ATS -10-84

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Form 3160-3
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

5 Lease Serial No. **NMLC-029509A**

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

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

8 Lease Name and Well No. **M C FEDERAL #60** <302519>

1a. Type of work: ☑ DRILL ☐ REENTER

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

2. Name of Operator **COG Operating LLC** <229137>

9 API Well No. **30-025-** 39877

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 **Maljamar; Yeso, West 44500**

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

At surface **SHL: 1972' FSL & 2444' FWL, Unit K** SURFACE UNORTHODOX LOCATION

At proposed prod. zone **BHL: 2310' FSL & 2310' FWL, Unit K**

11. Sec., T. R M or Blk and Survey or Area **Sec 21, T17S, R32E**

14 Distance in miles and direction from nearest town or post office* **2.5 miles south of Maljamar NM**

12 County or Parish **Lea**

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
1972'	**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
330'	7221' MD ~~7100'~~ 7200 TVD	**NMB000215**
21 Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
4040' GL	**07/31/2010**	**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
Title **Regulatory Analyst**	**Robyn M. Odom**	**04/12/2010**

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
/s/ Don Peterson	/s/ Don Peterson	JUL 29 2010
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) Well becomes orthodox at approximately 5,100' M.D.

Roswell Controlled Water Basin

AUG 20 2010

SEE ATTACHED FOR CONDITIONS OF APPROVAL

Approval Subject to General Requirements & Special Stipulations Attached

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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

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

Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease – 4 Copies
Fee Lease – 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
30-025- 39877	44500	MALJAMAR; YESO, WEST

Property Code	Property Name	Well Number
302519	MC FEDERAL	60

OGRID No.	Operator Name	Elevation
229137	COG OPERATING, LLC	4040'

Surface Location

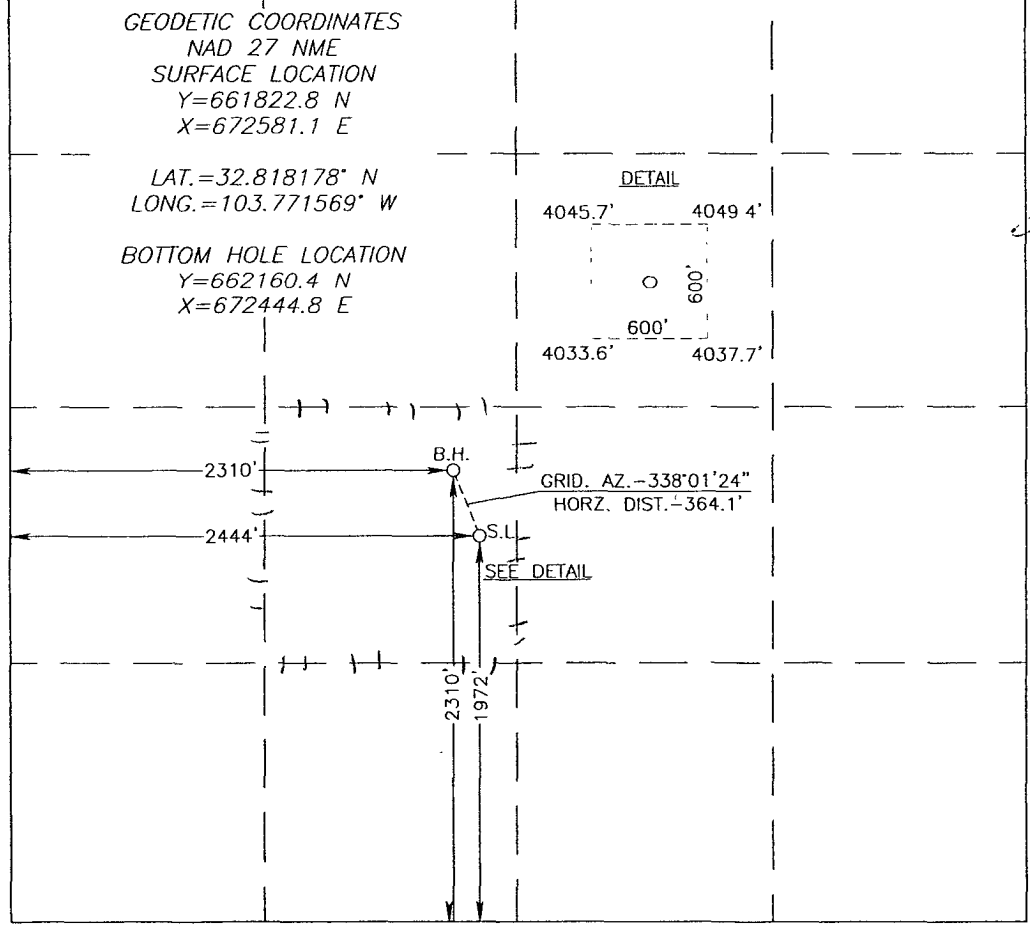
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	21	17-S	32-E		1972	SOUTH	2444	WEST	LEA

