N. M. Oil Cons. Division
811 S. 1st ST.
ARTESIA, NM 88210

Form 3160-3
(July 1992)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE
(Other instructions on reverse side)

FORM APPROVED
OMB NO. 1004-0136
Expires February 28, 1995

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

5. LEASE DESIGNATION AND SERIAL NO.: NM 17226-A

1a. TYPE OF WORK: Drill [X] Deepen [ ]

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

b. TYPE OF WELL: Oil Well [ ] Gas Well [X] Other — Single Zone [X] Multiple Zone [ ]

7. UNIT AGREEMENT NAME:

2. NAME OF OPERATOR: Boyd & McWilliams Energy Group, Inc.

8. FARM OR LEASE NAME, WELL NO.: Federal 22 No. 2

3. ADDRESS AND TELEPHONE NO.: c/o Melanie J. Parker, PO Box 123, Artesia, NM 88211-0123 505-748-2415

9. API WELL NO.:

10. FIELD AND POOL, OR WILDCAT: Wildcat

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 2210' FSL & 1675' FWL
At proposed prod. zone: Section 22, T13S, R30E Unit K

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 22, T13S, R30E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE *: 23 E of Hagerman, NM then 13 miles N to location

12. COUNTY OR PARISH: Chaves County 13. STATE: NM

15. DISTANCE FROM PROPOSED * LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 965'

16. NO. OF ACRES IN LEASE: ~~320~~ 880

17. NO. OF ACRES ASSIGNED TO THIS WELL: ~~40~~ 320

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: 382' (P&A well)

19. PROPOSED DEPTH: 9950'

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 3890' GR

22. APPROX. DATE WORK WILL START*: June 15, 1997

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	13 3/8"	48#	400'	sufficient to circulate - Cl C w/2% CC
11"	8 5/8"	24#	2000'	500 sx Cl C w/2% CC - up into 13 3/8"
7 7/8"	~~4 1/2"~~ 5 1/2"	~~11.6 & 10.5#~~ 15.5 17	9950'	1500 sx Cl C w/2% CC - up to 8500'
		K-55 N-80		

The operator is attempting to re-enter the P & A Federal "22" No. 1 well. This Application for Permit to Drill is being filed as an alternate location should the re-entry be unsuccessful.

Specific programs are outlined in the following attachments:

DRILLING PROGRAM
SURFACE USE AND OPERATING PLAN
H2S PLAN
EXHIBIT A - ROAD MAP
EXHIBIT B - EXISTING WELL MAP
EXHIBIT C - TOPO MAP
EXHIBIT D - DRILLING AND RIG LAYOUT
EXHIBIT E - 3M BOP EQUIPMENT

OPER. OGRID NO. 2685
PROPERTY NO. 21037
POOL CODE V
EFF. DATE 7/3/97
API NO. 30-005-21151

RECEIVED
MAY 13 97

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 Melanie J. Parker TITLE Agent DATE 5/9/97

(This space for Federal or State office use)

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:

APPROVED BY /s/ T R Krueger TITLE Acting Manager DATE 6-20-97

*See Instructions On Reverse Side

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 United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980

DISTRICT II
P.O. Drawer DD, Artesia, NM 88211-0719

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

DISTRICT IV
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised February 10, 1994
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-005-21151	✓	Wildcat Morrow

Property Code	Property Name	Well Number
21037	FEDERAL 22	2

OGRID No.	Operator Name	Elevation
002685	BOYD & MCWILLIAMS ENERGY GROUP, INC.	3890

