

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Form approved.
Budget Bureau No. 1004-0136
Expires: December 31, 1991

5. LEASE DESIGNATION AND SERIAL NO.

SF-078040

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME, WELL NO.

589 Gartner A #2R ✓

9. API WELL NO.

30-045-29137 ✓

10. FIELD AND POOL, OR WILDCAT

72319 Blanco Mesaverde ✓

11. SEC., T., R., M., OR BLK.

AND SURVEY OR AREA

Section 28

Township 30N

Range 8W ✓

12. COUNTY OR PARISH

San Juan ✓

13. STATE

New Mexico

16. NO. OF ACRES IN LEASE

2549.29

17. NO. OF ACRES ASSIGNED
TO THIS WELL

320 E/2 ✓

20. ROTARY OR CABLE TOOLS

Rotary

22. APPROX. DATE WORK WILL START*

07-01-94

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

b. TYPE OF WELL

OIL

WELL ☐

GAS

WELL ☒

OTHER

070 FARMINGTON, NM

MULTIPLE

ZONE ☐

2. NAME OF OPERATOR

Amoco Production Company 778

Attention:

Julia L. Acevedo

3. ADDRESS AND TELEPHONE NO.

P.O. Box 800, Denver, Colorado 80201

(303) 830-6003

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*

At surface

790FNL

1840FEL

At proposed prod. zone

1850' FNL

800' FEL

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

31 Miles from Aztec, N.M.

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

18. DISTANCE FROM PROPOSED LOCATION*
TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

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

6175"GR

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"	61#	300'	418 cf CL B (Cmt to surface)
12 1/4"	9 5/8"	36#	3289'	2032 cf CL B (Cement to surface)
option: 8 3/4"	7"	23#	4900'	514 cf CL B
6 1/4"	4 1/2"	11.6#	6400"	

Notice of Staking submitted: 05/16/94 as the Gartner A #2R

Lease Description: T30N - R8W

Sec. 26: E/2, SW/4, E/2NW/4, SW/4NW/4

Sec. 27: SE/4NE/4, W/2NE/4, NW/4, S/2

Sec. 28: All

Sec. 29: Lots 1(33.93), 8(35.36) BEING E/2NE/4

Sec. 33: ALL

RECEIVED
JUN 20 1994

OIL CON. DIV.
DIST. 3

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 Sr. Staff Assistant DATE 05-20-1994
(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

TITLE

*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.

APPROVED
AS AMENDED

JUN 16 1994
DISTRICT MANAGER

RECEIVED
JUN 11 1964

RECEIVED
JUN 11 1964

RECEIVED

RECEIVED

Submit to Appropriate
District Office
State Lease - 4 copies
Fee Lease - 3 copies

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised 1-1-89

OIL CONSERVATION DIVISION

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

RECEIVED

JUN 03 1994

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

BUREAU OF LAND MANAGEMENT
FARMINGTON DISTRICT OFFICE

Operator AMOCO PRODUCTION COMPANY			Lease GARTNER A		Well No. # 2 R
Unit Letter B	Section 28	Township 30 NORTH	Range 8 WEST	County NMPM SAN JUAN	
Actual Footage Location of Well: 790 feet from the NORTH line and 1840 feet from the EAST line					
Ground level Elev. 6175	Producing Formation Blanco-Mesaverde		Pool Blanco-Mesaverde	Dedicated Acreage: E/2 320 Acres	

- Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communalization, unitization, force-pooling, etc.?
☐ Yes ☐ No If answer is "yes" type of consolidation _____
If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)
No allowable will be assigned to the well until all interests have been consolidated (by communalization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.

OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature *DeAnne J. Tallant*
Printed Name **DeAnne Tallant**
Position **Staff Assistant**
Company **Amoco Production Company**
Date **May 16, 1994**

