

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		5 Lease Serial No NMLC-029405B
2 Name of Operator COG Operating LLC		6 If Indian, Allottee or Tribe Name
3a Address 550 W. Texas Ave., Suite 1300 Midland, TX 79701	3b. Phone No (include area code) 432-685-4385	7. If Unit or CA/Agreement, Name and/or No
4 Location of Well (Footage, Seg., T., R., M., or Survey Description) 735' FSL & 2222' FEL SEC. 19, T17S, R32E, UNIT O		8. Well Name and No G C FEDERAL #14
		9. API Well No. 30-025-39110
		10 Field and Pool, or Exploratory Area MALJAMAR; YESO WEST 44500
		11 County or Parish, State LEA, 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 Request to drill
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	directionally
	☐ 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.)

This well was approved at the location: 735 FSL & 2222 FEL, Section 19, R17S, R32E, UL O

COG Operating LLC respectfully requests permission to drill this well directionally.

**SHL 735 FSL & 2222 FEL, Section 19, R17S, R32E, UL O
BHL 990 FSL & 2310 FEL, Section 19, R17S, R32E, UL N**

A directional plan and a revised C-102 attached for your review.

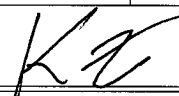
RECEIVED

JAN 05 2009

HOBBSOCD

14. I hereby certify that the foregoing is true and correct Name (Printed/Typed) Robyn Odom		Title Regulatory Analyst
Signature 		Date 01/02/2009

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by _____ 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.	Title _____ Office 	Date _____
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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)

RECEIVED**DISTRICT I**

1625 N FRENCH DR., HOBBS, NM 88240

JAN 05 2009**State of New Mexico**

Energy, Minerals and Natural Resources Department

Form C-102

DISTRICT II

1401 W GRAND AVENUE, ARTESIA, NM 88210

HOBBSOCD**CONSERVATION DIVISION**1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV

1220 S. ST. FRANCIS DR., SANTA FE, NM 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT☐ AMENDED REPORT

API Number 30-025-39110		Pool Code 44500	Pool Name MALJAMAR; YESO WEST
Property Code 302498	Property Name GC FEDERAL		Well Number 14
OGRID No. 229137	Operator Name COG OPERATING, LLC		Elevation 3926'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	19	17-S	32-E		735	SOUTH	2222	EAST	LEA

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
N	19	17-S	32-E		990	SOUTH	2310	WEST	LEA
Dedicated Acres 40		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

	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>Phyllis A. Edwards</i> 10-6-08 Signature Date Phyllis A. Edwards Printed Name Regulatory Analyst 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. <i>Ronald J. Eidson</i> 10/02/08 Date Surveyed Signature & Seal of Professional Surveyor RONALD J. EIDSON NEW MEXICO DSS 3239 Certificate No. GARY EIDSON 12641 RONALD J. EIDSON 3239
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COG Operating

Lea County, NM (NAD27 NME)

GC Federal #14

GC Federal #14

OH

Plan: Plan #4 - 7-7/8" Hole

Standard Planning Report

23 December, 2008



Scientific Drilling
Planning Report



Database:	EDM 2003 16 Single User Db	Local Co-ordinate Reference:	Well GC Federal #14
Company:	COG Operating	TVD Reference:	Ground Elev @ 3926 00ft (Rig ?)
Project:	Lea County, NM (NAD27 NME)	MD Reference:	Ground Elev @ 3926 00ft (Rig ?)
Site:	GC Federal #14	North Reference:	Grid
Well:	GC Federal #14	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #4 - 7-7/8" Hole		

Project	Lea County, NM (NAD27 NME)		
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	GC Federal #14		
Site Position:		Northing:	660,545 400 ft
From:	Map	Easting:	662,648 000 ft
Position Uncertainty:	0 00 ft	Slot Radius:	"
		Latitude:	32° 48' 53 308 N
		Longitude:	103° 48' 14 117 W
		Grid Convergence:	0 29 °

Well	GC Federal #14		
Well Position	+N/-S	0 00 ft	Northing: 660,545 400 ft
	+E/-W	0 00 ft	Easting: 662,648 000 ft
Position Uncertainty	0 00 ft	Wellhead Elevation:	ft
		Latitude:	32° 48' 53 308 N
		Longitude:	103° 48' 14 117 W
		Ground Level:	3,926 00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/23/2008	8 02	60 77	49,217

