OCD-ARTESIA

Form 3160-3
(April 2004)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5 Lease Serial No.
NMLC049998A

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

1a Type of work: ☑ DRILL ☐ REENTER

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

1b. Type of Well. ☑ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone

8. Lease Name and Well No
FOSTER EDDY #34

2 Name of Operator
COG Operating LLC

9 API Well No.
30-015- 39340

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

3b. Phone No. *(include area code)*
432-685-4384

10 Field and Pool, or Exploratory
Cedar Lake; Glorieta-Yeso

4 Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface **2046' FNL & 315' FEL, Unit H**
At proposed prod zone **1650' FNL & 330' FEL, Unit H**

11. Sec., T. R M. or Blk and Survey or Area
Sec 17 T17S R31E

14 Distance in miles and direction from nearest town or post office*
9 miles East of Loco Hills, NM

12. County or Parish
EDDY

13. State
NM

15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig unit line, if any)	16 No of acres in lease	17 Spacing Unit dedicated to this well
315'	**280**	**40**
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19 Proposed Depth	20. BLM/BIA Bond No. on file
330'	**TVD: 6300' MD: 6322'**	**NMB000740**
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22 Approximate date work will start*	23 Estimated duration
3734' GL	**08/31/2011**	**15 days**

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No 1, shall be attached to this form:

1 Well plat certified by a registered surveyor.
2. A Drilling Plan
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
4 Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25 Signature	Name *(Printed/Typed)*	Date
	Kelly J. Holly	**06/13/2011**

Title **Permitting Tech**

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
/s/ Don Peterson		AUG 11 2011
Title **FIELD MANAGER**	Office **CARLSBAD FIELD OFFICE**	

Application approval 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
Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

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

(Instructions on page 2)

RECEIVED
AUG 18 2011
NMOCD ARTESIA

Roswell Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Approval Subject to General Requirements & Special Stipulations Attached

MASTER DRILLING PROGRAM

1. Geologic Name of Surface Formation

Quaternary

2. Estimated Tops of Important Geologic Markers:

Quaternary	Surface
Rustler	375'
Top of Salt	600'
Base of Salt	1200'
Yates	1525'
Seven Rivers	1850'
Queen	2475'
Grayburg	2875'
San Andres	3175'
Glorietta	4700'
Paddock	4775'
Blinebry	5250'
Tubb	6200'

3. Estimated Depths of Anticipated Fresh Water, Oil and Gas

Water Sand	150'	Fresh Water
Grayburg	2875'	Oil/Gas
San Andres	3175'	Oil/Gas
Glorieta	4700'	Oil/Gas
Paddock	4775'	Oil/Gas
Blinebry	5250'	Oil/Gas
Tubb	6200'	Oil/Gas

No other formations are expected to give up oil, gas or fresh water in measurable quantities. Setting 13 3/8" casing to ~~450'~~ and circulating cement back to the surface will protect the surface fresh water sand. The Salt Section will be protected by setting 8 5/8" casing to ~~1800'~~ and circulating cement, in a single or multi-stage job and/or with an ECP, back to the surface. Any shallower zones above TD, which contain commercial quantities of oil and/or gas, will have cement circulated across them. This will be achieved by cementing, with a single or multi-stage job, the 5 1/2" production casing back 200' into the intermediate casing, to be run at TD. If wellbore conditions arise that require immediate action and/or a change to this program, COG Operating LLC personnel will always react to protect the wellbore and/or the environment.

See COA

See COA

4. Casing Program

Hole Size	Interval	OD Casing	Weight	Grade	Jt., Condition	Jt.	burst/collapse/tension
17 ½"	0-~~450'~~ See COA	13 3/8"	48#	H-40orJ-55	New	ST&C	8.71/3.724/14.91
11"	0-~~1800'~~ COA	8 5/8"	24or32#	J-55	New	ST&C	2.91/1.46/5.65
7 7/8"	0-T.D.	5 1/2"	15.5 or17#	J-55orL80	New	LT&C	1.71/1.574/2.20

360
1840
6322N
6300V

5. Cement Program

13 3/8" Surface Casing: Class C, 475 sx w/ 2% CaCl2, 0.25 pps CF, yield-1.32, back to surface 100% excess

