

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

reverse side)

Expires: February 28, 1995

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

Artesia, NM 88210

LEASE DESIGNATION AND SERIAL NO.  
NM-81622

INDIAN, ALLOTTEE OR TRIBE NAME

UNIT AGREEMENT NAME

FARM OR LEASE NAME, WELL NO.

GOLD RUSH "30" FED. # 8 Q

AP WELL NO.

FIELD AND POOL, OR WILDCAT

NASH DRAW - BRUNNEN CANYON

SEC., T., E., M., OR S.E.C.  
AND SURVEY OR AREA

SECTION 30 T23S-R30E

COUNTY OR PARISH

EDDY CO. NEW MEXICO

NO. OF ACRES ASSIGNED  
TO THIS WELL

40

ROTARY OR CABLE TOOLS  
ROTARY

APPROX. DATE WORK WILL START\*  
WHEN APPROVED

TYPE OF WORK  
DRILL ☒ DEEPEN ☐  
D. TYPE OF WELL  
OIL WELL ☒ GAS WELL ☐ OTHER ☐  
2. NAME OF OPERATOR  
COG OPERATING, LLC. (GREG WILKES 432-685-4341)

3. ADDRESS AND TELEPHONE NO.  
550 WEST TEXAS AVENUE SUITE 1300 MIDLAND, TEXAS 79701

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)  
At surface 2310' FEL & 2630' FSL SECTION 30 T23S-R30E EDDY CO.  
At proposed prod. zone SAME

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*

Approximately 15 miles East of Loving New Mexico

10. DISTANCE FROM PROPOSED\*  
LOCATION TO NEAREST  
PROPERTY OR LEASE LINE, FT.  
(Also to nearest drlg. unit line, if any) 2310'

16. NO. OF ACRES IN LEASE  
320

13. DISTANCE FROM PROPOSED LOCATION\*  
TO NEAREST WELL, DRILLING, COMPLETED,  
OR APPLIED FOR, ON THIS LEASE, FT. 660'

19. PROPOSED DEPTH  
7450'

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
3096' GR.

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
25"	Conductor	NA	40'	Cement to surface with Redi-mix
WITNESS 17 1/2"	H-40 13 3/8"	48	650'	750 Sx. Circulate cement to sur.
12 1/2"	J-55 8 5/8"	32	3100'	1150 Sx. " " "
7 7/8"	J-55 5 1/2"	15.5	7450'	1000 Sx. " " "

CAPITAN CONTROLLED WATER BASIN

1. Drill 25" hole to 40'. Set 40' of 20" conductor pipe and cement to surface with Redi-mix.
2. Drill 17 1/2" hole to 650'. Run and set 650' of 13 3/8" 48# H-40 ST&C casing. Cement with 500 Sx. of Class "C" Halco-Light + additives, tail in with 200 Sx. of Class "C" cement + 2% CaCl, 1/4# Flocele/Sx. Circulate cement to surface.
3. Drill 12 1/2" hole to 3100'. Run and set 3100' of 8 5/8" 32# J-55 ST&C casing. Cement with 925 Sx. of Class "C" Halco Light + additives, tail in with 250 Sx. of Class "C" + 1/4# Flocele/Sx. + 2% CaCl, circulate cement to surface.
4. Drill 7 7/8" hole to 7450'. Run and set 7450' of 5 1/2" 15.5# J-55 LT&C casing. Cement with 700 Sx. of Class "H" Halco Light cement + additives, tail in with 300 Sx. of Class "H" Premium Plus cement + additives, Circulate cement to surface.

COG OPERATING, LLC. ACCEPTS THE RESPONSIBILITY FOR THE OPERATION OF THIS LEASE.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED [Signature] TITLE Agent  
(This space for Federal or State office use)  
APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS  
AND SPECIAL STIPULATIONS  
ATTACHED

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

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:

/s/ Linda S. C. Rundell

STATE DIRECTOR

FEB - 8 2005

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

\*See Instructions On Reverse Side

APPROVAL FOR 1 YEAR

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the

EXHIBIT II  
Drawer DD, Artesia, NM 88211-0719

DISTRICT III  
1000 Rio Brazos Rd., Artec, NM 87410

**OIL CONSERVATION DIVISION**

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

**DISTRICT IV**  
P.O. Box 2088, Santa Fe, NM 87504-2088

☐ AMENDED REPORT

# WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number		Pool Code	Pool Name
		47545	NASH DRAW-P
Property Code	Property Name		Well Number
	GOLD RUSH "30" FEDERAL		8
OGRID No.	Operator Name		Elevation
229137	COG OPERATING, LLC.		3096

