HOBBS OCD

ATS-13-1111

Form 3160-3
(March 2012)

MAR 19 2014

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Hobbs

RECEIVED

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMLC-0315712

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

1a. Type of work: ☑ DRILL ☐ REENTER

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.
Sneed 9 Federal #7 <40210>

2. Name of Operator COG Operating LLC <229137>

9. API Well No.
30-025- 41740

3a. 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
Maljamar; Yeso, West <44500>

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

At surface SHL: 2260' FNL & 1785' FWL, UL F

At proposed prod. zone

11. Sec., T. R. M. or Blk. and Survey or Area
Sec 9, T17S, R32E

14. Distance in miles and direction from nearest town or post office*
2.5 miles Northeast of Loco Hills, 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)
~~1785~~ 855'

16. No. of acres in lease
760

17. Spacing Unit dedicated to this well
40

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
352'

19. Proposed Depth
7000'

20. BLM/BIA Bond No. on file
NMB000740; NMB000215

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
4082' GL

22. Approximate date work will start*
11/30/2013

23. Estimated duration
15 Days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must 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 must 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 BLM.

25. Signature

Name *(Printed/Typed)*
Kelly J. Holly

Date
8/08/2013

Title
Permitting Tech

Approved by *(Signature)*
/s/ STEPHEN J. CAFFEY

Name *(Printed/Typed)*

Date
MAR 13 2014

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.

(Continued on page 2)

*(Instructions on page 2)

Roswell Controlled Water Basin

KZ
03/19/14

Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

MAR 20 2014

MASTER DRILLING PROGRAM

1. Geologic Name of Surface Formation

Quaternary

2. Estimated Tops of Important Geologic Markers:

Quaternary	Surface
Rustler	918'
Top of Salt	1470'
Base of Salt	2064'
Yates	2236'
Seven Rivers	2581'
Queen	3212'
Grayburg	3631'
San Andres	3964'
Glorietta	5450'
Paddock	5497'
Blinebry	5937'
Tubb	6870'

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

Water Sand	150'	Fresh Water
Grayburg	3631'	Oil/Gas
San Andres	3964'	Oil/Gas
Glorietta	5450'	Oil/Gas
Paddock	5497'	Oil/Gas
Blinebry	5937'	Oil/Gas
Tubb	6870'	Oil/Gas

No other formations are expected to give up oil, gas or fresh water in measurable quantities. Setting 13 3/8" casing to ~~943'~~ 980' 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 2250' 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-~~943'~~ 980	13 3/8"	48#	H-40/J-55 hybrid	ST&C/New	6.03/1.85/10.32
11"	0-2250'	8 5/8"	32#	J-55	ST&C/New	1.75/2.03/6.07
7 7/8"	0-T.D.	5 1/2"	15.5	J-55	LT&C/New	2.00/1.21/2.68

5. Cement Program

13 3/8" Surface Casing:

LEAD: (0'-500') 425 sks Class C + 4% Gel+ 2% CaCl2 + 0.25 pps CF, yield-1.75 cf/sk, wt. 13.5 ppg Excess 114% + **TAIL: (500'-943')** 300 sx w/ 2% CaCl2+ 0.25 pps CF, yield-1.32 cf/sk, wt. 14.8 ppg. Excess 15%. Lead cement circulated to surface.

8 5/8" Intermediate Casing:

11" Hole:

Single Stage: LEAD: (0'-1500') 375 sks 50:50:10 C:Poz:Gel w/ 5% Salt +0.25 pps CF + 5pps LCM yield-2.45 cf/sk, wt. 11.8 ppg Excess 56% + **TAIL: (1500'-2250')** 200 sks Class C w/2% CaCl2, yield-1.32 cf/sk, 14.8 ppg. Excess 29%. Lead cement circulated to surface. .

Multi-Stage: DV Tool at 993' Stage 1 LEAD: (993'-1500') 175 sks 50:50:10 C:Poz:Gel w/ 5% Salt +0.25 pps CF+ 5 pps LCM, yield-2.45 cf/sk, wt. 11.8 ppg.Excess 233%. **TAIL: (1500'-2250')** 200 sks Class C w/2% CaCl2, yield - 1.32 cf/sk, 14.8 ppg. Excess 29%. **Stage 2: (0'-993')** 200 sks 50:50:10 C:Poz:Gel w/ 5% Salt + 0.25 pps CF + 5 pps LCM, yield 2.45 cf/sk, wt. 11.8 ppg. Excess 6%. Circulate cement to surface, assumption for tool is lost circulation. Multi stage tool to be set at approximately, depending on hole conditions, 993' (50' below the surface casing). Cement volumes will be adjusted

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proportionately for depth changes of multi stage tool.

