16-35

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OCD Hobbs

JUL 30 2010

HOBBSOCD

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-029509B**
	6. If Indian, Allotee or Tribe Name **N/A**
	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. <302508> **J C FEDERAL #50**
2. Name of Operator **COG Operating LLC** <229137>	9 API Well No. **30-025-** 39860
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: 1610' FSL & 685' FWL Unit L** At proposed prod zone **BHL: 1650' FSL & 990' FWL Unit L**	11 Sec , T. R. M or Blk. and Survey or Area **Sec 22, 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)	**685'**	16 No. of acres in lease **520**	17 Spacing Unit dedicated to this well **40**
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft	**200'**	19 Proposed Depth **7100' TVD 7115' MD**	20 BLM/BIA Bond No. on file **NMB000215**
21. Elevations (Show whether DF, KDB, RT, GL, etc.) **4027' GL**		22 Approximate date work will start* **10/31/2010**	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
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)* **Robyn M. Odom**	Date **07/26/2010**
Title **Regulatory Analyst**		
Approved by *(Signature)* /s/ Don Peterson	Name *(Printed/Typed)*	Date 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)

AUG 05 2010

Roswell Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

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

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DISTRICT II
1301 W. GRAND AVENUE, ARTESIA, NM 88210

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

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

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
11885 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- 39960	44500	MALJAMAR; YESO, WEST

Property Code	Property Name	Well Number
302508	JC FEDERAL	50

OGRID No.	Operator Name	Elevation
229137	COG OPERATING, LLC	4030'

Surface Location

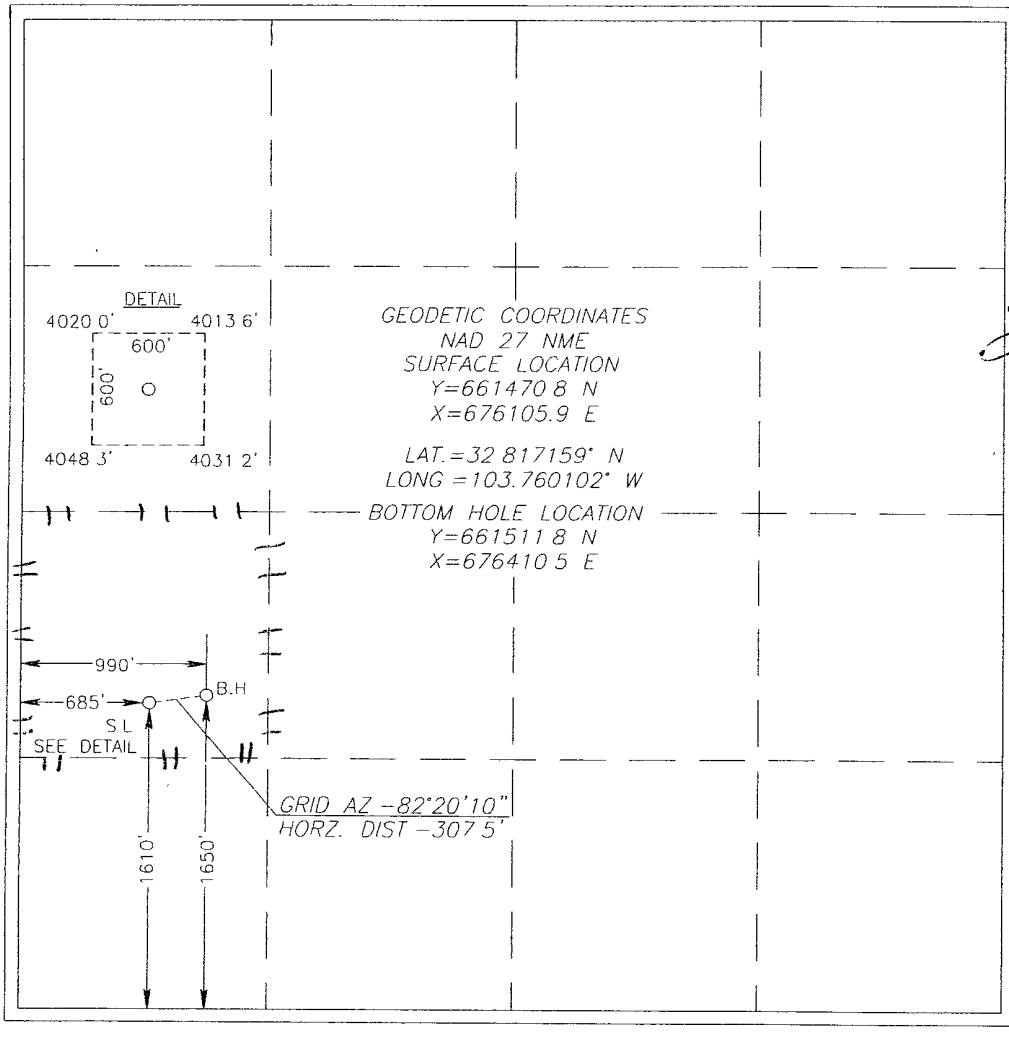
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	22	17-S	32-E		1610	SOUTH	685	WEST	LEA

