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Form 3160-3
(February 2005)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB NO. 1004-0137
Expires: March 31, 2007

5. Lease Serial No.

NM-0437523 & LC-055830

6. If Indian, Allottee or Tribe Name

N/A

7. If Unit or CA Agreement, Name and No.

N/A

8. Lease Name and Well No.

Grateful "BOD" Federal Com. #1H

9. API Well No.

30-015-38990

10. Field and Pool, or Exploratory

Undesignated
Wildcat Bone Spring

11. Sec., T., R., M., or Blk. And Survey or Area

Sec. 13-18S-29E

12. County or Parish

Eddy

13. State

NM

1a. Type of Work:

☒ DRILL☐ REENTER

1b. Type of Well:

☒ Oil Well☐ Gas Well☐ Other☒ Single Zone☐ Multiple Zone

2. Name of Operator

Yates Petroleum Corporation 025575

3a. Address

105 South Fourth Street, Artesia, NM 88210

3b. Phone No. (include area code)

505-748-1471

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

At surface

786' FNL & 545' FEL, NENE, Section 13-T18S-29E, Ltr A

At proposed prod. zone

660' FNL & 330' FWL, NWNW, Section 13-T18S-R29E, Ltr D

14. Distance in miles and direction from the nearest town or post office*

Approximately 6 miles south of Loc Hills, NM

15. Distance from proposed*
location to nearest

(Also to nearest drlg. unit line, if any)

330'

16. No. of acres in lease

434.46-BH

17. Spacing Unit dedicated to this well

N2N2-Sec.13-18S-29E

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

19. Proposed Depth

7980 VD & 12177 MD

20. BLM/ BIA Bond No. on file

NATIONWIDE BOND #NMB000434

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

3493 GL

22. Approximate date work will start*

ASAP

23. Estimated duration

60 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. ap

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 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)

Cy Cowan

Date

3/9/11

Title

Land Regulatory Agent

Approved By (Signature)

/s/ Don Peterson

Name (Printed/ Typed)

Date

APR 12 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 cc
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 wilfully 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

SEE ATTACHED FOR
CONDITIONS OF APPROVALApproval Subject to General Requirements
& Special Stipulations Attached

MULTI-POINT SURFACE USE AND OPERATIONS PLAN
YATES PETROLEUM CORPORATION
Grateful "BOD" Federal Com. #1H
786' FNL & 545' FEL, Surface Hole Location
660' FNL & 330' FWL, Bottom Hole location
Section 13-T18S-R29E
Eddy County, New Mexico

This plan is submitted with Form 3160-3, Application for Permit to Drill, covering the above described well. The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of the surface disturbance involved and the procedures to be followed in rehabilitating the surface after completion of the operations, so that a complete appraisal can be made of the environmental effect associated with the operations.

1. EXISTING ROADS:

Exhibit A is a portion of the BLM map showing the well and roads in the vicinity of the proposed location. The proposed well site is located approximately 6 miles south of Loco Hills, New Mexico and the access route to the location is indicated in red and green on Exhibit A.

DIRECTIONS: From Loco Hills at the junction of Highway 82 and County Road 217. Go southwest on 217 for approximately 3 miles. Turn left on County Road 216, General American Road and go south for approximately 1.9 miles. Turn left on existing lease road and go east approximately 0.1 of a mile. At this point turn right and go south approximately 0.2 of a mile. Turn right here and follow existing lease road going west for approximately 0.3 of a mile. Turn left here on old two track lease road. Go south on this lease road for approximately 0.3 of a mile and turn left to dry hole location. The new access road will start here going east for approximately 0.1 of a mile to the southwest corner of the proposed well location.

2. PLANNED ACCESS ROAD:

- A. The proposed access will and existing old lease road that will be upgraded for approximately 0.8 of a mile in length from the point of origin to the northwest corner of the drilling pad.
- B. The new road will be 14 feet in width (driving surface) and will be adequately drained to control runoff and soil erosion.
- C. The new road will be bladed with drainage on both sides. No traffic turnouts will be needed.
- D. The route of the road is visible.
- E. Existing roads will be maintained in the same or better condition.

