12-909

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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

5 Lease Serial No: NMNM - 98122

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

1a Type of work: ☑ DRILL ☐ REENTER

7 If Unit or CA Agreement, Name and No: NMNM-71030C; Skelly Unit

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

8 Lease Name and Well No: SKELLY UNIT #701 <30560?>

2 Name of Operator: Chevron USA Agent: COG Operating LLC <229137>

9 API Well No: 30-015- 40757

3a Address: Agent Address: One Concho Center, 600 W. Illinois Ave, Midland, TX 79701

3b Phone No (include area code): 432-685-4384

10 Field and Pool, or Exploratory: Fren; Glorieta-Yeso 26770

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

At surface: 1262 FNL & 2274 FWL, Unit C

At proposed prod zone: 990 FNL & 2310 FEL, Unit B

11 Sec, T R M or Blk and Survey or Area: Sec 21 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)	16 No of acres in lease	17 Spacing Unit dedicated to this well
1262'	1120	40
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft	**19 Proposed Depth**	**20 BLM/BIA Bond No on file**
285'	TVD: 6800' MD: 6862'	NMB000740; NMB000215
21 Elevations (Show whether DF, KDB, RT, GL, etc)	**22 Approximate date work will start***	**23 Estimated duration**
3764' GL	08/31/2012	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)	Date
	Kelly Holly	06/26/2012

Title: Permitting Tech

Approved by (Signature)	Name (Printed/Typed)	Date
/s/ Don Peterson	/s/ Don Peterson	SEP 25 2012
Title	**Office**	
FIELD MANAGER	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 USC Section 1001 and Title 43 USC 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

Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

DISTRICT I
1625 N French Dr , Hobbs, NM 88240
Phone (575) 393-6161 Fax (575) 393-0720
DISTRICT II
811 S First St , Artesia, NM 88210
Phone (575) 748-1283 Fax (575) 748-9720
DISTRICT III
1000 Rio Brazos Road, Aztec, NM 87410
Phone (505) 334-6178 Fax (505) 334-6170
DISTRICT IV
1220 S St Francis Dr , Santa Fe, NM 87505
Phone (505) 476-3460 Fax (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015- 40757	26770	FREN; GLORIETA-YESO

Property Code	Property Name	Well Number
305607	SKELLY UNIT	701

OGRID No	Operator Name	Elevation
229137	COG OPERATING, LLC	3764'

Surface Location

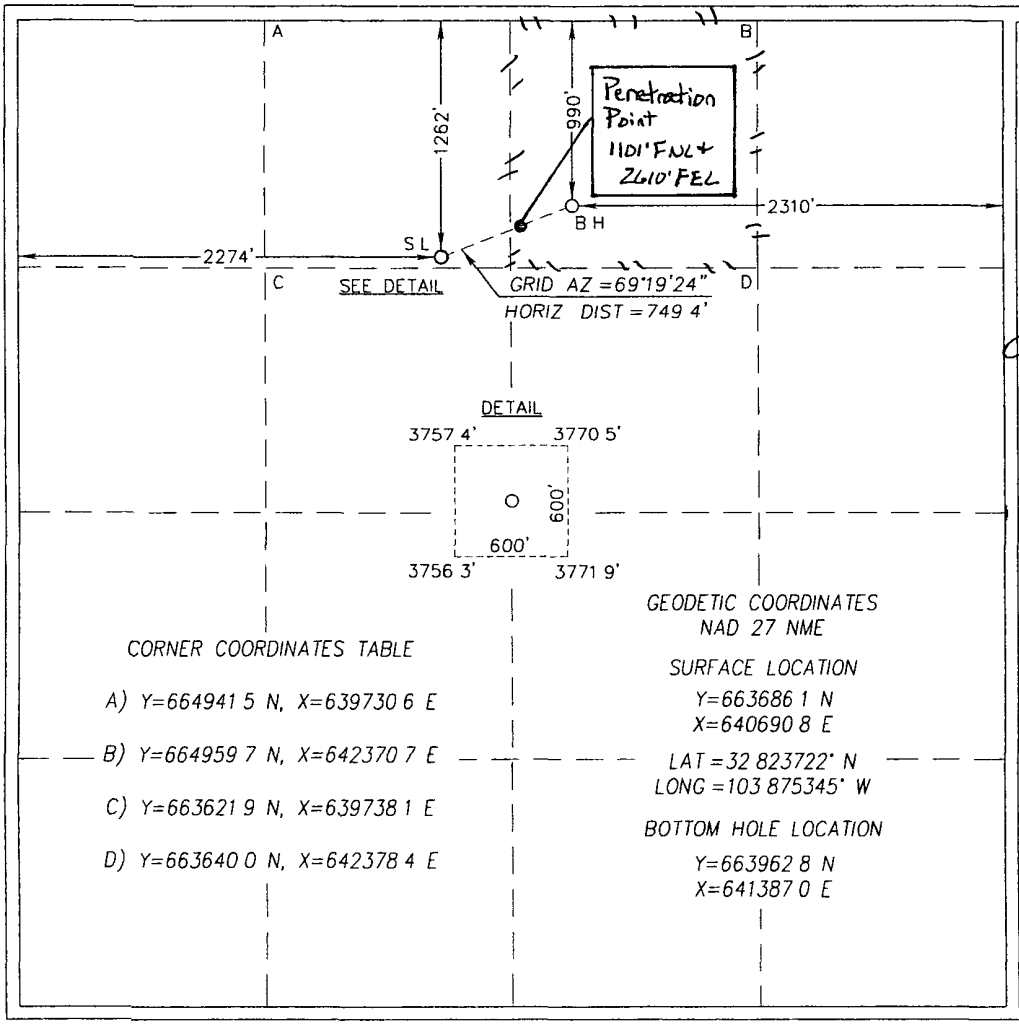
UL or lot No	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	21	17-S	31-E		1262	NORTH	2274	WEST	EDDY

