OCD-ARTESIA

ATS-11-168

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-029420A
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 COG Operating LLC 229137	7 If Unit or CA Agreement, Name and No. NMNM-71030C; Skelly Unit [305607]
3a Address 550 W. Texas Ave., Suite 1300 Midland, TX 79701	3b Phone No. (include area code) 432-685-4384
4 Location of Well (Report location clearly and in accordance with any State requirements.*) At surface 2193 FSL & 2052 FEL, Unit J At proposed prod zone 2310 FSL & 2310 FEL, Unit J	8 Lease Name and Well No. SKELLY UNIT #855
	9 API Well No. 30-015- 39702
	10 Field and Pool, or Exploratory Maljamar; Glorieta-Yeso (26770) [97869]
	11 Sec, T R M. or Blk and Survey or Area Sec 15 T17S R31E
14 Distance in miles and direction from nearest town or post office* 9 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)	2052'	16 No of acres in lease 640	17 Spacing Unit dedicated to this well 40
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft	250'	19 Proposed Depth TVD: 6700' MD: 6713'	20. BLM/BIA Bond No on file NMB000740
21 Elevations (Show whether DF, KDB, RT, GL, etc.) 3869' GL		22. Approximate date work will start* 08/31/2011	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 06/13/2011
Title Permitting Tech		
Approved by (Signature)	Name (Printed/Typed)	Date 8-5-2011
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)

Roswell Controlled Water Basin

RECEIVED
NOV 17 2011
NMOCD ARTESIA

Witness Surface Casing

SEE ATTACHED FOR CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

MASTER DRILLING PROGRAM

1. Geologic Name of Surface Formation

Quaternary

2. Estimated Tops of Important Geologic Markers:

Quaternary	Surface
Rustler	628'
Top of Salt	801'
Base of Salt	1771'
Yates	1958'
Seven Rivers	2293'
Queen	2915'
Grayburg	3345'
San Andres	3697'
Glorietta	5240'
Paddock	5299'
Blinebry	5736'
Tubb	6700'

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

Water Sand	150'	Fresh Water
Grayburg	3345'	Oil/Gas
San Andres	3697'	Oil/Gas
Glorieta	5240'	Oil/Gas
Paddock	5299'	Oil/Gas
Blinebry	5736'	Oil/Gas
Tubb	6700'	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 ~~1800'~~ 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

See COA

4. Casing Program

See COA

Hole Size	Interval	OD Casing	Weight	Grade	Jt., Condition	Jt.	burst/collapse/tension
17 ½"	0-650' 600	13 3/8"	48#	H-40orJ-55	New	ST&C	8.71/3.724/14.91
11" OK	0-1800'	8 5/8"	24or32#	J-55	New	ST&C	2.91/1.46/5.65
7 7/8" 6713	0-T.D.	5 1/2"	15.5 or17#	J-55orL80	New	LT&C	1.71/1.574/2.20

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, 700' (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.

Multi-Stage: Stage 1: (Assumed TD of 6700') 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

See COA

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
0-650' 600	Fresh Water	8.5	28	N.C.
650-1800' OK	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)
Skelly Unit #855
Skelly Unit #855

OH

Plan: Plan #1 7-7/8" Hole
SHL = 2193' FSL & 2052' FEL
BHL = 2300' FSL & 2300' FEL
Top of Paddock = 2300' FSL & 2300' FEL @ 5000' TVD

Standard Planning Report

11 April, 2011

Scientific Drilling
Directional Drilling Operations

Database:	EDM-Julio	**Local Co-ordinate Reference:**	Site Skelly Unit #855
Company:	COG Operating LLC	**TVD Reference:**	GL Elev @ 3869 00usft
Project:	Eddy County, NM (NAN27 NME)	**MD Reference:**	GL Elev @ 3869 00usft
Site:	Skelly Unit #855	**North Reference:**	Grid
Well:	Skelly Unit #855	**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 Skelly Unit #855

Site Position:		**Northing:**	667,189 90 usft	**Latitude:**	32° 49' 59 798 N
From:	Map	**Easting:**	646,907 60 usft	**Longitude:**	103° 51' 18 203 W
Position Uncertainty:	0 00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0 26 °

