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Form 3160-3
(April 2004)

NOV 15 2010

OCD-HOBBS

HOBBSOCD

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

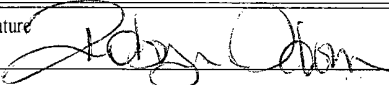
FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMLC-029405A
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name N/A
2. Name of Operator COG Operating LLC		7. If Unit or CA Agreement, Name and No. N/A
3a. Address 550 W. Texas, Suite 1300 Midland TX 79701		8. Lease Name and Well No. B C Federal #61 <302456>
3b. Phone No. (include area code) <229(37)> (432) 685-4385		9. API Well No. 30-025-39950
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface SHL: 1696' FNL & 2000' FEL, Unit G At proposed prod. zone BHL: 1650' FNL & 1650' FEL, Unit G		10. Field and Pool, or Exploratory Maljamar; Yeso, West 44500
14. Distance in miles and direction from nearest town or post office* 2.5 miles SW of Maljamar, NM		11. Sec., T. R. M. or Blk. and Survey or Area Sec 20, T17S, R32E
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1696'	16. No. of acres in lease 640	12. County or Parish Lea
17. Spacing Unit dedicated to this well 40	13. State NM	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 850'	19. Proposed Depth 7000'	20. BLM/BIA Bond No. on file NMB000215
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 4004' GL	22. Approximate date work will start* 09/30/2010	23. Estimated duration 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. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification |
| 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). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature 	Name (Printed/Typed) Robyn M. Odom	Date 06/11/2010
Title Regulatory Analyst		

Approved by (Signature) /s/ Don Peterson	Name (Printed/Typed) NOV 12 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)

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

K 11/16/10

Roswell Controlled Water Basin

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

DISTRICT I
1625 N. FRENCH DR., HOBBS, NM 88240

DISTRICT II
1301 W. GRAND AVENUE, ARTESIA, NM 88201

DISTRICT III
1000 RIO BRAZOS RD., AZTEC, NM 87410

DISTRICT IV
11885 S. ST. FRANCIS DR., SANTA FE, NM 87505

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State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

11885 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-025- 399512	Pool Code 44500	Pool Name MALJAMAR; YESO, WEST
Property Code 302456	Property Name BC FEDERAL	Well Number 61
OGRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 4004'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	20	17-S	32-E		1696	NORTH	2000	EAST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	20	17-S	32-E		1650	NORTH	1650	EAST	LEA

Dedicated Acres 40	Joint or Infill	Consolidation Code	Order No.
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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

<p>GEODETIC COORDINATES NAD 27 NME</p> <p>SURFACE LOCATION</p> <p>Y=663418.3 N X=668128.3 E</p> <p>LAT.=32.822628° N LONG.=103.786036° W</p> <p>BOTTOM HOLE LOCATION</p> <p>Y=663465.9 N X=668478.0 E</p>		<p>OPERATOR CERTIFICATION</p> <p>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.</p> <p><i>Robyn Odom</i> 6/11/2010 Signature Date</p> <p>Robyn Odom Printed Name</p> <p>SURVEYOR CERTIFICATION</p> <p>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.</p> <p>DATE SURVEYED MAY 25 2010 DSS Signature & Seal of Professional Surveyor <i>Ronald J. Eidson</i> 6/11/10 RONALD J. EIDSON 3239</p> <p>Certificate No. GARY G. EIDSON 12641 RONALD J. EIDSON 3239</p>
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MASTER DRILLING PROGRAM

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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

See COA
No other formations are expected to give up oil, gas or fresh water in measurable quantities. Setting 13 3/8" casing to ~~650'~~^{650-610'} 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 1/2"	0-650' 210'	13 3/8"	48#	H-40orJ-55	ST&C/New	6.03/2.578/10.32
11" or 12 1/2"	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'~~ *860'*

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'~~ *2150'*

See COA

6. Minimum Specifications for Pressure Control

See COA

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 nipped up on the 13 3/8" surface casing with BOP equipment and tested ~~together to 1000 psi by rig pump in one test.~~ The BOP will then be nipped 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:

See COA
410'

DEPTH	TYPE	WEIGHT	VISCOSITY	WATERLOSS
0-650' 410'	Fresh Water	8.5	28	N.C.
650-2100'	Brine	10	30	N.C.
2100'-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 1/2" 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.