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
B	21	17-S	31-E		990	NORTH	2310	EAST	EDDY

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 9/20/2012 Date

Robyn M. Odom
Printed Name

Rodom@concho.com
E-mail Address

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

MAY 23, 2012

Date of Survey

Signature & Seal of Professional Surveyor

RONALD J. EIDSON NEW MEXICO 3239 REGISTERED PROFESSIONAL SURVEYOR

Ronald J Eidson 08/30/2012

Certificate Number	Gary G Eidson	12641
	Ronald J Eidson	3239

BKL JWSC W O 12-13-1478

I hereby certify that I, or persons under my direct supervision, have inspected the drill site and access road proposed herein; that I am familiar with the conditions that presently exist; that I have full knowledge of State and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or COG Operating, LLC, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements. Executed this 12th day of June, 2012.

Signed: Carl Bird

Printed Name: Carl Bird

Position: Drilling Engineer

Address: 550 W. Texas, Suite 1300, Midland, Texas 79701

Telephone: (432) 683-7443

Field Representative (if not above signatory): Same

E-mail: cbird@concho.com

MASTER DRILLING PROGRAM

1. Geologic Name of Surface Formation

Quaternary

2. Estimated Tops of Important Geologic Markers:

Quaternary	Surface
Rustler	289'
Top of Salt	560'
Base of Salt	1150'
Yates	1590'
Seven Rivers	1910'
Queen	2520'
Grayburg	2900'
San Andres	3230'
Glorietta	4760'
Paddock	4850'
Blinebry	5350'
Tubb	6290'

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

Water Sand	150'	Fresh Water
Grayburg	2900'	Oil/Gas
San Andres	3230'	Oil/Gas
Glorieta	4760'	Oil/Gas
Paddock	4850'	Oil/Gas
Blinebry	5350'	Oil/Gas
Tubb	6290'	Oil/Gas

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

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-40/J-55 hybrid	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

5. Cement Program See COA

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

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

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'	Fresh Water	8.5	28	N.C.
450-1800'	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 2992 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. Completion is planned in the Paddock and Blinebry formations

CONCHO

COG Operating LLC

Eddy County, NM (NAN27 NME)
Skelly Unit #701

OH

Plan #2 7-7/8" Hole
Surface: 1262' FNL, 2274' FWL, Sec 21, T17S, R31E, Unit C
Top of Paddock @ 4800' TVD: 161' North of Surface & 396' East of Surfce
BHL: 980' FNL, 2300' FEL, Sec 21, T17S, R31E, Unit B

Standard Planning Report

18 September, 2012

Scientific Drilling

Database:	EDM 5000 1 Single User Db	**Local Co-ordinate Reference:**	Well #701
Company:	COG Operating LLC	**TVD Reference**	GL @ 3764 00usft
Project:	Eddy County, NM (NAN27 NME)	**MD Reference:**	GL @ 3764 00usft
Site:	Skelly Unit	**North Reference:**	Grid
Well:	#701	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 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		Using geodetic scale factor

Site	Skelly Unit				
Site Position		**Northing**	665,074 60 usft	**Latitude**	32° 49' 38 845 N
From:	Map	**Easting:**	647,417 00 usft	**Longitude**	103° 51' 12 345 W
Position Uncertainty	0 00 usft	**Slot Radius**	13-3/16 "	**Grid Convergence:**	0 26 °

Well	#701					
Well Position	**+N/-S**	-1,388 59 usft	**Northing:**	663,686 10 usft	**Latitude**	32° 49' 25 401 N
	+E/-W	-6,726 64 usft	**Easting**	640,690 80 usft	**Longitude:**	103° 52' 31 241 W
Position Uncertainty		0 00 usft	**Wellhead Elevation:**		**Ground Level:**	3,764 00 usft

Wellbore	OH				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	09/18/12	7 62	60 66	48,815

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	67 90	

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	
2,474 24	9 48	67 90	2,472 08	14 73	36 29	2 00	2 00	14 32	67 90	
6,862 15	9 48	67 90	6,800 00	286 72	706 25	0 00	0 00	0 00	0 00	PBHL