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
K	21	17-S	32-E		2310	SOUTH	2310	WEST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
40			

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.

Signature 4/12/2010 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.

NEW MEXICO 12641 REGISTERED PROFESSIONAL SURVEYOR

MARCH 30, 2010
Date Surveyed LA

Signature & Seal of Professional Surveyor

4/8/10

09.11.1034

Certificate No. GARY EIDSON 12641
RONALD J. EIDSON 3239

COG Operating LLC
Master Drilling Plan Revised 7-22-09
Maljamar ; Yeso
Use for Sections 3-35, T17S, R32E
Lea County, NM

MASTER DRILLING PROGRAM

1. Geologic Name of Surface Formation

Quaternary

2. Estimated Tops of Important Geologic Markers:

Quaternary	Surface
Top of Salt	900'
Base of Salt	1700'
Yates	2000'
Seven Rivers	2375'
Queen	2975'
Grayburg	3475'
San Andres	3775'
Glorietta	5225'
Yeso Group	5325'

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

Water Sand	150'	Fresh Water
Grayburg	3475'	Oil/Gas
San Andres	3775'	Oil/Gas
Glorietta	5225'	Oil/Gas
Yeso Group	5325'	Oil/Gas

No other formations are expected to give up oil, gas or fresh water in measurable quantities. Setting 13 3/8" casing to ~~650~~ 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 2100' 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

4. Casing Program

See COA

Hole Size	Interval	OD Casing	Weight	Grade	Jt., Condition	burst/collapse/tension
17 ½"	0-~~650'~~833	13 3/8"	48#	H-40orJ-55	ST&C/New	6.03/2.578/10.32
11"or~~12 ¼~~"	0-2100'	8 5/8"	24or32#	J-55	ST&C/New	1.85/1.241/4.78
7 7/8"	0-T.D.	5 1/2"	15.5or17#	J-55orL-80	LT&C/New	1.59/1.463/2.05

5. Cement Program

13 3/8" Surface Casing: Class C, 4% Gel, 2% CaCl2, .25 pps CF, 450 sx lead, yield-1.98 + 200 sx tail, yield-1.32.

8 5/8" Intermediate Casing:

11" Hole:

Single Stage: 50:50:10, 400 sx lead, yield-2.45 + Class C, 200 sx tail, yield-1.32, back to surface.

Multi-Stage: Stage 1: Class C, 400 sx, yield - 1.32; Stage 2: Class C, 200 sx, yield – 1.32, back to surface. Multi stage tool to be set at approximately, depending on hole conditions, 650'

See COA

5 1/2" Production Casing:

Single Stage: 35:65:6, 500 sx Lead, yield-2.05 + 50:50:2, 400 sx Tail, yield-1.37, to 200' minimum tie back to intermediate casing.

Multi-Stage: Stage 1: 50:50:2, 400 sx, yield - 1.37; Stage 2: 35:65:6, 500 sx, yield – 2.05, to 200' minimum tie back to intermediate casing. Multi stage tool to be set at approximately, depending on hole conditions, ~~TD - 2000'~~.

See COA

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. 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. The BOP will be nippled up on the 13 3/8" surface casing with BOP equipment and tested ~~together to 1000 psi by rig pump in one test.~~ See COA 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. All BOP's and accessory equipment will be tested to 2000 psi before drilling out of the intermediate casing. 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.

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-~~650~~ 853'	Fresh Water	8.5	28	N.C.
~~6~~50-2100'	Brine	10	30	N.C.
2100'-TD	Cut Brine	8.7-9.1	29	N.C.

