OCD-ARTESIA

ATS-10-665
EA-11-545

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

1a. Type of work. ☑ DRILL ☐ REENTER	5 Lease Serial No. **NMLC - 029418 (b)**
1b. Type of Well ☑ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone	6 If Indian, Allotee or Tribe Name **N/A**
2 Name of Operator **Chevron USA** **Agent: COG Operating LLC**	7 If Unit or CA Agreement, Name and No **N/A**
3a. Address **Agent Address: 550 W. Texas Ave., Suite 1300 Midland, TX 79701** 3b. Phone No. *(include area code)* **432-685-4384**	8 Lease Name and Well No **Tex Mack 11 Federal #63**
4. Location of Well *(Report location clearly and in accordance with any State requirements*)* At surface **SHL: 2435' FSL & 705' FEL, Unit I** At proposed prod zone **BHL: 2310' FSL & 990' FEL, Unit I** UNORTHODOX LOCATION @ surface	9 API Well No. **30-015-** 39144
	10 Field and Pool, or Exploratory **Fren; Glorieta-Yeso, East 97213**
	11 Sec., T R M or Blk. and Survey or Area **Sec 11 T17S R31E**
14 Distance in miles and direction from nearest town or post office* **6 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)	**705'**	16 No of acres in lease **1200**	17 Spacing Unit dedicated to this well **40**
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft	**1270'**	19 Proposed Depth **TVD: 6900' MD: 6915'**	20 BLM/BIA Bond No. on file **NMB~~-000215~~ 000740**
21 Elevations (Show whether DF, KDB, RT, GL, etc) **3957' GR**		22 Approximate date work will start* **03/31/2011**	23. Estimated duration **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)* **Kelly J. Holly**	Date **01/06/2011**
Title **Permitting Tech**		
Approved by *(Signature)* /s/ Don Peterson	Name *(Printed/Typed)*	Date APR 28 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
MAY 03 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	670'
Top of Salt	801'
Base of Salt	1771'
Yates	2006'
Seven Rivers	2332'
Queen	2952'
Grayburg	3392'
San Andres	3718'
Glorietta	5222'
Paddock	5285'
Blinebry	5688'
Tubb	6700'

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

Water Sand	150'	Fresh Water
Grayburg	3392'	Oil/Gas
San Andres	3718'	Oil/Gas
Glorieta	5222'	Oil/Gas
Paddock	5285'	Oil/Gas
Blinebry	5688'	Oil/Gas
Tubb	6700'	Oil/Gas

see COA

No other formations are expected to give up oil, gas or fresh water in measurable quantities. Setting 13 3/8" casing to ~~450~~ 400' 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~~ 1700' 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 COA

4. Casing Program

Hole Size	Interval	OD Casing	Weight	Grade	Jt., Condition	Jt.	burst/collapse/tension
17 ½"	0-450'	13 3/8"	48#	H-40orJ-55	New	ST&C	8.71/3.724/14.91
11"	0-1800'	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

See COA
See COA

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.

See COA

Multi-Stage: Stage 1: (Assumed TD of ~~6700~~ 6915) 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

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' 725	Fresh Water	8.5	28	N.C.
450-1800'/960	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)
Tex Mack 11 Fed #63
Tex Mack 11 Fed #63

OH

Plan: Plan #1 - 7-7/8" Hole
SHL = 2435' FSL & 705' FEL
BHL = 2300' FSL & 980' FEL
Top of Paddock = 2300' FSL & 980' FEL @ 5220' TVD

Standard Planning Report

05 January, 2011

Scientific Drilling
Directional Drilling Operations

Database:	EDM-Julio	**Local Co-ordinate Reference:**	Site Tex Mack 11 Fed #63
Company:	COG Operating LLC	**TVD Reference:**	GL Elev @ 3957 00usft
Project:	Eddy County, NM (NAN27 NME)	**MD Reference:**	GL Elev @ 3957 00usft
Site:	Tex Mack 11 Fed #63	**North Reference:**	Grid
Well:	Tex Mack 11 Fed #63	**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 Tex Mack 11 Fed #63