COG Operating LLC

Lea County, NM (NAD27 NME)

BC Federal #61

BC Federal #61

OH

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

SHL = 1696' FNL & 2000' FEL

BHL = 1660' FNL & 1660' FEL

Top of Paddock = 1660' FNL & 1660' FEL @ 5400' TVD

Standard Planning Report

07 June, 2010



Scientific Drilling
Directional Drilling Operations



Scientific Drilling Planning Report



Database: EDM 5000.1 Single User Db
Company: COG Operating LLC
Project: Lea County, NM (NAD27 NME)
Site: BC Federal #61
Well: BC Federal #61
Wellbore: OH
Design: Plan #1 - 7-7/8" Hole

Local Co-ordinate Reference: Well BC Federal #61
TVD Reference: GL Elev @ 4004.00ft
MD Reference: GL Elev @ 4004.00ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Project: Lea County, NM (NAD27 NME)

Map System: US State Plane 1927 (Exact solution)
Geo Datum: NAD 1927 (NADCON CONUS)
Map Zone: New Mexico East 3001

System Datum: Mean Sea Level

Site: BC Federal #61

Site Position: Northing: 663,418.30 ft Latitude: 32° 49' 21.460 N
From: Map Easting: 668,128.30 ft Longitude: 103° 47' 9.728 W
Position Uncertainty: 0.00 ft Slot Radius: 0" Grid Convergence: 0.30 °

Well: BC Federal #61

Well Position: +N/-S 0.00 ft Northing: 663,418.30 ft Latitude: 32° 49' 21.460 N
+E/-W 0.00 ft Easting: 668,128.30 ft Longitude: 103° 47' 9.728 W
Position Uncertainty: 0.00 ft Wellhead Elevation: Ground Level: 4,004.00 ft

Wellbore: OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	2010/06/07	7.84	60.75	49,084

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	83.68

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	
2,540.88	6.82	83.68	2,540.08	2.23	20.13	2.00	2.00	0.00	83.68	
5,078.67	6.82	83.68	5,059.92	35.37	319.57	0.00	0.00	0.00	0.00	
5,419.55	0.00	0.00	5,400.00	37.60	339.70	2.00	-2.00	0.00	180.00	TG1-BC #61
7,119.55	0.00	0.00	7,100.00	37.60	339.70	0.00	0.00	0.00	0.00	PBHL-BC #61



Scientific Drilling
Planning Report



Database: EDM 5000.1 Single User Db
Company: COG Operating LLC
Project: Lea County, NM (NAD27 NME)
Site: BC Federal #61
Well: BC Federal #61
Wellbore: OH
Design: Plan #1 - 7-7/8" Hole

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Well BC Federal #61
GL Elev @ 4004.00ft
GL Elev @ 4004.00ft
Grid
Minimum Curvature