See COA

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 15 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

Lea County, NM (NAD27 NME)
MC Federal #60
MC Federal #60

OH

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Plan: Plan #1 - 7-7/8" Hole
SHL = 1972' FSL & 2444' FWL
BHL = 2300' FSL & 2300' FWL
Top of Paddock = 2300' FSL & 2300' FWL @ 5450' TVD

Standard Planning Report

20 May, 2010

Scientific Drilling
Directional Drilling Operations

Database:	EDM 5000 1 Single User Db	**Local Co-ordinate Reference:**	Well MC Federal #60
Company:	COG Operating LLC	**TVD Reference:**	GL Elev @ 4040 00ft
Project:	Lea County, NM (NAD27 NME)	**MD Reference:**	GL Elev @ 4040.00ft
Site:	MC Federal #60	**North Reference:**	Grid
Well:	MC Federal #60	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 - 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 MC Federal #60

Site Position:		**Northing:**	661,822 80 ft	**Latitude:**	32° 49' 5.441 N
From:	Map	**Easting:**	672,581 10 ft	**Longitude:**	103° 46' 17 648 W
Position Uncertainty:	0 00 ft	**Slot Radius:**	0 "	**Grid Convergence:**	0 30 °

Well MC Federal #60

Well Position	**+N/-S**	0 00 ft	**Northing:**	661,822 80 ft	**Latitude:**	32° 49' 5 441 N
	+E/-W	0 00 ft	**Easting:**	672,581 10 ft	**Longitude:**	103° 46' 17 648 W
Position Uncertainty		0 00 ft	**Wellhead Elevation:**		**Ground Level:**	4,040 00 ft

Wellbore OH

Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF200510	2010/05/20	7 84	60 75	49,087

Design Plan #1 - 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	335 94

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	
2,200 00	0 00	0 00	2,200 00	0 00	0 00	0 00	0 00	0 00	0 00	
2,553 06	7 06	335 94	2,552 16	19 84	-8 86	2 00	2 00	0 00	335 94	
5,118 18	7 06	335 94	5,097 84	307 76	-137 44	0 00	0 00	0 00	0 00	
5,471 24	0 00	0 00	5,450 00	327 60	-146 30	2 00	-2 00	0 00	180 00	TG1-MC #60
7,221 24	0 00	0 00	7,200 00	327 60	-146 30	0 00	0 00	0 00	0 00	PBHL-MC #60