8 5/8" Intermediate Casing:

11" Hole:

Single Stage: LEAD 350 sx 50:50:10 C:Poz:Gel w/ 5% Salt +0.25% CF, yield-2.45 + TAIL 200 sx Class C w/2% CaCl2, yield-1.32, back to surface. 145% excess

Multi-Stage: Stage 1: 350 sx Class C, w/2% CaCl2, yield - 1.32. 40% excess Stage 2: 200 sx Class C w/2% CaCl2, yield – 1.32, back to surface, 108% excess Multi stage tool to be set at approximately, depending on hole conditions, 500' (50' below the surface casing). Cement volumes will be adjusted proportionately for depth changes of multi stage tool.

See COA

5 1/2" Production Casing:

Single Stage: LEAD 500 sx 35:65:6 C:Poz:Gel w/ 5% Salt + 5 pps LCM + 0.2% SMS + 0.3% FL-52A + 0.125 pps CF, yield-2.05 + TAIL 400 sx 50:50:2 C:Poz:Gel w/ 5% Salt + 3 pps LCM + 0.6% SMS + 1% FL-25 + 1% BA-58 + 0.3% FL-52A + 0.125 pps CF, yield-1.37, to 200' minimum tie back to intermediate casing. 44.4% open hole excess, cement calculated back to surface.

Multi-Stage: Stage 1: (Assumed TD of 6700') 500 sx 50:50:2, C:Poz:Gel w/ 5% Salt + 3 pps LCM + 0.6% SMS + 1% FL-25 + 1% BA-58 + 0.3% FL-52A + 0.125 pps CF, yield - 1.37, 7% excess; minimum volume, will be adjusted up after caliper is

See COA

run. Stage 2: LEAD 450 sx 50:50:2 C:Poz:Gel w/ 5% Salt + 3 pps LCM + 0.6% SMS + 1% FL-25 + 1% BA-58 + 0.3% FL-52A + 0.125 pps CF, yield - 1.37, + TAIL 250 sx Class C w/ 0.3% R-3 + 1.5% CD-32, yield – 1.02 152% open hole excess, cement calculated back to surface. Multi stage tool to be set at approximately, depending on hole conditions, 3000'. Cement volumes will be adjusted proportionately for depth changes of multi stage tool, assumption for tool is water flow.

6. Minimum Specifications for Pressure Control

The blowout preventer equipment (BOP) shown in Exhibit #9 will consist of a double ram-type (2000 psi WP) preventer, and in some cases possibly a 2000 psi Hydril type annular preventer as provided for in Onshore Order #2. This unit will be hydraulically operated and the ram type preventer will be equipped with blind rams on top of 4 1/2" drill pipe rams on the bottom. A 13-5/8" or 11" BOP will be used, depending on the rig selected, during the drilling of the well. The BOP will be nippled up on the 13 3/8" surface casing with BOP equipment and tested to 2000 psi. When 11" BOP is used the special drilling flange will be utilized on the 13-3/8" head to allow testing the BOP with a retrievable test plug. After setting 8-5/8" the BOP will then be nippled up on the 8 5/8" intermediate casing and tested by a third party to 2000 psi and used continuously until total depth is reached. Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment (Exhibit #10) will include a Kelly cock and floor safety valve, choke lines and a choke manifold (Exhibit #11) with a 2000 psi WP rating.

The majority of the rigs currently in use have a 13-5/8" BOP, so no special provision is needed for most wells in the area for conventionally testing the BOP with a test plug. However, due to the vagaries of rig scheduling, it might be that one of the few rigs with 11" BOP's might be called upon to drill any specific well in the area. Note that intermediate hole size is always 11". Therefore, COG Operating LLC respectfully requests a variance to the requirement of 13-5/8" BOP on 13-3/8" casing. When that circumstance is encountered the special flange will be utilized to allow testing the entire BOP with a test plug, without subjecting the casing to test pressure. The special flange also allows the return to full-open capability if desired.