Database:	EDM 5000 1 Single User Db	**Local Co-ordinate Reference:**	Well #701
Company:	COG Operating LLC	**TVD Reference:**	GL @ 3764 00usft
Project:	Eddy County, NM (NAN27 NME)	**MD Reference:**	GL @ 3764 00usft
Site:	Skelly Unit	**North Reference:**	Grid
Well:	#701	**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
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 DLS 2.00 TFO 67.90									
2,100 00	2 00	67 90	2,099 98	0 66	1 62	1 75	2 00	2 00	0 00
2,200 00	4 00	67 90	2,199 84	2 63	6 47	6 98	2 00	2 00	0 00
2,300 00	6 00	67 90	2,299 45	5 90	14 54	15 69	2 00	2 00	0 00
2,400 00	8 00	67 90	2,398 70	10 49	25 83	27 88	2 00	2 00	0 00
2,474 24	9 48	67 90	2,472 08	14 73	36 29	39 16	2 00	2 00	0 00
Start 4387.91 hold at 2474.24 MD									
2,500 00	9 48	67 90	2,497 48	16 33	40 22	43 41	0 00	0 00	0 00
2,600 00	9 48	67 90	2,596 12	22 53	55 49	59 89	0 00	0 00	0 00
2,700 00	9 48	67 90	2,694 75	28 73	70 76	76 37	0 00	0 00	0 00
2,800 00	9 48	67 90	2,793 38	34 92	86 03	92 84	0 00	0 00	0 00
2,900 00	9 48	67 90	2,892 02	41 12	101 29	109 32	0 00	0 00	0 00
3,000 00	9 48	67 90	2,990 65	47 32	116 56	125 80	0 00	0 00	0 00
3,100 00	9 48	67 90	3,089 28	53 52	131 83	142 28	0 00	0 00	0 00
3,200 00	9 48	67 90	3,187 92	59 72	147 10	158 76	0 00	0 00	0 00
3,300 00	9 48	67 90	3,286 55	65 92	162 37	175 24	0 00	0 00	0 00
3,400 00	9 48	67 90	3,385 18	72 12	177 64	191 72	0 00	0 00	0 00
3,500 00	9 48	67 90	3,483 81	78 31	192 90	208 19	0 00	0 00	0 00
3,600 00	9 48	67 90	3,582 45	84 51	208 17	224 67	0 00	0 00	0 00
3,700 00	9 48	67 90	3,681 08	90 71	223 44	241 15	0 00	0 00	0 00
3,800 00	9 48	67 90	3,779 71	96 91	238 71	257 63	0 00	0 00	0 00
3,900 00	9 48	67 90	3,878 35	103 11	253 98	274 11	0 00	0 00	0 00
4,000 00	9 48	67 90	3,976 98	109 31	269 25	290 59	0 00	0 00	0 00
4,100 00	9 48	67 90	4,075 61	115 51	284 51	307 07	0 00	0 00	0 00
4,200 00	9 48	67 90	4,174 24	121 70	299 78	323 54	0 00	0 00	0 00
4,300 00	9 48	67 90	4,272 88	127 90	315 05	340 02	0 00	0 00	0 00
4,400 00	9 48	67 90	4,371 51	134 10	330 32	356 50	0 00	0 00	0 00
4,500 00	9 48	67 90	4,470 14	140 30	345 59	372 98	0 00	0 00	0 00
4,600 00	9 48	67 90	4,568 78	146 50	360 86	389 46	0 00	0 00	0 00
4,700 00	9 48	67 90	4,667 41	152 70	376 12	405 94	0 00	0 00	0 00
4,800 00	9 48	67 90	4,766 04	158 90	391 39	422 42	0 00	0 00	0 00
4,834 43	9 48	67 90	4,800 00	161 03	396 65	428 09	0 00	0 00	0 00
Top of Paddock									
4,900 00	9 48	67 90	4,864 68	165 09	406 66	438 90	0 00	0 00	0 00
5,000 00	9 48	67 90	4,963 31	171 29	421 93	455 37	0 00	0 00	0 00
5,100 00	9 48	67 90	5,061 94	177 49	437 20	471 85	0 00	0 00	0 00
5,200 00	9 48	67 90	5,160 57	183 69	452 47	488 33	0 00	0 00	0 00
5,300 00	9 48	67 90	5,259 21	189 89	467 73	504 81	0 00	0 00	0 00
5,400 00	9 48	67 90	5,357 84	196 09	483 00	521 29	0 00	0 00	0 00
5,500 00	9 48	67 90	5,456 47	202 29	498 27	537 77	0 00	0 00	0 00
5,600 00	9 48	67 90	5,555 11	208 48	513 54	554 25	0 00	0 00	0 00
5,700 00	9 48	67 90	5,653 74	214 68	528 81	570 72	0 00	0 00	0 00
5,800 00	9 48	67 90	5,752 37	220 88	544 08	587 20	0 00	0 00	0 00
5,900 00	9 48	67 90	5,851 00	227 08	559 34	603 68	0 00	0 00	0 00
6,000 00	9 48	67 90	5,949 64	233 28	574 61	620 16	0 00	0 00	0 00
6,100 00	9 48	67 90	6,048 27	239 48	589 88	636 64	0 00	0 00	0 00
6,200 00	9 48	67 90	6,146 90	245 68	605 15	653 12	0 00	0 00	0 00
6,300 00	9 48	67 90	6,245 54	251 87	620 42	669 60	0 00	0 00	0 00
6,400 00	9 48	67 90	6,344 17	258 07	635 69	686 07	0 00	0 00	0 00
6,500 00	9 48	67 90	6,442 80	264 27	650 95	702 55	0 00	0 00	0 00

Database:	EDM 5000 1 Single User Db	**Local Co-ordinate Reference:**	Well #701
Company:	COG Operating LLC	**TVD Reference:**	GL @ 3764 00usft
Project:	Eddy County, NM (NAN27 NME)	**MD Reference:**	GL @ 3764 00usft
Site:	Skelly Unit	**North Reference:**	Grid
Well:	#701	**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)
6,600 00	9 48	67 90	6,541 44	270 47	666 22	719 03	0 00	0 00	0 00
6,700 00	9 48	67 90	6,640 07	276 67	681 49	735 51	0 00	0 00	0 00
6,800 00	9 48	67 90	6,738 70	282 87	696 76	751 99	0 00	0 00	0 00
6,862 15	9 48	67 90	6,800 00	286 72	706 25	762 23	0 00	0 00	0 00
PBHL									

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
PBHL	0 00	0 01	6,800 00	286 72	706 25	663,972 80	641,397 00	32° 49' 28 207 N	103° 52' 22 951 W
- plan hits target center									
- Circle (radius 10 00)									

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

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,834 43	4,800 00	Top of Paddock		0 00	

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 DLS 2 00 TFO 67 90
2,474 24	2,472 08	14 73	36 29	Start 4387 91 hold at 2474 24 MD