Database:	EDM 5000 1 Single User Db	**Local Co-ordinate Reference:**	Well MC Federal #60
Company:	COG Operating LLC	**TVD Reference:**	GL Elev @ 4040 00ft
Project:	Lea County, NM (NAD27 NME)	**MD Reference:**	GL Elev @ 4040 00ft
Site:	MC Federal #60	**North Reference:**	Grid
Well:	MC Federal #60	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 - 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
East HL-MC #60 - South HL-MC #60									
2,100 00	0 00	0 00	2,100.00	0 00	0 00	0 00	0 00	0 00	0 00
8-5/8" Casing									
2,200 00	0 00	0 00	2,200.00	0.00	0 00	0 00	0 00	0 00	0.00
KOP Start Build 2.00°/100'									
2,300 00	2 00	335 94	2,299 98	1 59	-0 71	1 75	2 00	2 00	0 00
2,400 00	4 00	335 94	2,399 84	6 37	-2.85	6 98	2 00	2 00	0 00
2,500 00	6 00	335 94	2,499 45	14 33	-6 40	15 69	2 00	2.00	0 00
2,553 06	7 06	335 94	2,552.17	19 84	-8 86	21 73	2 00	2 00	0 00
EOC Hold 7.06°									
2,600 00	7 06	335.94	2,598 75	25 11	-11 21	27 50	0 00	0 00	0.00
2,700 00	7 06	335.94	2,697 99	36 33	-16 23	39 79	0 00	0.00	0 00
2,800 00	7 06	335 94	2,797 23	47 56	-21 24	52 08	0 00	0 00	0 00
2,900 00	7 06	335 94	2,896 48	58 78	-26.25	64 38	0 00	0 00	0 00
3,000 00	7 06	335 94	2,995 72	70 01	-31.26	76 67	0 00	0 00	0.00
3,100 00	7 06	335 94	3,094 96	81 23	-36 28	88 96	0 00	0 00	0 00
3,200 00	7 06	335.94	3,194 20	92.46	-41 29	101.26	0 00	0 00	0 00
3,300 00	7 06	335 94	3,293 44	103 68	-46.30	113 55	0 00	0 00	0 00
3,400 00	7 06	335 94	3,392 68	114 90	-51 31	125 84	0 00	0 00	0 00
3,500 00	7 06	335.94	3,491 92	126 13	-56 33	138 13	0 00	0 00	0 00
3,600 00	7 06	335 94	3,591 17	137 35	-61 34	150 43	0 00	0 00	0 00
3,700 00	7 06	335 94	3,690 41	148.58	-66 35	162 72	0 00	0 00	0 00
3,800 00	7 06	335 94	3,789 65	159 80	-71 36	175 01	0 00	0 00	0 00
3,900 00	7 06	335 94	3,888.89	171 03	-76 38	187 31	0 00	0 00	0 00
4,000 00	7 06	335 94	3,988 13	182 25	-81 39	199 60	0 00	0 00	0 00
4,100 00	7 06	335 94	4,087 37	193 48	-86 40	211 89	0 00	0 00	0 00
4,200 00	7 06	335 94	4,186 62	204 70	-91 41	224.18	0 00	0 00	0 00
4,300 00	7 06	335 94	4,285 86	215 92	-96 43	236 48	0 00	0 00	0 00
4,400 00	7 06	335 94	4,385.10	227 15	-101 44	248 77	0 00	0 00	0 00
4,500 00	7 06	335 94	4,484 34	238.37	-106 45	261 06	0 00	0.00	0 00
4,600 00	7.06	335 94	4,583 58	249 60	-111 47	273 36	0 00	0 00	0 00
4,700 00	7 06	335 94	4,682 82	260 82	-116 48	285 65	0 00	0 00	0 00
4,800 00	7 06	335 94	4,782 07	272 05	-121 49	297 94	0 00	0 00	0 00
4,900 00	7 06	335 94	4,881 31	283 27	-126 50	310 23	0 00	0 00	0 00
5,000 00	7 06	335 94	4,980 55	294 50	-131 52	322.53	0 00	0 00	0 00
5,100 00	7 06	335 94	5,079 79	305 72	-136 53	334 82	0 00	0 00	0 00
5,118 18	7 06	335 94	5,097 83	307 76	-137 44	337 05	0 00	0 00	0 00
Start DLS 2.00°/100'									
5,200 00	5 42	335 94	5,179.16	315 88	-141 07	345 95	2 00	-2 00	0 00
5,300 00	3 42	335 94	5,278 86	322 93	-144 21	353 67	2 00	-2 00	0 00
5,400 00	1 42	335 94	5,378 77	326 79	-145 94	357 90	2 00	-2 00	0 00
5,471 24	0 00	0 00	5,450 00	327 60	-146 30	358 78	2 00	-2 00	33 78
EOC Hold 0.00° - TG1-MC #60									
7,221 24	0 00	0 00	7,200 00	327 60	-146 30	358 78	0 00	0 00	0 00
PBHL-MC #60									

Database:	EDM 5000 1 Single User Db	**Local Co-ordinate Reference:**	Well MC Federal #60
Company:	COG Operating LLC	**TVD Reference:**	GL Elev @ 4040 00ft
Project:	Lea County, NM (NAD27 NME)	**MD Reference:**	GL Elev @ 4040 00ft
Site:	MC Federal #60	**North Reference:**	Grid
Well:	MC Federal #60	**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 (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
East HL-MC #60	0 00	0 00	0 00	337 60	-136 30	662,160 40	672,444 80	32° 49' 8 789 N	103° 46' 19 224 W
- plan misses target center by 364 08ft at 0 00ft MD (0 00 TVD, 0 00 N, 0 00 E)									
- Rectangle (sides W0 00 H200 00 D0 00)									
South HL-MC #60	0 00	0 00	0 00	337 60	-136 30	662,160 40	672,444 80	32° 49' 8.789 N	103° 46' 19 224 W
- plan misses target center by 364 08ft at 0 00ft MD (0 00 TVD, 0 00 N, 0 00 E)									
- Rectangle (sides W200 00 H0 00 D0 00)									
TG1-MC #60	0 00	0 00	5,450 00	327 60	-146 30	662,150.40	672,434 80	32° 49' 8 690 N	103° 46' 19 342 W
- plan hits target center									
- Point									
PBHL-MC #60	0 00	0 01	7,200 00	327 60	-146 30	662,150 40	672,434 80	32° 49' 8 690 N	103° 46' 19 342 W
- plan hits target center									
- Circle (radius 10 00)									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
2,100 00	2,100 00	8-5/8" Casing	8-5/8	12-1/4