Surface Location

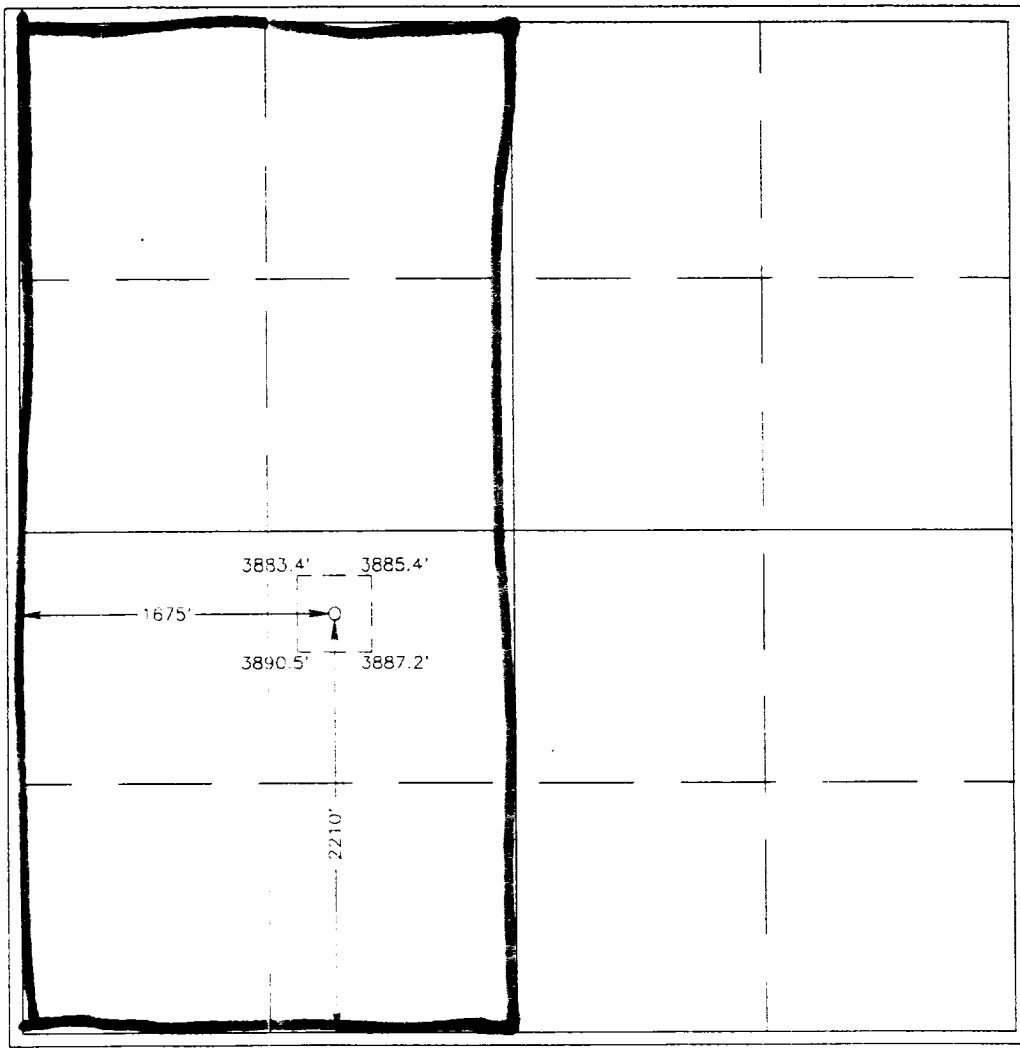
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	22	13 S	30 E		2210	SOUTH	1675	WEST	CHAVES

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.
320			

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 the the information contained herein is true and complete to the best of my knowledge and belief.

Melanie Parker
Signature

Melanie J. Parker
Printed Name

Agent
Title

5/6/97
Date

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 supervison, and that the same is true and correct to the best of my belief.

APRIL 25, 1997

Date Surveyed DMCC

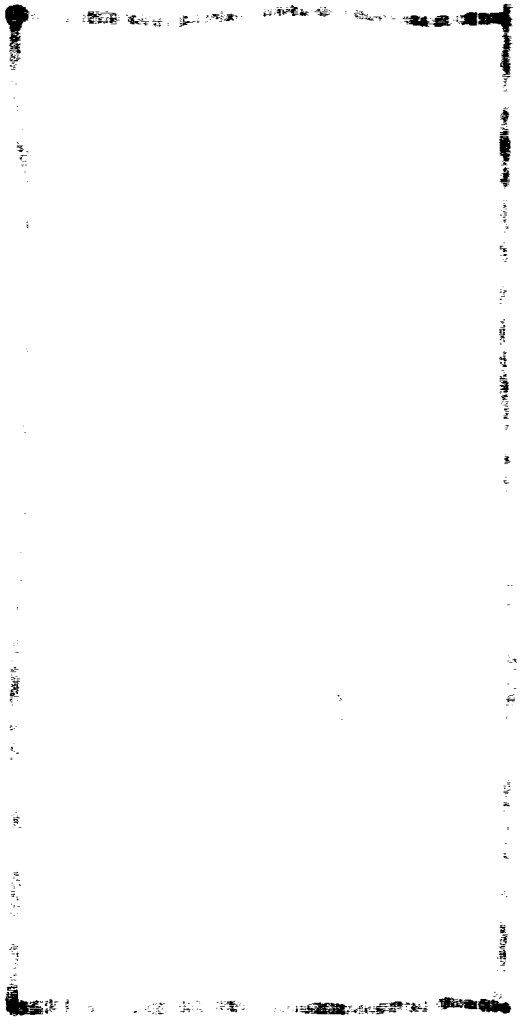
Signature & Seal of Professional Surveyor