Well Skelly Unit #855

Well Position	**+N/-S**	0 00 usft	**Northing:**	667,189 90 usft	**Latitude:**	32° 49' 59 798 N
	+E/-W	0 00 usft	**Easting:**	646,907 60 usft	**Longitude:**	103° 51' 18 203 W
Position Uncertainty		0 00 usft	**Wellhead Elevation:**		**Ground Level:**	3,869.00 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2011/04/11	7 79	60 71	48,967

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	293 06

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	
2,000 00	0 00	0 00	2,000 00	0 00	0 00	0 00	0 00	0 00	0 00	
2,283 45	5 67	293 06	2,282 99	5 49	-12 89	2 00	2 00	0 00	293 06	
4,729.44	5 67	293 06	4,717 01	100 11	-235 21	0 00	0 00	0 00	0 00	
5,012 89	0 00	0 01	5,000 00	105 60	-248 10	2 00	-2 00	0 00	180.00	TG1-Skelly #855
6,712 89	0 00	0 01	6,700 00	105 60	-248 10	0 00	0 00	0 00	0 01	PBHL-Skelly #855

Database:	EDM-Julio	**Local Co-ordinate Reference:**	Site Skelly Unit #855
Company:	COG Operating LLC	**TVD Reference:**	GL Elev @ 3869 00usft
Project:	Eddy County, NM (NAN27 NME)	**MD Reference:**	GL Elev @ 3869 00usft
Site:	Skelly Unit #855	**North Reference:**	Grid
Well:	Skelly Unit #855	**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
North HL-Skelly #855 - East HL-Skelly #855									
1,900.00	0 00	0 00	1,900 00	0 00	0 00	0 00	0 00	0 00	0 00
8-5/8" Casing									
2,000 00	0 00	0 00	2,000 00	0 00	0 00	0 00	0 00	0 00	0 00
KOP Start Build 2.00°/100'									
2,100 00	2 00	293 06	2,099 98	0 68	-1 61	1 75	2 00	2 00	0 00
2,200 00	4 00	293 06	2,199 84	2 73	-6 42	6 98	2 00	2 00	0 00
2,283 45	5 67	293 06	2,282 99	5 49	-12 89	14 01	2 00	2 00	0 00
EOC hold 5.67°									
2,300 00	5 67	293 06	2,299 46	6 13	-14 40	15 65	0 00	0 00	0 00
2,400 00	5 67	293 06	2,398 97	10 00	-23 49	25 52	0 00	0 00	0 00
2,500 00	5 67	293 06	2,498 48	13 86	-32 57	35 40	0 00	0 00	0 00
2,600 00	5 67	293 06	2,597 99	17 73	-41 66	45 28	0 00	0.00	0 00
2,700 00	5 67	293.06	2,697 50	21 60	-50 75	55 16	0 00	0 00	0 00
2,800 00	5 67	293 06	2,797 01	25 47	-59 84	65 04	0 00	0 00	0 00
2,900 00	5 67	293 06	2,896 52	29 34	-68 93	74 91	0 00	0 00	0 00
3,000 00	5 67	293 06	2,996 03	33 21	-78 02	84 79	0 00	0 00	0 00
3,100 00	5 67	293 06	3,095 54	37 08	-87 11	94 67	0 00	0 00	0 00
3,200 00	5 67	293 06	3,195 06	40 94	-96 20	104 55	0 00	0 00	0 00
3,300 00	5 67	293 06	3,294 57	44 81	-105 29	114 43	0 00	0 00	0 00
3,400 00	5 67	293 06	3,394 08	48 68	-114 38	124 30	0 00	0 00	0 00
3,500 00	5 67	293 06	3,493 59	52 55	-123 46	134 18	0 00	0 00	0 00
3,600 00	5 67	293 06	3,593 10	56 42	-132 55	144 06	0 00	0 00	0 00
3,700 00	5 67	293.06	3,692 61	60 29	-141 64	153 94	0 00	0 00	0 00
3,800 00	5 67	293 06	3,792 12	64 16	-150 73	163 82	0 00	0 00	0 00
3,900 00	5 67	293 06	3,891.63	68 03	-159 82	173 70	0 00	0 00	0 00
4,000 00	5 67	293 06	3,991 14	71 89	-168 91	183 57	0 00	0 00	0 00
4,100 00	5 67	293 06	4,090 65	75 76	-178 00	193 45	0 00	0 00	0 00
4,200 00	5 67	293 06	4,190 16	79 63	-187 09	203 33	0 00	0 00	0 00
4,300 00	5 67	293 06	4,289 68	83.50	-196 18	213 21	0 00	0 00	0 00
4,400 00	5 67	293 06	4,389.19	87 37	-205 27	223 09	0 00	0 00	0 00
4,500 00	5 67	293.06	4,488 70	91 24	-214 35	232 96	0 00	0 00	0 00
4,600.00	5 67	293 06	4,588 21	95 11	-223 44	242 84	0 00	0.00	0 00
4,700 00	5 67	293 06	4,687 72	98 97	-232 53	252 72	0 00	0 00	0 00
4,729 44	5 67	293 06	4,717 02	100 11	-235 21	255 63	0 00	0 00	0 00
Start Drop 2.00°/100'									
4,800 00	4 26	293 06	4,787 31	102 50	-240 83	261 73	2 00	-2 00	0 00
4,900 00	2 26	293.06	4,887.14	104 73	-246 05	267 41	2 00	-2 00	0 00
5,000 00	0 26	293 06	4,987 11	105 59	-248 07	269 61	2 00	-2 00	0 00
5,012 89	0 00	0 00	5,000 00	105 60	-248 10	269 64	2 00	-2.00	519 46
EOC hold 0.00° - TG1-Skelly #855									
6,712 89	0 00	0 01	6,700 00	105 60	-248 10	269 64	0 00	0 00	0 00
PBHL-Skelly #855									