5 1/2" Production Casing:

Single Stage: LEAD: (0'-4000') 500 sks 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 cf/sk, 12.5 ppg Excess 43% + **TAIL: (4000'-7000')** 400 sks 50:50:2 C:Poz:Gel w/ 5% Salt + 3 pps LCM + 0.6% SMS + 1% FL-25 + 1% BA-58 + 0.125 pps CF, yield-1.37 cf/sk, wt. 14.0 ppg. Excess 5%. 200' minimum tie back to intermediate casing. Cement calculated to surface.

Multi-Stage: DV Tool at 2300'. Assumed TD of 7000'. Stage 1 Lead: (2300'-4000') 250 sks 35:65:6 C:Poz:Gel w/ 5% Salt + 5 pps LCM + 0.2% SMS + 0.3% FL-52A + 0.125 pps CF, yield – 2.01cf/sk, 12.5 ppg.Excess 71% **TAIL: (4000'-7000')** 500 sks 50:50:2, C:Poz:Gel w/5% Salt + 3pps LCM + 0.6% SMS + 1 % FL-25 + 1% BA-58 + 0.125 pps CF yield 1.37 cf/sk, wt. 14.0 ppg. Excess 32%. Minimum volume will be adjusted up after caliper is run. **Stage 2 LEAD: (0'-1500')** 250 sks 35:65:6 C:Poz:Gel w/ 5% Salt + 5 pps LCM + 0.2% SMS + 0.3% FL-52A + 0.125 pps CF, yield – 2.01 cf/sks, wt. 12.5 ppg Excess 89% + **TAIL: (1500'-2300')** 250 sks Class C w/ 0.3% R-3 + 1.5% CD-32 yield – 1.02 cf/sks, wt. 16.8 ppg. Excess 80%. Densified cement to control water flows if encountered. 200' minimum tie back to intermediate casing. Lead cement calculated back to surface. Multi stage tool to be set at approximately 2300', depending on hole conditions. 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 nipped 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 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. 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 will include a Kelly cock and floor safety valve, choke lines and a choke manifold with a 2000 psi WP rating.

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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.

All casing strings below the conductor shall be pressure tested to 0.22 psi per foot of casing string depth or 1500 psig, whichever is greater, but not to exceed 70 percent of casing's minimum internal yield. If pressure declines more than 10 percent in 30 minutes, corrective action will be taken.

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

DEPTH	TYPE	WEIGHT	VISCOSITY	WATERLOSS
0-943' 980'	Fresh Water	8.5	28	N.C.
943-2250'	Brine	10	30	N.C.

2250'-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.

Visual or electronic mud monitoring equipment shall be in place to detect volume changes indicating loss or gain of circulating fluid volume.

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

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

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. Based on BHP tests in this area, the estimated bottom hole temperature at TD is 100° Fahrenheit and the estimated maximum bottom hole pressure is 2950 psi. Wells in the Maljamar area will penetrate formations that are known or could reasonably be expected to contain Hydrogen Sulfide. Measurable gas volumes or hydrogen sulfide levels have not been encountered during drilling operations in this area. However as per Onshore order No. 6 a Hydrogen Sulfide Drilling Operation Plan is included with this APD. If H2S concentrations exceed 100 ppm a remote operated choke will be installed. All BOPE testing companies used by COG have H2S certified