3. LOCATION OF EXISTING WELL:

- A. There is drilling activity within a one-mile radius of the well site.
- B. Exhibit D shows existing wells within a one-mile radius of the proposed well site

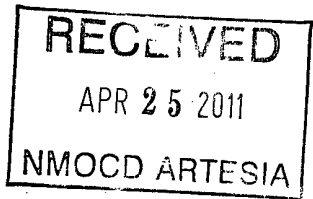
4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

- A. There are no production facilities on this lease at the present time.
- B. In the event that the well is productive, the necessary production facilities will be installed on the drilling pad. If the well is productive oil, a gas or diesel self-contained unit will be used to provide the necessary power until an electric line can be built, if needed.

5. LOCATION AND TYPE OF WATER SUPPLY:

- A. It is planned to drill the proposed well with a brine water system. The water will be obtained from commercial sources and will be hauled to the location by truck over the existing and proposed roads shown in Exhibit A.

YATES PETROLEUM CORPORATION
Grateful "BOD" Federal Com #1H
660' FNL and 330' FEL, Section 13-18S-29E, Surface Hole Location
660' FNL and 330' FWL, Section 13-18S-29E, Bottom Hole Location
Eddy County, New Mexico



1. The estimated tops of geologic markers are as follows:

Rustler	320'	San Andres	3160'
Tansill	1170'	Bone Springs	4270' Oil
Yates	1270'	First Bone Springs	6950' Oil
Seven Rivers	1670'	2 nd Bone Springs	7570' Oil
Queen	2270' Oil/Gas	Target Sand (Lateral)	7980' Oil 8252' MD
Grayburg	2645'	TD (Lateral Hole)	12395'

2. The estimated depths at which anticipated water, oil or gas formations are expected to be encountered:

Water: 160'

Oil or Gas: Zones: 2270' Oil/Gas, 4270' Oil, 6950' Oil, 7570' Oil & 7980' Oil.

3. Pressure Control Equipment: BOPE will be installed on the ~~13 3/8"~~ ^{11 3/4"} and 8 5/8" casing and rated for 3000# BOP System. Pressure tests will be conducted before drilling out from under all casing strings, which are set and cemented in place. Blowout Preventer controls will be installed prior to drilling the surface plug and will remain in use until the well is completed or abandoned. Preventers will be inspected and operated at least daily to ensure good mechanical working order, and this inspection recorded on the daily drilling report. See Exhibit B. * See COA

4. Auxiliary Equipment: Kelly cock, pit level indicators, flow sensor equipment, and a sub with full opening valve to fit the drill pipe and collars will be available on the rig floor in the open position at all times for use when Kelly is not in use.

5. THE PROPOSED CASING AND CEMENTING PROGRAM:

- A. CASING PROGRAM: All new casing to be used

* See COA

Hole Size	Casing Size	Wt./Ft	Grade	Coupling	Interval	Length
14 3/4"	11 3/4"	42#	H-40	ST&C	0-400'	400' → 375'
11"	8 5/8"	32#	J-55	ST&C	0-3300'	3300'
7 7/8"	5 1/2"	17#	P-110	LT&C	0-8300'	8300'
7 7/8"	5 1/2"	17#	L-80	LT&C	8300'-12395'	4095'

Minimum Casing Design Factors: Burst 1.0, Tensile Strength 1.8, Collapse 1.125

- B. CEMENTING PROGRAM:

Surface Casing: Cement with 275 sacks Class C (Yld 1.34 Wt. 14.80). TOC surface.

Intermediate Casing: Lead with 700 sacks of C Lite (Yld 2.00 Wt 12.50). Tail in with 225 sacks Class C (YLD 1.34 WT 14.80 YLD). TOC surface

Production: Production cement to be done in two stages with stage tool at approximately 6700'.

Stage 1: 6700'-12395' cement with 1100 sacks Pecos Valley Lite (Yld. 1.83 Wt. 13.00) TOC 6700'.

Stage 2: 2800'-6700' lead with 600 sacks C Lite (Yld 2.00 Wt. 12.5), tail with 100 sacks Class C (Yld. 1.34 Wt14.80). TOC 2800'.