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-BC #61 - North HL-BC #61									
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	83.68	2,299.98	0.19	1.73	1.75	2.00	2.00	0.00
2,400.00	4.00	83.68	2,399.84	0.77	6.94	6.98	2.00	2.00	0.00
2,500.00	6.00	83.68	2,499.45	1.73	15.60	15.69	2.00	2.00	0.00
2,540.88	6.82	83.68	2,540.08	2.23	20.13	20.26	2.00	2.00	0.00
EOC Hold 6.82°									
2,600.00	6.82	83.68	2,598.78	3.00	27.11	27.27	0.00	0.00	0.00
2,700.00	6.82	83.68	2,698.07	4.31	38.91	39.15	0.00	0.00	0.00
2,800.00	6.82	83.68	2,797.36	5.61	50.71	51.02	0.00	0.00	0.00
2,900.00	6.82	83.68	2,896.66	6.92	62.51	62.89	0.00	0.00	0.00
3,000.00	6.82	83.68	2,995.95	8.22	74.30	74.76	0.00	0.00	0.00
3,100.00	6.82	83.68	3,095.24	9.53	86.10	86.63	0.00	0.00	0.00
3,200.00	6.82	83.68	3,194.54	10.84	97.90	98.50	0.00	0.00	0.00
3,300.00	6.82	83.68	3,293.83	12.14	109.70	110.37	0.00	0.00	0.00
3,400.00	6.82	83.68	3,393.12	13.45	121.50	122.24	0.00	0.00	0.00
3,500.00	6.82	83.68	3,492.41	14.75	133.30	134.11	0.00	0.00	0.00
3,600.00	6.82	83.68	3,591.71	16.06	145.10	145.98	0.00	0.00	0.00
3,700.00	6.82	83.68	3,691.00	17.37	156.90	157.86	0.00	0.00	0.00
3,800.00	6.82	83.68	3,790.29	18.67	168.70	169.73	0.00	0.00	0.00
3,900.00	6.82	83.68	3,889.59	19.98	180.50	181.60	0.00	0.00	0.00
4,000.00	6.82	83.68	3,988.88	21.28	192.29	193.47	0.00	0.00	0.00
4,100.00	6.82	83.68	4,088.17	22.59	204.09	205.34	0.00	0.00	0.00
4,200.00	6.82	83.68	4,187.46	23.90	215.89	217.21	0.00	0.00	0.00
4,300.00	6.82	83.68	4,286.76	25.20	227.69	229.08	0.00	0.00	0.00
4,400.00	6.82	83.68	4,386.05	26.51	239.49	240.95	0.00	0.00	0.00
4,500.00	6.82	83.68	4,485.34	27.81	251.29	252.82	0.00	0.00	0.00
4,600.00	6.82	83.68	4,584.64	29.12	263.09	264.69	0.00	0.00	0.00
4,700.00	6.82	83.68	4,683.93	30.43	274.89	276.57	0.00	0.00	0.00
4,800.00	6.82	83.68	4,783.22	31.73	286.69	288.44	0.00	0.00	0.00
4,900.00	6.82	83.68	4,882.51	33.04	298.48	300.31	0.00	0.00	0.00
5,000.00	6.82	83.68	4,981.81	34.34	310.28	312.18	0.00	0.00	0.00
5,078.67	6.82	83.68	5,059.92	35.37	319.57	321.52	0.00	0.00	0.00
Start Drop 2.00°/100'									
5,100.00	6.39	83.68	5,081.11	35.64	322.00	323.97	2.00	-2.00	0.00
5,200.00	4.39	83.68	5,180.66	36.67	331.34	333.37	2.00	-2.00	0.00
5,300.00	2.39	83.68	5,280.48	37.33	337.22	339.28	2.00	-2.00	0.00
5,400.00	0.39	83.68	5,380.45	37.59	339.63	341.71	2.00	-2.00	0.00
5,419.55	0.00	0.00	5,400.00	37.60	339.70	341.77	2.00	-2.00	0.00
EOC hold 0.00° - TG1-BC #61									
7,119.55	0.00	0.00	7,100.00	37.60	339.70	341.77	0.00	0.00	0.00
PBHL-BC #61									



Scientific Drilling

Planning Report



Database: EDM 5000.1 Single User Db
Company: COG Operating LLC
Project: Lea County, NM (NAD27 NME)
Site: BC Federal #61
Well: BC Federal #61
Wellbore: OH
Design: Plan #1 - 7-7/8" Hole

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Well BC Federal #61
GL Elev @ 4004.00ft
GL Elev @ 4004.00ft
Grid
Minimum Curvature

Design Targets

Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
-hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
-Shape									
East HL-BC #61	0.00	0.00	0.00	47.60	349.70	663,465.90	668,478.00	32° 49' 21.913 N	103° 47' 5.627 W
- plan misses target center by 352.92ft at 0.00ft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Rectangle (sides W0.00 H100.00 D0.00)									
North HL-BC #61	0.00	0.00	0.00	47.60	349.70	663,465.90	668,478.00	32° 49' 21.913 N	103° 47' 5.627 W
- plan misses target center by 352.92ft at 0.00ft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Rectangle (sides W200.00 H0.00 D0.00)									
TG1-BC #61	0.00	0.00	5,400.00	37.60	339.70	663,455.90	668,468.00	32° 49' 21.814 N	103° 47' 5.745 W
- plan hits target center									
- Circle (radius 10.00)									
PBHL-BC #61	0.00	0.00	7,100.00	37.60	339.70	663,455.90	668,468.00	32° 49' 21.814 N	103° 47' 5.745 W
- plan hits target center									
- Circle (radius 10.00)									