See COA

7. Types and Characteristics of the Proposed Mud System

The well will be drilled to TD with a combination of brine, cut brine and polymer mud system. The applicable depths and properties of this system are as follows:

DEPTH	TYPE	WEIGHT	VISCOSITY	WATERLOSS
0-450' 360	Fresh Water	8.5	28	N.C.
450-1800' 840	Brine	10	30	N.C.
1800'-TD	Cut Brine	8.7-9.1	29	N.C.

Sufficient mud materials will be kept at the well site to maintain mud properties and meet minimum lost circulation and weight increase requirements at all times.

8. Auxiliary Well Control and Monitoring Equipment

A. Kelly cock will be kept in the drill string at all times.

B. A full opening drill pipe-stabbing valve with proper drill pipe connections will be on the rig floor at all times.

9. Logging, Testing and Coring Program See COA

A. The electric logging program will consist of GR-Dual Laterolog, Spectral Density, Dual Spaced Neutron, CSNG Log and will be run from TD to 8 5/8" casing shoe.

B. Drill Stem test is not anticipated.

C. No conventional coring is anticipated.

D. Further testing procedures will be determined after the 5 ½" production casing has been cemented at TD, based on drill shows and log evaluation.

10. Abnormal Conditions, Pressure, Temperatures and Potential Hazards

No abnormal pressures or temperatures are anticipated. The estimated bottom hole at TD is 110 degrees and the estimated maximum bottom hold pressure is 2300 psig. Measurable gas volumes or Hydrogen Sulfide levels have not been encountered during drilling operations in this area, although a Hydrogen Sulfide Drilling Operation Plan is attached to this program. No major loss of circulation zones has been reported in offsetting wells.

11. Anticipated Starting Date and Duration of Operations

Road and location work will not begin until approval has been received from the BLM. As this is a Master Drilling plan, please refer to the Form 3160-3 for the anticipated start date. Once commenced, drilling operations should be finished in approximately 12 days. If the well is productive, an additional 30 days will be required for completion and testing before a decision is made to install permanent facilities.

CONCHO

COG Operating LLC

Eddy County, NM (NAN27 NME)
Foster Eddy #34
Foster Eddy #34

OH

Plan: Plan #1 Rev 1 7-7/8" Hole

Standard Planning Report

28 March, 2011

Scientific Drilling
Directional Drilling Operations

Database:	EDM-Julio	**Local Co-ordinate Reference:**	Site Foster Eddy #34
Company:	COG Operating LLC	**TVD Reference:**	GL Elev @ 3734 00usft
Project:	Eddy County, NM (NAN27 NME)	**MD Reference:**	GL Elev @ 3734 00usft
Site:	Foster Eddy #34	**North Reference:**	Grid
Well:	Foster Eddy #34	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 Rev 1 7-7/8" Hole		

Project Eddy County, NM (NAN27 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 Foster Eddy #34

Site Position:		**Northing:**	668,164 70 usft	**Latitude:**	32° 50' 9 828 N
From:	Map	**Easting:**	638,074 00 usft	**Longitude:**	103° 53' 1 683 W
Position Uncertainty:	0 00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0 24 °

Well Foster Eddy #34

Well Position	**+N/-S**	0 00 usft	**Northing:**	668,164 70 usft	**Latitude:**	32° 50' 9 828 N
	+E/-W	0 00 usft	**Easting:**	638,074 00 usft	**Longitude:**	103° 53' 1 683 W
Position Uncertainty		0 00 usft	**Wellhead Elevation:**		**Ground Level:**	3,734 00 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2011/03/28	7 80	60.70	48,970

Design Plan #1 Rev 1 7-7/8" Hole

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	350 90

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0 00	0 00	0 00	0.00	0 00	0 00	0 00	0 00	0 00	0 00	
2,000 00	0 00	0 00	2,000 00	0 00	0 00	0 00	0 00	0 00	0 00	
2,338 75	6 78	350 90	2,337 96	19 75	-3 16	2 00	2 00	0 00	350 90	
4,784 01	6 78	350 90	4,766 14	304 59	-48 78	0 00	0 00	0 00	0 00	
4,918 48	4 09	350 90	4,900 00	317 16	-50 79	2 00	-2 00	0 00	-180 00	TG1-Foster #34
6,322.05	4 09	350 90	6,300 00	415 90	-66 60	0 00	0 00	0 00	0 00	PBHL-Foster #34