Database:	EDM-Julio	**Local Co-ordinate Reference:**	Site Skelly Unit #855
Company:	COG Operating LLC	**TVD Reference:**	GL Elev. @ 3869 00usft
Project:	Eddy County, NM (NAN27 NME)	**MD Reference:**	GL Elev. @ 3869 00usft
Site:	Skelly Unit #855	**North Reference:**	Grid
Well:	Skelly Unit #855	**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
North HL-Skelly #855 - plan misses target center by 282 81usft at 0 00usft MD (0 00 TVD, 0.00 N, 0 00 E) - Rectangle (sides W100 00 H0 00 D0 00)	0 00	0 00	0 00	115 60	-258 10	667,305 50	646,649 50	32° 50' 0 954 N	103° 51' 21 221 W
East HL-Skelly #855 - plan misses target center by 282 81usft at 0 00usft MD (0 00 TVD, 0 00 N, 0 00 E) - Rectangle (sides W0 00 H100 00 D0 00)	0 00	0 00	0 00	115 60	-258 10	667,305 50	646,649 50	32° 50' 0 954 N	103° 51' 21 221 W
TG1-Skelly #855 - plan hits target center - Point	0 00	0 00	5,000 00	105 60	-248 10	667,295 50	646,659 50	32° 50' 0 854 N	103° 51' 21 105 W
PBHL-Skelly #855 - plan hits target center - Circle (radius 10 00)	0 00	0 01	6,700 00	105 60	-248.10	667,295 50	646,659 50	32° 50' 0 854 N	103° 51' 21 105 W

Casing Points

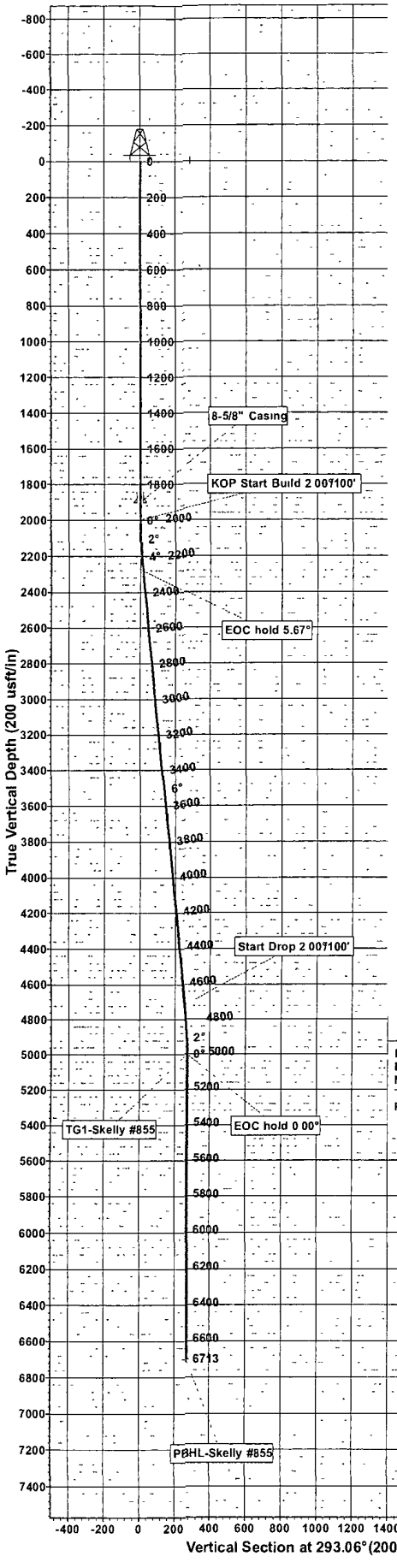
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,900 00	1,900 00	8-5/8" Casing	8-5/8	12-1/4