Casing Points

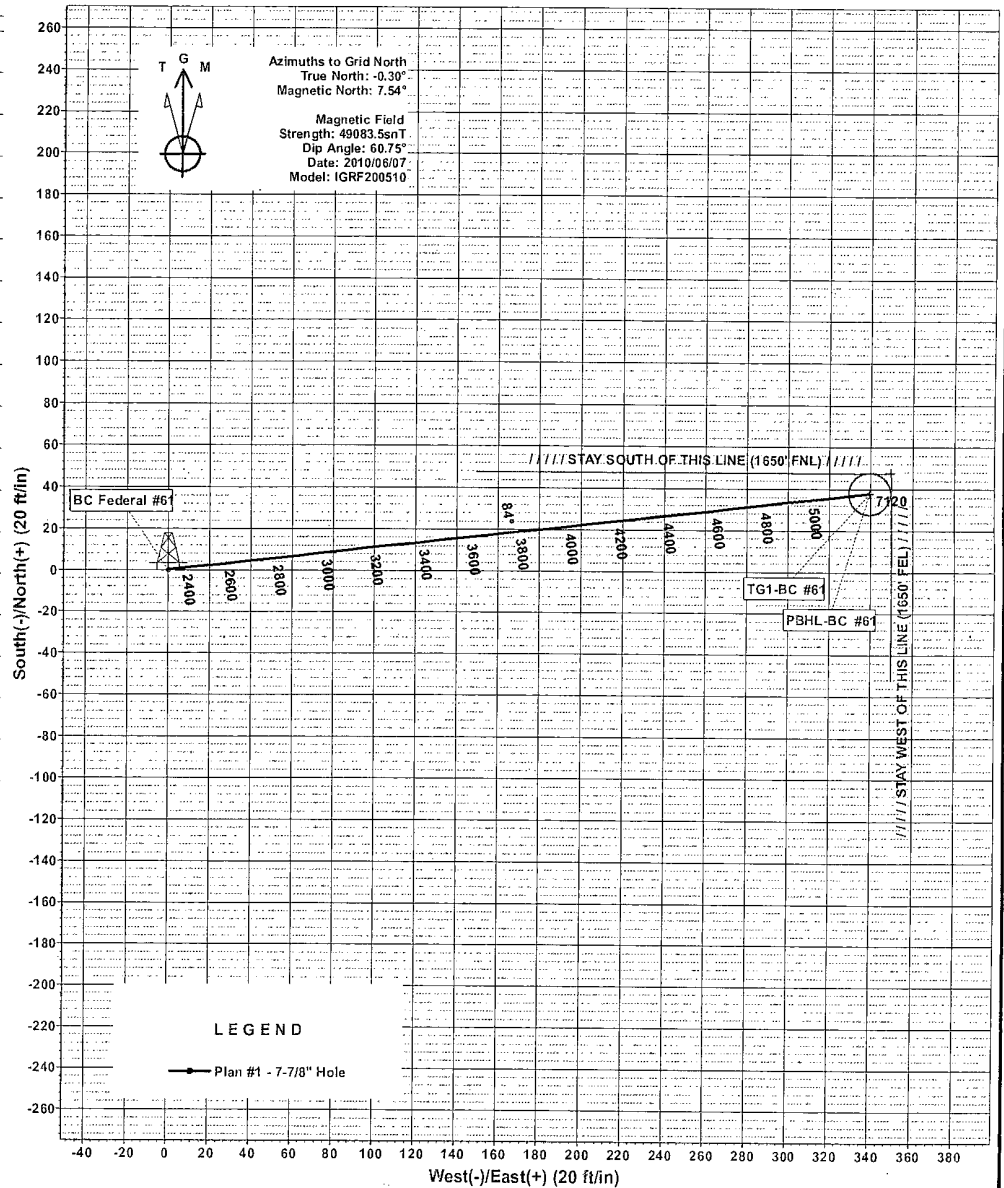
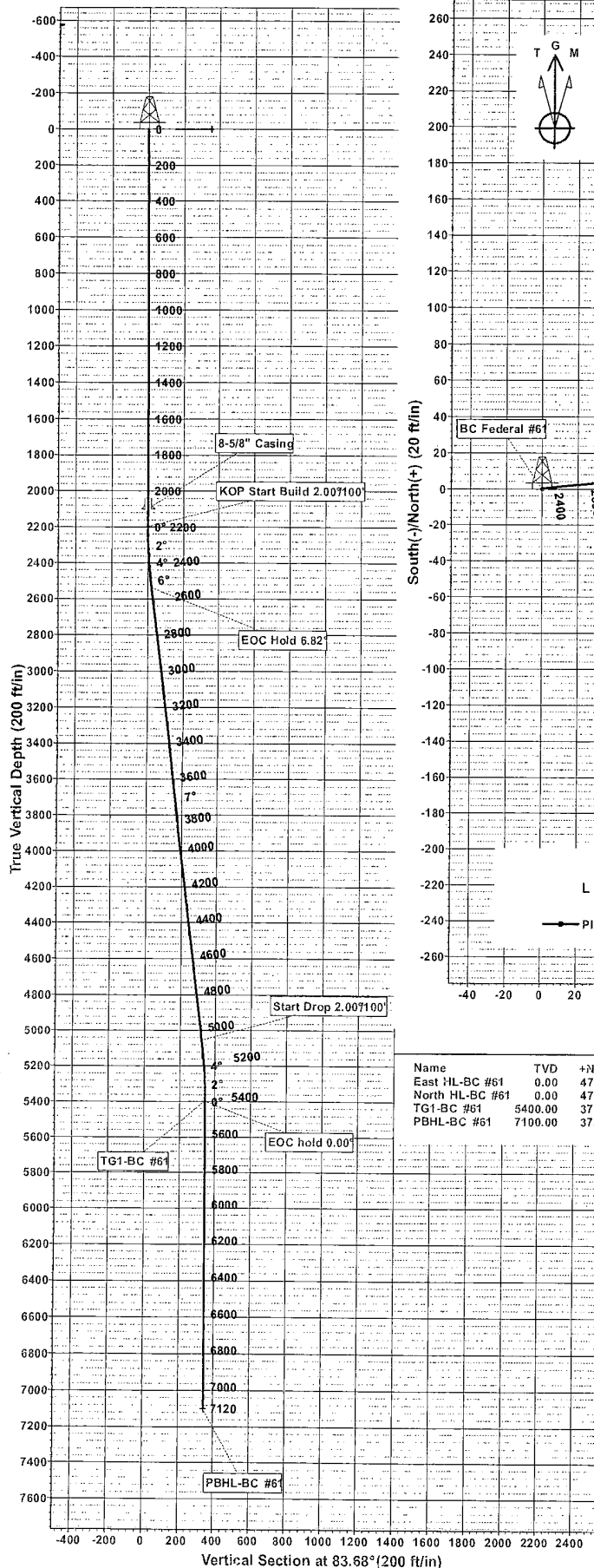
Measured Depth	Vertical Depth	Name	Casing Diameter	Hole Diameter
(ft)	(ft)		(")	(")
2,100.00	2,100.00	8-5/8" Casing	8-5/8	12-1/4

