
MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V=Sec (ft)	DLeg (9/100ft)	Northing (ft)	Easting (ft)	
5,400.00	0.00	0.00	5,400.00	966.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
5,500.00	0.00	0.00	5,500.00	1,066.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
5,600.00	0.00	0.00	5,600.00	1,166.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
5,700.00	0.00	0.00	5,700.00	1,266.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
5,800.00	0.00	0.00	5,800.00	1,366.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
5,900.00	0.00	0.00	5,900.00	1,466.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
6,000.00	0.00	0.00	6,000.00	1,566.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
6,100.00	0.00	0.00	6,100.00	1,666.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
6,200.00	0.00	0.00	6,200.00	1,766.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
6,300.00	0.00	0.00	6,300.00	1,866.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
6,400.00	0.00	0.00	6,400.00	1,966.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
6,500.00	0.00	0.00	6,500.00	2,066.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
6,600.00	0.00	0.00	6,600.00	2,166.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
6,700.00	0.00	0.00	6,700.00	2,266.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
6,800.00	0.00	0.00	6,800.00	2,366.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
6,900.00	0.00	0.00	6,900.00	2,466.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
7,000.00	0.00	0.00	7,000.00	2,566.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
7,100.00	0.00	0.00	7,100.00	2,666.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
7,200.00	0.00	0.00	7,200.00	2,766.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
7,300.00	0.00	0.00	7,300.00	2,866.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
7,400.00	0.00	0.00	7,400.00	2,966.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
7,500.00	0.00	0.00	7,500.00	3,066.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
7,600.00	0.00	0.00	7,600.00	3,166.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
7,700.00	0.00	0.00	7,700.00	3,266.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
7,800.00	0.00	0.00	7,800.00	3,366.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
7,900.00	0.00	0.00	7,900.00	3,466.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	
8,000.00	0.00	0.00	8,000.00	3,566.50	0.00	0.00	0.00	0.00	736,670.60	699,556.00	



Pathfinder
Pathfinder X & Y Planning Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #1:
Project:	Chaves County	TVD Reference:	WELL @ 4433.50ft. (18.5 KB Correction)
Site:	Taurus "10" Federal Com	MD Reference:	WELL @ 4433.50ft. (18.5 KB Correction)
Well:	#1	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	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)	
8,100.00	0.00	0.00	8,100.00	3,666.50	0.00	0.00	0.00	0.00	0.00	736,670.60	699,556.00
8,200.00	0.00	0.00	8,200.00	3,766.50	0.00	0.00	0.00	0.00	0.00	736,670.60	699,556.00
8,272.50	0.00	0.00	8,272.50	3,839.00	0.00	0.00	0.00	0.00	0.00	736,670.60	699,556.00
8,275.00	0.30	81.39	8,275.00	3,841.50	0.00	0.01	0.01	12.00	736,670.60	699,556.01	
8,300.00	3.30	81.39	8,299.98	3,866.48	0.12	0.78	0.79	12.00	736,670.72	699,556.78	
8,325.00	6.30	81.39	8,324.89	3,891.39	0.43	2.85	2.88	12.00	736,671.03	699,558.85	
8,350.00	9.30	81.39	8,349.66	3,916.16	0.94	6.20	6.27	12.00	736,671.54	699,562.20	
8,375.00	12.30	81.39	8,374.21	3,940.71	1.64	10.83	10.96	12.00	736,672.24	699,566.83	
8,400.00	15.30	81.39	8,398.49	3,964.99	2.53	16.73	16.92	12.00	736,673.13	699,572.73	
8,425.00	18.30	81.39	8,422.42	3,988.92	3.61	23.87	24.14	12.00	736,674.21	699,579.87	
8,450.00	21.30	81.39	8,445.94	4,012.44	4.88	32.24	32.61	12.00	736,675.48	699,588.24	
8,475.00	24.30	81.39	8,468.99	4,035.49	6.33	41.82	42.29	12.00	736,676.93	699,597.82	
8,500.00	27.30	81.39	8,491.49	4,057.99	7.96	52.57	53.17	12.00	736,678.56	699,608.57	
8,525.00	30.29	81.39	8,513.40	4,079.90	9.76	64.48	65.21	12.00	736,680.36	699,620.48	
8,550.00	33.29	81.39	8,534.64	4,101.14	11.73	77.50	78.38	12.00	736,682.33	699,633.50	
8,575.00	36.29	81.39	8,555.17	4,121.67	13.87	91.60	92.65	12.00	736,684.47	699,647.60	
8,600.00	39.29	81.39	8,574.93	4,141.43	16.16	106.75	107.97	12.00	736,686.76	699,662.75	
8,625.00	42.29	81.39	8,593.85	4,160.35	18.61	122.90	124.30	12.00	736,689.21	699,678.90	
8,650.00	45.29	81.39	8,611.89	4,178.39	21.20	140.00	141.60	12.00	736,691.80	699,696.00	
8,675.00	48.29	81.39	8,629.01	4,195.51	23.93	158.01	159.82	12.00	736,694.53	699,714.01	
8,700.00	51.29	81.39	8,645.15	4,211.65	26.78	176.89	178.91	12.00	736,697.38	699,732.89	
8,725.00	54.29	81.39	8,660.26	4,226.76	29.76	196.57	198.81	12.00	736,700.36	699,752.57	
8,750.00	57.29	81.39	8,674.32	4,240.82	32.86	217.01	219.49	12.00	736,703.46	699,773.01	
8,775.00	60.29	81.39	8,687.27	4,253.77	36.06	238.15	240.87	12.00	736,706.66	699,794.15	
8,800.00	63.29	81.39	8,699.09	4,265.59	39.36	259.93	262.89	12.00	736,709.96	699,815.93	
8,825.00	66.29	81.39	8,709.73	4,276.23	42.74	282.29	285.51	12.00	736,713.34	699,838.29	
8,850.00	69.29	81.39	8,719.18	4,285.68	46.21	305.17	308.65	12.00	736,716.81	699,861.17	