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
L	22	17-S	32-E		1650	SOUTH	990	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 7/22/2010 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.

RONALD J. EIDSON
JUNE 25, 2001
NEW MEXICO
3239
REGISTERED PROFESSIONAL SURVEYOR

Date Surveyed LA
Signature & Seal of Professional Surveyor

Ronald J. Eidson 07/21/2010

10-13-1059

Certificate No. GARY G. EIDSON 12641
RONALD J. EIDSON 3239

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

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

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

Hole Size	Interval	OD Casing	Weight	Grade	Jt., Condition	burst/collapse/tension
17 ½"	0-650' 815	13 3/8"	48#	H-40orJ-55	ST&C/New	6.03/2.578/10.32
11"or12¼"	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

See COA

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~~. 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.

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-~~6~~50'	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)
JC Federal #50
JC Federal #50

OH

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Plan: Plan #2 - 7-7/8" Hole
SHL = 1610' FSL & 685' FWL
BHL = 1660' FSL & 980' FWL
Top of Paddock = 1660' FSL & 980' FWL @ 5450' TVD

Standard Planning Report

22 July, 2010

Scientific Drilling
Directional Drilling Operations

Database:	EDM-Julio	**Local Co-ordinate Reference:**	Well JC Federal #50
Company:	COG Operating LLC	**TVD Reference:**	GL Elev @ 4027 00usft
Project:	Lea County, NM (NAD27 NME)	**MD Reference:**	GL Elev @ 4027 00usft
Site:	JC Federal #50	**North Reference:**	Grid
Well:	JC Federal #50	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 - 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 JC Federal #50

Site Position:		**Northing:**	661,470 80 usft	**Latitude:**	32° 49' 1 771 N
From:	Map	**Easting:**	676,105.90 usft	**Longitude:**	103° 45' 36 368 W
Position Uncertainty:	0 00 usft	**Slot Radius:**	0 "	**Grid Convergence:**	0 31 °

Well JC Federal #50

Well Position	**+N/-S**	0 00 usft	**Northing:**	661,470 80 usft	**Latitude:**	32° 49' 1 771 N
	+E/-W	0 00 usft	**Easting:**	676,105 90 usft	**Longitude:**	103° 45' 36 368 W
Position Uncertainty		0 00 usft	**Wellhead Elevation:**		**Ground Level:**	4,030 00 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	2010/07/22	7 81	60 75	49,071

Design Plan #2 - 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	80 18

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	
2,200 00	0 00	0 00	2,200 00	0 00	0 00	0 00	0 00	0 00	0 00	
2,488 24	5 76	80 18	2,487 75	2 47	14 28	2 00	2 00	0 00	80 18	
5,176 33	5 76	80 18	5,162 25	48 53	280 32	0 00	0 00	0 00	0 00	
5,464 57	0 00	0 00	5,450 00	51 00	294 60	2 00	-2 00	0 00	180 00	TG1-JC #50
7,114 57	0 00	0 00	7,100 00	51 00	294 60	0 00	0 00	0 00	0 00	PBHL-JC #50