Database:	EDM-Julio	**Local Co-ordinate Reference:**	Site Foster Eddy #34
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Site:	Foster Eddy #34	**North Reference:**	Grid
Well:	Foster Eddy #34	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 Rev 1 7-7/8" Hole		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
East HL-Foster #34 - North HL-Foster #34									
1,900.00	0 00	0 00	1,900 00	0 00	0 00	0 00	0 00	0 00	0 00
8-5/8" Casing									
2,000 00	0 00	0 00	2,000 00	0 00	0 00	0 00	0 00	0 00	0 00
KOP Start Build 2.00°/100'									
2,100 00	2 00	350 90	2,099 98	1 72	-0 28	1 75	2 00	2 00	0 00
2,200 00	4 00	350 90	2,199 84	6 89	-1 10	6 98	2 00	2 00	0 00
2,300 00	6 00	350 90	2,299 45	15 50	-2 48	15 69	2 00	2 00	0 00
2,338 75	6 77	350 90	2,337 96	19 75	-3 16	20 00	2 00	2 00	0.00
EOC hold 6.78°									
2,400 00	6 78	350 90	2,398 78	26 89	-4 31	27 23	0 00	0 00	0 00
2,500 00	6 78	350 90	2,498 09	38 54	-6 17	39 03	0 00	0 00	0 00
2,600 00	6 78	350 90	2,597 39	50 19	-8 04	50 82	0 00	0 00	0 00
2,700 00	6 78	350 90	2,696 69	61 83	-9 90	62 62	0 00	0 00	0 00
2,800 00	6 78	350 90	2,795 99	73 48	-11 77	74 42	0 00	0 00	0 00
2,900 00	6 78	350 90	2,895 29	85 13	-13 63	86 22	0 00	0 00	0 00
3,000 00	6 78	350 90	2,994 59	96 78	-15 50	98 01	0 00	0 00	0 00
3,100 00	6 78	350 90	3,093 90	108 43	-17 36	109 81	0 00	0 00	0 00
3,200 00	6 78	350 90	3,193 20	120 08	-19 23	121 61	0 00	0 00	0 00
3,300 00	6 78	350 90	3,292 50	131 73	-21 09	133.40	0 00	0 00	0 00
3,400 00	6 78	350 90	3,391 80	143 38	-22 96	145 20	0 00	0 00	0 00
3,500 00	6 78	350 90	3,491 10	155 02	-24 82	157 00	0 00	0 00	0 00
3,600 00	6 78	350 90	3,590 40	166 67	-26 69	168 80	0 00	0 00	0 00
3,700 00	6 78	350 90	3,689 71	178 32	-28 56	180 59	0 00	0 00	0 00
3,800 00	6 78	350 90	3,789 01	189 97	-30 42	192 39	0 00	0 00	0 00
3,900 00	6 78	350 90	3,888 31	201 62	-32 29	204 19	0 00	0 00	0 00
4,000 00	6 78	350 90	3,987 61	213 27	-34 15	215 98	0 00	0 00	0 00
4,100 00	6 78	350 90	4,086 91	224 92	-36 02	227 78	0 00	0 00	0 00
4,200 00	6 78	350 90	4,186 21	236 57	-37 88	239 58	0 00	0 00	0 00
4,300 00	6 78	350 90	4,285 52	248 21	-39 75	251 38	0.00	0 00	0 00
4,400 00	6 78	350 90	4,384.82	259 86	-41 61	263 17	0 00	0 00	0 00
4,500 00	6 78	350 90	4,484 12	271 51	-43 48	274 97	0 00	0 00	0 00
4,600 00	6 78	350 90	4,583 42	283 16	-45 34	286 77	0 00	0 00	0 00
4,700 00	6 78	350 90	4,682 72	294 81	-47 21	298 56	0 00	0 00	0 00
4,784 01	6 78	350 90	4,766 15	304 60	-48 78	308 48	0 00	0 00	0 00
Start Drop 2.00°/100'									
4,800 00	6 46	350 90	4,782 03	306 41	-49 07	310 32	2 00	-2 00	0 00
4,900 00	4 46	350 90	4,881 57	315 80	-50 57	319 82	2 00	-2 00	0 00
4,918 48	4 09	350 90	4,900 00	317 16	-50 79	321 20	2 00	-2 00	0 00
EOC hold 4.09° - TG1-Foster #34									
5,000 00	4 09	350 90	4,981 31	322 89	-51 71	327 01	0 00	0 00	0 00
5,100 00	4 09	350 90	5,081 06	329 93	-52 83	334 13	0 00	0 00	0 00
5,200 00	4 09	350.90	5,180 80	336 96	-53.96	341 26	0 00	0 00	0 00
5,300 00	4 09	350 90	5,280 55	344 00	-55 09	348 38	0 00	0 00	0 00
5,400 00	4 09	350 90	5,380 30	351 03	-56 21	355 51	0 00	0 00	0 00
5,500 00	4 09	350 90	5,480 04	358 07	-57 34	362 63	0 00	0 00	0 00
5,600 00	4 09	350 90	5,579 79	365 10	-58 47	369 76	0 00	0 00	0 00
5,700 00	4 09	350 90	5,679 53	372.14	-59.59	376 88	0 00	0 00	0 00
5,800.00	4 09	350 90	5,779 28	379 17	-60 72	384 00	0 00	0 00	0 00
5,900-00	4 09	350 90	5,879 03	386 21	-61 85	391 13	0 00	0 00	0 00
6,000 00	4 09	350 90	5,978 77	393 24	-62 97	398 25	0 00	0 00	0 00
6,100 00	4 09	350 90	6,078 52	400 28	-64 10	405 38	0 00	0 00	0 00