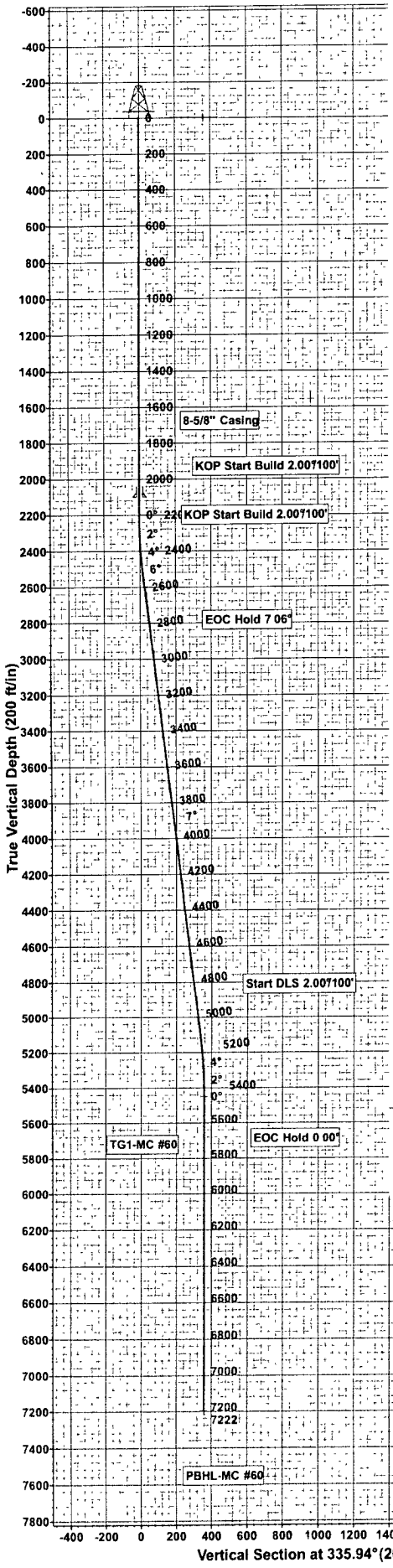
Plan Annotations

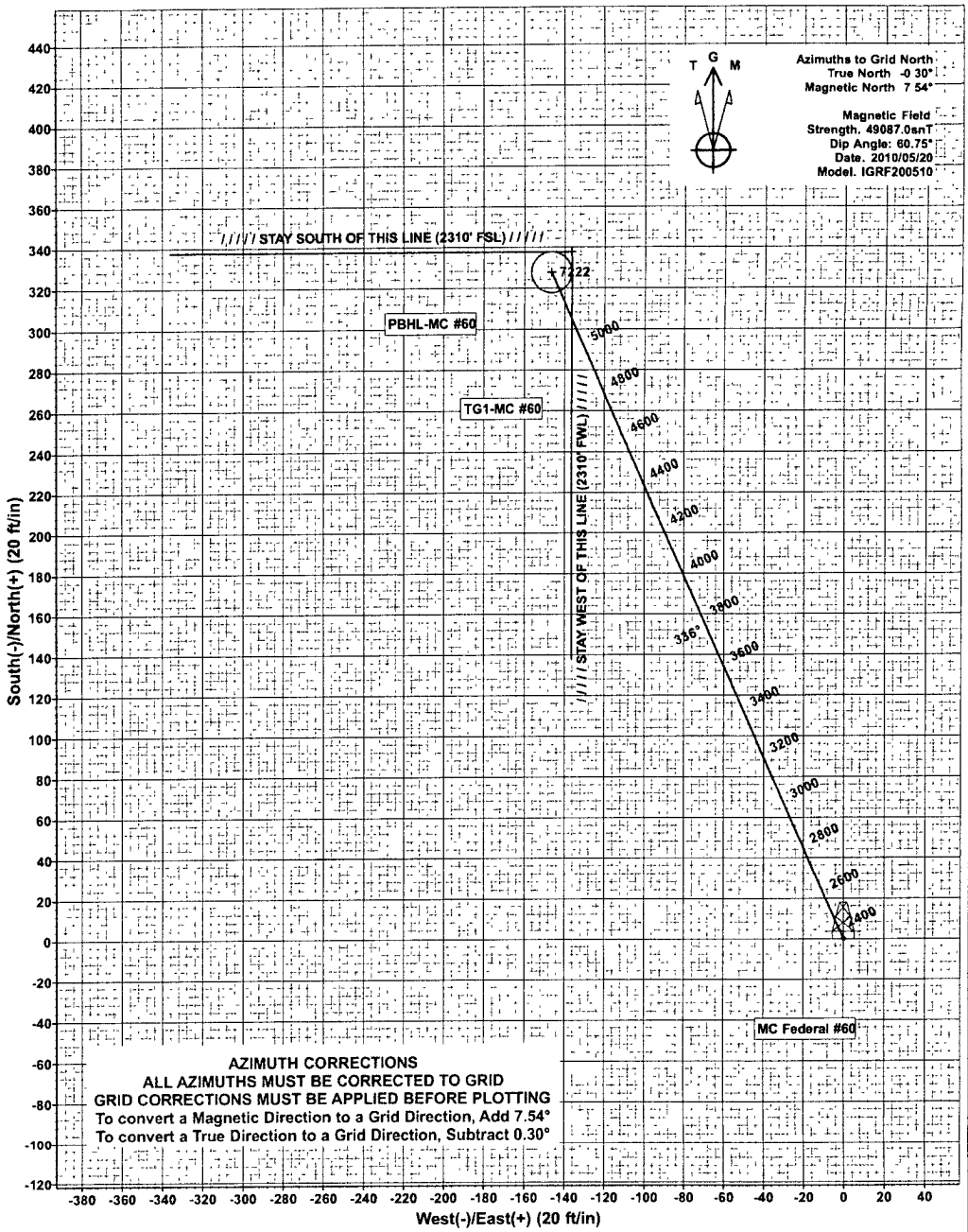
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
2,200 00	2,200 00	0 00	0 00	KOP Start Build 2 00°/100'
2,553 06	2,552 17	19 84	-8 86	EOC Hold 7 06°
5,118 18	5,097.83	307 76	-137 44	Start DLS 2 00°/100'
5,471 24	5,450 00	327 60	-146 30	EOC Hold 0 00°

CONCHO

Scientific Drilling for COG Operating LLC
Site: Lea County, NM (NAD27 NME)
Well: MC Federal #60
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
East HL-MC #60	0.00	337.60	-136.30	662160.40	672444.80	32° 49' 8.789 N	103° 46' 19.224 W	Rectangle (Sides: L20.00.00 W0.00)
South HL-MC #60	0.00	337.60	-136.30	662160.40	672444.80	32° 49' 8.789 N	103° 46' 19.224 W	Rectangle (Sides: L0.00 W200.00)
TG1-MC #60	5450.00	327.60	-146.30	662150.40	672434.80	32° 49' 8.690 N	103° 46' 19.342 W	Point
PBHL-MC #60	7200.00	327.60	-146.30	662150.40	672434.80	32° 49' 8.690 N	103° 46' 19.342 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	2200.00	0.00	0.00	2200.00	0.00	0.00	0.00	0.00	0.00	
3	2553.06	7.06	335.94	2552.16	19.84	-8.86	2.00	335.94	21.73	
4	5118.18	7.06	335.94	5097.84	307.76	-137.44	0.00	0.00	337.06	
5	5471.24	0.00	0.00	5450.00	327.60	-146.30	2.00	180.00	358.78	TG1-MC #60
6	7221.24	0.00	0.00	7200.00	327.60	-146.30	0.00	0.00	358.78	PBHL-MC #60

WELL DETAILS MC Federal #60

Ground Level: 4040.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	661822.80	672581.10	32° 49' 5.441 N	103° 46' 1.7.648 W	