CONCHO

Scientific Drilling

Skelly Unit #701
Eddy County, NM (NAN27 NME)
Northing: 663686.10
Easting: 640690.80
Plan #2 7-7/8" Hole

T M

To convert Magnetic North to Grid Add 7 37°
To convert True North to Grid, Subtract 0 25°

Azimuths to Grid North
True North -0 25°
Magnetic North 7 37°

Magnetic Field
Strength 48815 2snT
Dip Angle 60 66°
Date 09/18/2012
Model IGRF2010

WELL DETAILS

Ground Level 3764 00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0 00	0 00	663686 10	640690 80	32° 49' 25 401 N	103° 52' 31 241 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	
2000 00	0 00	0 00	2000 00	0 00	0 00	0 00	0 00	0 00	
2474 24	9 48	67 90	2472 08	14 73	36 29	2 00	67 90	39 16	
6862 15	9 48	67 90	6800 00	286 72	706 25	0 00	0 00	762 23	PBHL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting
PBHL	6800 00	286 72	706 25	663972 80	641397 00

SITE DETAILS Skelly Unit
Site Centre Northing 665074 60
Easting 647417 00

Positional Uncertainty 0 00
Convergence 0 26
Local North Grid

PROJECT DETAILS Eddy County NM (NAN27 NME)
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

CASING DETAILS

TVD	MD	Name	Size
1900 00	1900 08	8-5/8" Casing	8-5/8

Map System US State Plane 1927 (Exact solution)
Datum NAD 1927 (NADCON CONUS)
Ellipsoid Clarke 1866
Zone Name New Mexico East 3001

Local Origin Well #701 Grid North

Latitude 32° 49' 25 401 N
Longitude 103° 52' 31 241 W

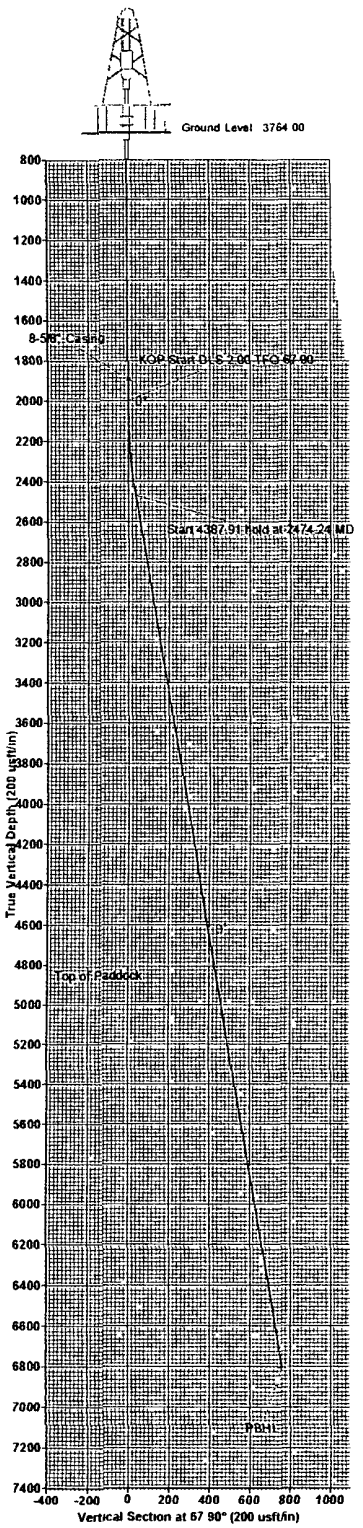
Grid East 640690 80
Grid North 663686 10
Scale Factor 1 000

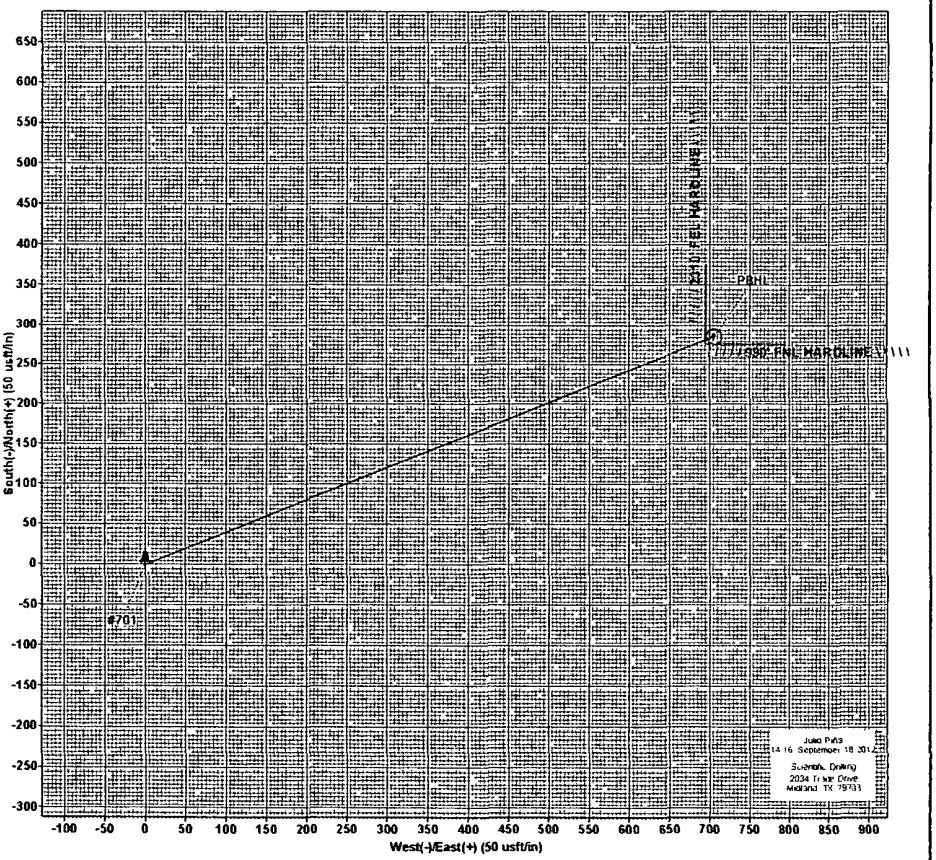
Geomagnetic Model IGRF2010
Sample Date 18-Sep-12
Magnetic Declination 7 62°
Dip Angle from Horizontal 60 66°
Magnetic Field Strength 48815