Pathfinder
Pathfinder X & Y Planning Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #1
Project:	Chaves County	TVD Reference:	WELL @ 4433.50ft (18.5' KB Correction)
Site:	Taurus "10" Federal Com	MD Reference:	WELL @ 4433.50ft (18.5' KB Correction)
Well:	#1	North Reference:	Grd
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	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)
8,875.00	72.29	81.39	8,727.41	4,293.91	49.74	328.51	332.26	12.00	736,720.34	699,884.51
8,900.00	75.29	81.39	8,734.39	4,300.89	53.33	352.25	356.26	12.00	736,723.93	699,908.25
8,925.00	78.29	81.39	8,740.10	4,306.60	56.98	376.31	380.60	12.00	736,727.58	699,932.31
8,950.00	81.29	81.39	8,744.54	4,311.04	60.66	400.63	405.20	12.00	736,731.26	699,956.63
8,975.00	84.29	81.39	8,747.68	4,314.18	64.37	425.15	430.00	12.00	736,734.97	699,981.15
9,000.00	87.28	81.39	8,749.51	4,316.01	68.11	449.80	454.93	12.00	736,738.71	700,005.80
9,015.80	89.18	81.39	8,750.00	4,316.50	70.47	465.41	470.71	12.00	736,741.07	700,021.41
9,100.00	89.18	81.39	8,751.21	4,317.71	83.07	548.65	554.91	0.00	736,753.67	700,104.65
9,200.00	89.18	81.39	8,752.64	4,319.14	98.04	647.52	654.90	0.00	736,768.64	700,203.52
9,300.00	89.18	81.39	8,754.07	4,320.57	113.01	746.38	754.89	0.00	736,783.61	700,302.38
9,400.00	89.18	81.39	8,755.50	4,322.00	127.98	845.24	854.88	0.00	736,798.58	700,401.24
9,500.00	89.18	81.39	8,756.93	4,323.43	142.95	944.11	954.87	0.00	736,813.55	700,500.11
9,600.00	89.18	81.39	8,758.36	4,324.86	157.92	1,042.97	1,054.86	0.00	736,828.52	700,598.97
9,700.00	89.18	81.39	8,759.79	4,326.29	172.89	1,141.83	1,154.85	0.00	736,843.49	700,697.83
9,800.00	89.18	81.39	8,761.22	4,327.72	187.86	1,240.70	1,254.84	0.00	736,858.46	700,796.70
9,900.00	89.18	81.39	8,762.65	4,329.15	202.83	1,339.56	1,354.83	0.00	736,873.43	700,895.56
10,000.00	89.18	81.39	8,764.09	4,330.59	217.80	1,438.42	1,454.82	0.00	736,888.40	700,994.42
10,100.00	89.18	81.39	8,765.52	4,332.02	232.77	1,537.28	1,554.81	0.00	736,903.37	701,093.28
10,200.00	89.18	81.39	8,766.95	4,333.45	247.74	1,636.15	1,654.80	0.00	736,918.34	701,192.15
10,300.00	89.18	81.39	8,768.38	4,334.88	262.71	1,735.01	1,754.79	0.00	736,933.31	701,291.01
10,400.00	89.18	81.39	8,769.81	4,336.31	277.67	1,833.87	1,854.78	0.00	736,948.27	701,389.87
10,500.00	89.18	81.39	8,771.24	4,337.74	292.64	1,932.74	1,954.77	0.00	736,963.24	701,488.74
10,600.00	89.18	81.39	8,772.67	4,339.17	307.61	2,031.60	2,054.75	0.00	736,978.21	701,587.60
10,700.00	89.18	81.39	8,774.10	4,340.60	322.58	2,130.46	2,154.74	0.00	736,993.18	701,686.46
10,800.00	89.18	81.39	8,775.53	4,342.03	337.55	2,229.32	2,254.73	0.00	737,008.15	701,785.32
10,900.00	89.18	81.39	8,776.97	4,343.47	352.52	2,328.19	2,354.72	0.00	737,023.12	701,884.19
11,000.00	89.18	81.39	8,778.40	4,344.90	367.49	2,427.05	2,454.71	0.00	737,038.09	701,983.05