Design	Plan #4 - 7-7/8" Hole			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0 00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0 00	0 00	0 00	287 89

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	
2,250 00	0 00	0 00	2,250 00	0 00	0 00	0 00	0 00	0 00	0 00	
2,967 11	14 34	287 89	2,959 64	27 43	-84 97	2 00	2 00	-10 06	287 89	
5,351 79	14 34	287 89	5,270 00	208 88	-647 12	0 00	0 00	0 00	0 00	PP-GC #14
5,920 96	2 96	287 89	5,831 77	235 14	-728 46	2 00	-2 00	0 00	180 00	
6,990 61	2 96	287 89	6,900 00	252 10	-781 00	0 00	0 00	0 00	0 00	BPHL-GC #14

Scientific Drilling

Planning Report



Database:	EDM 2003 16 Single User Db	Local Co-ordinate Reference:	Well GC Federal #14
Company:	COG Operating	TVD Reference:	Ground Elev @ 3926 00ft (Rig ?)
Project:	Lea County, NM (NAD27 NME)	MD Reference:	Ground Elev @ 3926 00ft (Rig ?)
Site:	GC Federal #14	North Reference:	Grid
Well:	GC Federal #14	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #4 - 7-7/8" Hole		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
2,150 00	0 00	0 00	2,150 00	0 00	0 00	0 00	0 00	0 00	0 00
8 5/8" Casing									
2,250 00	0 00	0 00	2,250 00	0 00	0 00	0 00	0 00	0 00	0 00
KOP Start DLS 2.00°/100'									
2,300 00	1 00	287 89	2,300 00	0 13	-0 42	0 44	2 00	2 00	0 00
2,400 00	3 00	287 89	2,399 93	1 21	-3 74	3 93	2 00	2 00	0 00
2,500 00	5 00	287 89	2,499 68	3 35	-10 37	10 90	2 00	2 00	0 00
2,600 00	7 00	287 89	2,599 13	6 56	-20 32	21 35	2 00	2 00	0 00
2,700 00	9 00	287 89	2,698 15	10 83	-33 57	35 27	2 00	2 00	0 00
2,800 00	11 00	287 89	2,796 63	16 17	-50 09	52 63	2 00	2 00	0 00
2,900 00	13 00	287 89	2,894 44	22 55	-69 87	73 42	2 00	2 00	0 00
2,967 11	14 34	287 89	2,959 64	27 43	-84 97	89 29	2 00	2 00	0 00
EOC hold 14.34°									
3,000 00	14 34	287 89	2,991 51	29 93	-92 72	97 43	0 00	0 00	0 00
3,100 00	14 34	287 89	3,088 39	37 54	-116 30	122 20	0 00	0 00	0 00
3,200 00	14 34	287 89	3,185 28	45 15	-139 87	146 98	0 00	0 00	0 00
3,300 00	14 34	287 89	3,282 16	52 76	-163 44	171 75	0 00	0 00	0 00
3,400 00	14 34	287 89	3,379 04	60 37	-187 02	196 52	0 00	0 00	0 00
3,500 00	14 34	287 89	3,475 93	67 98	-210 59	221 29	0 00	0 00	0 00
3,600 00	14 34	287 89	3,572 81	75 59	-234 16	246 06	0 00	0 00	0 00
3,700 00	14 34	287 89	3,669 69	83 19	-257 74	270 83	0 00	0 00	0 00
3,800 00	14 34	287 89	3,766 58	90 80	-281 31	295 60	0 00	0 00	0 00
3,900 00	14 34	287 89	3,863 46	98 41	-304 88	320 37	0 00	0 00	0 00
4,000 00	14 34	287 89	3,960 34	106 02	-328 46	345 15	0 00	0 00	0 00
4,100 00	14 34	287 89	4,057 23	113 63	-352 03	369 92	0 00	0 00	0 00
4,200 00	14 34	287 89	4,154 11	121 24	-375 60	394 69	0 00	0 00	0 00
4,300 00	14 34	287 89	4,250 99	128 85	-399 18	419 46	0 00	0 00	0 00
4,400 00	14 34	287 89	4,347 88	136 46	-422 75	444 23	0 00	0 00	0 00
4,500 00	14 34	287 89	4,444 76	144 07	-446 33	469 00	0 00	0 00	0 00
4,600 00	14 34	287 89	4,541 64	151 68	-469 90	493 77	0 00	0 00	0 00
4,700 00	14 34	287 89	4,638 53	159 29	-493 47	518 54	0 00	0 00	0 00
4,800 00	14 34	287 89	4,735 41	166 90	-517 05	543 32	0 00	0 00	0 00
4,900 00	14 34	287 89	4,832 29	174 51	-540 62	568 09	0 00	0 00	0 00
5,000 00	14 34	287 89	4,929 18	182 12	-564 19	592 86	0 00	0 00	0 00
5,100 00	14 34	287 89	5,026 06	189 72	-587 77	617 63	0 00	0 00	0 00
5,200 00	14 34	287 89	5,122 94	197 33	-611 34	642 40	0 00	0 00	0 00
5,300 00	14 34	287 89	5,219 83	204 94	-634 91	667 17	0 00	0 00	0 00
5,351 79	14 34	287 89	5,270 00	208 88	-647 12	680 00	0 00	0 00	0 00
Start drop 2.00°/100' - Top of Paddock - PP-GC #14									
5,400 00	13 38	287 89	5,316 81	212 43	-658 11	691 55	2 00	-2 00	0 00
5,500 00	11 38	287 89	5,414 48	219 02	-678 51	712 98	2 00	-2 00	0 00
5,600 00	9 38	287 89	5,512 84	224 55	-695 65	731 00	2 00	-2 00	0 00
5,700 00	7 38	287 89	5,611 77	229 03	-709 52	745 57	2 00	-2 00	0 00
5,800 00	5 38	287 89	5,711 14	232 44	-720 09	756 67	2 00	-2 00	0 00
5,900 00	3 38	287 89	5,810 84	234 78	-727 35	764 31	2 00	-2 00	0 00
5,920 96	2 96	287 89	5,831 77	235 14	-728 46	765 47	2 00	-2 00	0 00
EOC hold 2.96°									
6,000 00	2 96	287 89	5,910 71	236 39	-732 34	769 55	0 00	0 00	0 00
6,100 00	2 96	287 89	6,010 57	237 98	-737 25	774 71	0 00	0 00	0 00
6,200 00	2 96	287 89	6,110 44	239 56	-742 16	779 87	0 00	0 00	0 00
6,300 00	2 96	287 89	6,210 31	241 15	-747 08	785 03	0 00	0 00	0 00
6,400 00	2 96	287 89	6,310 17	242 73	-751 99	790 19	0 00	0 00	0 00