RONALD J. EIDSON
NEW MEXICO
3239
REGISTERED PROFESSIONAL SURVEYOR

4-29-97

97-11-0750

Certificate No. JOHN W. WEST 676
RONALD J. EIDSON 3239
GARY L. JOSON 12641



DRILLING PROGRAM

Boyd & McWilliams Energy Group, Inc.
Federal "22" No. 2
2210' FSL & 1675' FWL, Unit K
Section 22, T13S, R30E
Chaves County, New Mexico

In connection with Form 3160-3, Application for Permit to Drill subject well, Boyd & McWilliams Energy Group, Inc. submits the following items of pertinent information in accordance with BLM requirements:

1. Geologic Name of Surface Formation: Permian

2. Estimated Tops of Important Geologic Markers and

Formation	Depth
Yates	1420'
Queen	2142'
San Andres	2762'
Glorietta	4165'
Abo	6425'
Wolfcamp	7615'
Strawn	8980'
Atoka	9490'
Morrow	9798'

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

Water: +-250' ~~(already cased off)~~
Oil or Gas: 9340' & 9490'

No other formations are expected to give up oil, gas or fresh water in measurable quantities. The surface fresh water sands are already cased off. ~~4 1/2~~ 5 1/2" production casing will be set at TD. No abnormal pressures are anticipated.

4. Casing and Cement Program

Hole Size	Casing From	To	Casing OD	Weight, Grade, Coupling, Cond.
17 1/2"	0'	400'	13 3/8"	48# H-40
11"	0'	2000'	8 5/8"	24# J-55 LTC
7 7/8"	0'	TD	~~4 1/2~~ 5 1/2"	~~11.6 & 10.5# J-55 LTC~~ 15.5# K-55 & 17# N-80

Minimum Design Factors: Collapse 1.125, Burst 1.0, Tension 1.7.

13 3/8" Surface Casing Set at 400' - 250 sx or sufficient to circulate

8 5/8" Intermediate Casing Set at 2000' - 500 sx or sufficient to bring up into 13 3/8"

4 1/2" Production Casing Set at TD - Cement with 1500 sx Class C cmt or sufficient to bring up into 8 5/8"

5. Minimum Specifications for Pressure Control:

7 7/8" Hole - The following BOP equipment will be nippled up on the 8 5/8" casing and used continuously until TD is reached for the 7 7/8" hole.

The blowout preventer equipment (BOP) shown in Exhibit "E" will consist of a 3000 psi WP double ram type preventer and a 3M annular (bag type) preventer with rotating head. Both BOP's will be hydraulically operated. At the drilling contractor's option, 5M BOP's may be substituted. H_2S trim will not be required.

Before drilling out from under the 8 5/8" intermediate casing, all BOP's and accessory equipment will be tested to 2200 psi with the rig pump. Pipe rams will be operationally checked each 24 hour period. Blind rams will be oeprationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets.

BLM method to calculate minimum BOP requirements:
(.052)(8.4 ppg)(9950') - (0.22 psi/ft)(9950')= 2157 psi
Minimum BOP requirements: 3M BOP stack and manifold system

6. Proposed Mud System:

The well will be drilled to TD with a combination of fresh water and 10# brine. The applicable depths and properties of this system are as follows:

Depth	Type	Weight (ppg)	Viscosity (sec)	Water Loss cc
0-400'	Fresh water	8.4	28	NC
0-9950'	Brine	10.0	29	NC

Sufficient mud material(s) to maintain mud properties, control lost circulation and contain a blowout will be available at the well site during drilling operations. Mud will be checked hourly by rig personnel.

7. Auxiliary Well Control and Monitoring Equipment:

a) A kelly cock will be kept in the string at all times.

b) A full opening drill pipe stabbing valve (TIW/inside BOP) with proper drill pipe

connections will be on the rig floor at all times.

c) An electronic pit volume totalizer system will NOT be used. The drilling fluids system will be visually monitored at all times.

8. Logging, Testing and Coring Programs:

a) Drillstem tests will be run on the basis of drilling shows.

b) The electric logging program will consist of:
7 7/8" hole - gamma ray, dual induction log, compensated neutron and litho-density logs.

9. Abnormal Conditions, Pressures, Temperatures and Potential Hazards:

No abnormal pressures, temperatures, or other potential hazards are anticipated.