To convert Magnetic North to Grid Add 7 37°
To convert Magnetic North to True North Add 7 62° East
To convert True North to Grid Subtract 0 25°

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
4800 00	4834 43	Top of Paddock





COG OPERATING LLC
550 West Texas, Suite 100
Midland, TX 79701

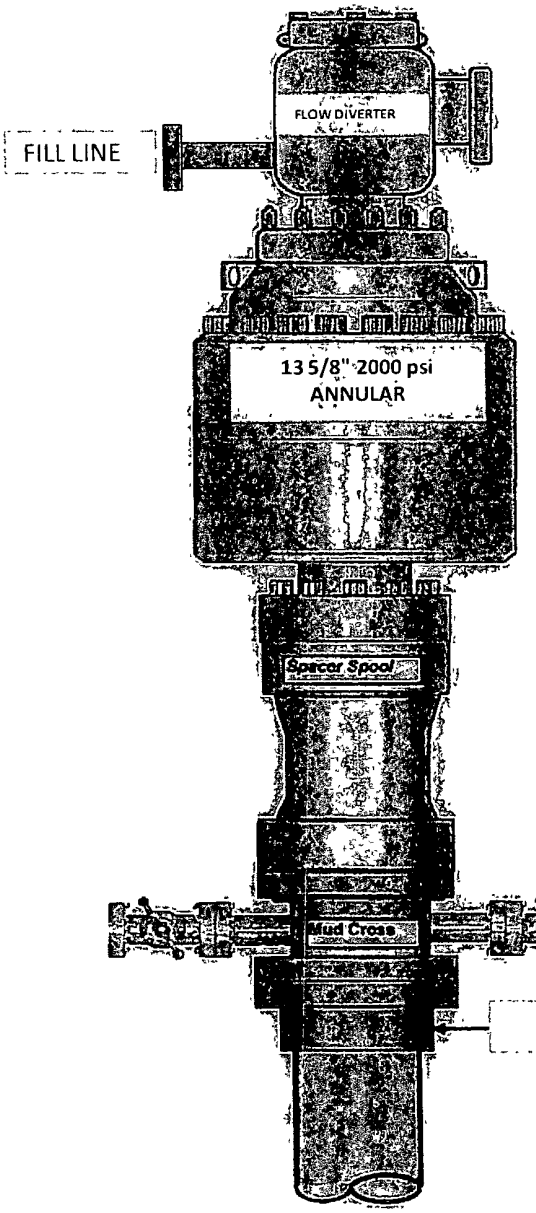
DIRECTIONAL PLAN VARIANCE REQUEST

SKELLY UNIT #701
EDDY, NM

SHL	1262 FNL, 2274 FWL	Sec 21, T17S, R31E, Unit C
BHL	990 FNL, 2310 FWL	Sec 21, T17S, R31E, Unit C

COG Operating LLC, as Operator, desires that the APD reflect the footages as stated on the surveyor's plat. However, Operator also desires to avoid inadvertently drilling the well to a non-standard location. Therefore, due to the proximity of the plat bottom hole location to the pro-ration unit hard line(s), the attached directional plan is designed to avoid the hard lines by as much as fifty feet; said fifty feet being in either (or both) the north-south and/or east-west directions as applicable.