Scientific Drilling

Planning Report



Database:	EDM 2003 16 Single User Db	Local Co-ordinate Reference:	Well GC Federal #14
Company:	COG Operating	TVD Reference:	Ground Elev @ 3926 00ft (Rig ?)
Project:	Lea County, NM (NAD27 NME)	MD Reference:	Ground Elev @ 3926 00ft (Rig ?)
Site:	GC Federal #14	North Reference:	Grid
Well:	GC Federal #14	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #4 - 7-7/8" Hole		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
6,500 00	2 96	287 89	6,410 04	244 32	-756 90	795 36	0 00	0 00	0 00	
6,600 00	2 96	287 89	6,509 91	245 91	-761 81	800 52	0 00	0 00	0 00	
6,700 00	2 96	287 89	6,609 77	247 49	-766 72	805 68	0 00	0 00	0 00	
6,800 00	2 96	287 89	6,709 64	249 08	-771 64	810 84	0 00	0 00	0 00	
6,900 00	2 96	287 89	6,809 51	250 66	-776 55	816 00	0 00	0 00	0 00	
6,990 61	2 96	287 89	6,900 00	252 10	-781 00	820 68	0 00	0 00	0 00	
BPHL-GC #14										

Targets									
Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	
BPHL-GC #14	- plan hits target	0 00	0 00	6,900 00	252 10	-781 00	660,797 500	661,867 000	32° 48' 55 842 N 103° 48' 23 254 W
PP-GC #14	- plan hits target	0 00	0 00	5,270 00	208 88	-647 12	660,754 284	662,000 878	32° 48' 55 407 N 103° 48' 21 688 W
	- Point								