No hydrogen sulfide or other hazardous gases or fluids have been encountered, reported, or are known to exist at this depth in this area. No major lost circulation zones have been reported in offsetting wells.

The maximum anticipated bottom hole pressure is approximately 4407 psi.
(9950' x .46 psi/ft = 4577 psi)
The maximum anticipated bottom hole temperature is 138 degrees F.

10. Anticipated Starting Date and Duration of Operations:

Plans are to re-enter this well as soon as possible after receiving approval. Once commenced, the drilling operation should be complete in 15 days. If the well is productive, an additional 30 days will be required for completion, testing, and installation of permanent facilities.

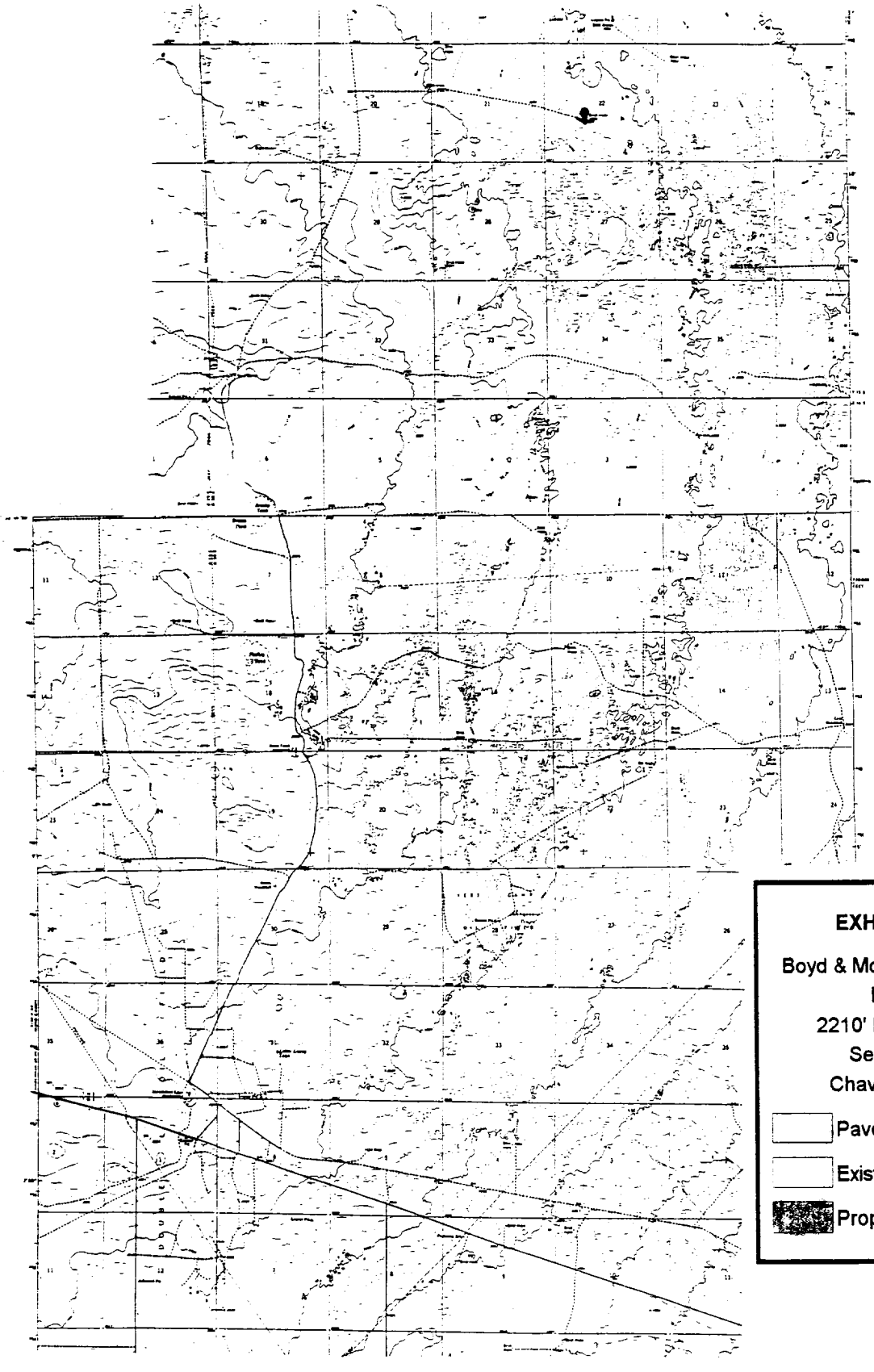


EXHIBIT "A" - ROAD MAP

Boyd & McWilliams Energy Group, Inc.
Federal "22" No. 2 ●
2210' FSL & 1675' FWL, Unit K
Section 22, T13S, R30E
Chaves County, New Mexico