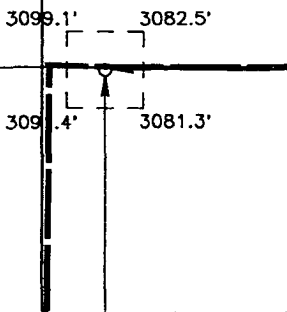
### Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	30	23 S	30 E		2630	SOUTH	2310	EAST	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
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

LOT 1 41.09 AC.			<p><b>OPERATOR CERTIFICATION</b></p> <p><i>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</i></p> <p><u>Joe T. Janica</u> Signature</p> <p><u>Joe T. Janica</u> Printed Name</p> <p><u>Agent</u> Title</p> <p><u>01/07/05</u> Date</p>
LOT 2 41.21 AC.			<p><b>SURVEYOR CERTIFICATION</b></p> <p><i>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.</i></p> <p><u>FEBRUARY 2, 1998</u> Date Surveyed</p> <p><u>JLP</u> Signature &amp; Seal of Professional Surveyor</p>
LOT 3 41.13 AC.			<p><u>Ronald J. Eidson</u> Signature &amp; Seal of Professional Surveyor</p> <p><u>2-04-98</u> Date</p> <p><u>W.Q. Num. 98-11-0179</u> Well Number</p> <p><u>Certificate No. RONALD J. EIDSON, 3239</u> <u>GARY G. EIDSON, 12841</u> <u>MACON McDONALD, 12185</u></p>
LOT 4 41.22 AC.			

# APPLICATION TO DRILL

COG OPERATING, LLC.  
GOLD RUSH "30" FEDERAL # 8  
UNIT "J" SECTION 30  
T23S-R30E EDDY CO. NM

In response to questions asked under Section II of Bulletin NTL-6 the following information on the above well is provided for your consideration.

1. Location of well: 2310' FEL & 2630' FSL SECTION 30 T23S-R30E EDDY CO. NM
2. Ground Elevation above Sea Level: 3096' GR.
3. Geological age of surface formation: Quaternary Deposits:
4. Drilling tools and associated equipment: Conventional rotary drilling rig using drilling mud as a circulating medium to remove solids from hole.
5. Proposed drilling depth: 7450'
6. Estimated tops of geological markers:

Lamar	3290'	Brushy Canyon	6350'
Bell Canyon	4280'	Bone Spring	7080'
Cherry Canyon	5780'	Avalon Sand	7190'

7. Possible mineral bearing formations:

Brushy Canyon	Oil
Bone Spring	Oil
Avalon Sand	Oil

8. Casing Program:

Hole Size	Interval	OD of Casing	Weight	Thread	Collar	Grade
25"	0-40'	20"	NA	NA	NA	Conductor
17½"	0-650'	13 3/8"	54.5	8-R	ST&C	J-55
12½"	0-3100'	8 5/8"	32	8-R	ST&C	J-55
7 7/8"	0-7450'	5½"	15.5	8-R	LT&C	J-55

## APPLICATION TO DRILL

COG OPERATING, LLC.  
 GOLD RUSH "30" FEDERAL # 8  
 UNIT "J" SECTION 30  
 T23S-R30E EDDY CO. NM

## 9. CASING CEMENTING &amp; SETTING DEPTH:

20"	Conductor	Set 40' of 20" conductor pipe and cement to surface Redi-mix.
13 3/8"	Surface	Set 650' of 13 3/8" 54.5# J-55 ST&C casing. Cement with 500 Sx. of Halco Light + additives, tail in with 250 Sx. of Class "C" + 2% CaCl, + 1/4# Flocele/Sx. Circulate cement.
8 5/8"	Intermediate	Set 3100' of 8 5/8" 32# J-55 ST&C casing. Cement with 925 Sx. of Halco Light + additives, tail in with 250 Sx. of Class "C" cement + 2% CaCl, + 1/4# Flocele/Sx. circulate cement to surface.
5 1/2"	Production	Set 7450' of 5 1/2" 15.5# J-55 LT&C casing. Cement with 700 Sx. of Halco Light cement + additives, tail in with 300 Sx. of Class "H" Modified + additives, circulate cement to surface.