Database:	EDM-Julio	**Local Co-ordinate Reference:**	Site Foster Eddy #34
Company:	COG Operating LLC	**TVD Reference:**	GL Elev @ 3734 00usft
Project:	Eddy County, NM (NAN27 NME)	**MD Reference:**	GL Elev @ 3734.00usft
Site:	Foster Eddy #34	**North Reference:**	Grid
Well:	Foster Eddy #34	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 Rev 1 7-7/8" Hole		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,200.00	4 09	350 90	6,178 26	407 31	-65 23	412 50	0 00	0 00	0 00
6,300.00	4.09	350 90	6,278 01	414 35	-66 35	419 63	0 00	0 00	0 00
6,322.05	4 09	350 90	6,300 00	415 90	-66 60	421 20	0.00	0 00	0 00
PBHL-Foster #34									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
East HL-Foster #34	0 00	0 00	0 00	425 90	-16 60	668,590 60	638,057 40	32° 50' 14 043 N	103° 53' 1.857 W
- plan misses target center by 426 22usft at 0 00usft MD (0 00 TVD, 0 00 N, 0 00 E)									
- Rectangle (sides W0 00 H300 00 D0 00)									
North HL-Foster #34	0 00	0 00	0.00	425 90	-16.60	668,590 60	638,057 40	32° 50' 14 043 N	103° 53' 1 857 W
- plan misses target center by 426 22usft at 0 00usft MD (0.00 TVD, 0 00 N, 0 00 E)									
- Rectangle (sides W200 00 H0 00 D0 00)									
TG1-Foster #34	0 00	0 00	4,900 00	317 16	-50 79	668,481 86	638,023 22	32° 50' 12 968 N	103° 53' 2 263 W
- plan hits target center									
- Point									
PBHL-Foster #34	0 00	0 01	6,300 00	415.90	-66.60	668,580 60	638,007 40	32° 50' 13 946 N	103° 53' 2 443 W
- plan hits target center									
- Circle (radius 50 00)									