Well will be drilled with a 7 7/8" hole to 7503'. The well will then be kicked off at approximate 7503' and directionally drilled at 12 degrees per 100' with a 7 7/8" hole to 8300' MD (7980 TVD), lateral will then be drilled to 12177' MD (7980' TVD) where 5 1/2' will be run and cemented. Penetration point of producing zone will be encountered at 775' FNL and 1022' FEL in Section 13-18S 29E. Deepest TVD in the well will be in the lateral at 7980' in the lateral.

6. MUD PROGRAM AND AUXILIARY EQUIPMENT:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Viscosity</u>	<u>Fluid Loss</u>
0-400' 375'	Fresh Water	8.60-9.20	35-40	N/C
400'-3300'	Brine Water	10.00-10.20	28	N/C
3300'-7503'	Cut Brine	8.80-9.00	28-29	N/C
7503'-12177'	Cut Brine(Lateral)	8.80-9.30	28-32	<10-12

Sufficient mud material(s) to maintain mud properties, control lost circulation and contain a blow out will be available at the well site during drilling operations. Rig personnel will check mud hourly.

7. EVALUATION PROGRAM: *See Cor 4*

Samples: 30' Samples to 5000'. 10' Samples from 5000' to TD.

Logging: Platform Express/Hals/CMR/Dipole Sonic

Coring: None anticipated

DST's: None Anticipated

Mudlogging: Yes. From Surface Casing

8. ABNORMAL CONDITIONS, BOTTOM HOLE PRESSURE, AND POTENTIAL HAZARDS:

Maximum Anticipated BHP:

0'-400'	191 PSI
400'-3300'	1750 PSI
3300'-7980'	3859 PSI

Abnormal Pressures Anticipated: None

Lost Circulation Zones Anticipated: None.