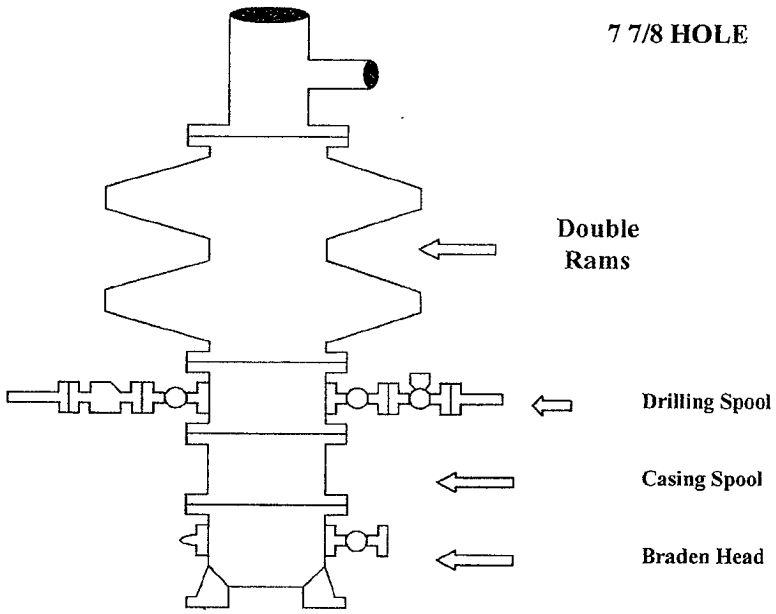
PROJECT DETAILS: Lea County, NM (NAD27 NME)

Plan: Plan #1 - 7-7/8" Hole (MC Federal #60/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

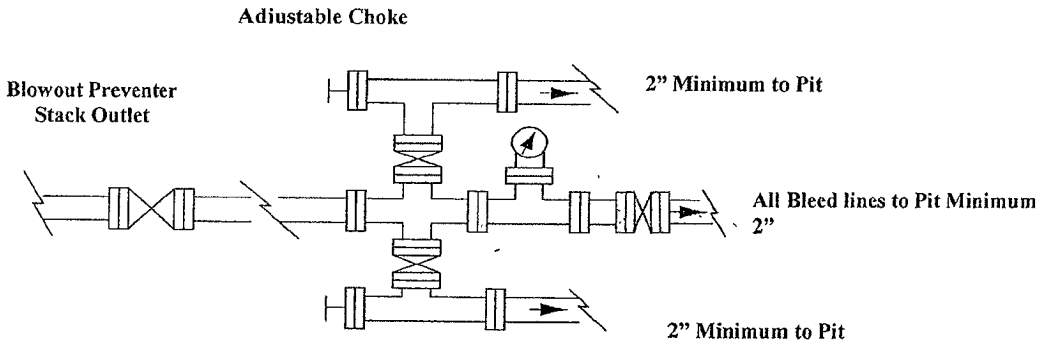
Created By: Julio Pina Date: 20-May-10
Checked: Date:
Reviewed: Date:
Approved: Date:

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



Adjustable Choke
(or Positive)

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.

RLM-CARLSBAD FIELD OFFI

Form 3160-5
(April 2004)

RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

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

JUL 30 2010

HOBBSOCD

JUL 30 2010

HOBBSOCD

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.

5. Lease Serial No.
VARIOUS

6. If Indian, Allottee or Tribe Name

7 If Unit or CA/Agreement, Name and/or No

1 Type of Well
☑ Oil Well ☐ ☐ Gas Well ☐ ☐ Other

8. Well Name and No.
VARIOUS

2. Name of Operator
COG Operating LLC

9. API Well No.
VARIOUS

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

3b. Phone No. *(include area code)*
432-685-4340

10. Field and Pool, or Exploratory Area
VARIOUS

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

11. County or Parish, State
VARIOUS

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 **Amend attached list of APD's**
	☐ 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 recomplete 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 recompletion 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.)

Regarding the attached list of APD's and locations, please be advised that:

COG Operating LLC will purchase onsite caliche from the BLM to be purchased at the current rate set by the BLM.

The topsoil will be stockpiled and used during interim reclamation.

In the event that onsite caliche is not available, COG will purchase caliche from a BLM caliche pit at the current rate set by the BLM.

In the event that there is no BLM caliche pit within five miles of the location, COG will obtain caliche from a state or private pit.

ORIGINAL SUNDRIES TO: Bureau of Land Management in Carlsbad and Roswell, NM

* BLM Reserves the right to recind at any time if process altered.

14. I hereby certify that the foregoing is true and correct
Name *(Printed/Typed)*
Phyllis Edwards Title **Regulatory Analyst**

Signature Phyllis Edwards Date **12/10/2009**

APPROVED

JAN 5 2010

JAMES A. AMOS
SUPERVISOR
EPS/LEB/SOCD/FO

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by James A. Amos Title SEPS Date 1-5-10

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 CFO

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)

J Amos