10. PRESSURE CONTROL EQUIPMENT: Exhibit "E" shows a 900 series 3000 PSI working pressure B.O.P. consisting of an annular bag type preventor, middle blind rams, and bottom pipe rams. The B.O.P. will be nipped up on the 13 3/8" casing and tested to API specifications. The B.O.P. will be operated at least once each 24 Hr. period and the blind rams will be operated when the drill pipe is out of on trips. Full opening stabbing valve and upper kelly cock will be available in case if needed. Exhibit "E-1" shows a hydraulically operated closing unit and a 3" 3000 PSI choke manifold with adjustable chokes. No abnormal pressures or temperatures are expected while drilling this well. No problems in offset wells.

11. PROPOSED MUD CIRCULATING SYSTEM:

DEPTH	MUD WT.	VISC.	FLUID LOSS	TYPE MUD SYSTEM
40-650'	8.4-8.7	29-34	NC	Fresh water use paper to control seepage.
650-3100'	10.0-10.2	29-38	NC	Brine water add paper to control seepage & High viscosity sweeps to clean hole.
3100-6900'	8.4-8.7	29-38	NC	Fresh water use Gel for for high viscosity sweeps to clean hole.
6900-7450'	8.4-8.7	34-40	10 cc or less	Same as above add a Poly-t6 reduce water loss and Gel for viscosity use high viscosity sweeps to clean hole.

Sufficient mud materials will be kept on location at all times in order to combat lost circulation, or unexpected kicks. In order to run DST's, open hole logs, and casing, viscosity, and water loss may have to be adjusted to meet these needs.

APPLICATION TO DRILL

COG OPERATING, LLC.  
GOLD RUSH "30" FEDERAL # 8  
UNIT "J" SECTION 30  
T23S-R30E EDDY CO. NM

12. LOGGING, CORING, AND TESTING PROGRAM:

- A. Open hole logs: Dual Induction, CNL, LDT, Gamma Ray and Caliper from TD back to 3100'.
- B. Run Gamma Ray, CNL from 3100' back to surface.
- C. Mud logger will be placed on hole at 3100' and remain on hole to TD.
- D. No DST's or cores are planned at this time.

13. POTENTIAL HAZARDS:

No abnormal pressures or temperatures are expected. There is no known presence of H<sup>2</sup>S in this area. If H<sup>2</sup>S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 3800 PSI, and Estimated BHT 150°.

14. ANTICIPATED STARTING DATE AND DURATION OF OPERATION:

Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon after BLM approval and as soon as a rig will be available. Move in operation and drilling is expected to take 22 days. If production casing is run then an additional 30 days will be needed to complete well and construct surface facilities and/or lay flowlines in order to place well on production.

15. OTHER FACETS OF OPERATIONS:

After running casing, cased hole Gamma Ray, Neutron Collar logs will be run from TD back to all possible productive zones. The BRUSHY CANYON formation will be perforated and stimulated in order to establish production. The well will be swab tested and potentialized as an oil well.

## HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

1. All Company and Contract personnel admitted on location must be trained by a qualified H<sub>2</sub>S safety instructor to the following:
  - A. Characteristics of H<sub>2</sub>S
  - B. Physical effects and hazards
  - C. Proper use of safety equipment and life support systems.
  - D. Principle and operation of H<sub>2</sub>S detectors, warning system and briefing areas.
  - E. Evacuation procedure, routes and first aid.
  - F. Proper use of 30 minute pressure demand air pack.
2. H<sub>2</sub>S Detection and Alarm Systems
  - A. H<sub>2</sub>S detectors and audio alarm system to be located at bell nipple, end of bloop line (mud pit) and on derrick floor or doghouse.
3. Windsock and/or wind streamers
  - A. Windsock at mudpit area should be high enough to be visible.
  - B. Windsock at briefing area should be high enough to be visible.
  - C. There should be a windsock at entrance to location.
4. Condition Flags and Signs
  - A. Warning sign on access road to location.
  - B. Flags to be displayed on sign at entrance to location. Green flag, normal safe condition. Yellow flag indicates potential pressure and danger. Red flag, danger, H<sub>2</sub>S present in dangerous concentration. Only emergency personnel admitted to location.
5. Well control equipment
  - A. See exhibit "E" & "E-1"
6. Communication
  - A. While working under masks chalkboards will be used for communication.
  - B. Hand signals will be used where chalk board is inappropriate.
  - C. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.
7. Drillstem Testing
  - A. Exhausts will be watered.
  - B. Flare line will be equipped with an electric ignitor or a propane pilot light in case gas reaches the surface.
  - C. If the location is near to a dwelling a closed DST will be performed.

## HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

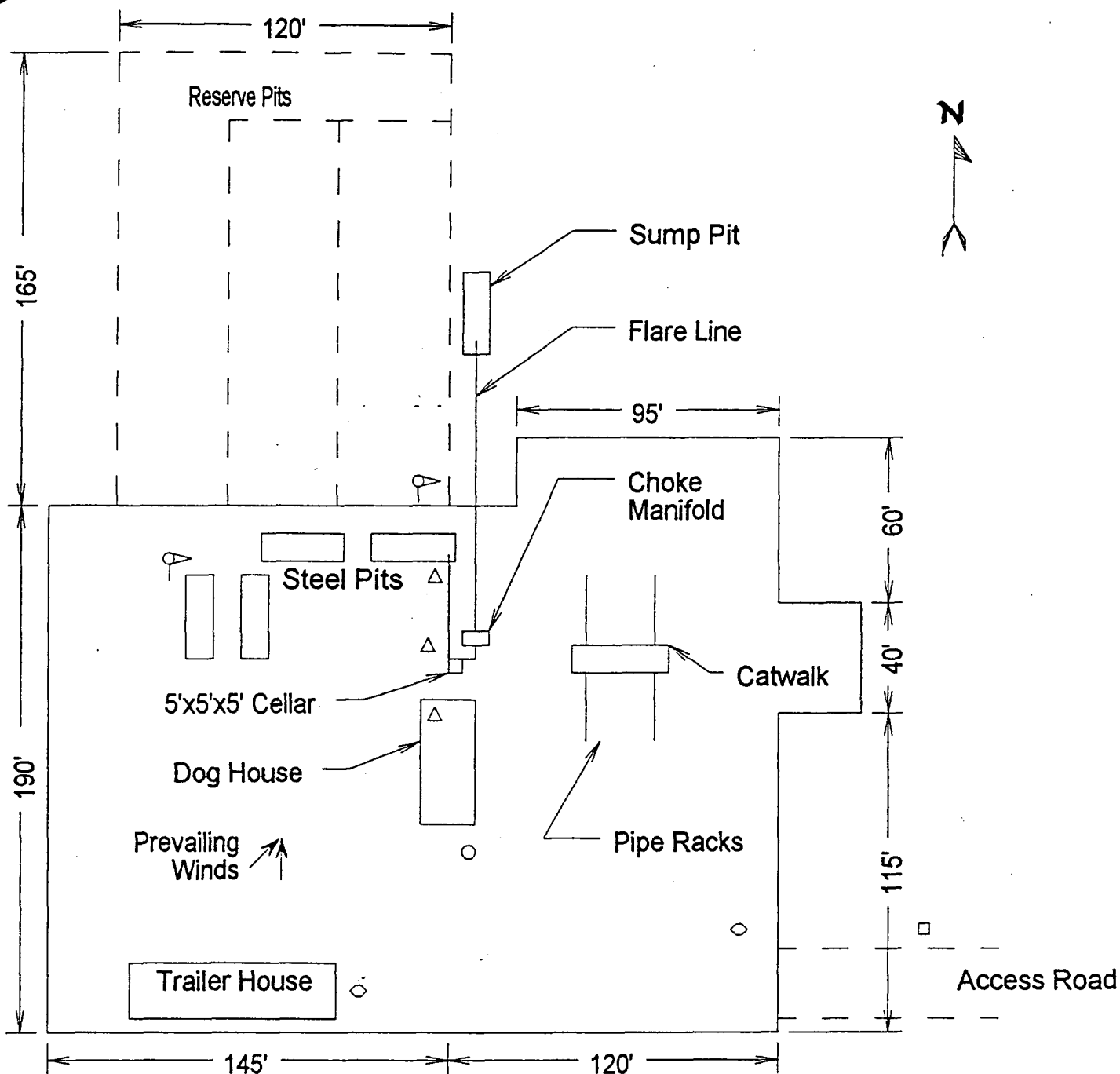
8. Drilling contractor supervisor will be required to be familiar with the effects  $H_2S$  has on tubular goods and other mechanical equipment.
9. If  $H_2S$  is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with  $H_2S$  scavengers if necessary.