Pathfinder
Pathfinder X & Y Planning Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #1:
Project:	Chaves County	TVD Reference:	WELL @ 4433.50ft (18.5' KB Correction)
Site:	Taurus "10" Federal Com	MD Reference:	WELL @ 4433.50ft (18.5' KB Correction)
Well:	#1	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	D Leg (°/100ft)	Northing (ft)	Easting (ft)
11,100.00	89.18	81.39	8,779.83	4,346.33	382.46	2,525.91	2,554.70	0.00	737,053.06	702,081.91
11,200.00	89.18	81.39	8,781.26	4,347.76	397.43	2,624.78	2,654.69	0.00	737,068.03	702,180.78
11,300.00	89.18	81.39	8,782.69	4,349.19	412.40	2,723.64	2,754.68	0.00	737,083.00	702,279.64
11,400.00	89.18	81.39	8,784.12	4,350.62	427.37	2,822.50	2,854.67	0.00	737,097.97	702,378.50
11,500.00	89.18	81.39	8,785.55	4,352.05	442.34	2,921.36	2,954.66	0.00	737,112.94	702,477.36
11,600.00	89.18	81.39	8,786.98	4,353.48	457.31	3,020.23	3,054.65	0.00	737,127.91	702,576.23
11,700.00	89.18	81.39	8,788.41	4,354.91	472.27	3,119.09	3,154.64	0.00	737,142.87	702,675.09
11,800.00	89.18	81.39	8,789.85	4,356.35	487.24	3,217.95	3,254.63	0.00	737,157.84	702,773.95
11,900.00	89.18	81.39	8,791.28	4,357.78	502.21	3,316.82	3,354.62	0.00	737,172.81	702,872.82
12,000.00	89.18	81.39	8,792.71	4,359.21	517.18	3,415.68	3,454.61	0.00	737,187.78	702,971.68
12,100.00	89.18	81.39	8,794.14	4,360.64	532.15	3,514.54	3,554.60	0.00	737,202.75	703,070.54
12,200.00	89.18	81.39	8,795.57	4,362.07	547.12	3,613.40	3,654.59	0.00	737,217.72	703,169.40
12,300.00	89.18	81.39	8,797.00	4,363.50	562.09	3,712.27	3,754.58	0.00	737,232.69	703,268.27
12,400.00	89.18	81.39	8,798.43	4,364.93	577.06	3,811.13	3,854.57	0.00	737,247.66	703,367.13
12,500.00	89.18	81.39	8,799.86	4,366.36	592.03	3,909.99	3,954.56	0.00	737,262.63	703,465.99
12,600.00	89.18	81.39	8,801.29	4,367.79	607.00	4,008.86	4,054.55	0.00	737,277.60	703,564.86
12,700.00	89.18	81.39	8,802.73	4,369.23	621.97	4,107.72	4,154.54	0.00	737,292.57	703,663.72
12,800.00	89.18	81.39	8,804.16	4,370.66	636.94	4,206.58	4,254.53	0.00	737,307.54	703,762.58
12,900.00	89.18	81.39	8,805.59	4,372.09	651.91	4,305.45	4,354.52	0.00	737,322.51	703,861.45
13,000.00	89.18	81.39	8,807.02	4,373.52	666.88	4,404.31	4,454.51	0.00	737,337.48	703,960.31
13,100.00	89.18	81.39	8,808.45	4,374.95	681.84	4,503.17	4,554.50	0.00	737,352.44	704,059.17
13,200.00	89.18	81.39	8,809.88	4,376.38	696.81	4,602.03	4,654.49	0.00	737,367.41	704,158.03
13,225.50	89.18	81.39	8,810.25	4,376.75	700.63	4,627.25	4,679.99	0.00	737,371.23	704,183.25