13 5/8" 2K ANNULAR



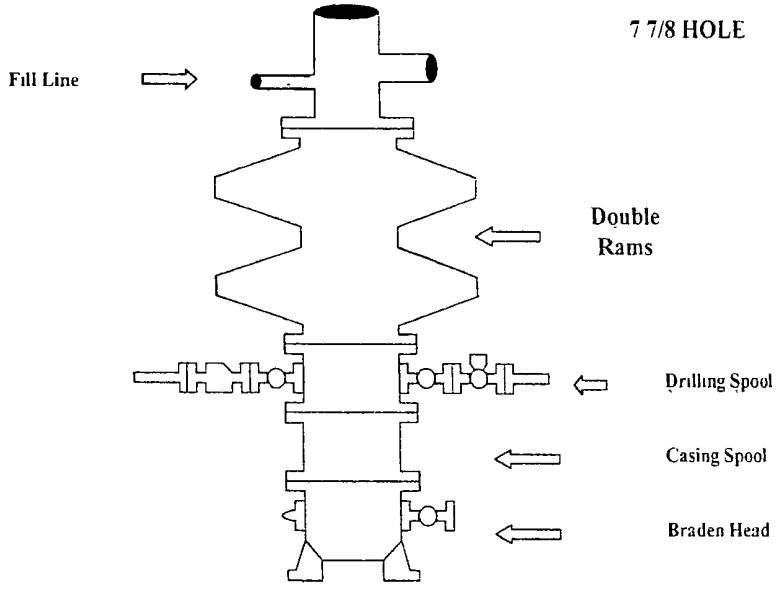
4-1/16",2K VALVES

13 5/8" 3K "A" SECTION

COG Operating LLC

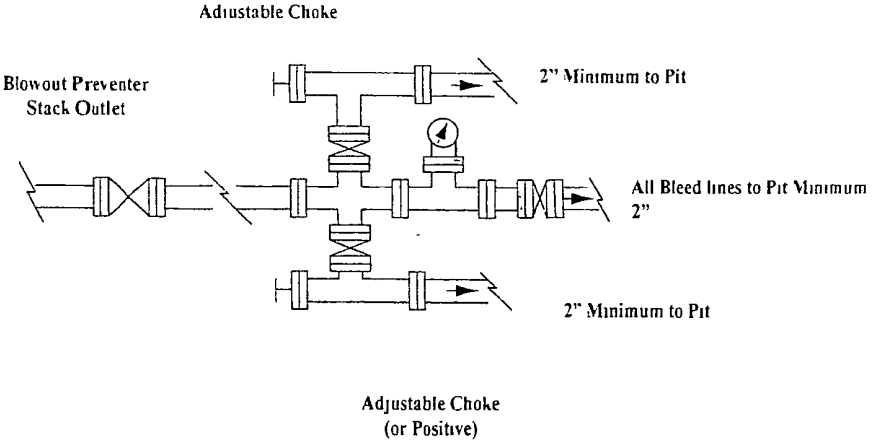
Exhibit #9

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

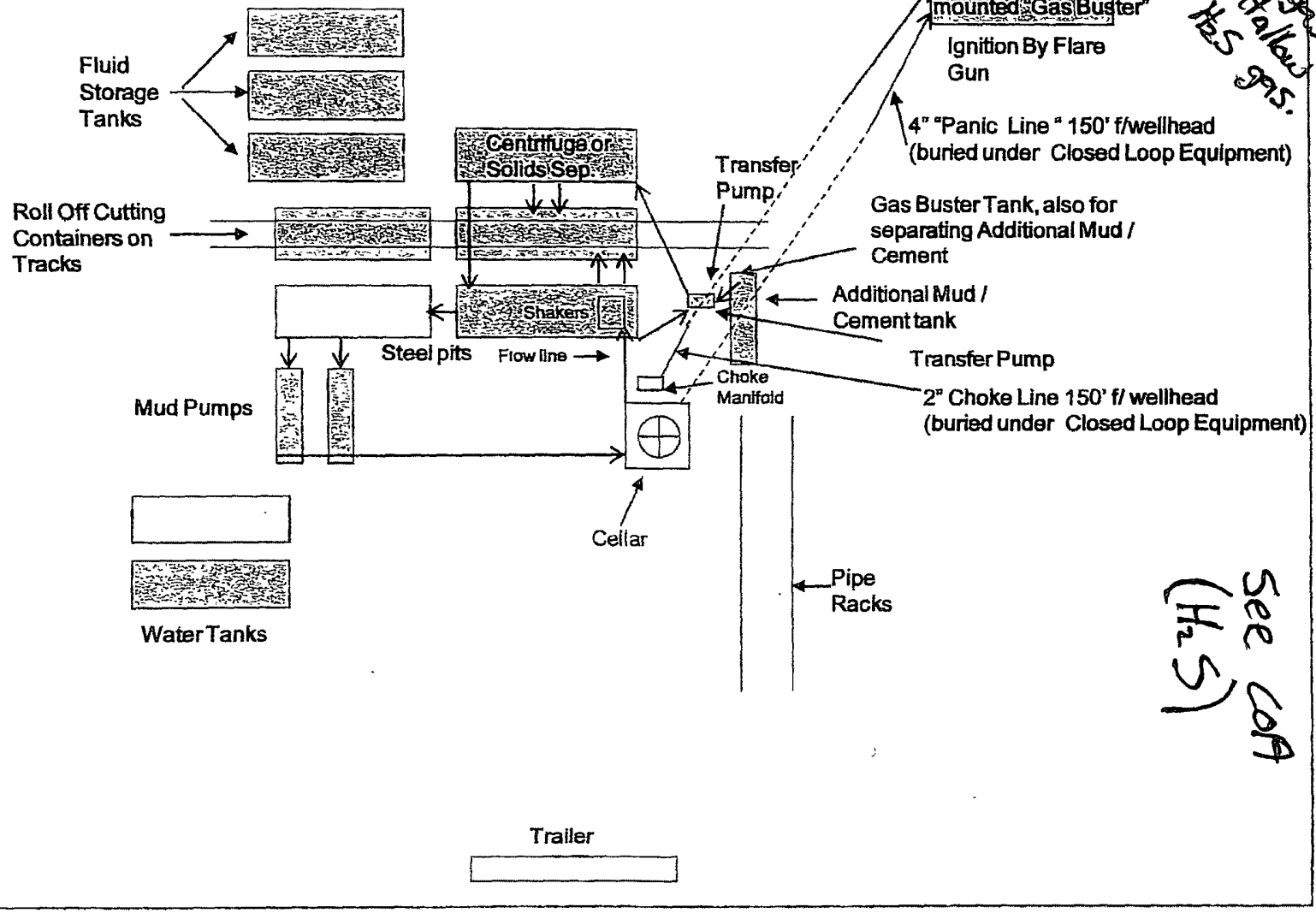
9 Extension wrenches and hands wheels to be properly installed

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



COG Operating LLC

Hydrogen Sulfide Drilling Operation Plan

I. HYDROGEN SULFIDE TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

1. The hazards an characteristics of hydrogen sulfide (H2S)
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H2S detectors alarms warning systems, briefing areas, evacuation procedures, and prevailing winds.
4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

1. The effects of H2S on metal components. If high tensile tubular are to be used, personnel well be trained in their special maintenance requirements.
2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
3. The contents and requirements of the H2S Drilling Operations Plan and Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H2S zone (within 3 days or 500 feet) and weekly H2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H2S Drilling Operations Plan and the Public Protection Plan. **The concentrations of H2S of wells in this area from surface to TD are low enough that a contingency plan is not required.**

II. H2S SAFETY EQUIPMENT AND SYSTEMS

Note: All H2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonable expected to contain H2S.