SURFACE USE PLAN

COG OPERATING, LLC.  
GOLD RUSH "30" FEDERAL # 8  
UNIT "J" SECTION 30  
T23S-R30E EDDY CO. NM

1. EXISTING AND PROPOSED ROADS: Area maps: Exhibit "B" is a reproduction of a County General Hi-way map showing access roads to the location. Exhibit "C" is a reproduction of a USGS Topographic map showing existing roads in close proximity to the location and the proposed access roads. All existing roads will be maintained in a condition equal to or better than their current conditions. All new roads will be constructed to BLM specifications.
  - A. Exhibit "A" shows the location of the proposed well site as staked.
  - B. From Hobbs, New Mexico take U.S. Hi-way 62-180 toward Carlsbad New Mexico go 40± miles to WIPP Road, turn Left go 13 miles to CR-802, turn Right go 4.6 miles to State Hi-way 128 turn Right go 6 miles to Rawhide Road, turn Left go 4 miles, turn Left go .4 miles, turn, turn Right go 1 mile, turn Left go .4 miles, turn Southeast follow road .45 miles , turn Southwest go to well # 2, turn Northwest and follow road to location.
  - C. Lay flowlines and construct powerlines along road as shown on Exhibits "C" and "F"
2. PLANNED ACCESS ROADS: Approximately 1500' of new road will be constructed.
  - A. The access road will be crowned and ditched to a 12' wide traveled surface with a 40' Right-Of-Way.
  - B. Gradient on all roads will be less than 5% if possible.
  - C. Turn-outs will be constructed where necessary.
  - D. If needed roads will be surfaced to the BLM requirements with material obtained from a local source.
  - E. Center line of new road will be flagged.
  - F. The new road will be constructed to utilize low water crossings where drainage currently exists, and culverts will be installed where necessary.
3. EXHIBIT "A-1" SHOWS THE BELOW LISTED TYPE WELLS WITHIN A 1 MILE RADIUS:
  - A. Water wells - None known
  - B. Disposal wells - One known approximately 3000' Northeast.
  - C. Drilling wells - None known
  - D. Producing wells - As shown on Exhibit "A-1"
  - E. Abandoned wells - As shown on exhibit "A-1"