Site Position:		**Northing:**	672,753 10 usft	**Latitude:**	32° 50' 54 544 N
From:	Map	**Easting:**	653,502 30 usft	**Longitude:**	103° 50' 0 605 W
Position Uncertainty:	0 00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0 27 °

Well Tex Mack 11 Fed #63

Well Position	**+N/-S**	0 00 usft	**Northing:**	672,753 10 usft	**Latitude:**	32° 50' 54 544 N
	+E/-W	0 00 usft	**Easting:**	653,502 30 usft	**Longitude:**	103° 50' 0 605 W
Position Uncertainty		0 00 usft	**Wellhead Elevation:**		**Ground Level:**	3,957 00 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2011/01/05	7 81	60 73	49,004

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	243 48

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	
1,950 00	0.00	0 00	1,950 00	0 00	0 00	0 00	0 00	0 00	0 00	
2,243 87	5 88	243 48	2,243 36	-6 72	-13 47	2 00	2 00	0 00	243 48	
4,941 34	5 88	243 48	4,926 64	-130 08	-260 63	0 00	0 00	0 00	0 00	
5,235 21	0 00	0 00	5,220 00	-136 80	-274 10	2 00	-2 00	0 00	180 00	PP-Tex Mack 11 #63
6,915 21	0 00	0 00	6,900 00	-136 80	-274 10	0 00	0 00	0 00	0 00	PBHL-Tex Mack 11 #I