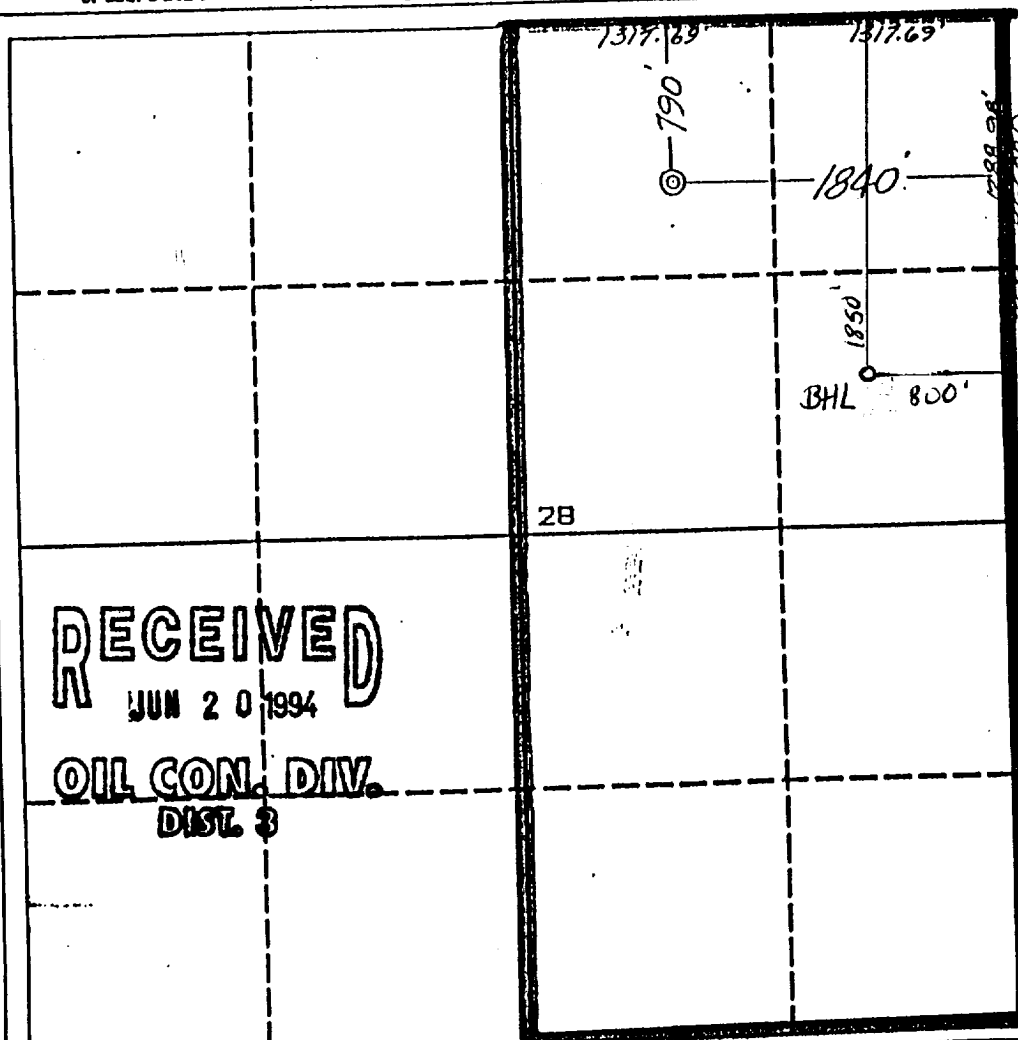
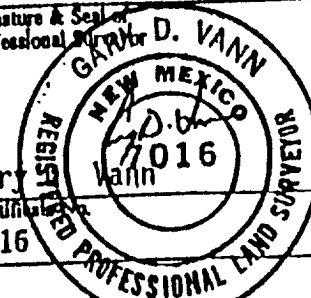
SURVEYOR CERTIFICATION

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 knowledge and belief.

Date Surveyed **May 4, 1994**

Signature & Seal of Professional Surveyor
GARY D. VANN
7016

Gary D. Vann
Certified
7016



RECEIVED
JUN 20 1994
OIL CON. DIV.
DIST. 3

RECEIVED
JUN 10 1960
U.S. AIR FORCE
OFFICE OF THE
JOINT CHIEFS OF STAFF
WASHINGTON, D.C.

AMOCO PRODUCTION COMPANY
DRILLING AND COMPLETION PROGRAM

File No.: grtr2r2
 Date: 5/17/93

Lease: Gartner "A" Well No. #2-R
 County: San Juan, New Mexico Location: 790' FNL X 1840' FEL Sect 28, 8W, 30N
 Former name: Gartner "A" #2 Field: Basin Mesa Verde

30 8

OBJECTIVE: Horizontally drill Cliff House member of Mesa Verde.				
METHOD OF DRILLING		APPROXIMATE DEPTHS OF GEOLOGICAL MARKER		
TYPE OF TOOLS	DEPTH OF DRILLING	Actual GL-----Estimated KB	6175	6191
Rotary	0 - TD	Marker	Depth (ft.)	SS Elev. (ft.)
SPECIAL SURVEYS		Ojo Alamo	1,782	4,408
TYPE	DEPTH	Fruitland*	2,831	3,580
		Pictured Cliffs*	2,954	3,237
Triple combo suite	PC--Fruitland	Lewis Shale	3,089	3,102
FDC-CNL/HRI/ML/GR/SP/CAL	ICP-SCP	KOP	4,300	1,891
		Cliff House "E"	4,461	1,730
None	TD-ICP	Cliff House "B"	4,681	1,510
REMARKS:		Cliff House Target	TVD	4,700
		TOTAL DEPTH	Measured	6,400
		* Possible pay		
		# Probable completion		
		OJO ALAMO IS POSSIBLE USEABLE WATER		
SPECIAL TESTS		DRILL CUTTING SAMPLES		DRILLING TIME
TYPE	DEPTH INTERVAL, ETC	FREQUENCY	DEPTH	FREQUENCY
None		None		Geograph
Remarks:		0 - TD		
		Mud Logging Program: Two man fully equipped fair from KOP. (BENCHMARK)		
		Coring Program: None		

MUD PROGRAM:

Approx. Interval	Type Mud	Weight, #/gal	Vis, sec/qt.	W/L, cc's/30 min.
0-----SCP	SPUD	8.5-9.0	Sufficient to clean hole.	NC
SCP---ICP	LSND	8.8-11.0*	Sufficient to clean hole/ maintain integrity if logs.	10-15 cc
ICP---TD	AIR/GAS		Probable gas/nitrogen mist drillin	

REMARKS:

* Use minimum mud weight to control formation pressures.

