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. **NMNM-0467931**

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 **Electra Federal #53**

2. Name of Operator **COG Operating LLC**

9 API Well No. **30-015-** 39284

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

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

10 Field and Pool, or Exploratory **Loco Hills; Glorieta Yeso 96718**

4 Location of Well *(Report location clearly and in accordance with any State requirements *)*

At surface **SHL: 1755' FNL & 2572' FEL, Unit G**

At proposed prod zone **BHL: 1650' FNL & 2310' FEL, Unit G**

11 Sec , T R M or Blk. and Survey or Area **Sec 10, T17S, R30E**

14. Distance in miles and direction from nearest town or post office* **2 miles North 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
1755'	**640**	**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
440'	**6150' TVD, 6165' MD**	**NMB000740**
21 Elevations (Show whether DF, KDB, RT, GL, etc.)	22 Approximate date work will start*	23 Estimated duration
3724' GL	**07/31/2011**	**10 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
Robyn Odom	**Robyn M. Odom**	**05/04/2011**

Title **Regulatory Analyst**

Approved by *(Signature)* /s/ Don Peterson	Name *(Printed/Typed)*	Date JUL 22 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 4 2011
NMOCD ARTESIA

Roswell Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Approval Subject to General Requirements & Special Stipulations Attached

COG Operating LLC
Master Drilling Plan Revised 2-08-11
East Loco Hills; Yeso
Use for Sections 3-30, T-17-S, R-30-E
Eddy County, NM

MASTER DRILLING PROGRAM

1. Geologic Name of Surface Formation

Quaternary

2. Estimated Tops of Important Geologic Markers:

Quaternary	Surface
Rustler	340'
Top of Salt	500'
Base of Salt	1000'
Yates	1280'
Seven Rivers	1570'
Queen	2190'
Grayburg	2600'
San Andres	2910'
Glorietta	4380'
Paddock	4460'
Blinebry	4930'
Tubb	5940'

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

Water Sand	150'	Fresh Water
Grayburg	2600'	Oil/Gas
San Andres	2910'	Oil/Gas
Glorietta	4380'	Oil/Gas
Paddock	4460'	Oil/Gas
Blinebry	4930'	Oil/Gas
Tubb	5940'	Oil/Gas

No other formations are expected to give up oil, gas or fresh water in measurable quantities. Setting 13 3/8" casing to 425' 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 1300' 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 (but calculated to surface), 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 con't

4. Casing Program

See COA

Hole Size	Interval	OD Casing	Weight	Grade	Jt., Condition	Jt.	brst/clps/ten
17 ½"	0-425'325	13 3/8"	48#	H-40orJ-55	ST&C/New	ST&C	9.22/3.943/15.8
11"	0-1300'	8 5/8"	24or32#	J-55	ST&C/New	ST&C	3.03/2.029/7.82
7 7/8"	0-TD	5 1/2"	15.5or17#	J-55orL-80	LT&C/New	LT&C	1.88/1.731/2.42

5. Cement Program

13 3/8" Surface Casing: 450 Class C w/ 2% Cacl2 + 0.25 pps CF, yield 1.32, back to surface. 101% excess

8 5/8" Intermediate Casing:

11" Hole:
Single Stage: LEAD: 300 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. 202% excess
Multi-Stage: Stage 1: 200 Class C w/2% CaCl2, yield - 1.32; 26% excess. Stage 2: 300 sx 50:50:10 C:Poz:Gel w/ 5% Salt +0.25% CF, yield - 2.45, back to surface, 509% excess; assumption for tool is lost circulation. Multi stage tool to be set at approximately, depending on hole conditions, 475' (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, 62.4% open hole excess, cement calculated back to surface.
Multi-Stage: Stage 1: (Assumed TD of 6000') 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, 31.8% excess; Stage 2: LEAD

See COA

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 – 1.02 110.8% 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
0-425'325	Fresh Water	8.5	28	N.C.
425-1300'	Brine	10	30	N.C.
1300'-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)
Electra Federal #53
Electra Federal #53

OH

Plan: Plan #1 - 7-7/8" Hole
SHL = 1755' FNL & 2572' FEL
BHL = 1660' FNL & 2300' FEL
Top of Paddock = 1660' FNL & 2300' FEL @ 4400' TVD