Plan Annotations

Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S	+E/-W	
(ft)	(ft)	(ft)	(ft)	
2,200.00	2,200.00	0.00	0.00	KOP Start Build 2.00°/100'
2,540.88	2,540.08	2.23	20.13	EOC Hold 6.82°
5,078.67	5,059.92	35.37	319.57	Start Drop 2.00°/100'
5,419.55	5,400.00	37.60	339.70	EOC hold 0.00°



Scientific Drilling for COG Operating LLC
Site: Lea County, NM (NAD27 NME)
Well: BC Federal #61
Wellbore: OH
Design: Plan #1 - 7-7/8" Hole



Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
East HL-BC #61	0.00	0.00	47.60	349.70	663465.90	32° 49' 21.913 N	103° 47' 5.627 W	Rectangle (Sides: L100.00 W200.00)
North HL-BC #61	0.00	0.00	47.60	349.70	663465.90	32° 49' 21.913 N	103° 47' 5.627 W	Rectangle (Sides: L0.00 W200.00)
TG1-BC #61	5400.00	37.60	339.70	663455.90	668468.00	32° 49' 21.314 N	103° 47' 5.745 W	Circle (Radius: 10.00)
PBHL-BC #61	7100.00	37.60	339.70	663455.90	668468.00	32° 49' 21.814 N	103° 47' 5.745 W	Circle (Radius: 10.00)