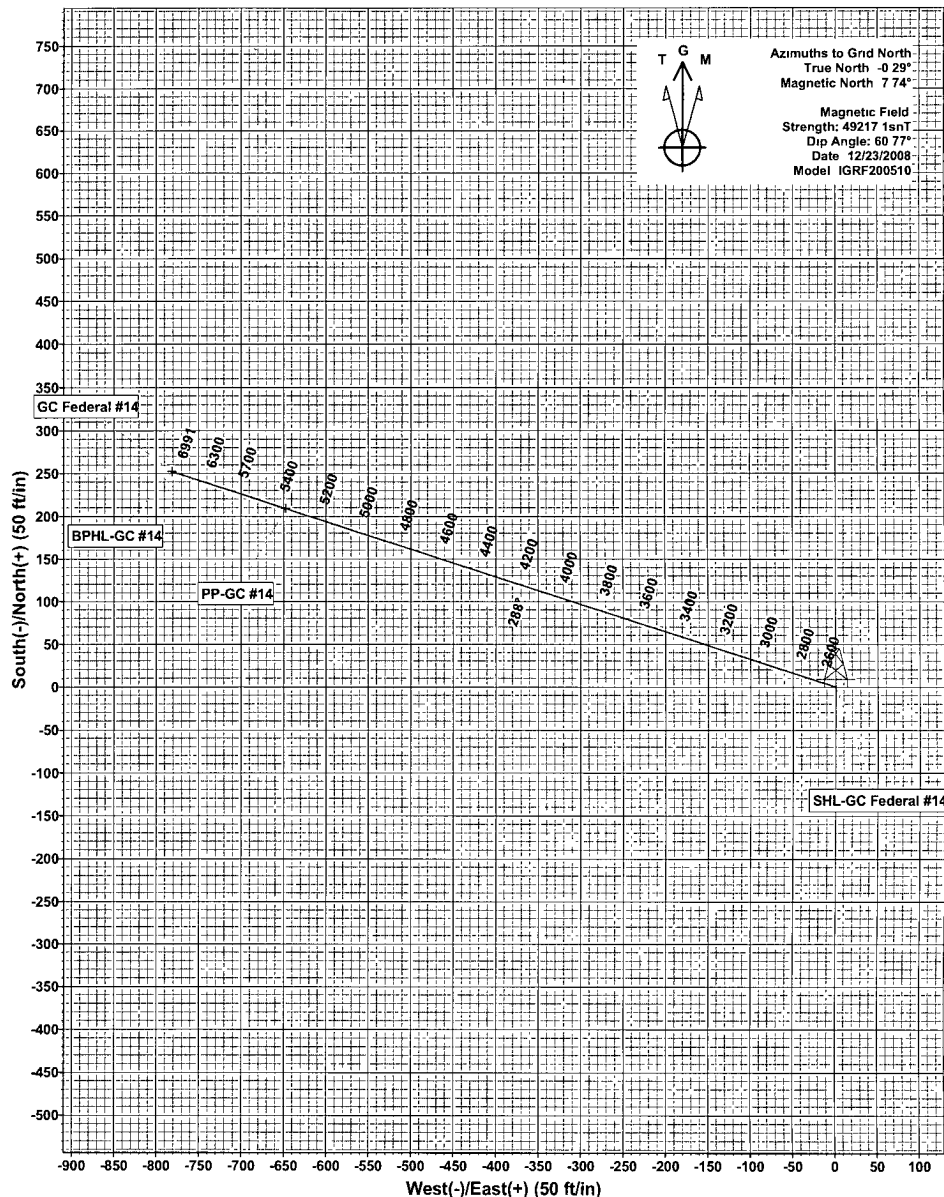
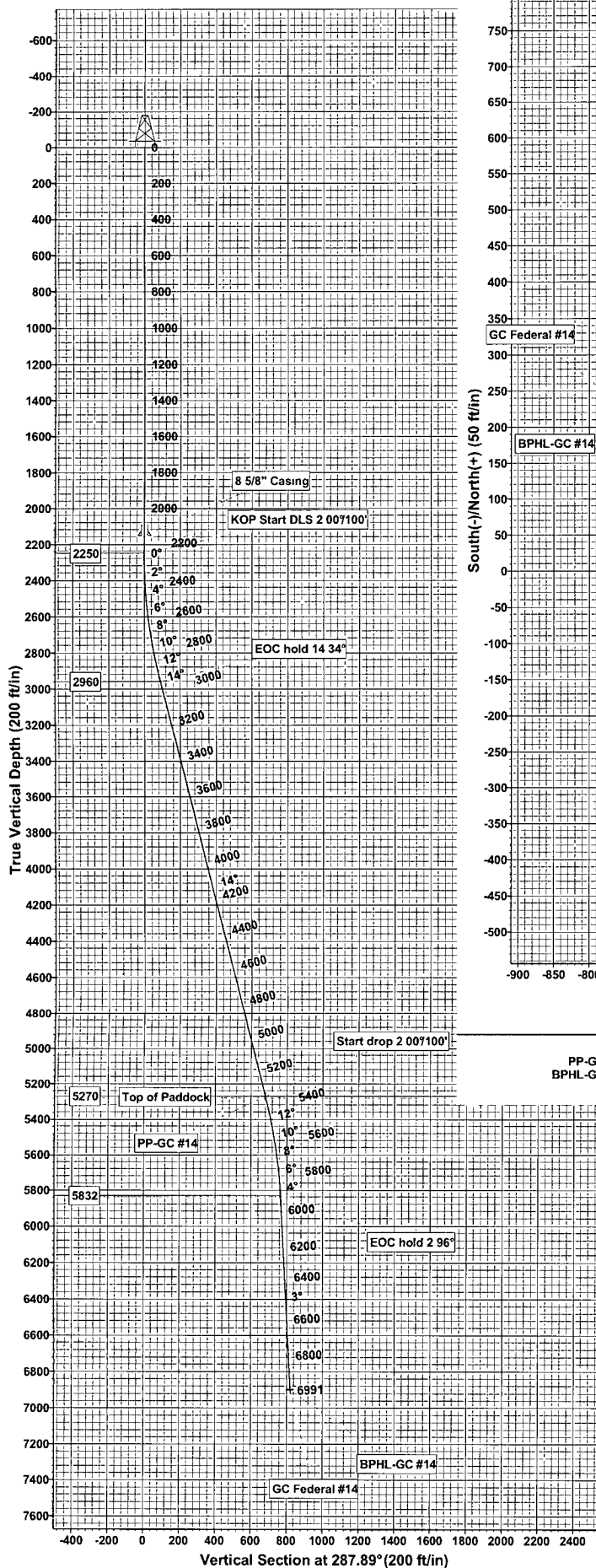
Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
2,150 00	2,150 00	8 5/8" Casing	8-5/8	10-5/8	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
5,351 79	5,270 00	Top of Paddock		0 00	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
2,250 00	2,250 00	0 00	0 00	KOP Start DLS 2 00°/100'	
2,967 11	2,959 64	27 43	-84 97	EOC hold 14 34°	
5,351 79	5,270 00	208 88	-647 12	Start drop 2 00°/100'	
5,920 96	5,831 77	235 14	-728 46	EOC hold 2 96°	