Casing Points

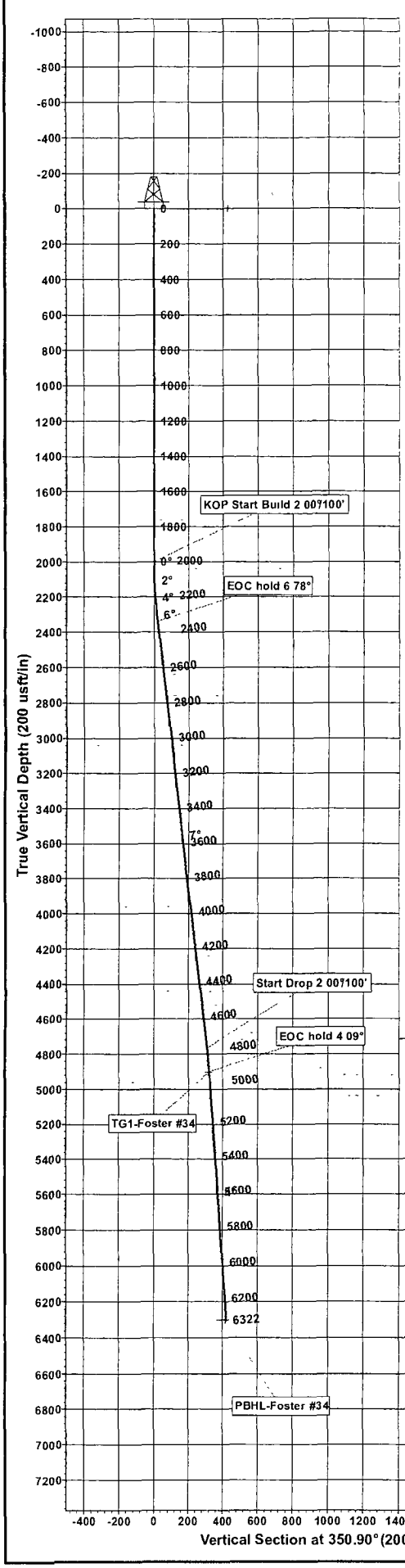
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,900 00	1,900 00	8-5/8" Casing	8-5/8	12-1/4

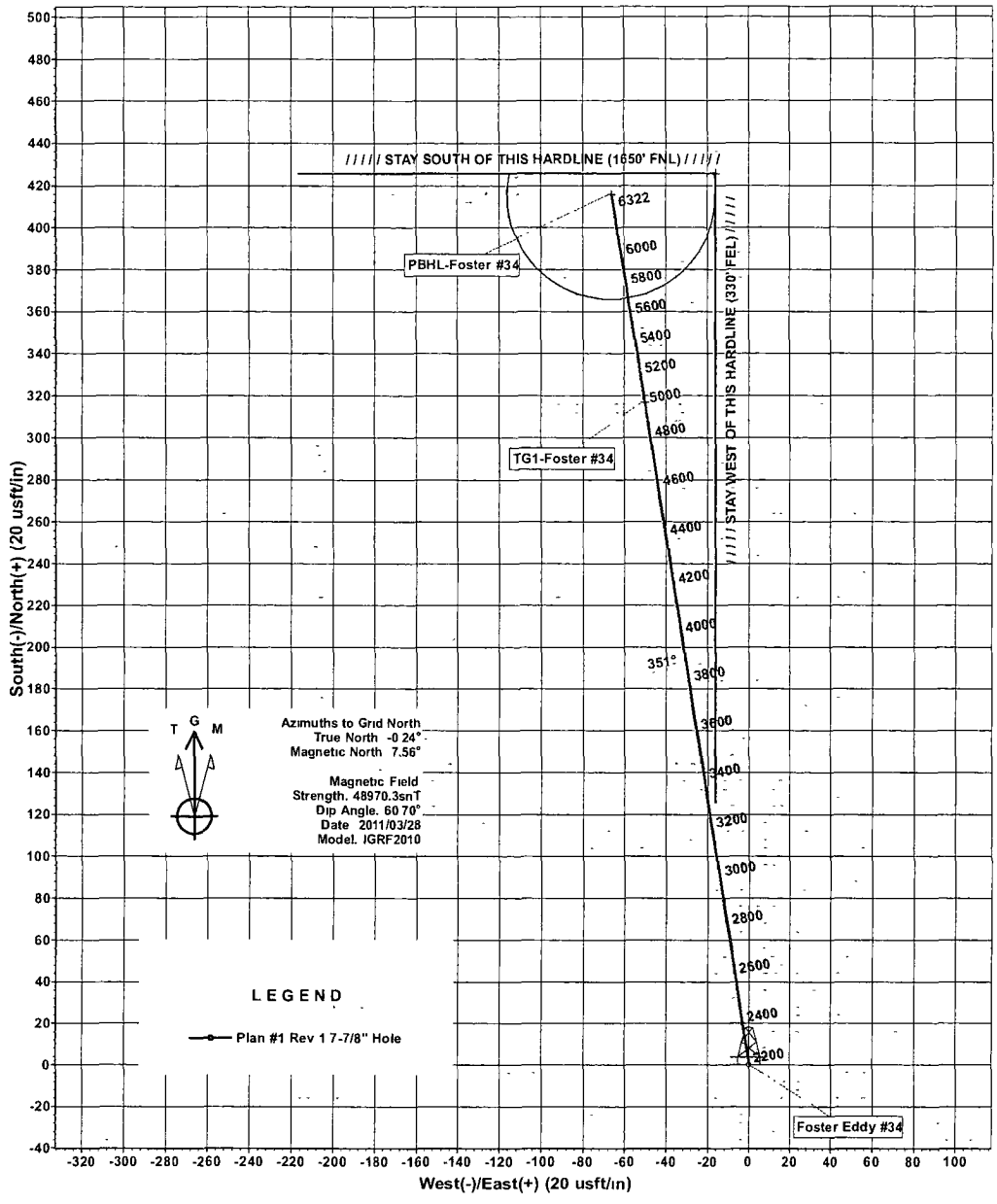
Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
2,000 00	2,000 00	0 00	0 00	KOP Start Build 2 00°/100'
2,338 75	2,337 96	19 75	-3 16	EOC hold 6 78°
4,784 01	4,766 15	304.60	-48 78	Start Drop 2 00°/100'
4,918 48	4,900 00	317 16	-50 79	EOC hold 4 09°