Standard Planning Report

30 September, 2010

Scientific Drilling
Directional Drilling Operations

Database:	EDM-Julio	**Local Co-ordinate Reference:**	Site Electra Federal #53
Company:	COG Operating LLC	**TVD Reference:**	GL Elev @ 3724 00usft
Project:	Eddy County, NM (NAN27 NME)	**MD Reference:**	GL Elev @ 3724 00usft
Site:	Electra Federal #53	**North Reference:**	Grid
Well:	Electra Federal #53	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #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 Electra Federal #53

Site Position:		**Northing:**	673,630 30 usft	**Latitude:**	32° 51' 4 803 N
From:	Map	**Easting:**	614,944 60 usft	**Longitude:**	103° 57' 32 542 W
Position Uncertainty:	0 00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0 20 °

Well Electra Federal #53

Well Position	**+N/-S**	0 00 usft	**Northing:**	673,630 30 usft	**Latitude:**	32° 51' 4 803 N
	+E/-W	0 00 usft	**Easting:**	614,944 60 usft	**Longitude:**	103° 57' 32 542 W
Position Uncertainty		0 00 usft	**Wellhead Elevation:**		**Ground Level:**	3,724 00 usft

Wellbore OH

Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	BGGM2010	2010/09/30	7 96	60 73	49,057

Design Plan #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	70 59

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	
1,450 00	0 00	0 00	1,450 00	0 00	0 00	0 00	0.00	0 00	0 00	
1,761 46	6 23	70 59	1,760 85	5 62	15 95	2 00	2 00	0 00	70 59	
4,103 59	6 23	70 59	4,089 15	90 08	255 65	0 00	0 00	0 00	0 00	
4,415 06	0 00	0 00	4,400 00	95 70	271 60	2 00	-2 00	0 00	180 00	TG1-EF #53
6,165 06	0 00	0 00	6,150 00	95 70	271 60	0 00	0 00	0 00	0 00	PBHL-EF #53

Database:	EDM-Julio	**Local Co-ordinate Reference:**	Site Electra Federal #53
Company:	COG Operating LLC	**TVD Reference:**	GL Elev @ 3724 00usft
Project:	Eddy County, NM (NAN27 NME)	**MD Reference:**	GL Elev @ 3724 00usft
Site:	Electra Federal #53	**North Reference:**	Grid
Well:	Electra Federal #53	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #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
South HL-EF #53 - West HL-EF #53									
1,350 00	0 00	0 00	1,350 00	0 00	0 00	0 00	0 00	0 00	0 00
8-5/8" Casing									
1,450 00	0 00	0 00	1,450 00	0 00	0 00	0 00	0 00	0 00	0 00
KOP Start Build 2.00°/100'									
1,500 00	1 00	70 59	1,500 00	0 15	0 41	0 44	2 00	2 00	0 00
1,600 00	3 00	70 59	1,599 93	1 30	3 70	3 93	2 00	2 00	0 00
1,700 00	5 00	70 59	1,699 68	3 62	10 28	10 90	2 00	2 00	0 00
1,761 46	6 23	70 59	1,760 85	5 62	15 95	16 91	2 00	2 00	0 00
EOC hold 6.23°									
1,800 00	6 23	70 59	1,799 16	7 01	19 90	21 10	0 00	0 00	0 00
1,900 00	6 23	70 59	1,898 57	10 62	30 13	31 95	0 00	0 00	0 00
2,000 00	6 23	70 59	1,997 98	14 22	40 37	42 80	0 00	0 00	0 00
2,100 00	6 23	70 59	2,097 39	17 83	50 60	53 65	0 00	0 00	0.00
2,200 00	6 23	70 59	2,196 80	21 43	60 83	64 50	0 00	0 00	0 00
2,300 00	6 23	70 59	2,296.21	25 04	71 07	75 35	0 00	0 00	0 00
2,400 00	6 23	70 59	2,395 62	28 65	81 30	86 20	0 00	0 00	0 00
2,500 00	6 23	70 59	2,495 03	32 25	91 54	97 05	0 00	0 00	0 00
2,600 00	6 23	70 59	2,594 44	35 86	101 77	107 90	0 00	0 00	0 00
2,700 00	6 23	70 59	2,693 85	39 47	112 00	118 75	0 00	0 00	0 00
2,800 00	6 23	70 59	2,793 25	43 07	122 24	129 60	0 00	0 00	0 00
2,900 00	6 23	70 59	2,892 66	46 68	132 47	140 45	0 00	0 00	0 00
3,000 00	6 23	70 59	2,992 07	50 28	142 71	151 30	0 00	0 00	0 00
3,100 00	6 23	70 59	3,091 48	53 89	152 94	162 16	0 00	0 00	0 00
3,200 00	6 23	70 59	3,190 89	57 50	163 17	173 01	0 00	0 00	0 00
3,300 00	6 23	70 59	3,290 30	61 10	173 41	183 86	0 00	0 00	0 00
3,400 00	6 23	70 59	3,389 71	64 71	183 64	194 71	0 00	0 00	0 00
3,500 00	6 23	70 59	3,489 12	68 31	193 88	205 56	0 00	0 00	0 00
3,600 00	6 23	70 59	3,588 53	71 92	204 11	216 41	0 00	0 00	0 00
3,700 00	6 23	70 59	3,687 94	75 53	214 34	227 26	0 00	0 00	0 00
3,800 00	6 23	70 59	3,787 35	79 13	224 58	238 11	0 00	0 00	0 00
3,900 00	6 23	70 59	3,886 76	82 74	234 81	248 96	0 00	0 00	0 00
4,000 00	6 23	70 59	3,986 17	86 34	245 05	259 81	0 00	0 00	0 00
4,100 00	6 23	70 59	4,085 58	89 95	255 28	270 66	0 00	0 00	0 00
4,103 59	6 23	70 59	4,089 15	90 08	255.65	271 05	0 00	0 00	0 00
Start DLS 2.00°/100'									
4,200 00	4 30	70 59	4,185 15	93 02	263 99	279 90	2.00	-2 00	0 00
4,300 00	2 30	70 59	4,284 98	94 93	269 42	285 66	2 00	-2 00	0 00
4,400 00	0 30	70 59	4,384 94	95 69	271 56	287 93	2 00	-2 00	0 00
4,415 06	0 00	0 00	4,400 00	95 70	271 60	287 97	2 00	-2 00	0 00
EOC hold 0.00° - Top of Paddock - TG1-EF #53									
6,165 06	0 00	0 00	6,150 00	95 70	271 60	287 97	0 00	0 00	0 00
PBHL-EF #53									