COG Operating

Scientific Drilling for COG Operating
Site: Lea County, NM (NAD27 NME)
Well: GC Federal #14
Wellbore: OH
Design: Plan #4 - 7-7/8" Hole



WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PP-GC #14	5270.00	208.88	-647.12	660754.284	662000.878	32°48' 55.407" N	103°48' 21.688" W	Point
BPHL-GC #14	6900.00	252.10	-781.00	660797.500	661867.000	32°48' 55.842" N	103°48' 23.254" W	Point

AZIMUTH CORRECTIONS
ALL AZIMUTHS MUST BE CORRECTED TO GRID
GRID CORRECTIONS MUST BE APPLIED BEFORE PLOTTING
To convert a Magnetic Direction to a Grid Direction, Add 7.74°
To convert a True Direction to a Grid Direction, Subtract 0.29°

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	2250.00	0.00	0.00	2250.00	0.00	0.00	0.00	0.00	0.00	
3	2967.11	14.34	287.89	2959.64	27.43	-84.97	2.00	287.89	89.29	
4	5351.79	14.34	287.89	5270.00	208.88	-647.12	0.00	0.00	680.00	PP-GC #14
5	5920.96	2.96	287.89	5831.77	235.14	-728.46	2.00	180.00	765.47	
6	6990.61	2.96	287.89	6900.00	252.10	-781.00	0.00	0.00	820.68	BPHL-GC #14

WELL DETAILS: GC Federal #14

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	660545.400	662648.000	32°48' 53.308" N	103°48' 14.117" W	

PROJECT DETAILS: Lea County, NM (NAD27 NME)				Plan: Plan #4 - 7-7/8" Hole (GC Federal #14/OH)			
Geodetic System:	US State Plane 1927 (Exact solution)	Created By:	Julio Pina	Date:	23-Dec-08		
Datum:	NAD 1927 (NADCON CONUS)	Checked:		Date:			
Ellipsoid:	Clarke 1866	Reviewed:		Date:			
Zone:	New Mexico East 3001	Approved:		Date:			
System Datum:	Mean Sea Level						