1. **Well Control Equipment:**

   A. Flare line.

   B. Choke manifold.

   C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.

   D. Auxiliary equipment may include if applicable: annular preventer & rotating head.

2. **Protective equipment for essential personnel:**

   A. Mark II Survive air 30-minute units located in the doghouse and at briefing areas, as indicated on well site diagram.

3. **H2S detection and monitoring equipment:**

   A. 1 portable H2S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H2S levels of 20 PPM are reached.

4. **Visual warning systems:**

   A. Wind direction indicators as shown on well site diagram (Exhibit #8).

   B. Caution/Danger signs (Exhibit #7) shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate. See example attached.

5. **Mud program:**

   A. The mud program has been designed to minimize the volume of H2S circulated to surface. Proper mud weight, safe drilling practices, and the use of H2S scavengers will minimize hazards when penetrating H2S bearing zones.

6. **Metallurgy:**

   A. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.

   B. All elastomers used for packing and seals shall be H2S trim.

7. **Communication:**

   A. Radio communications in company vehicles including cellular telephone and 2-way radio.

   B. Land line (telephone) communication at Office.

8. **Well testing:**

   A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safely and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill-stem-testing operations conducted in an H2S environment will use the closed chamber method of testing.

   B. There will be no drill stem testing.

EXHIBIT #7

WARNING

YOU ARE ENTERING AN H_2S

AUTHORIZED PERSONNEL ONLY

1. BEARDS OR CONTACT LENSES NOT ALLOWED
2. HARD HATS REQUIRED
3. SMOKING IN DESIGNATED AREAS ONLY
4. BE WIND CONSCIOUS AT ALL TIMES
5. CHECK WITH COG OPERATING FOREMAN AT