Paved Highway NM 249
Existing Access Road Cindy Rd
Proposed Access Road

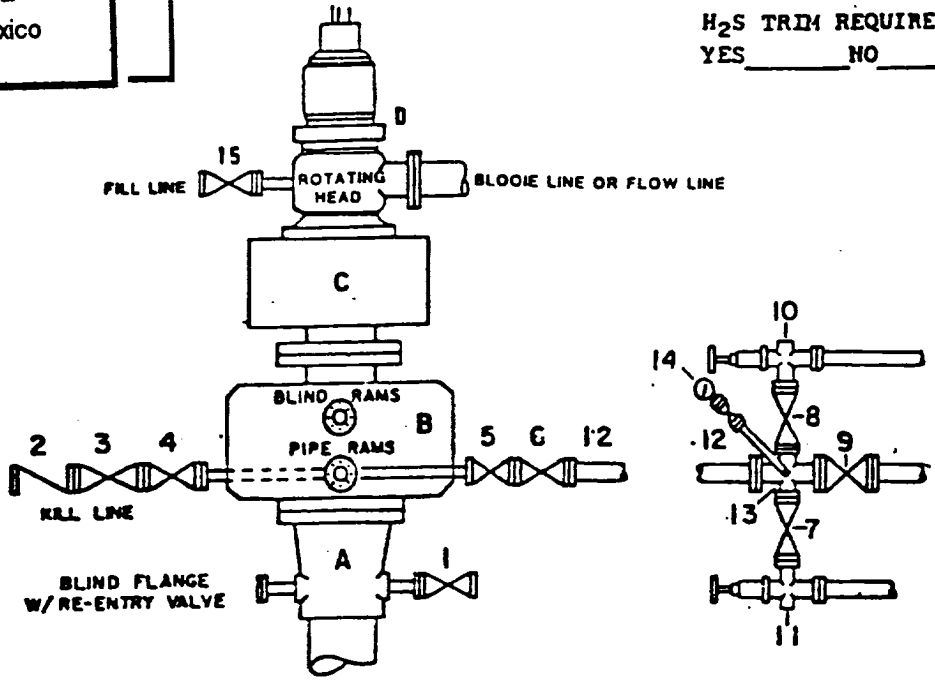
EXHIBIT "E" - BOP EQUIPMENT

Boyd & McWilliams Energy Group, Inc.
Federal "22" No. 2
2210' FSL & 1675' FWL, Unit K
Section 22, T13S, R30E
Chaves County, New Mexico

DRILLING CONTROL

CONDITION III-B 3000 PSI WP

H_2S TRIM REQUIRED
YES_____ NO_____



DRILLING CONTROL

MATERIAL LIST - CONDITION III - B

A	Wellhead
B	3000# W.P. Dual ram type preventer, hydraulic operated with 1" steel, 3000# W.P. control lines (where sub-structure height is adequate, 2 - 3000# W.P. single ram preventers may be utilized with 3000# W.P. drilling spool with 2" minimum flanged outlet for kill line and 3" minimum flanged outlet for choke line. The drilling spool is to be installed below the single ram type preventers).
C	3000# W.P. Annular Preventer with 1" steel, 3000# W.P. control lines.
D	Rotating Head with fill up outlet and extended Blooie line.
1,3,4, 7,8,	2" minimum 3000# W.P. flanged full opening steel gate valve, or Halliburton Lo Torc Plug valve.
2	2" minimum 3000# W.P. back pressure valve.
5,6,9	3" minimum 3000# W.P. flanged full opening steel gate valve, or Halliburton Lo Torc Plug valve.
12	3" minimum Schedule 80, Grade B, seamless line pipe.
13	2" minimum x 3" minimum 3000# W.P. flanged cross.
10,11	2" minimum 3000# W.P. adjustable choke bodies.
14	Cameron Mud Gauge or equivalent (location optional in Choke line).
15	2" minimum 3000# W.P. flanged or threaded full opening steel gate valve, or Halliburton Lo Torc Plug valve.

SCALE	DATE	EST NO	DRG NO	
DRAWN BY				EXHIBIT E
CHECKED BY				
APPROVED BY				


Received
Hobbs
OCD