PBHL(Taurus_10 #1)



Pathfinder
Pathfinder X & Y Planning Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #1
Project:	Chaves County	TVD Reference:	WELL @ 4433.50ft (18.5 KB Correction)
Site:	Taurus "10" Federal Com	MD Reference:	WELL @ 4433.50ft (18.5 KB Correction)
Well:	#1	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	Midland Database

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
PBHL(Taurus 10 #1)	0.00	0.00	8,810.00	700.40	4,627.28	737,371.000	704,183.284	33° 1' 33.239 N	103° 48' 7.222 W
- plan hits target center									
- Point									

Checked By: _____	Approved By: _____	Date: _____
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Azimuths to Grid North
True North: -0.28°
Magnetic North: 7.60°

Magnetic Field
Strength: 49207.6snT
Dip Angle: 60.93°
Date: 04/30/2010
Model: IGRF200510

PATHFINDER

Project: Chaves County
Site: Taurus "10" Federal Com
Well: #1
Wellbore: OH
Plan: Plan #1 (#1/OH)

WELL DETAILS: #1

Ground Elevation: 4415.00
RKB Elevation: WELL @ 4433.50ft (18.5' KB Correction)
Rig Name: 18.5' KB Correction

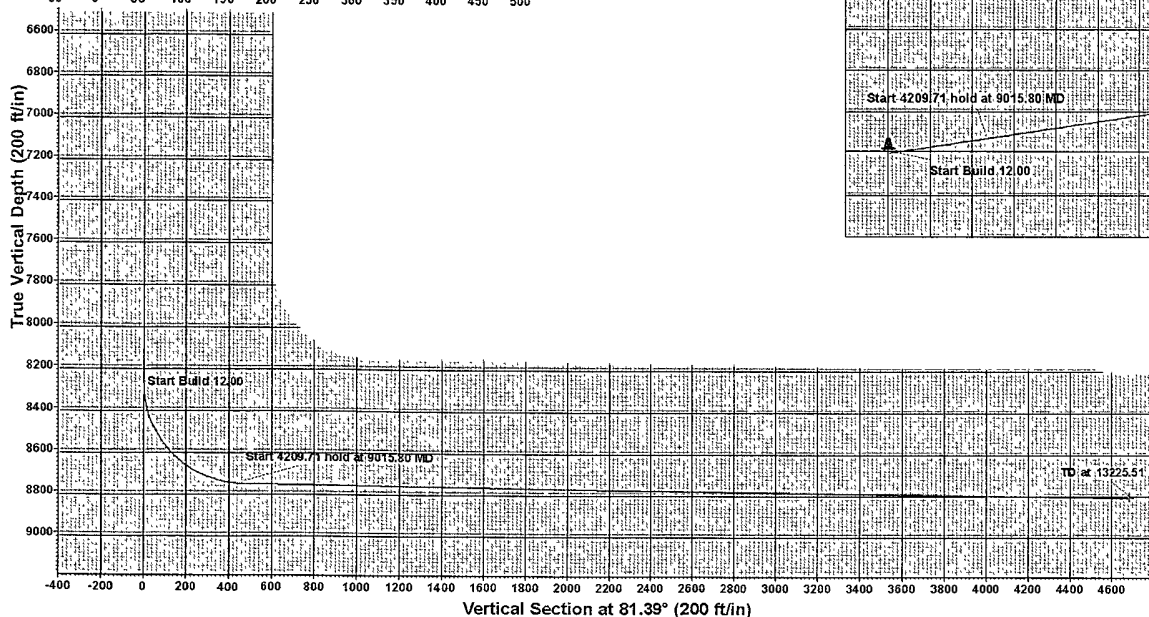
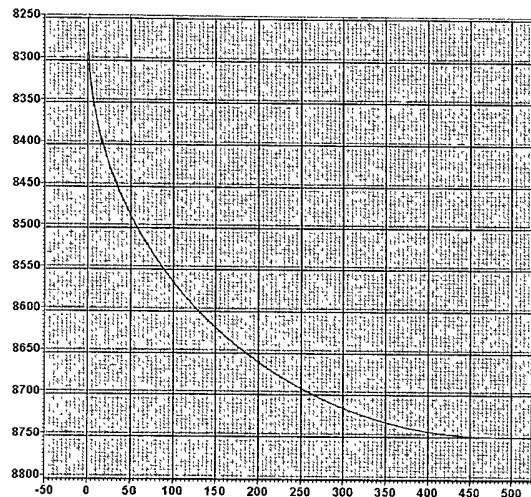
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	736670.600	699556.000	33° 1' 26.537" N	103° 49' 1.613" W	

SECTION DETAILS

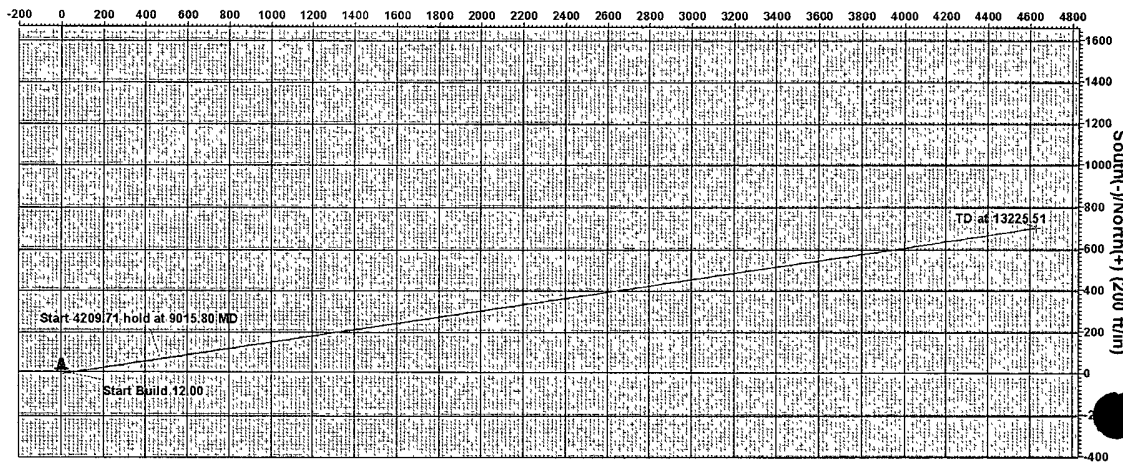
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	8272.50	0.00	0.00	8272.50	0.00	0.00	0.00	0.00	0.00	
3	9015.80	89.18	81.39	8750.00	70.47	465.41	12.00	81.39	470.71	
4	13225.51	89.18	81.39	8810.25	700.63	4627.25	0.00	0.00	4679.99	PBHL(Taurus 10 #1)

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL(Taurus 10 #1)	8810.00	700.40	4627.28	737371.000	704183.284	Point



West(-)/East(+) (200 ft/in)



PROJECT DETAILS: Chaves County
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level
Local North: Grid

Plan Plan #1 (#1/OH)

Created By Nate Bingham Date 14 27, April 30 2010

Checked _____ Date _____