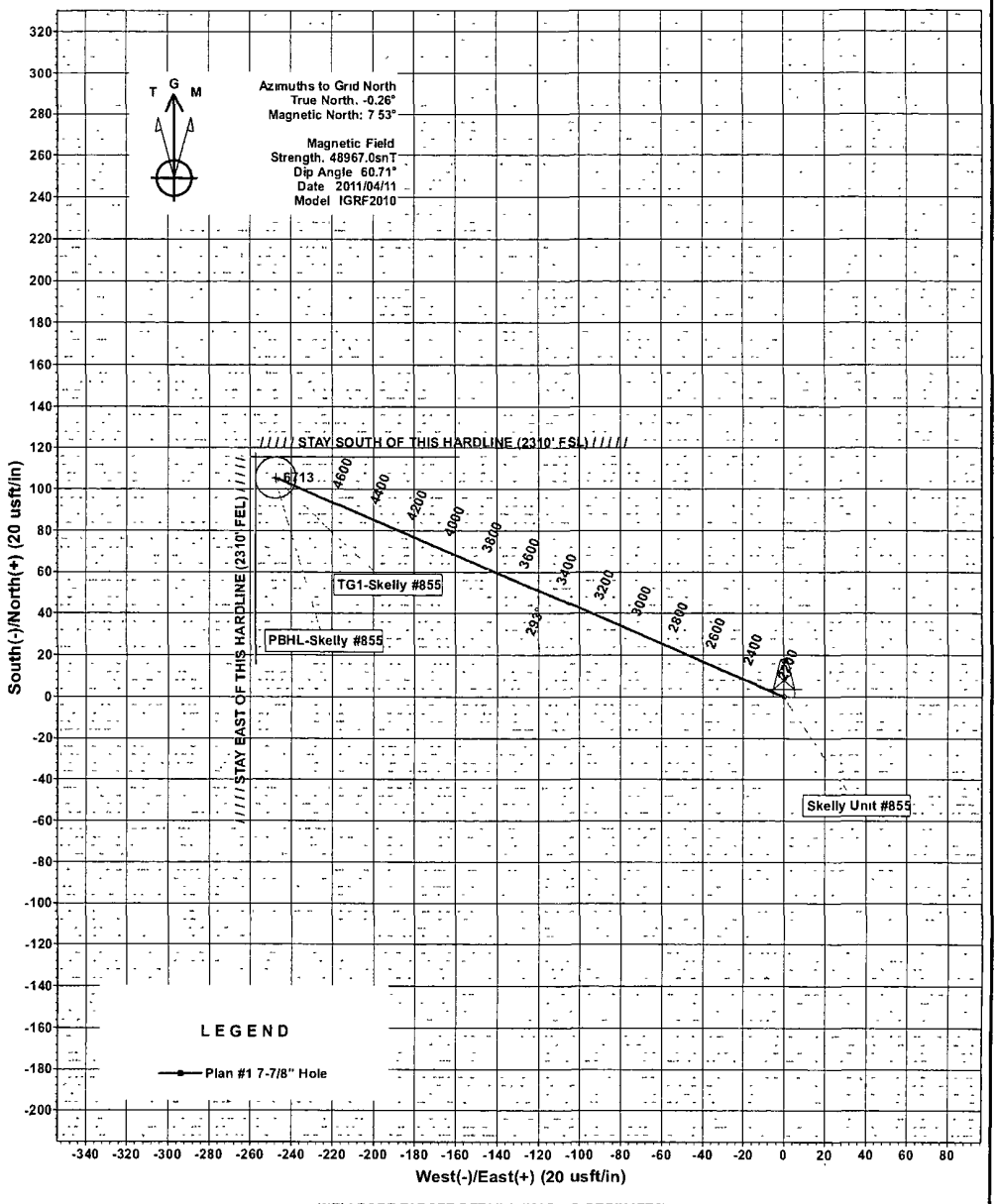
Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
2,000 00	2,000 00	0 00	0 00	KOP Start Build 2 00°/100'
2,283 45	2,282 99	5 49	-12.89	EOC hold 5 67°
4,729 44	4,717 02	100 11	-235 21	Start Drop 2 00°/100'
5,012.89	5,000 00	105 60	-248 10	EOC hold 0 00°