Scientific Drilling for COG Operating LLC
Site: Eddy County, NM (NAN27 NME)
Well: Foster Eddy #34
Wellbore: OH
Design: Plan #1 Rev 1 7-7/8" Hole

Scientific Drilling
Directional Drilling Operations





WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
East HL-Foster #34	0.00	425 90	-16.60	668590.60	638057 40	32° 50' 14 043 N	103° 53' 1 857 W	Rectangle (Sides: L300.00 W0.00)
North HL-Foster #34	0 00	425 90	-16 60	668590.60	638057.40	32° 50' 14 043 N	103° 53' 1 857 W	Rectangle (Sides: L0.00 W200 00)
TG1-Foster #34	4900 00	317 16	-50 79	668481 86	638023.21	32° 50' 12.968 N	103° 53' 2.263 W	Point
PBHL-Foster #34	6300.00	415 90	-66 60	668580 60	638007 40	32° 50' 13.946 N	103° 53' 2 443 W	Circle (Radius 50 00)

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0 00	0 00	0 00	0.00	0.00	0 00	0.00	0 00	0.00	
2	2000 00	0.00	0 00	2000.00	0 00	0 00	0.00	0 00	0.00	
3	2338 75	6 78	350.90	2337.96	19 75	-3 16	2.00	350 90	20.00	
4	4784.01	6 78	350 90	4766.14	304 59	-48.78	0 00	0 00	308.48	
5	4918.48	4 09	350 90	4900 00	317 16	-50.79	2 00	-180.00	321.20	TG1-Foster #34
6	6322 05	4 09	350.90	6300 00	415.90	-66 60	0 00	0.00	421.20	PBHL-Foster #34

WELL DETAILS: Foster Eddy #34

Ground Level. 3734 00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	668164 70	638074 00	32° 50' 9 828 N	103° 53' 1 683 W	