Database:	EDM-Julio	**Local Co-ordinate Reference:**	Site Tex Mack 11 Fed #63
Company:	COG Operating LLC	**TVD Reference:**	GL Elev @ 3957.00usft
Project:	Eddy County, NM (NAN27 NME)	**MD Reference:**	GL Elev @ 3957.00usft
Site:	Tex Mack 11 Fed #63	**North Reference:**	Grid
Well:	Tex Mack 11 Fed #63	**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
1,850.00	0.00	0.00	1,850.00	0.00	0.00	0.00	0.00	0.00	0.00
8-5/8" Casing									
1,950.00	0.00	0.00	1,950.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP Start Build 2.00°/100'									
2,000.00	1.00	243.48	2,000.00	-0.19	-0.39	0.44	2.00	2.00	0.00
2,100.00	3.00	243.48	2,099.93	-1.75	-3.51	3.93	2.00	2.00	0.00
2,200.00	5.00	243.48	2,199.68	-4.87	-9.75	10.90	2.00	2.00	0.00
2,243.87	5.88	243.48	2,243.35	-6.72	-13.47	15.06	2.00	2.00	0.00
EOC hold 5.88°									
2,300.00	5.88	243.48	2,299.19	-9.29	-18.62	20.81	0.00	0.00	0.00
2,400.00	5.88	243.48	2,398.66	-13.86	-27.78	31.05	0.00	0.00	0.00
2,500.00	5.88	243.48	2,498.14	-18.44	-36.94	41.29	0.00	0.00	0.00
2,600.00	5.88	243.48	2,597.61	-23.01	-46.10	51.53	0.00	0.00	0.00
2,700.00	5.88	243.48	2,697.09	-27.58	-55.27	61.77	0.00	0.00	0.00
2,800.00	5.88	243.48	2,796.56	-32.16	-64.43	72.01	0.00	0.00	0.00
2,900.00	5.88	243.48	2,896.04	-36.73	-73.59	82.25	0.00	0.00	0.00
3,000.00	5.88	243.48	2,995.51	-41.30	-82.75	92.49	0.00	0.00	0.00
3,100.00	5.88	243.48	3,094.98	-45.87	-91.92	102.73	0.00	0.00	0.00
3,200.00	5.88	243.48	3,194.46	-50.45	-101.08	112.97	0.00	0.00	0.00
3,300.00	5.88	243.48	3,293.93	-55.02	-110.24	123.21	0.00	0.00	0.00
3,400.00	5.88	243.48	3,393.41	-59.59	-119.40	133.45	0.00	0.00	0.00
3,500.00	5.88	243.48	3,492.88	-64.17	-128.57	143.69	0.00	0.00	0.00
3,600.00	5.88	243.48	3,592.36	-68.74	-137.73	153.93	0.00	0.00	0.00
3,700.00	5.88	243.48	3,691.83	-73.31	-146.89	164.17	0.00	0.00	0.00
3,800.00	5.88	243.48	3,791.30	-77.88	-156.05	174.41	0.00	0.00	0.00
3,900.00	5.88	243.48	3,890.78	-82.46	-165.21	184.65	0.00	0.00	0.00
4,000.00	5.88	243.48	3,990.25	-87.03	-174.38	194.89	0.00	0.00	0.00
4,100.00	5.88	243.48	4,089.73	-91.60	-183.54	205.13	0.00	0.00	0.00
4,200.00	5.88	243.48	4,189.20	-96.18	-192.70	215.37	0.00	0.00	0.00
4,300.00	5.88	243.48	4,288.68	-100.75	-201.86	225.61	0.00	0.00	0.00
4,400.00	5.88	243.48	4,388.15	-105.32	-211.03	235.85	0.00	0.00	0.00
4,500.00	5.88	243.48	4,487.63	-109.89	-220.19	246.09	0.00	0.00	0.00
4,600.00	5.88	243.48	4,587.10	-114.47	-229.35	256.33	0.00	0.00	0.00
4,700.00	5.88	243.48	4,686.57	-119.04	-238.51	266.57	0.00	0.00	0.00
4,800.00	5.88	243.48	4,786.05	-123.61	-247.68	276.81	0.00	0.00	0.00
4,900.00	5.88	243.48	4,885.52	-128.18	-256.84	287.05	0.00	0.00	0.00
4,941.34	5.88	243.48	4,926.65	-130.08	-260.63	291.28	0.00	0.00	0.00
Start Drop 2.00°/100'									
5,000.00	4.70	243.48	4,985.05	-132.49	-265.47	296.69	2.00	-2.00	0.00
5,100.00	2.70	243.48	5,084.84	-135.38	-271.25	303.15	2.00	-2.00	0.00
5,200.00	0.70	243.48	5,184.79	-136.70	-273.91	306.13	2.00	-2.00	0.00
5,235.21	0.00	0.00	5,220.00	-136.80	-274.10	306.34	2.00	-2.00	330.94
EOC hold 0.00° - PP-Tex Mack 11 #63									
6,915.21	0.00	0.00	6,900.00	-136.80	-274.10	306.34	0.00	0.00	0.00
PBHL-Tex Mack 11 #63									

Database:	EDM Julio	**Local Co-ordinate Reference:**	Site Tex Mack 11 Fed #63
Company:	COG Operating LLC	**TVD Reference:**	GL Elev @ 3957 00usft
Project:	Eddy County, NM (NAN27 NME)	**MD Reference:**	GL Elev @ 3957 00usft
Site:	Tex Mack 11 Fed #63	**North Reference:**	Grid
Well:	Tex Mack 11 Fed #63	**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-Tex Mack 11 #	0 00	0 01	0 00	-126 80	-284 10	672,626.30	653,218 20	32° 50' 53 303 N	103° 50' 3 942 W
- plan misses target center by 311 11usft at 0 00usft MD (0 00 TVD, 0 00 N, 0.00 E) - Rectangle (sides W200 00 H0 00 D0 00)									
East HL-Tex Mack 11 #6	0 00	0 01	0 00	-126 80	-284 10	672,626 30	653,218 20	32° 50' 53 303 N	103° 50' 3 942 W
- plan misses target center by 311 11usft at 0 00usft MD (0.00 TVD, 0 00 N, 0 00 E) - Rectangle (sides W0 00 H100 00 D0 00)									
PP-Tex Mack 11 #63 - plan hits target center - Point	0 00	0.01	5,220 00	-136 80	-274 10	672,616 30	653,228 20	32° 50' 53 204 N	103° 50' 3 825 W
PBHL-Tex Mack 11 #63 - plan hits target center - Circle (radius 10 00)	0 00	0 01	6,900 00	-136.80	-274 10	672,616.30	653,228 20	32° 50' 53 204 N	103° 50' 3 825 W