Scientific Drilling for COG Operating LLC
Site: Eddy County, NM (NAN27 NME)
Well: Skelly Unit #855
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-Skelly #855	0.00	115.60	-258.10	667305.50	646649.50	32° 50' 0.954 N	103° 51' 21.221 W	Rectangle (Sides : L100.00 W0.00)
North HL-Skelly #855	0.00	115.60	-258.10	667305.50	646649.50	32° 50' 0.954 N	103° 51' 21.221 W	Rectangle (Sides: L0.00 W100.00)
TG1-Skelly #855	5000.00	105.60	-248.10	667295.50	646659.50	32° 50' 0.854 N	103° 51' 21.105 W	Point
PBHL-Skelly #855	6700.00	105.60	-248.10	667295.50	646659.50	32° 50' 0.854 N	103° 51' 21.105 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	2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00	
3	2283.45	5.67	293.06	2282.99	5.49	-12.89	2.00	293.06	14.01	
4	4729.44	5.67	293.06	4717.01	100.11	-235.21	0.00	0.00	255.63	
5	5012.89	0.00	0.00	5000.00	105.60	-248.10	2.00	180.00	269.64	TG1-Skelly #855
6	6712.89	0.00	0.00	6700.00	105.60	-248.10	0.00	0.00	269.64	PBHL-Skelly #855

WELL DETAILS: Skelly Unit #855

Ground Level 3869.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	667189.90	646907.60	32° 49' 59.798 N	103° 51' 18.203 W	

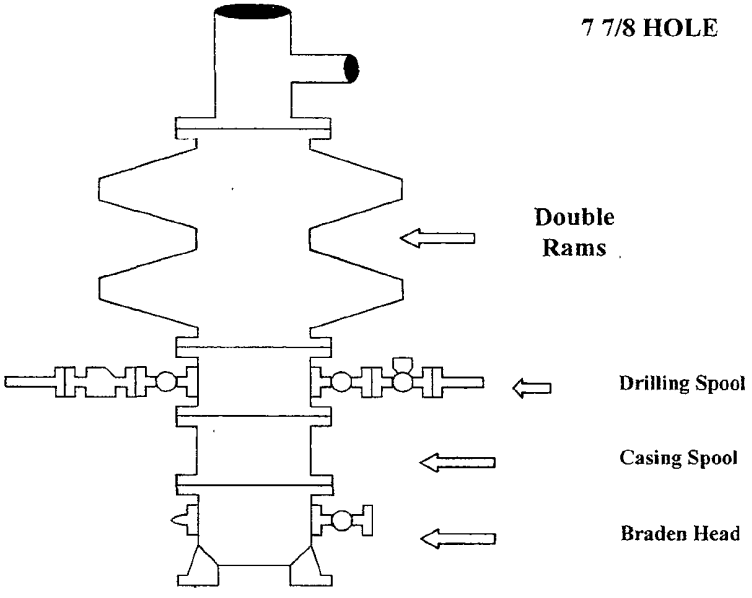
PROJECT DETAILS: Eddy County, NM (NAN27 NME)

Plan: Plan #1 7-7/8" Hole (Skelly Unit #855/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