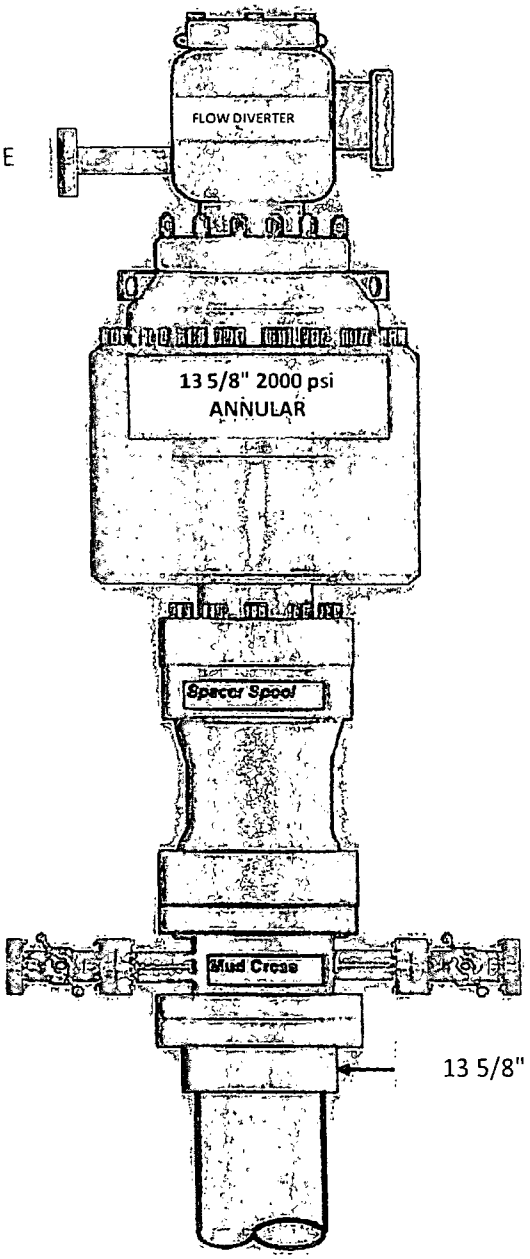
See COA

employees and will work on H2S locations. 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.