Database:	EDM-Julio	**Local Co-ordinate Reference:**	Well JC Federal #50
Company:	COG Operating LLC	**TVD Reference:**	GL Elev @ 4027 00usft
Project:	Lea County, NM (NAD27 NME)	**MD Reference:**	GL Elev @ 4027 00usft
Site:	JC Federal #50	**North Reference:**	Grid
Well:	JC Federal #50	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 - 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-JC #50 - West HL-JC #50									
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	80 18	2,299 98	0 30	1 72	1 75	2 00	2 00	0 00
2,400 00	4 00	80 18	2,399 84	1 19	6 88	6 98	2 00	2 00	0 00
2,488 24	5 76	80 18	2,487 75	2 47	14 28	14 49	2 00	2 00	0 00
EOC Hold 5.76°									
2,500 00	5 76	80 18	2,499 45	2 67	15 44	15 67	0 00	0 00	0 00
2,600 00	5 76	80 18	2,598 95	4 39	25 34	25 71	0 00	0 00	0 00
2,700 00	5 76	80 18	2,698 44	6 10	35 23	35 76	0 00	0 00	0 00
2,800 00	5 76	80 18	2,797 94	7 81	45 13	45 80	0 00	0 00	0 00
2,900 00	5 76	80 18	2,897 43	9 53	55 03	55 85	0 00	0 00	0 00
3,000 00	5 76	80 18	2,996 93	11 24	64 93	65 89	0 00	0 00	0 00
3,100 00	5 76	80 18	3,096 42	12 95	74 82	75 94	0 00	0 00	0 00
3,200 00	5 76	80 18	3,195 91	14 67	84 72	85 98	0 00	0 00	0 00
3,300 00	5 76	80 18	3,295 41	16 38	94 62	96 03	0 00	0 00	0 00
3,400 00	5 76	80 18	3,394 90	18 09	104 52	106 07	0 00	0 00	0 00
3,500 00	5 76	80 18	3,494 40	19 81	114 41	116 11	0 00	0 00	0 00
3,600 00	5 76	80 18	3,593 89	21 52	124 31	126 16	0 00	0 00	0 00
3,700 00	5 76	80 18	3,693 39	23 23	134 21	136 20	0 00	0 00	0 00
3,800 00	5 76	80 18	3,792.88	24 95	144 10	146 25	0 00	0 00	0 00
3,900 00	5 76	80 18	3,892 37	26 66	154 00	156 29	0 00	0 00	0 00
4,000 00	5 76	80 18	3,991 87	28 37	163 90	166 34	0 00	0 00	0 00
4,100 00	5 76	80 18	4,091 36	30 09	173 80	176 38	0 00	0 00	0 00
4,200 00	5 76	80 18	4,190 86	31 80	183 69	186 43	0 00	0 00	0 00
4,300 00	5 76	80 18	4,290 35	33 51	193 59	196 47	0 00	0 00	0 00
4,400 00	5 76	80 18	4,389 85	35 23	203 49	206 52	0 00	0 00	0 00
4,500 00	5 76	80 18	4,489 34	36 94	213 39	216 56	0 00	0 00	0 00
4,600 00	5 76	80 18	4,588 83	38 65	223 28	226 60	0 00	0 00	0 00
4,700 00	5 76	80 18	4,688 33	40 37	233 18	236 65	0 00	0 00	0 00
4,800 00	5 76	80 18	4,787 82	42 08	243 08	246 69	0 00	0 00	0 00
4,900 00	5 76	80 18	4,887 32	43 79	252 98	256 74	0 00	0 00	0 00
5,000 00	5 76	80 18	4,986 81	45 51	262 87	266 78	0 00	0 00	0 00
5,100 00	5 76	80 18	5,086 31	47 22	272 77	276 83	0 00	0 00	0 00
5,176 33	5 76	80 18	5,162 25	48 53	280 32	284 49	0 00	0 00	0 00
Start DLS 2.00°/100'									
5,200 00	5 29	80 18	5,185 81	48 92	282 57	286 77	2 00	-2 00	0 00
5,300 00	3 29	80 18	5,285 52	50 19	289 94	294 26	2 00	-2 00	0 00
5,400 00	1 29	80 18	5,385 44	50 88	293 88	298 25	2 00	-2 00	0 00
5,464 57	0 00	80 18	5,450 00	51 00	294 60	298 98	2 00	-2 00	0 00
EOC Hold 0.00° - TG1-JC #50									
7,114 57	0 00	0 00	7,100 00	51 00	294 60	298 98	0 00	0 00	0 00
PBHL-JC #50									