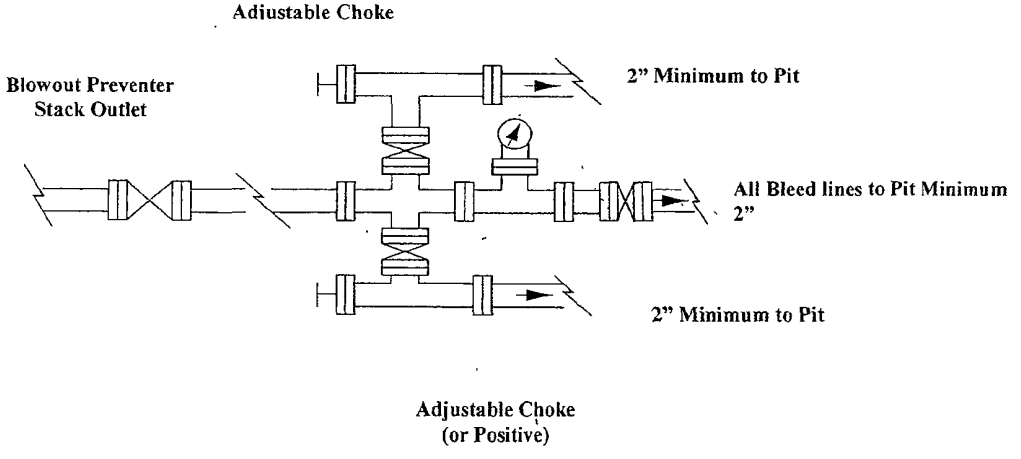
Created By: Julio Pina Date 11-Apr-11
Checked: _____ Date _____
Reviewed _____ Date. _____
Approved. _____ Date: _____