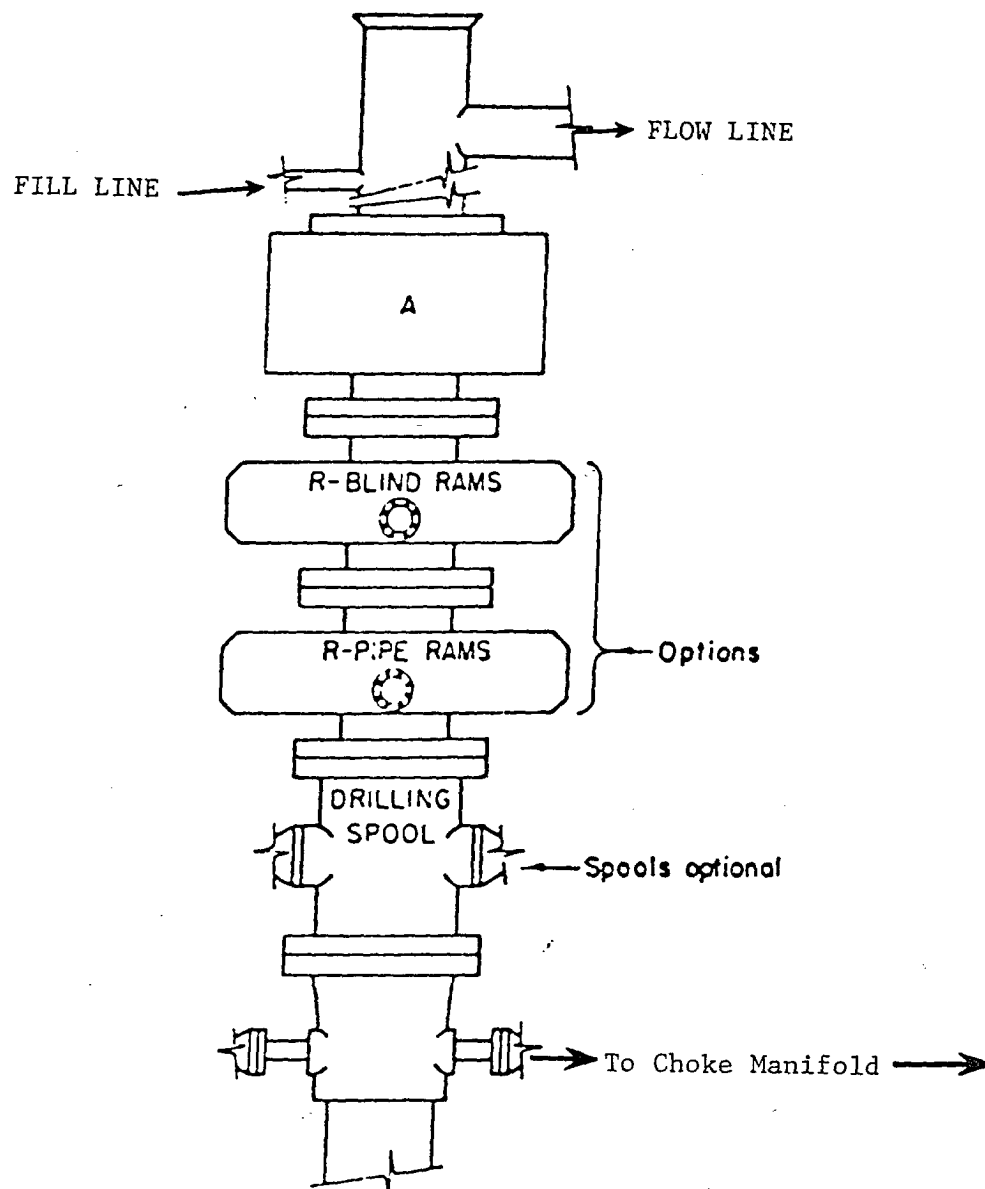




- ⊙ Wind Direction Indicators (wind sock or streamers)
- △ H2S Monitors (alarms at bell nipple and shale shaker)
- Briefing Areas
- Remote BOP Closing Unit
- Sign and Condition Flags

EXHIBIT "D"  
RIG LAY OUT PLAT

COG OPERATING, LLC.  
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T23S-R30E EDDY CO. NM