Database:	EDM-Julio	**Local Co-ordinate Reference:**	Well JC Federal #50
Company:	COG Operating LLC	**TVD Reference:**	GL Elev @ 4027 00usft
Project:	Lea County, NM (NAD27 NME)	**MD Reference:**	GL Elev @ 4027 00usft
Site:	JC Federal #50	**North Reference:**	Grid
Well:	JC Federal #50	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 - 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-JC #50 - plan misses target center by 307 35usft at 0 00usft MD (0 00 TVD, 0 00 N, 0 00 E) - Rectangle (sides W200 00 H0 00 D0 00)	0 00	0 00	0 00	41 00	304 60	661,511 80	676,410 50	32° 49' 2 160 N	103° 45' 32 796 W
West HL-JC #50 - plan misses target center by 307 35usft at 0 00usft MD (0 00 TVD, 0 00 N, 0 00 E) - Rectangle (sides W0 00 H200 00 D0 00)	0 00	0 00	0 00	41 00	304 60	661,511 80	676,410 50	32° 49' 2 160 N	103° 45' 32 796 W
TG1-JC #50 - plan hits target center - Point	0 00	0 00	5,450 00	51 00	294 60	661,521 80	676,400 50	32° 49' 2 260 N	103° 45' 32 912 W
PBHL-JC #50 - plan hits target center - Circle (radius 10 00)	0 00	0 00	7,100 00	51 00	294 60	661,521 80	676,400 50	32° 49' 2 260 N	103° 45' 32 912 W