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

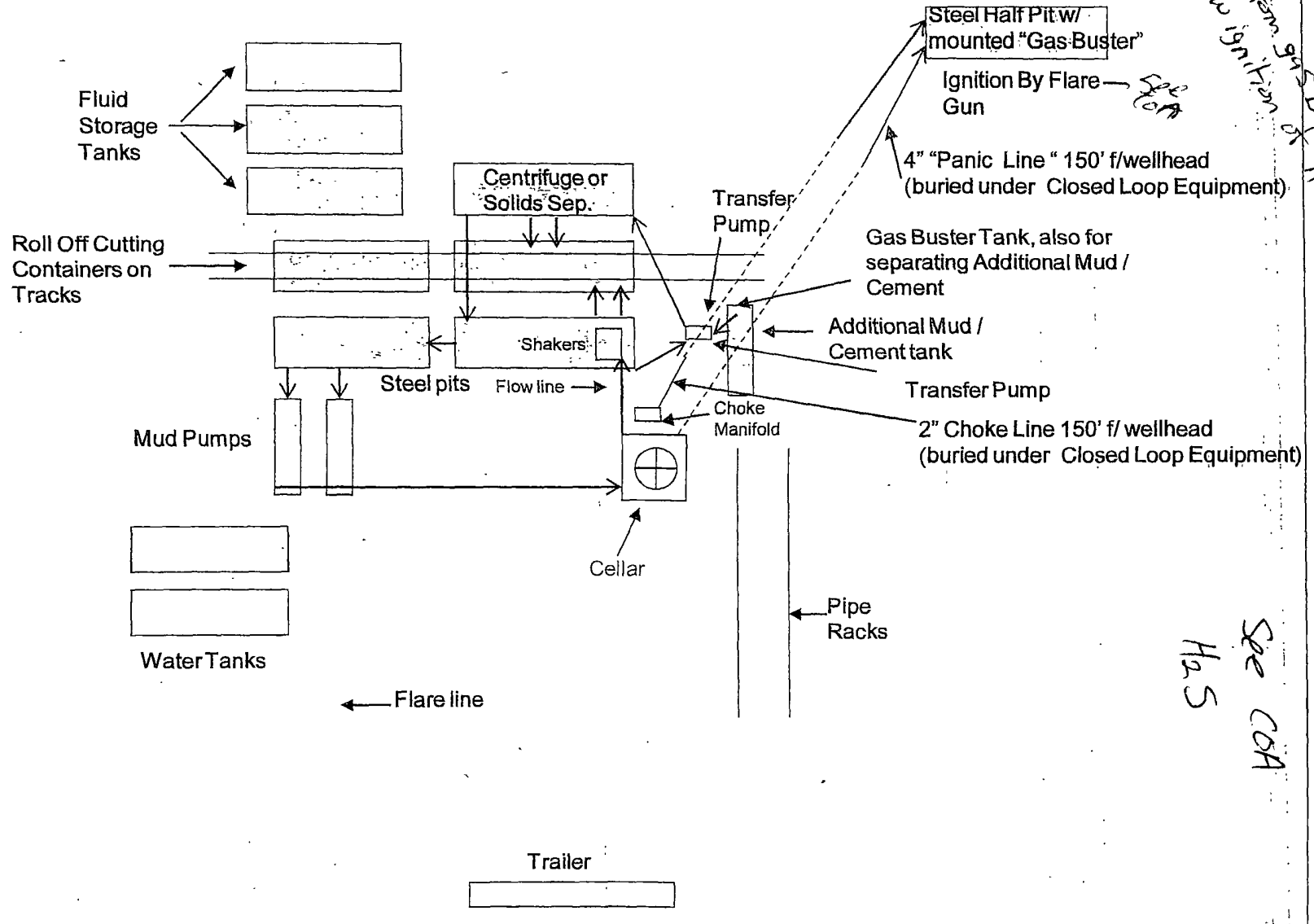


NOTES REGARDING THE BLOWOUT PREVENTERS
Master Drilling Plan
Eddy County, New Mexico

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.

COG Operating LLC

Closed Loop Equipment Diagram



Open bottom gas buster if Won't allow ignition of H_2S

See COA

Closed Loop Operation & Maintenance Procedure

All drilling fluid circulated over shaker(s) with cuttings discharged into roll off container.

Fluid and fines below shaker(s) are circulated with transfer pump through centrifuge(s) or solids separator with cuttings and fines discharged into roll off container.

Fluid is continuously re-circulated through equipment with polymer added to aid separation of cutting fines.

Roll off containers are lined and de-watered with fluids re-circulated into system.

Additional tank is used to capture unused drilling fluid or cement returns from casing jobs.

This equipment will be maintained 24 hrs./day by solids control personnel and or rig crews that stay on location.

Cuttings will be hauled to either:

CRI (permit number R9166)
or
GMI (permit number 711-019-001)

dependent upon which rig is available to drill this well.

DISTRICT 2 -- CHECKLIST FOR INTENTS TO DRILL

C 30560T

Operator COG OPR OGRID # 229137

Well Name & # SKELLY UNIT 855 Surface Type (F) (S) (P)

Location: UL J, Sect 15, Twnship 17 s, RNG 31 e, Sub-surface Type (F) (S) (P)

A. Date C101 rec'd 11/17/2011 C101 reviewed 11/28/2011

B. 1. Check mark, Information is OK on Forms:
OGRID ✓, BONDING ✓, PROP CODE ✓, WELL # ✓, SIGNATURE ✓
2. Inactive Well list as of: 11/28/2011 # wells 367, # Inactive wells 8
a. District Grant APD but see number of inactive wells:
No letter required ✓; Sent Letter to Operator ____, to Santa Fe ____
3. Additional Bonding as of: 11/28/2011
a. District Denial because operator needs addition bonding:
No Letter required ✓; Sent Letter to Operator ____, To Santa Fe____
b. District Denial because of Inactive well list and Financial Assurance:
No Letter required ✓; Sent Letter to Operator ____, To Santa Fe ___

C. C102 YES ✓, NO ___, Signature ✓

Mar Loco Pool FREN; GLORIETA-YESO, Code 26770-97866

a. Dedicated acreage 40, What Units_____
b. SUR. Location Standard _____: Non-Standard Location_____
c. Well shares acres: Yes ___, No ___, # of wells ____ plus this well #____

2. 2nd. Operator in same acreage, Yes_____, No _____
Agreement Letter _____, Disagreement letter_____

3. Intent to Directional Drill Yes ____, No ___
a. Dedicated acreage _____, What Units _____
b. Bottomhole Location Standard _____, Non-Standard Bottomhole _____

4. Downhole Commingle: Yes_____, No_____
a. Pool #2_____,Code_____, Acres_____
Pool #3_____, Code _____, Acres _____
Pool #4_____, Code_____, Acres_____

5. POTASH Area Yes _____, No ✓,

D. Blowout Preventer Yes ✓, No _____,

E. H2S Yes ✓, No _____,

F. C144 Pit Registration Yes ✓, No _____,

G. Does APD require Santa Fe Approval:
1. Non-Standard Location: Yes _____, No ✓, NSL #_____
2. Non-Standard Proration: Yes_____, No ✓, NSP # _____
3. Simultaneous Dedication: Yes _____, No ✓, SD # _____
Number of wells _____ Plus #_____
4. Injection order Yes _____, No ✓; PMX #_____ or WFX #_____
5. SWD order Yes _____, NO ✓; SWD # _____
6. DHC from SF_____; DHC-HOB_____; Holding_____

7. OCD Approval Date 11/28/2011 API #30-015-39702
8. Reviewers_____