H2S Zones Anticipated: None Anticipated

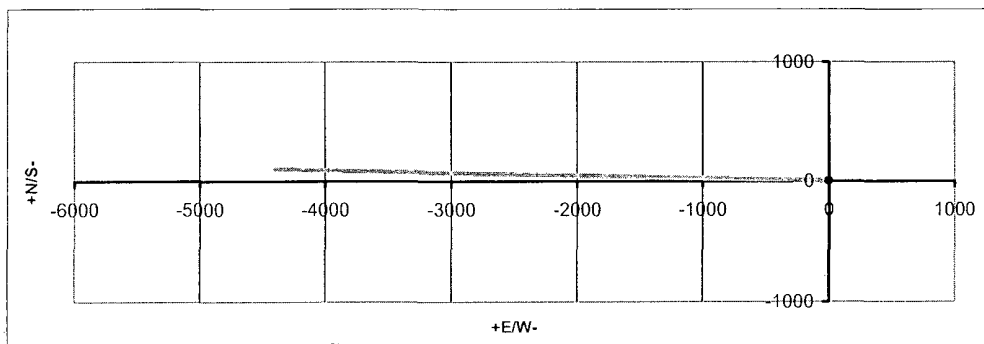
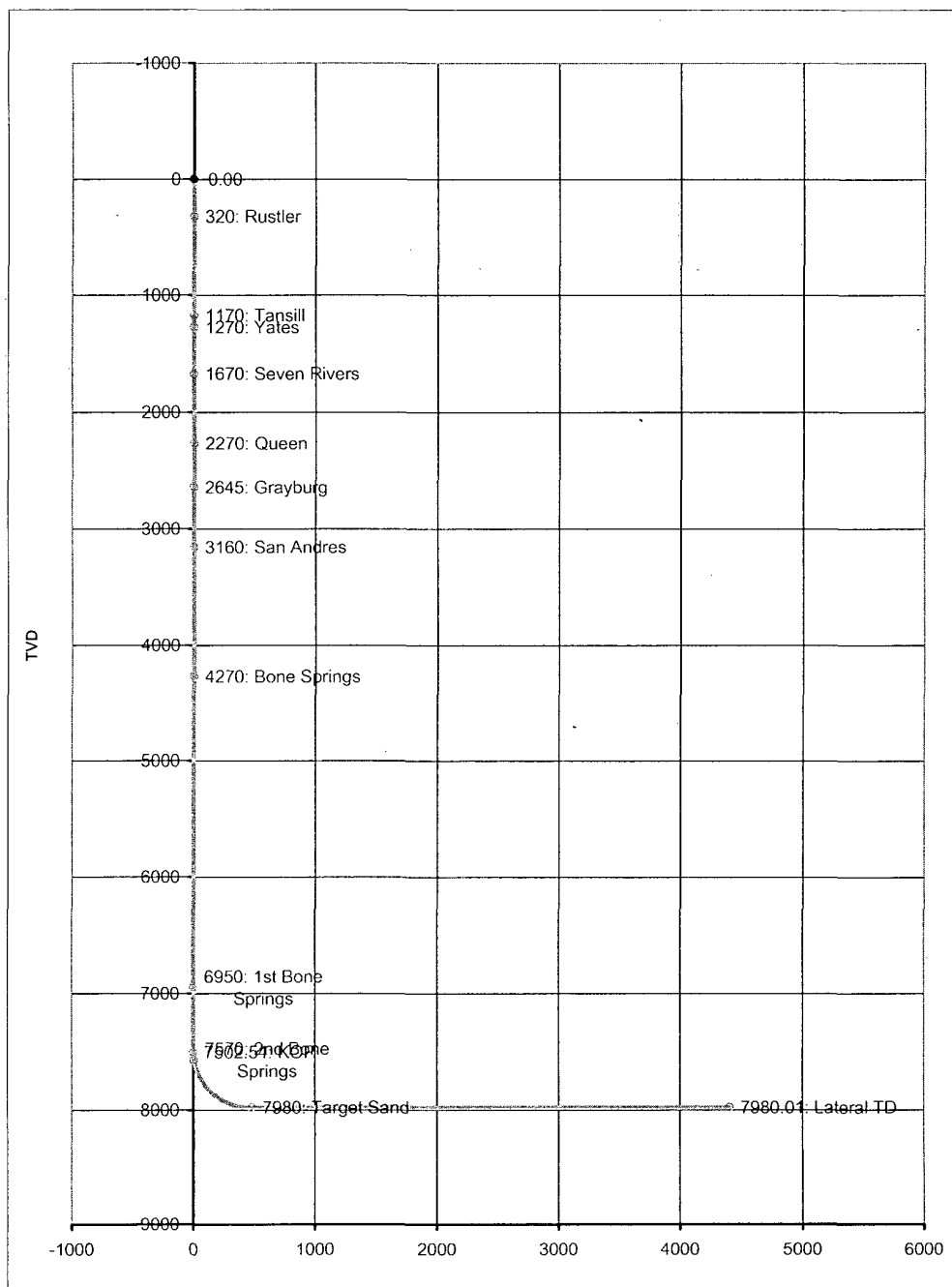
Maximum Bottom Hole Temperature: 155 F

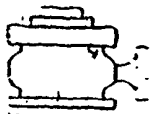
9. ANTICIPATED STARTING DATE:

Plans are to drill this well as soon as possible after receiving approval. It should take approximately 60 days to drill the well with completion taking another 20 days.

Co: Yates Petroleum Corporation			Units: Feet, ° 7100ft		VS Az: 271.32		Tgt TVD: 7980.00	
Drillers: 0			Elevation:		Tgt Radius: 0.00		Tgt MD: 0.00	
Well Name: Grateful BOD Federal Com. #1H			Northing:		Tgt N/S: 101.25		Tgt Displ.: 0.00	
Location: Section 13, 18S-29E			Easting:		Tgt E/W: -4400.40		Method: Minimum Curvature	