Casing Points

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

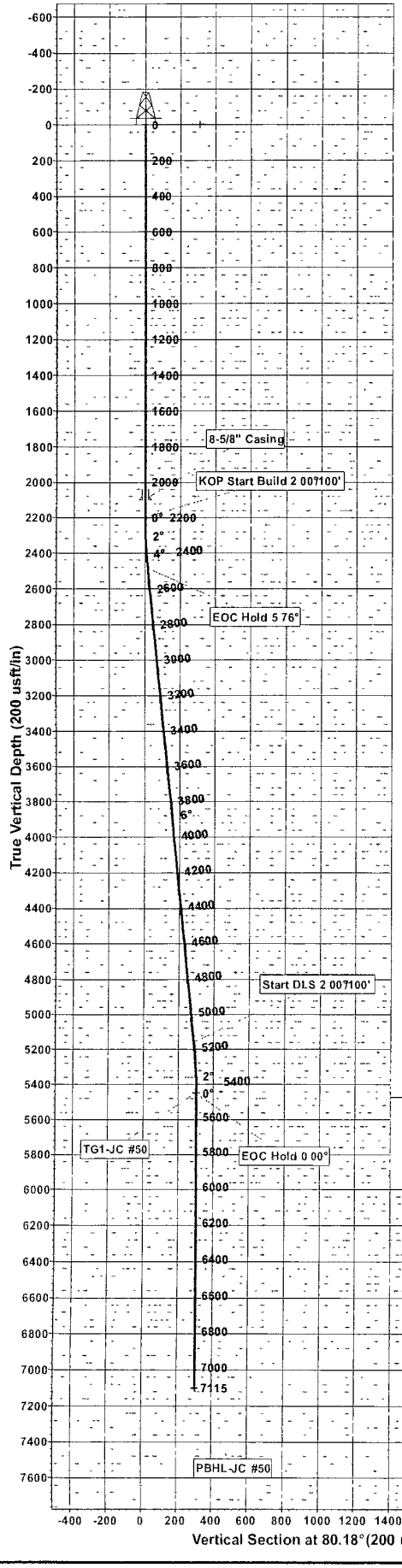
Plan Annotations

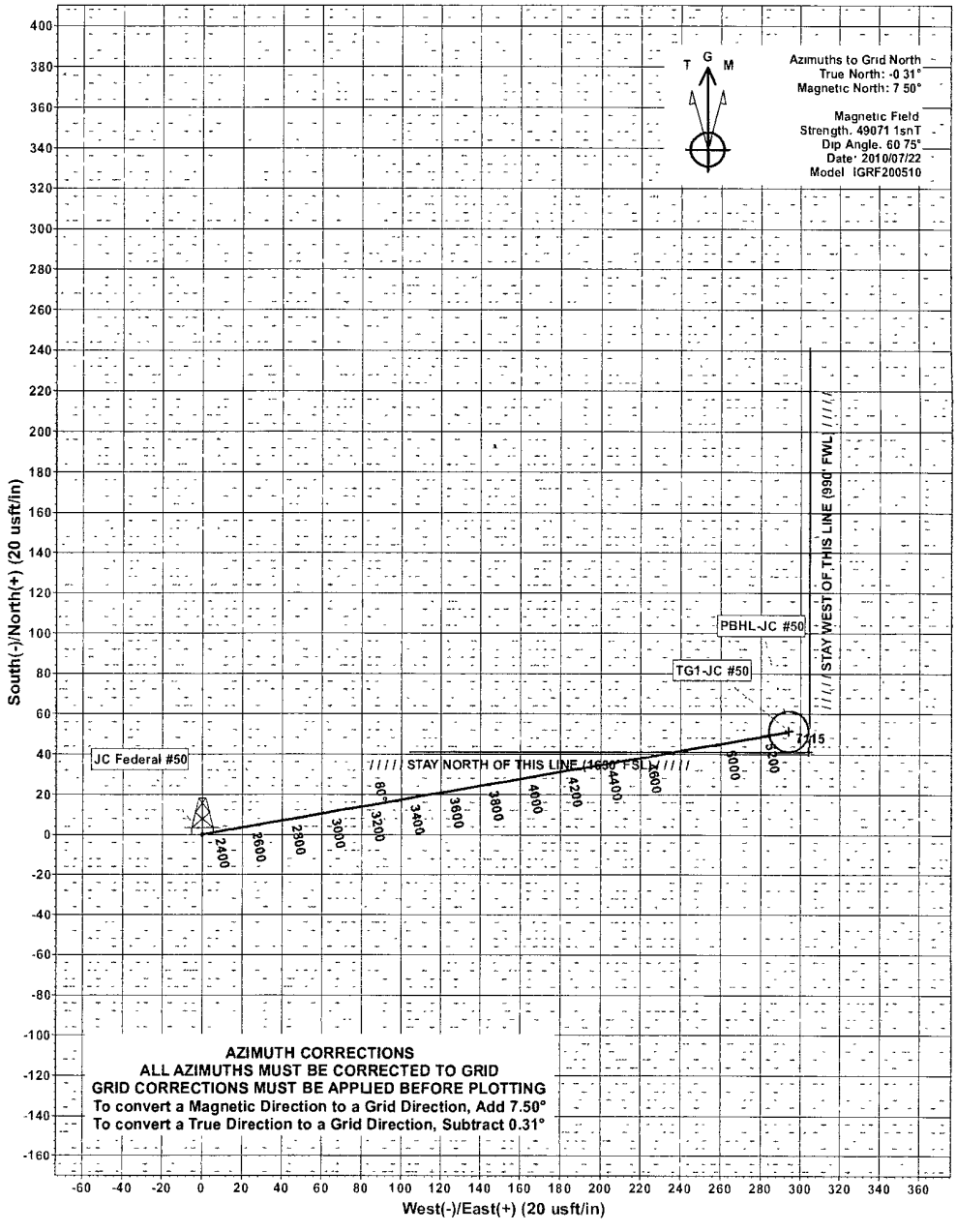
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
2,200 00	2,200 00	0 00	0 00	KOP Start Build 2 00°/100'
2,488 24	2 487 75	2 47	14 28	EOC Hold 5 76°
5,176 33	5,162 25	48 53	280 32	Start DLS 2 00°/100'
5,464 57	5,450 00	51 00	294 60	EOC Hold 0 00°

CONCHO

Scientific Drilling for COG Operating LLC
Site: Lea County, NM (NAD27 NME)
Well: JC Federal #50
Wellbore: OH
Design: Plan #2 - 7-7/8" Hole

Scientific Drilling
Directional Drilling Operations





AZIMUTH CORRECTIONS
ALL AZIMUTHS MUST BE CORRECTED TO GRID
GRID CORRECTIONS MUST BE APPLIED BEFORE PLOTTING
To convert a Magnetic Direction to a Grid Direction, Add 7.50°
To convert a True Direction to a Grid Direction, Subtract 0.31°