Casing Points

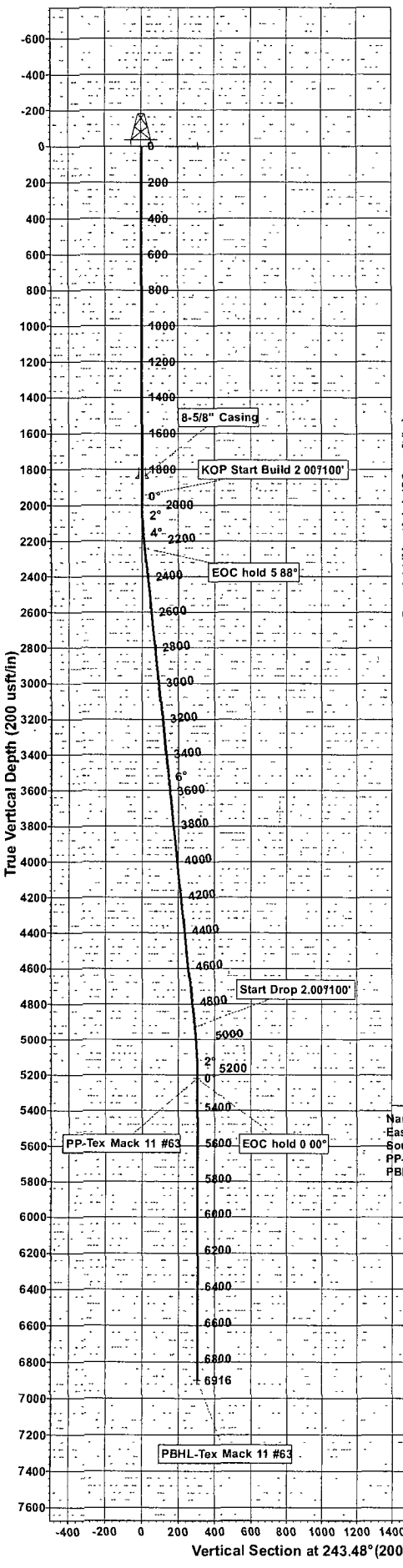
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,850 00	1,850 00	8-5/8" Casing	8-5/8	12-1/4