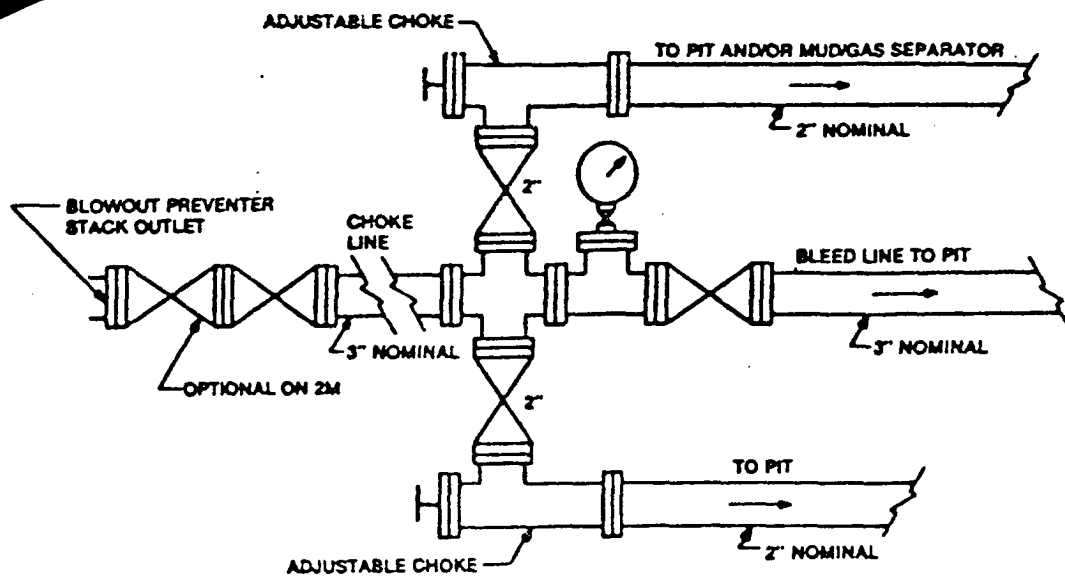


# **ARRANGEMENT SRRA**

900 Series  
3000 PSI WP

EXHIBIT "E"  
SKETCH OF B.O.P. TO BE USED ON

COG OPERATING, LLC.  
GOLD RUSH "30" FEDERAL # 8  
UNIT "J" SECTION 30  
T23S-R30E EDDY CO. NM



Typical choke manifold assembly for 3M WP system

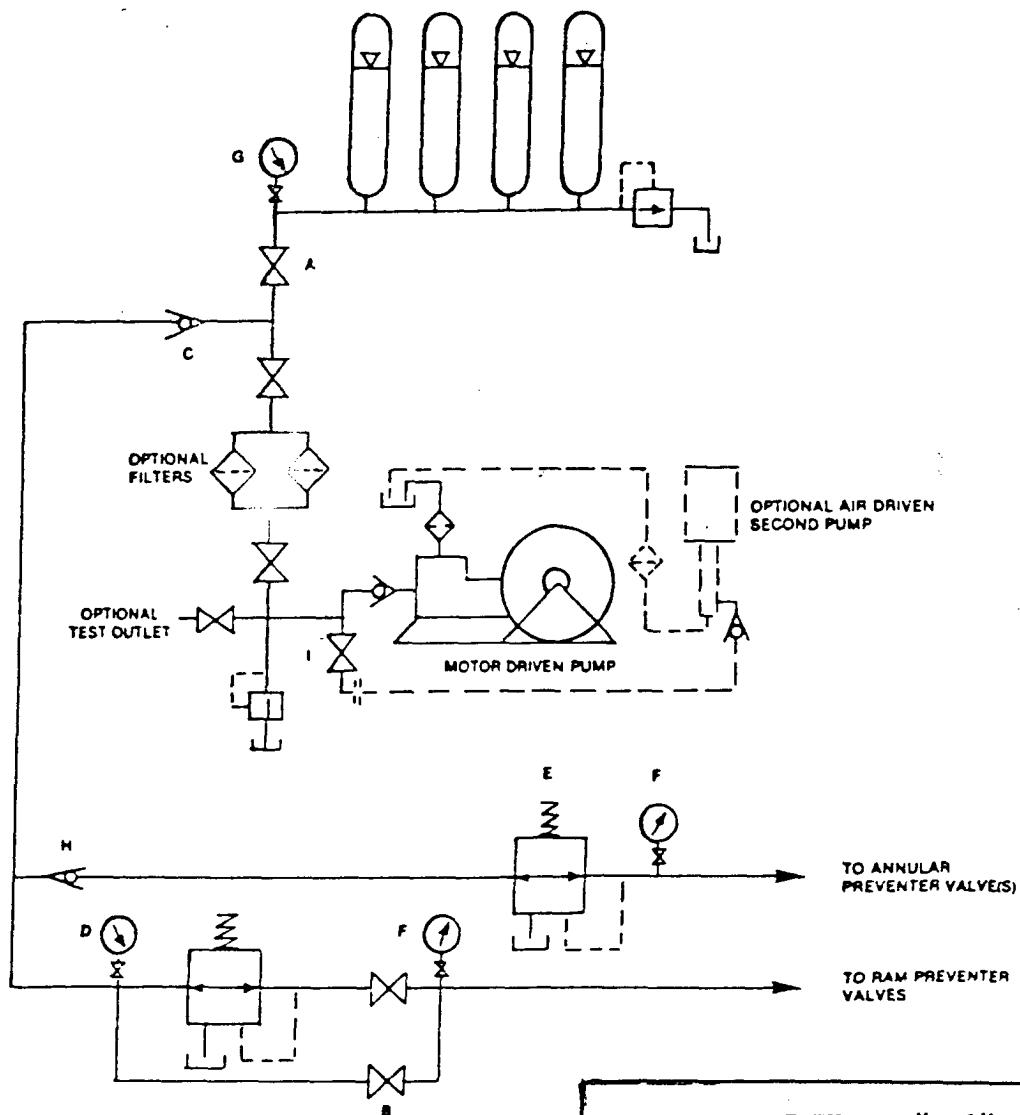


EXHIBIT "E-1"  
CHOKE MANIFOLD & CLOSING UNIT

COG OPERATING, LLC.  
GOLD RUSH "30" FEDERAL # 8  
UNIT "J" SECTION 30  
T23S-R30E EDDY CO. NM