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
South HL-JC #50	0.00	41 00	304 60	661511 80	676410 50	32° 49' 2 160 N	103°45' 32 796 W	Rectangle (Sides. L0 0 0 W200 00)
West HL-JC #50	0 00	41 00	304 60	661511 80	676410 50	32° 49' 2 160 N	103°45' 32 796 W	Rectangle (Sides L200 00 W0 00)
TG1-JC #50	5450 00	51 00	294 60	661521 80	676400 50	32°4 9' 2 260 N	103°45' 32.912 W	Point
PBHL-JC #50	7100 00	51 00	294 60	661521.80	676400 50	32° 49' 2 260 N	103°45' 32 912 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	2488 24	5.76	80 18	2487 75	2 47	14 28	2 00	80 18	14 49	
4	5176 33	5 76	80.18	5162 25	48 53	280 32	0 00	0 00	284.49	
5	5464.57	0 00	0 00	5450 00	51 00	294 60	2 00	180 00	298 98	TG1-JC #50
6	7114 57	0 00	0 00	7100 00	51.00	294 60	0 00	0 00	298 98	PBHL-JC #50

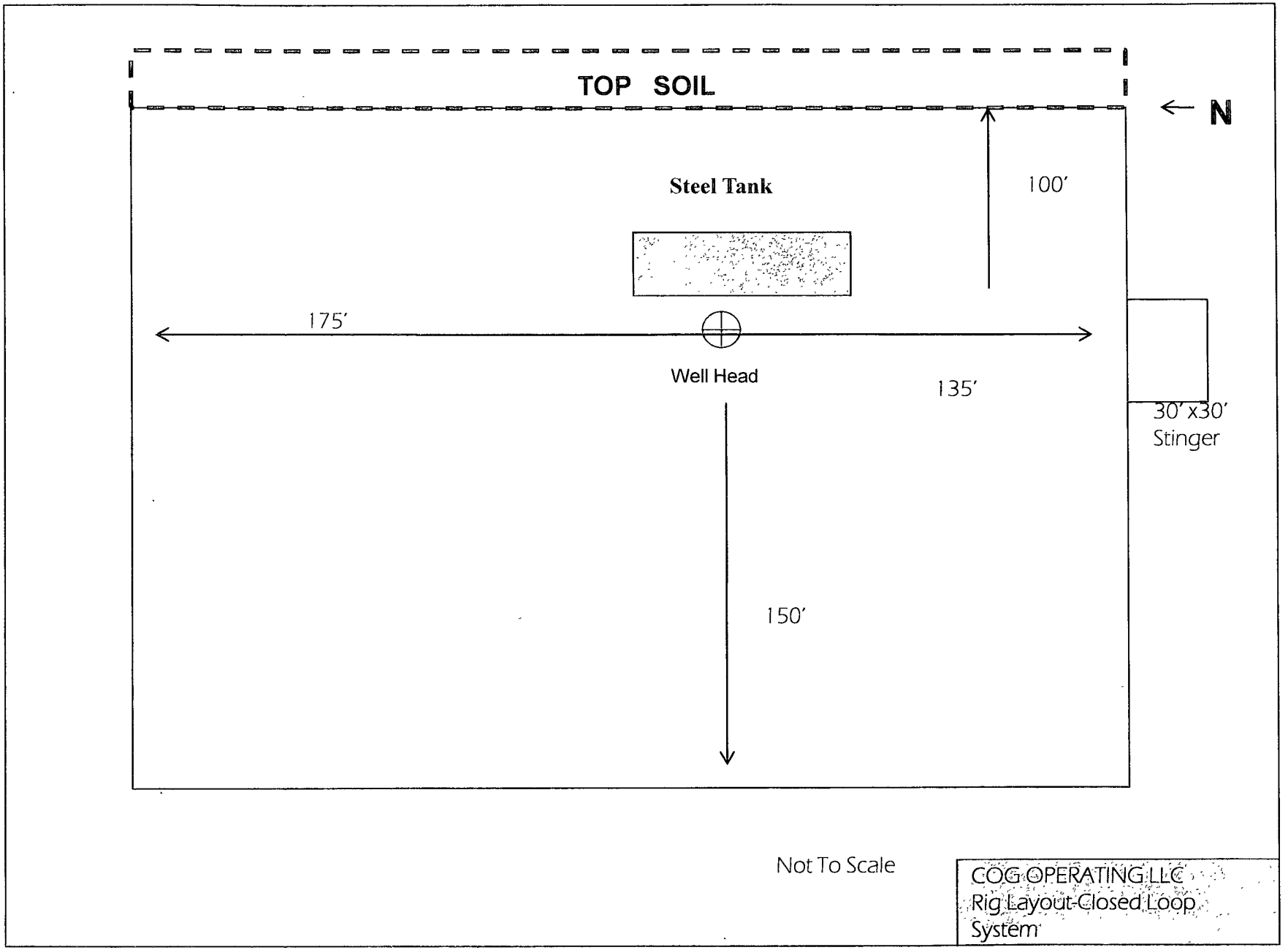
WELL DETAILS: JC Federal #50

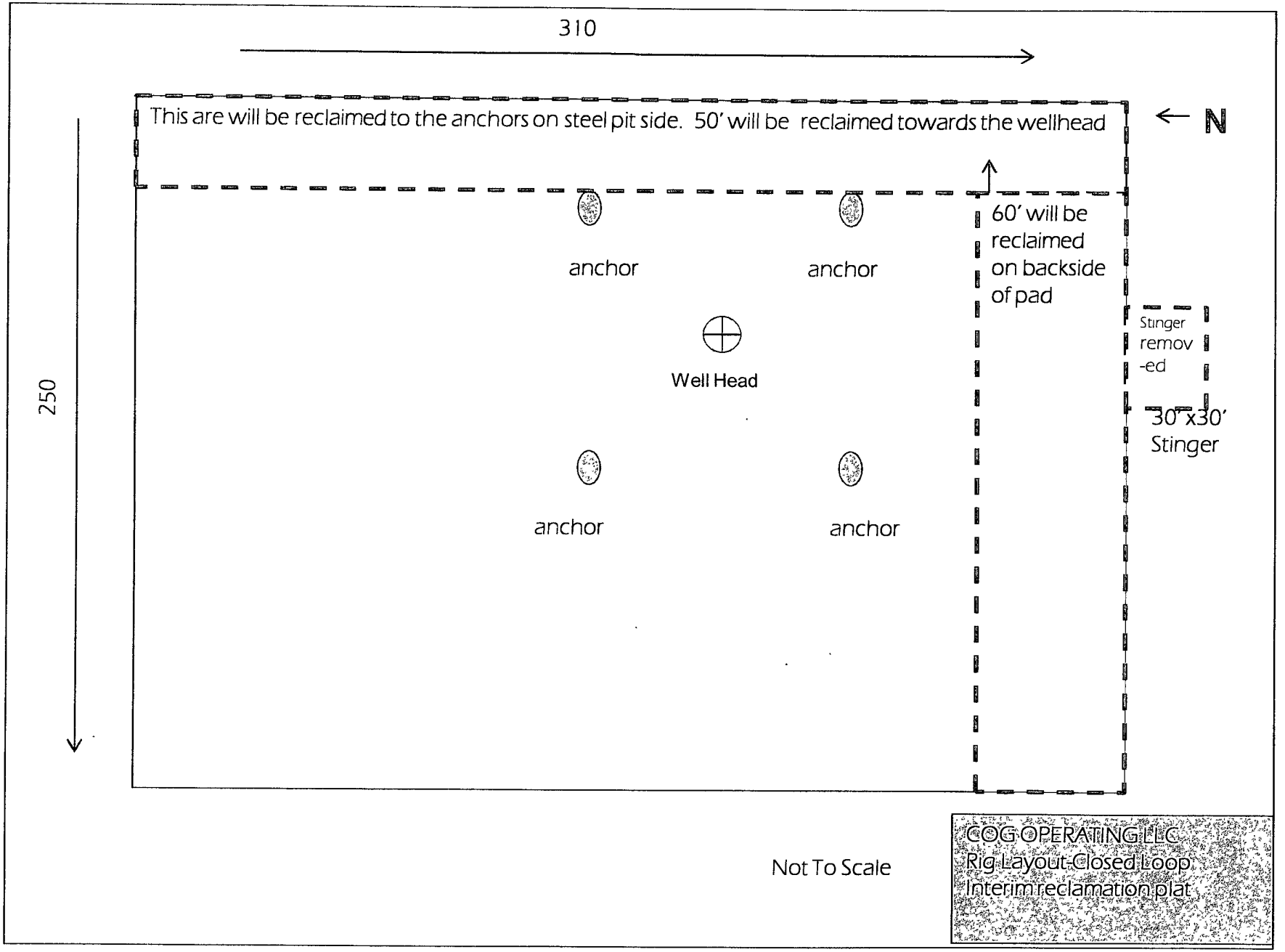
Ground Level: 4030 00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0 00	0 00	661470 80	676105 90	32°49' 1.771 N	103°45' 3 6 368 W	