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2200.00	0.00	0.00	2200.00	0.00	0.00	0.00	0.00	0.00	
3	2540.88	6.82	83.68	2540.88	2.23	20.13	2.00	83.68	20.26	
4	5078.67	6.82	83.68	5059.92	35.37	319.57	0.00	0.00	321.52	TG1-BC #61
5	5419.55	0.00	0.00	5400.00	37.60	339.70	2.00	180.00	341.77	PBHL-BC #61
6	7119.55	0.00	0.00	7100.00	37.60	339.70	0.00	0.00	341.77	

WELL DETAILS: BC Federal #61

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	663418.30	668128.30	32° 49' 21.460 N	103° 47' 9.728 W	

PROJECT DETAILS: Lea County, NM (NAD27 NME)

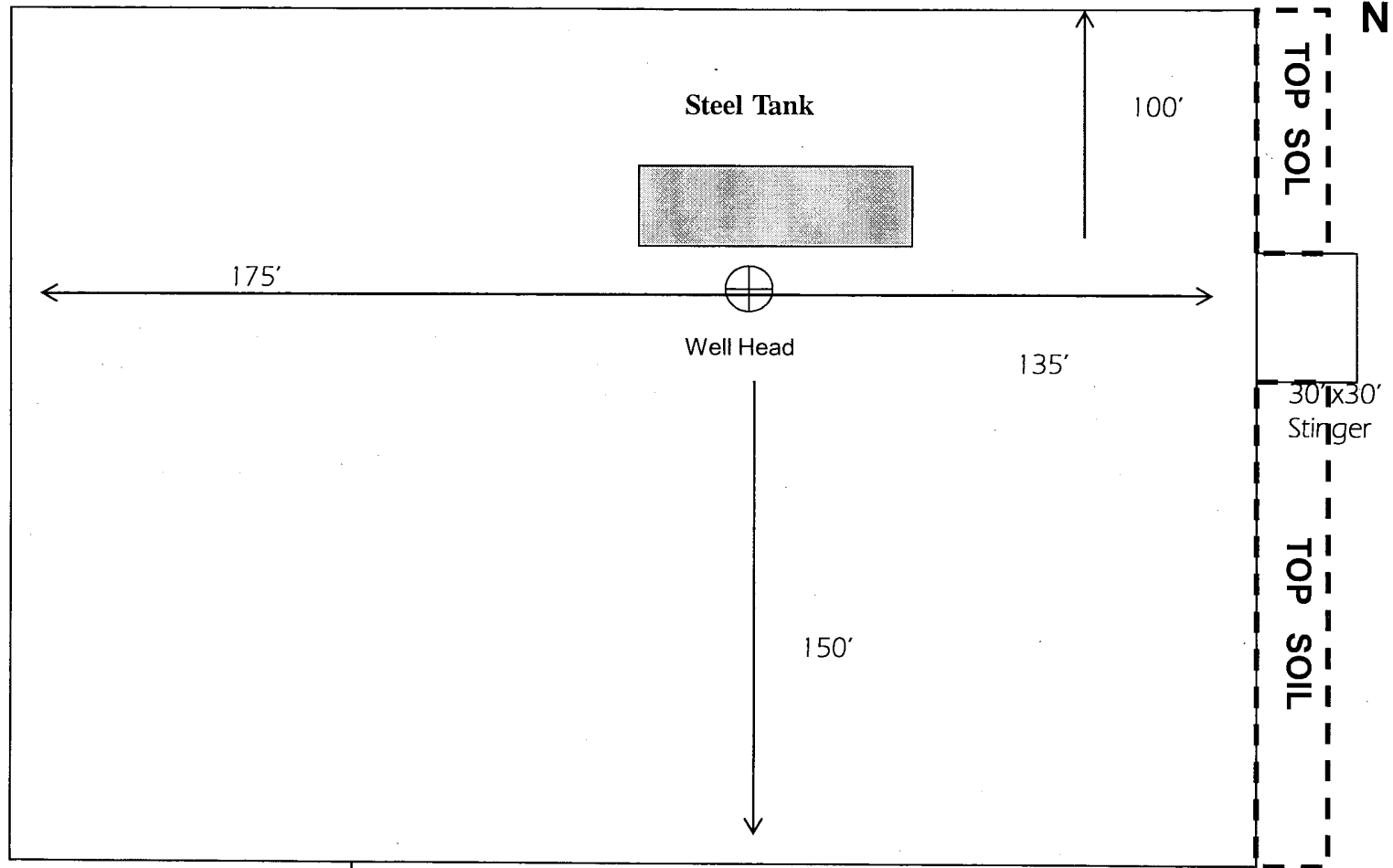
Plan: Plan #1 - 7-7/8" Hole (BC Federal #61/OH)