Database:	EDM-Julio	**Local Co-ordinate Reference:**	Site Electra Federal #53
Company:	COG Operating LLC	**TVD Reference:**	GL Elev @ 3724 00usft
Project:	Eddy County, NM (NAN27 NME)	**MD Reference:**	GL Elev @ 3724 00usft
Site:	Electra Federal #53	**North Reference:**	Grid
Well:	Electra Federal #53	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 - 7-7/8" Hole		

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
South HL-EF #53	0 00	0 00	0 00	105 70	261 60	673,736 00	615,206 20	32° 51' 5 840 N	103° 57' 29 471 W
- plan misses target center by 282 15usft at 0 00usft MD (0 00 TVD, 0 00 N, 0 00 E)									
- Rectangle (sides W200 00 H0 00 D0 00)									
West HL-EF #53	0 00	0 00	0 00	105 70	261 60	673,736 00	615,206 20	32° 51' 5 840 N	103° 57' 29 471 W
- plan misses target center by 282 15usft at 0 00usft MD (0 00 TVD, 0 00 N, 0 00 E)									
- Rectangle (sides W0 00 H200 00 D0 00)									
TG1-EF #53	0 00	0 00	4,400 00	95 70	271 60	673,726 00	615,216 20	32° 51' 5 741 N	103° 57' 29 355 W
- plan hits target center									
- Point									
PBHL-EF #53	0 00	0 00	6,150 00	95 70	271 60	673,726 00	615,216 20	32° 51' 5 741 N	103° 57' 29 355 W
- plan hits target center									
- Circle (radius 10 00)									

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,350 00	1,350 00	8-5/8" Casing	8-5/8	12-1/4