No	MD	CL	Inc	Azi	TVD	VS	+N/S	+E/W	BR	WR	DLS	Comments
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
1	320.00	320.00	0.00	360.00	320.00	0.00	0.00	0.00	0.00	0.00	0.00	Rustler
2	1170.00	850.00	0.00	360.00	1170.00	0.00	0.00	0.00	0.00	0.00	0.00	Tansill
3	1270.00	100.00	0.00	360.00	1270.00	0.00	0.00	0.00	0.00	0.00	0.00	Yates
4	1670.00	400.00	0.00	360.00	1670.00	0.00	0.00	0.00	0.00	0.00	0.00	Seven Rivers
5	2270.00	600.00	0.00	360.00	2270.00	0.00	0.00	0.00	0.00	0.00	0.00	Queen
6	2645.00	375.00	0.00	360.00	2645.00	0.00	0.00	0.00	0.00	0.00	0.00	Grayburg
7	3160.00	515.00	0.00	360.00	3160.00	0.00	0.00	0.00	0.00	0.00	0.00	San Andres
8	4270.00	1110.00	0.00	360.00	4270.00	0.00	0.00	0.00	0.00	0.00	0.00	Bone Springs
9	6950.00	2680.00	0.00	360.00	6950.00	0.00	0.01	0.00	0.00	0.00	0.00	1st Bone Springs
10	7502.54	7502.54	0.00	271.32	7502.54	0.00	0.01	0.00	0.00	-1.18	0.00	KOP
11	7570.22	67.69	8.12	271.32	7570.00	4.79	0.12	-4.79	12.00	0.00	12.00	2nd Bone Springs
12	7600.00	97.46	11.70	271.32	7599.32	9.91	0.23	-9.91	12.00	0.00	12.00	
13	7700.00	100.00	23.70	271.32	7694.42	40.25	0.93	-40.24	12.00	0.00	12.00	
14	7800.00	100.00	35.70	271.32	7781.13	89.70	2.07	-89.68	12.00	0.00	12.00	
15	7900.00	100.00	47.70	271.32	7855.66	156.10	3.60	-156.06	12.00	0.00	12.00	
16	8000.00	100.00	59.70	271.32	7914.76	236.54	5.45	-236.48	12.00	0.00	12.00	
17	8100.00	100.00	71.70	271.32	7955.84	327.51	7.54	-327.42	12.00	0.00	12.00	
18	8200.00	100.00	83.70	271.32	7977.11	425.04	9.78	-424.92	12.00	0.00	12.00	
19	8252.53	750.00	90.00	271.32	7980.00	477.46	10.99	-477.34	12.00	0.00	12.00	Target Sand
20	12176.64	3924.10	90.00	271.32	7980.01	4401.57	101.26	-4400.40	0.00	0.00	0.00	Lateral TD