13 5/8" 2K ANNULAR



FILL LINE

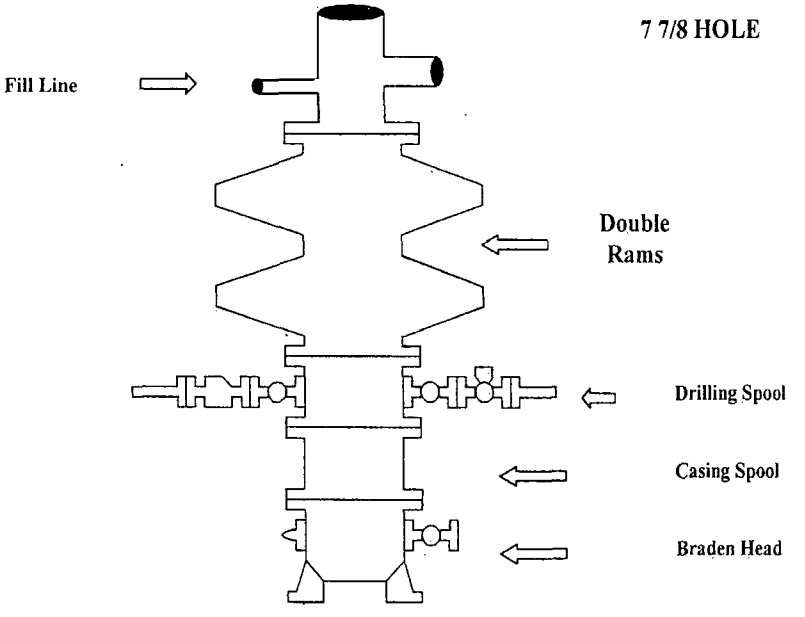
4-1/16",2K VALVES

13 5/8" 3K "A" SECTION

COG Operating LLC

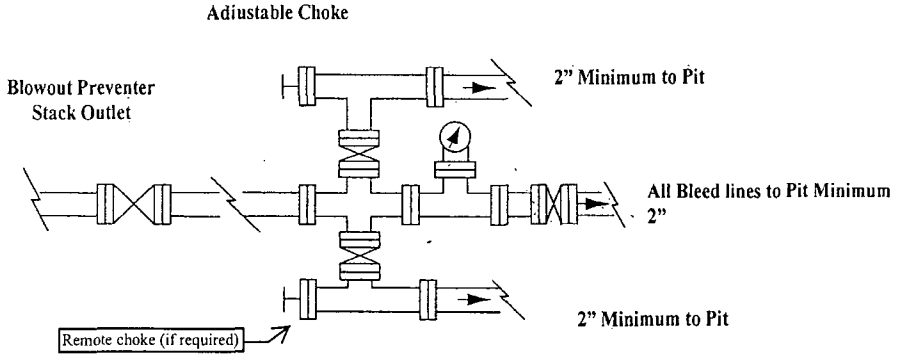
Exhibit #9

BOPE and Choke Schematic



Minimum 4" Nominal choke and kill lines

Choke Manifold Requirement (2000 psi WP)
No Annular Required



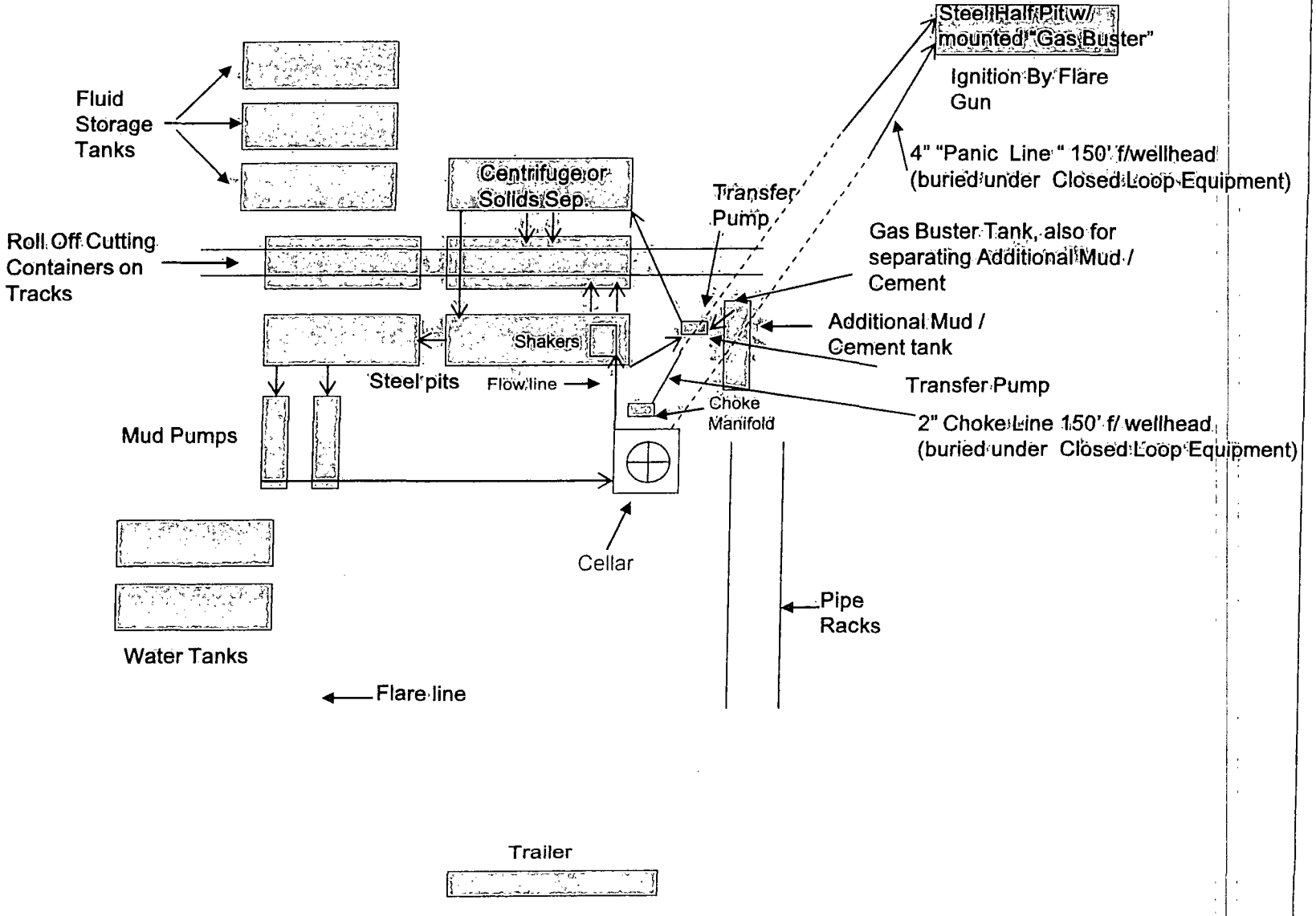
Adjustable Choke

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



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.