Formations

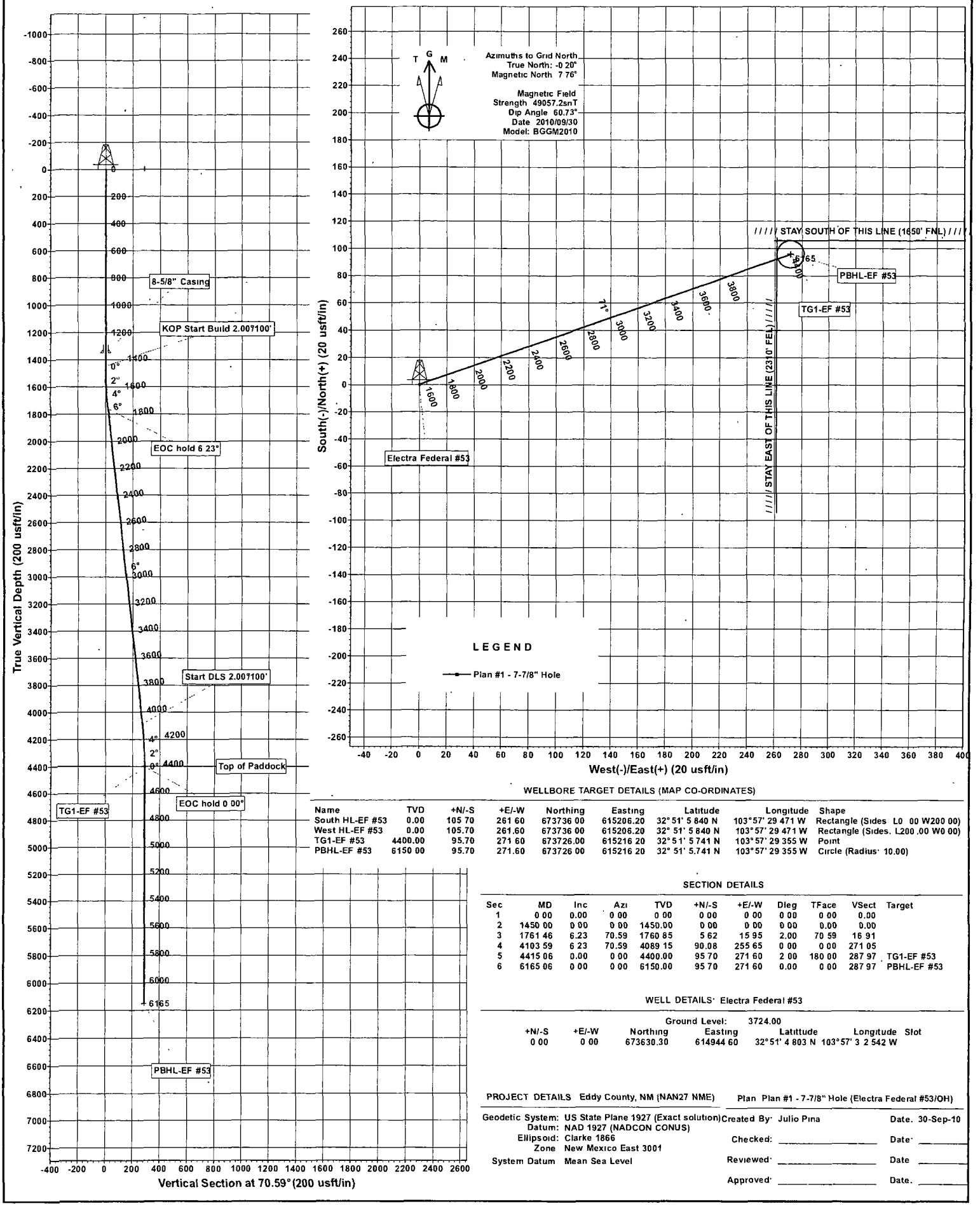
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,415 06	4,400 00	Top of Paddock		0 00	

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
1,450 00	1,450 00	0 00	0 00	KOP Start Build 2 00°/100'
1,761 46	1,760 85	5 62	15 95	EOC hold 6 23°
4,103 59	4,089 15	90 08	255 65	Start DLS 2 00°/100'
4,415 06	4,400 00	95 70	271 60	EOC hold 0 00°

Scientific Drilling for COG Operating LLC
Site: Eddy County, NM (NAN27 NME)
Well: Electra Federal #53
Wellbore: OH
Design: Plan #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
South HL-EF #53	0.00	105 70	261 60	673736 00	615206.20	32° 51' 5 840 N	103°57' 29 471 W	Rectangle (Sides L0 00 W200 00)
West HL-EF #53	0.00	105.70	261.60	673736 00	615206.20	32° 51' 5 840 N	103°57' 29 471 W	Rectangle (Sides. L200 .00 W0 00)
TG1-EF #53	4400.00	95.70	271 60	673726.00	615216 20	32° 51' 5 741 N	103°57' 29 355 W	Point
PBHL-EF #53	6150 00	95.70	271.60	673726 00	615216 20	32° 51' 5.741 N	103°57' 29 355 W	Circle (Radius· 10.00)