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
Checked: _____
Reviewed: _____
Approved: _____

Date: 07-Jun-10
Date: _____
Date: _____
Date: _____

See COA ✓ Door NW



Access Road

Not To Scale

COG OPERATING LLC
Rig Layout-Closed Loop
System B C Federa 61

310

see COA V Door NW



This area will be reclaimed to the anchors on steel pit side. 50' will be reclaimed towards the wellhead

250



anchor



anchor



Well Head



anchor



anchor

60' will be reclaimed on backside of pad

Stinger removed

30' x 30' Stinger

Not To Scale

COG OPERATING LLC
Rig Layout-Closed Loop
Interim reclamation plat
B C Federa 61

COG Operating LLC

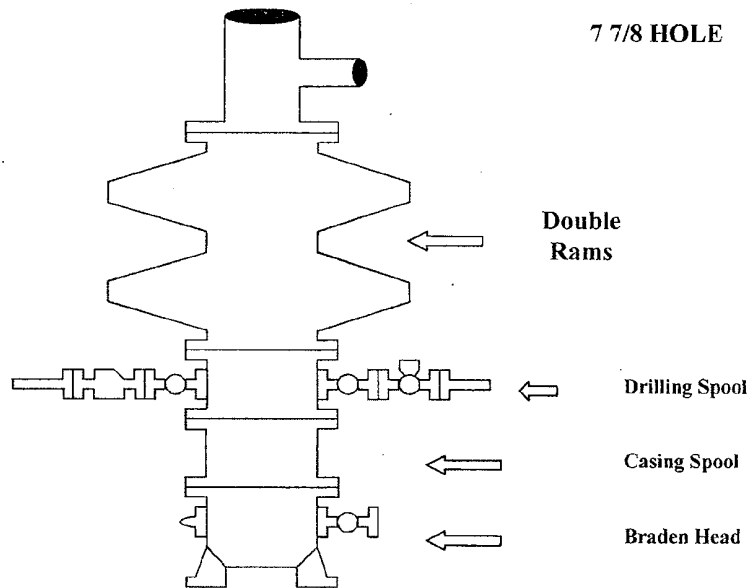
Exhibit #9

BOPE and Choke Schematic

RECEIVED

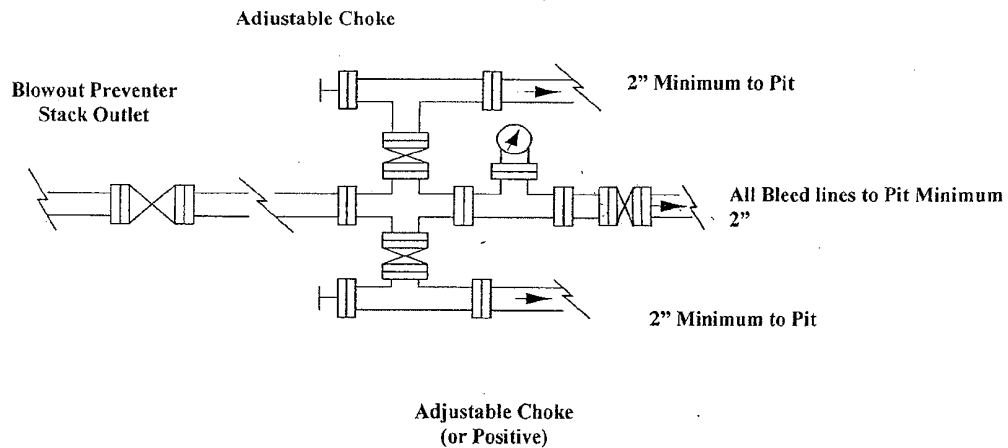
NOV 15 2010

HOBBSOCD



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.