COG OPERATING LLC

1-432-683-7443

1-575-746-2010

EDDY COUNTY EMERGENCY NUMBERS

ARTESIA FIRE DEPT. 575-746-5050
ARTESIA POLICE DEPT. 575-746-5000
EDDY CO. SHERIFF DEPT. 575-746-9888

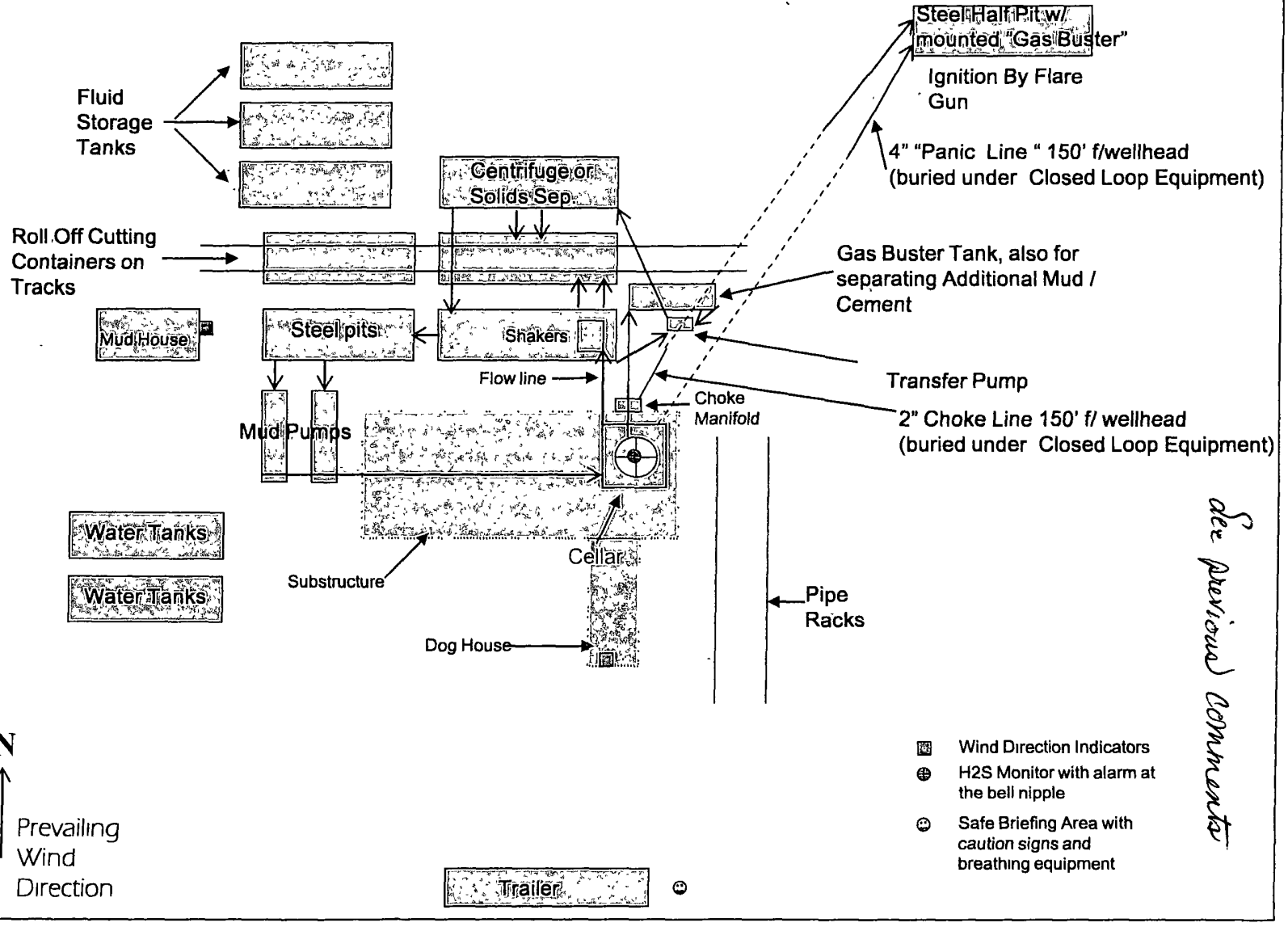
LEA COUNTY EMERGENCY NUMBERS

HOBBS FIRE DEPT. 575-397-9308
HOBBS POLICE DEPT. 575-397-9285
LEA CO. SHERIFF DEPT. 575-396-1196

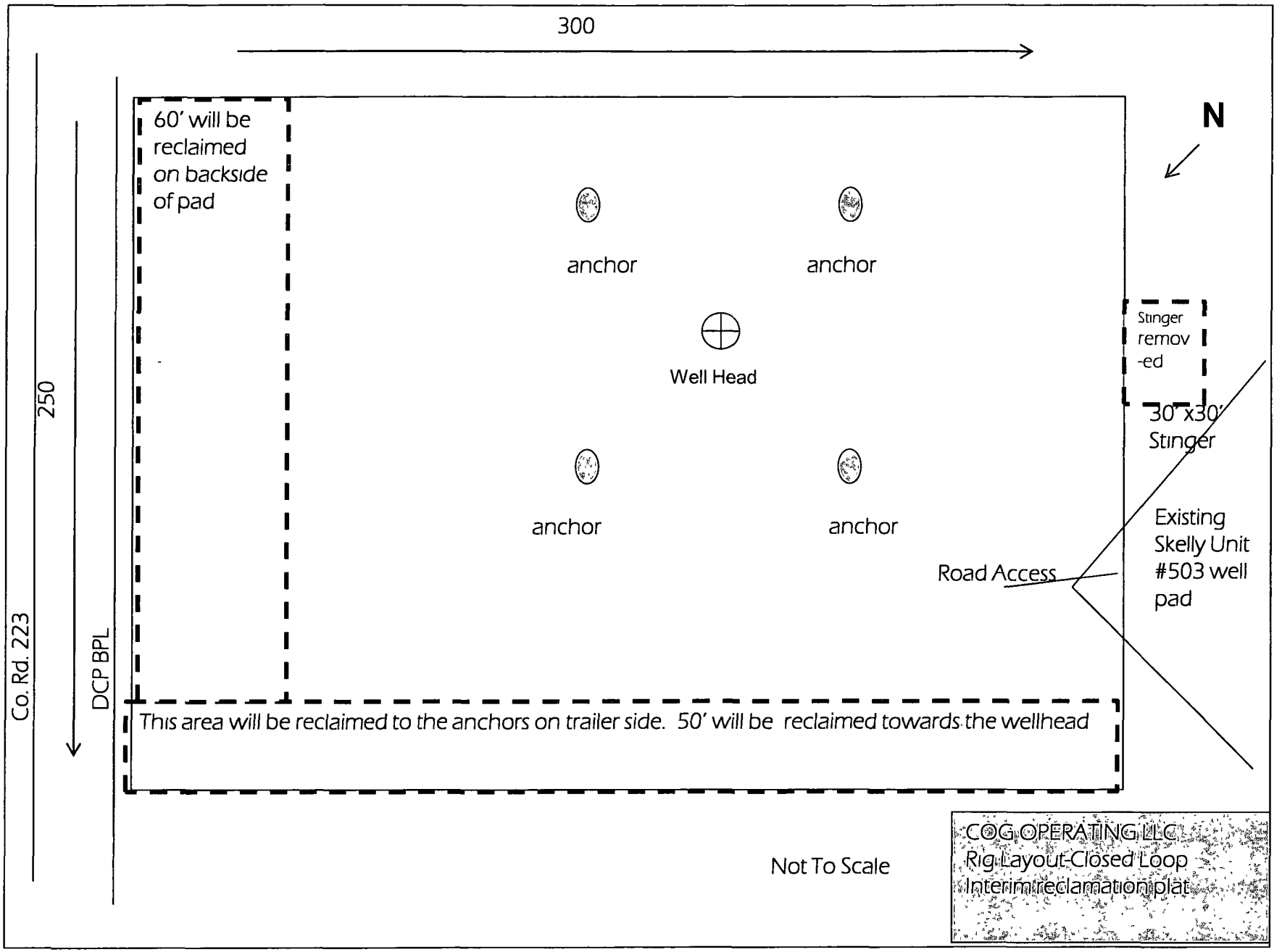
COG Operating LLC

EXHIBIT 8

Drilling Location - H2S Safety Equipment Diagram



See previous comments


300
250
60' will be reclaimed on backside of pad
N
anchor
anchor
Well Head
Stinger remov -ed
30' x30' Stinger
anchor
anchor
Existing Skelly Unit #503 well pad
Road Access
Co. Rd. 223
DCP BPL
This area will be reclaimed to the anchors on trailer side. 50' will be reclaimed towards the wellhead
Not To Scale
COG OPERATING LLC
Rig Layout-Closed Loop
Interim reclamation plat

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	COG Operating
LEASE NO.:	NM98122
WELL NAME & NO.:	701 Skelly Unit
SURFACE HOLE FOOTAGE:	1262' FNL & 2274' FWL
BOTTOM HOLE FOOTAGE	990' FNL & 2310' FWL
LOCATION:	Section 21, T.17 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.