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	1450 00	0 00	0 00	1450.00	0 00	0 00	0 00	0.00	0.00	
3	1761 46	6.23	70.59	1760 85	5 62	15 95	2.00	70 59	16 91	
4	4103 59	6 23	70.59	4089 15	90.08	255 65	0 00	0 00	271 05	
5	4415 06	0.00	0 00	4400.00	95 70	271 60	2 00	180 00	287 97	TG1-EF #53
6	6165 06	0 00	0 00	6150.00	95 70	271 60	0.00	0 00	287 97	PBHL-EF #53

WELL DETAILS· Electra Federal #53

Ground Level: 3724.00

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude	Slot
0 00	0 00	673630.30	614944 60	32°51' 4 803 N	103°57' 3 2 542 W	

PROJECT DETAILS Eddy County, NM (NAN27 NME)

Plan Plan #1 - 7-7/8" Hole (Electra Federal #53/OH)

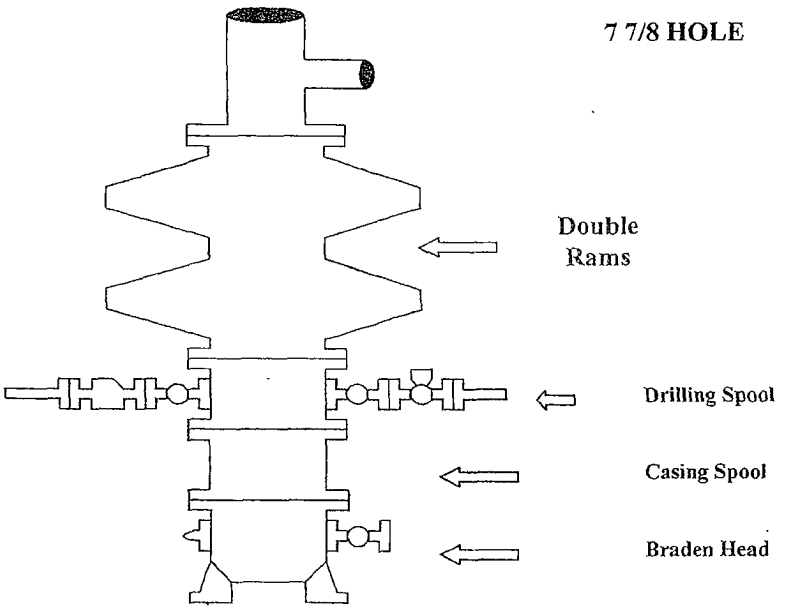
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone New Mexico East 3001
System Datum Mean Sea Level

Created By· Julio Pina Date. 30-Sep-10
Checked: _____ Date· _____
Reviewed· _____ Date _____
Approved· _____ Date. _____

COG Operating LLC

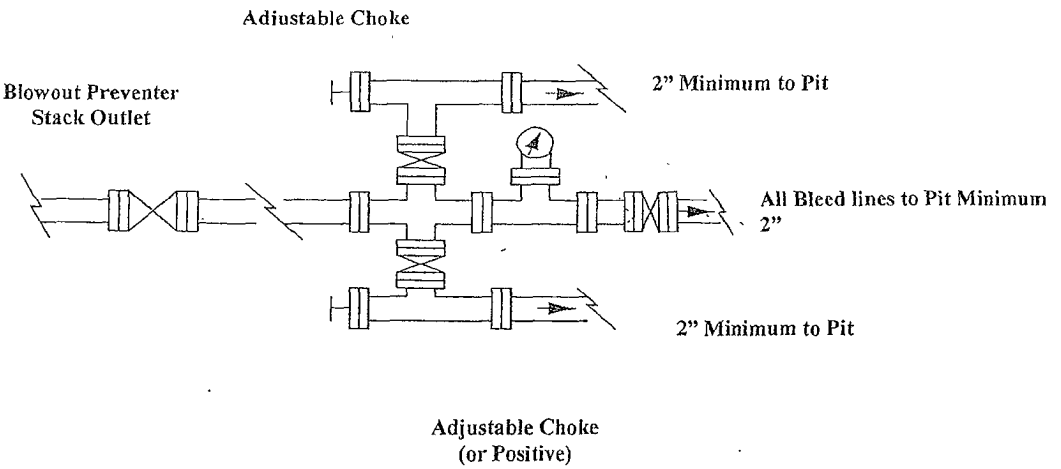
Exhibit #9

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.