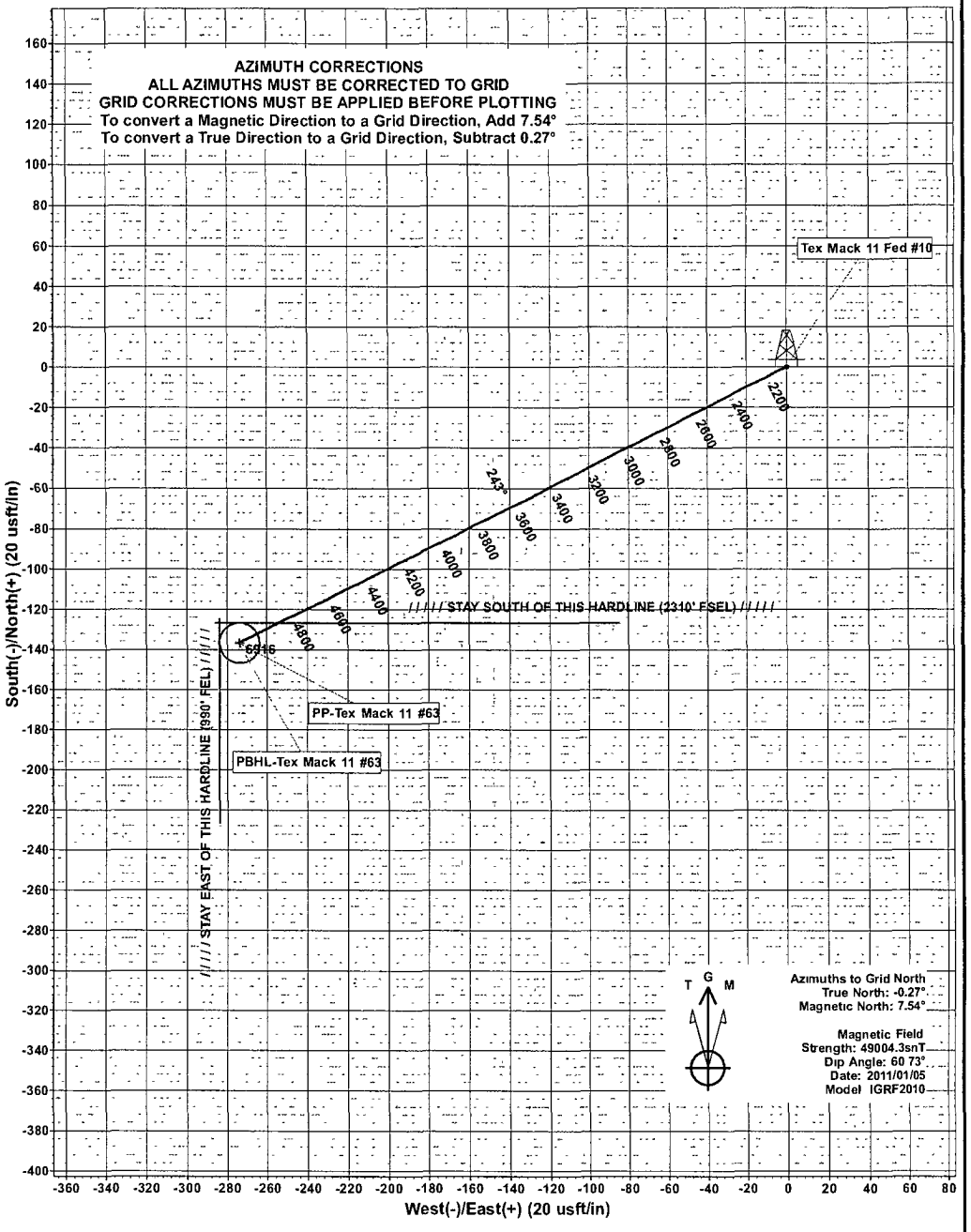
Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
1,950 00	1,950 00	0 00	0.00	KOP Start Build 2 00°/100'
2,243 87	2,243 35	-6 72	-13 47	EOC hold 5 88°
4,941 34	4,926 65	-130 08	-260 63	Start Drop 2 00°/100'
5,235 21	5,220 00	-136 80	-274 10	EOC hold 0.00°

Scientific Drilling for COG Operating LLC
Site: Eddy County, NM (NAN27 NME)
Well: Tex Mack 11 Fed #63
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-Tex Mack 11 #63	0.00	-126 80	-284 10	672626.30	653218.20	32°50' 53 303 N	103°50' 3.942 W	Rectangle (Sides: L100.00 W0 00)
South HL-Tex Mack 11 #63	0 00	-126 80	-284 10	672626 30	653218.20	32°50' 53 303 N	103°50' 3.942 W	Rectangle (Sides: L0 00 W200 00)
PP-Tex Mack 11 #63	5220.00	-136 80	-274.10	672616 30	653228.20	32°50' 53 204 N	103°50' 3 825 W	Point
PBHL-Tex Mack 11 #63	6900 00	-136.80	-274 10	672616.30	653228.20	32°50' 53 204 N	103°50' 3 825 W	Circle (Rad ius 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	1950.00	0.00	0.00	1950 00	0.00	0 00	0 00	0.00	0.00	
3	2243 87	5.88	243 48	2243 36	-6 72	-13 47	2.00	243 48	15.06	
4	4941 34	5.88	243 48	4926.64	-130 08	-260.63	0.00	0 00	291.28	
5	5235 21	0.00	0 00	5220.00	-136 80	-274.10	2.00	180 00	306 34	PP-Tex Mack 11 #63
6	6915 21	0.00	0 00	6900.00	-136.80	-274.10	0.00	0 00	306.34	PBHL-Tex Mack 11 #63