PROJECT DETAILS: Lea County, NM (NAD27 NME) — Plan: Plan #2 - 7-7/8" Hole (JC Federal #50/OH)

Geodetic System	US State Plane 1927 (Exact solution)	Created By	Julio Pina	Date	22-Jul-10
Datum	NAD 1927 (NADCON CONUS)				
Ellipsoid	Clarke 1866	Checked		Date	
Zone	New Mexico East 3001				
System Datum	Mean Sea Level	Reviewed		Date	
		Approved		Date	

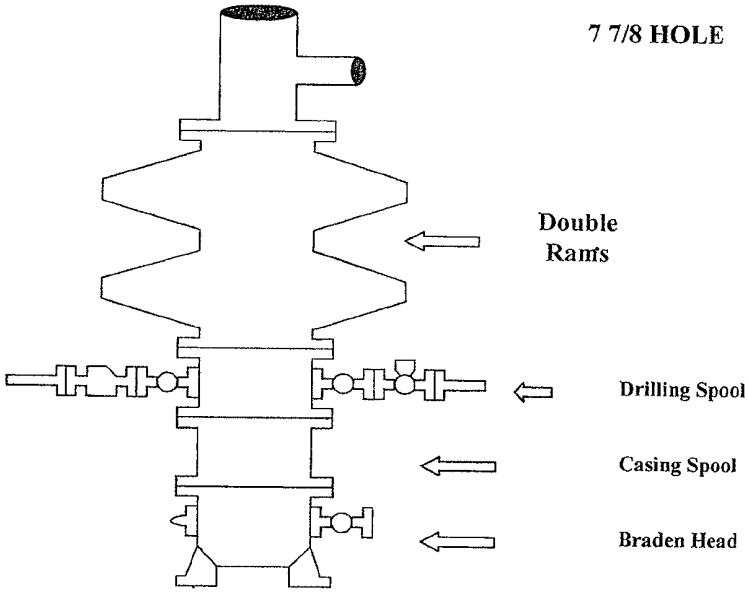

TOP SOIL
N
Steel Tank
100'
175'
Well Head
135'
30' x30'
Stinger
150'
Not To Scale
COG OPERATING LLC
Rig Layout-Closed Loop
System


310
This are will be reclaimed to the anchors on steel pit side. 50' will be reclaimed towards the wellhead
N
60' will be reclaimed on backside of pad
anchor
anchor
Well Head
Stinger remov -ed
30'x30' Stinger
250
anchor
anchor
Not To Scale
COG OPERATING LLC
Rig Layout-Closed Loop
Interim reclamation plat

COG Operating LLC

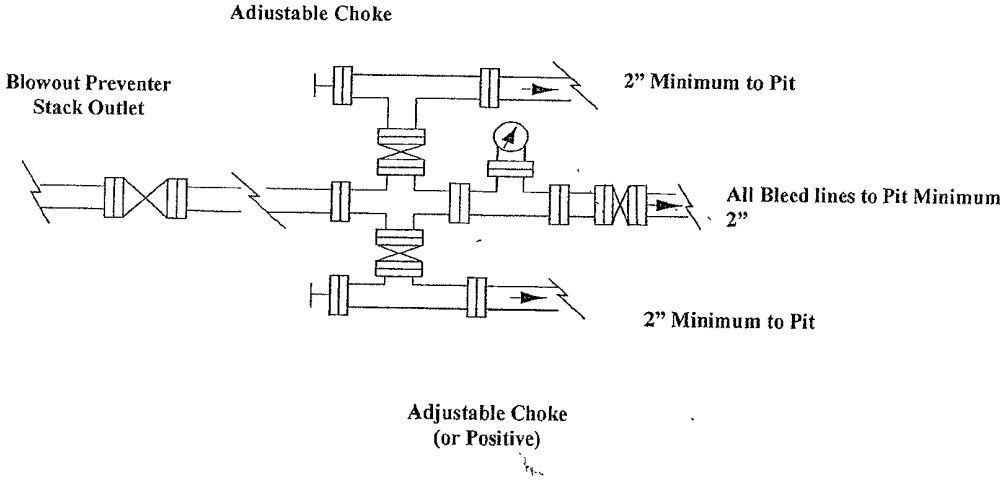
Exhibit #9

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.