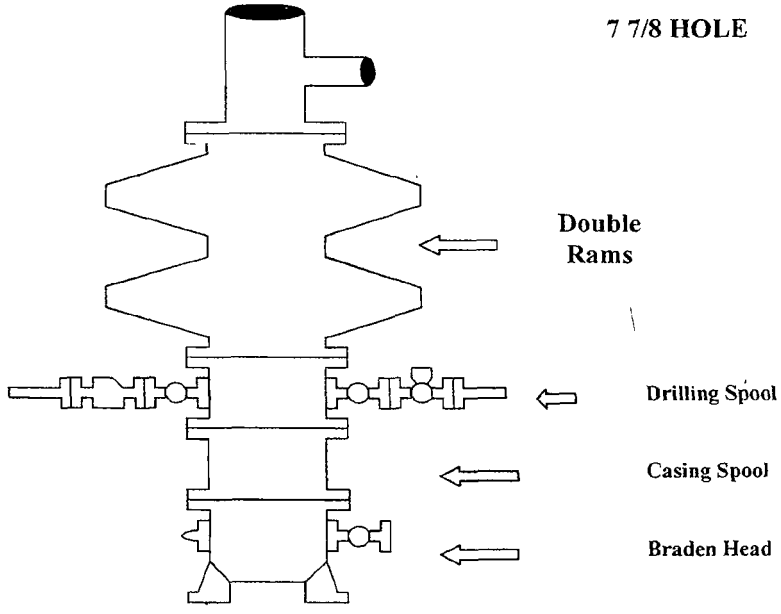
PROJECT DETAILS Eddy County, NM (NAN27 NME)

Plan Plan #1 Rev 1 7-7/8" Hole (Foster Eddy #34/OH)

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

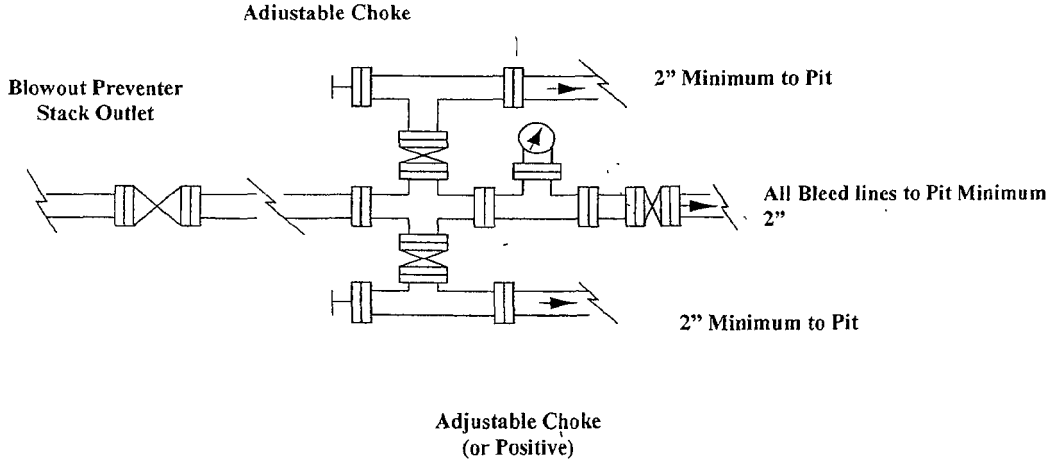
Created By. Julio Pina Date 28-Mar-11
Checked: _____ Date _____
Reviewed _____ Date _____
Approved _____ Date. _____

COG Operating LLC
Exhibit #9
BOPE and Choke Schematic



Minimum 4" Nominal choke and kill lines

Choke Manifold Requirement (2000 psi WP)
No Annular Required



NOTES REGARDING THE BLOWOUT PREVENTERS
Master Drilling Plan
Eddy County, New Mexico

1. Drilling nipple to be so constructed that it can be removed without use of a welder through rotary table opening, with minimum I.D. equal to preventer bore.
2. Wear ring to be properly installed in head.
3. Blow out preventer and all fittings must be in good condition, 2000 psi WP minimum.
4. All fittings to be flanged.
5. Safety valve must be available on rig floor at all times with proper connections, valve to be full 2000 psi WP minimum.
6. All choke and fill lines to be securely anchored especially ends of choke lines.
7. Equipment through which bit must pass shall be at least as large as the diameter of the casing being drilled through.
8. Kelly cock on Kelly.
9. Extension wrenches and hands wheels to be properly installed.
10. Blow out preventer control to be located as close to driller's position as feasible.
11. Blow out preventer closing equipment to include minimum 40-gallon accumulator, two independent sources of pump power on each closing unit installation all API specifications.