WELL DETAILS: Tex Mack 11 Fed #63

Ground Level: 3957 00

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude	Slot
0 00	0.00	672753 10	653502.30	32°50' 54.544 N	103°50' 0 605 W	

PROJECT DETAILS: Eddy County, NM (NAN27 NME) Plan. Plan #1 - 7-7/8" Hole (Tex Mack 11 Fed #63/OH)

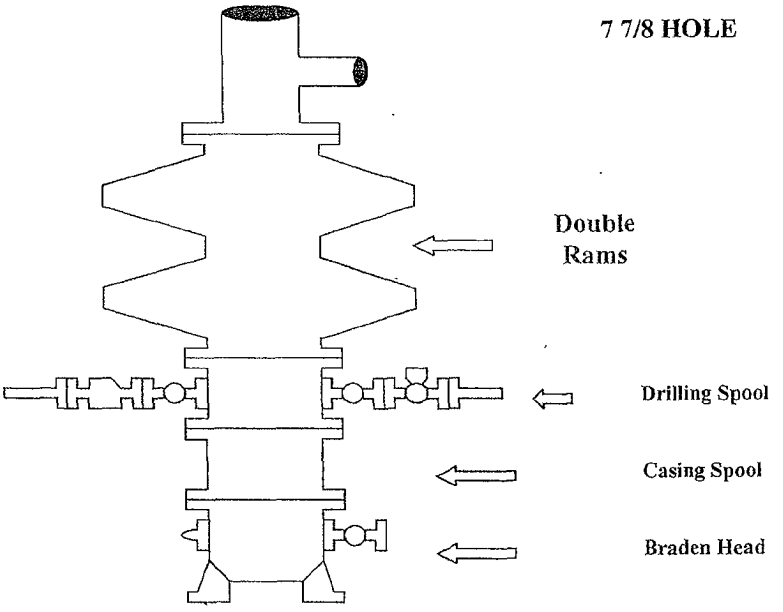
Geodetic System: US State Plane 1927 (Exact solution)
Datum. NAD 1927 (NADCON CONUS)
Ellipsoid Clarke 1866
Zone. New Mexico East 3001
System Datum Mean Sea Level

Created By. Julio Pina Date: 05-Jan-11
Checked. _____ Date: _____
Reviewed: _____ Date: _____
Approved _____ Date _____

COG Operating LLC

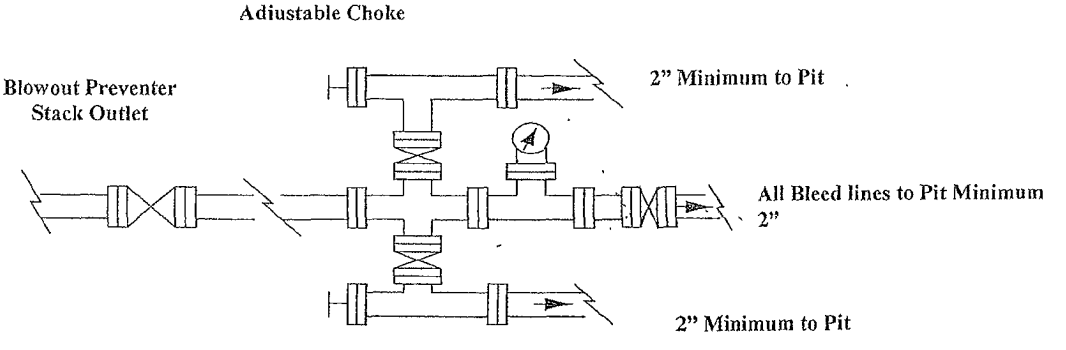
Exhibit #9

BOPE and Choke Schematic



Minimum 4" Nominal choke and kill lines

Choke Manifold Requirement (2000 psi WP)
No Annular Required



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.