Yates Petroleum Corporation

BOP-3

Typical 3,000 psi Pressure System

Schematic

Annular with Double Ram Preventer Stack

YATES PETROLEUM CORPORATION

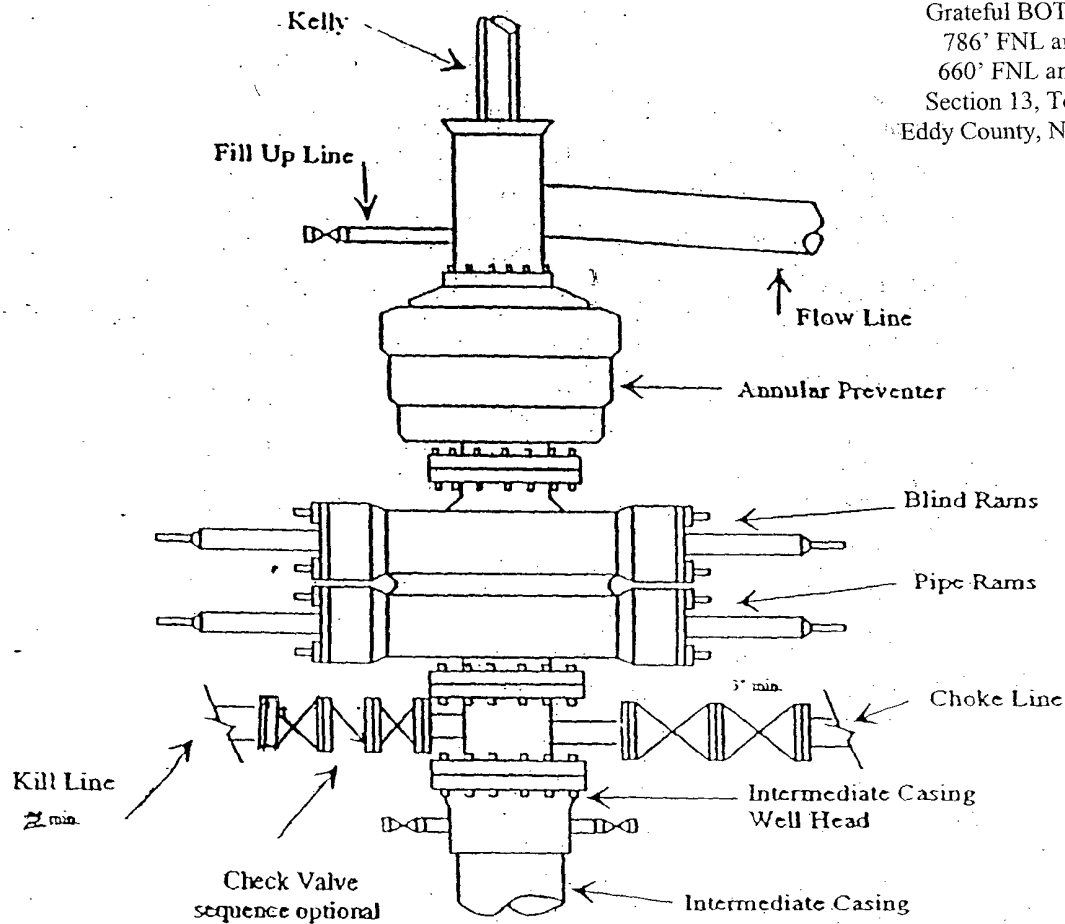
Grateful BOT Federal Com. #1H

786' FNL and 545' FEL SHL

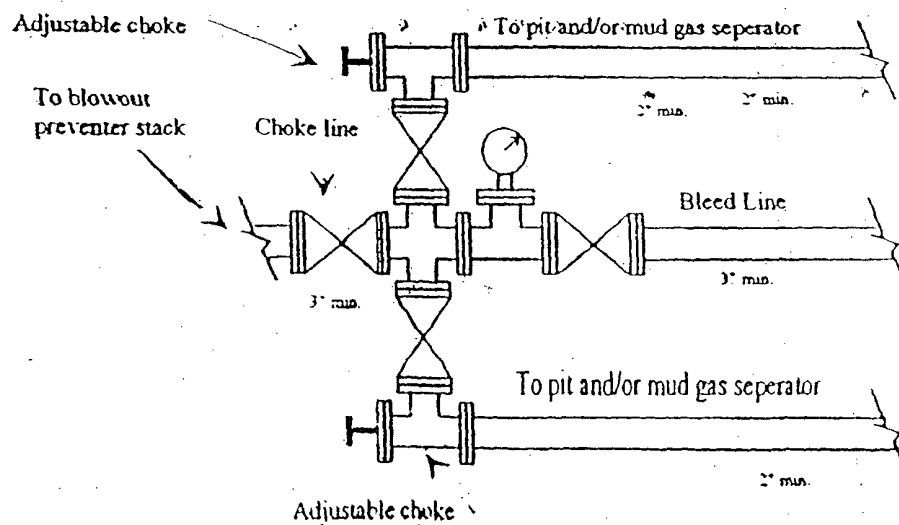
660' FNL and 660' FWL BHL

Section 13, Township 18S-R29E

Eddy County, New Mexico Exhibit C



Typical 3,000 psi choke manifold assembly with at least these minimum features



YATES PETROLEUM CORPORATION
Piping from Choke Manifold
to the Closed-Loop Drilling Mud System

YATES PETROLEUM CORPORATION
Grateful BOT Federal Com. #1H
786' FNL and 545' FEL SHL
660' FNL and 660' FWL BHL
Section 13, Township 18S-R29E
Eddy County, New Mexico Exhibit E