CASING PROGRAM:

Casing String	Estimated Depth	Casing Size	Hole Size	Landing Point, Cement, Etc
Conductor				
Surface	300	13 3/8"	17 1/2"	1,2
Intermediate	3,239	9 5/8"	12 1/4"	1,2,3
Liner	4,900	(If required) 7"	8 3/4"	2
Production	6,400	4 1/2"	6 1/4"	4
				Measured Depth
				Measured Depth

Remarks:

1. Circulate cement to surface.
2. Southern Rockies Drilling Team to design cement programs.
3. Casing set 150' into the Lewis Shale.
4. Probable pre-perforated liner set through the productive section of the Cliff House.

GENERAL REMARKS:

Southern Rockies Engineering staff to design completion program.

Form 46 Reviewed by:

Logging program reviewed by:

PREPARED BY:

APPROVED:

APPROVED:

Pasternack/bilyeu

For Production Dept

For Exploration Dept.

Form 46 7-84bw

5/18/94 13:21



RECEIVED
BLM

94 JUN -3 AM 11:04

070 FARMINGTON, NM

Southern

Rockies

Business

Unit

March 18, 1994

Mr. William J. LeMay, Director
New Mexico Oil Conservation Division
310 Old Santa Fe Trail
Santa Fe, NM 87501

**Application of Amoco Production Company
For A High Angle/Horizontal Directional Drilling Pilot
Project Area And Special Operating Rules Therefore,
San Juan County, New Mexico**

AMOCO PRODUCTION COMPANY ("Amoco") hereby makes application for approval of a high angle/horizontal directional drilling pilot project area and special operating rules therefore. In support of this application, Amoco states the following:

1. Amoco is the operator of the Mesaverde formation, Blanco-Mesaverde Pool, underlying the E/2 of Section 28, Township 30 North, Range 8 West, N.M.P.M., San Juan County, New Mexico, hereinafter referred to as the "Project Area."
2. Within the Project Area, Amoco seeks authority to:
 - (a) drill Gartner A-2R well as a replacement well for the Gartner A-2 well located 1650' FNL and 1500' FEL of Section 28, Township 30 North, Range 8 West;
 - (b) the Gartner A-2R well will be located at a surface location to be determined in the NE/4 of Section 28 but no closer than 790' to the boundary of the quarter section;
 - (c) use medium-radius drilling techniques to drill a high angle/horizontal well in the Mesaverde formation in a direction and lateral distance to be determined by Amoco;
 - (d) traverse quarter-quarter section line within the Project Area by its proposed wellbore; and

AMOCO PRODUCTION COMPANY

Cementing Procedure/form 46

Well Name: Gartner "A" #2-R Basin Mesa Verde

Amoco proposes to drill the well to further develop the Mesa Verde reservoir.
The well will be drilled to the surface casing point using native mud.
The well will then be drilled to the intermediate casing point with a non-dispersed mud system.
The production hole will be drilled with air horizontally in the Cliff House member of the Mesa Verde.
A protective liner will be set into the top of the Cliff House if necessary.
A perforated liner may be set through the horizontal section if necessary.

Surface Casing:

Quantity (ft)	Size (in)	Weight (ppf)	Description
300	13 3/8"	81	K-55, ST&C

Cement program
417 cf Class B, 0.4% CFR-3, 0.4% Haled 344, 5 #/sx Gilsomite,
+ 0.25 #/sx Floccle.
1.28 cf/sx, 15.11 ppg.

Hole Size: 17 1/2" Excess cement: 100%

Intermediate Casing:

Quantity (ft)	Size (in)	Weight (ppf)	Description
3239	8 5/8"	36	J-55, LT&C

Cement program/2 stage

* 1st Stg Tail:

443 cf Class B, 0.4% CFR-3, 0.4% Haled 344, 5 #/sx Gilsomite,
+ 0.25 #/sx Floccle.
1.28 cf/sx, 15.11 ppg.

Top of Fruitland Coal

2831 ft

Stage tool depth

2531 ft, 100' above top of Fruitland Coal.

* 2nd Stg Lead:

1458 cf Class B, 0.5:35:0, 7#/sx salt, 0.375 #/sx Floccle
5% Calseal and 2 % Microbond
1.8 cf/sx, 13.0 ppg.

* 2nd Stg Tail:

128 cf Class B, 0.4% CFR-3, 0.4% Haled 344, 5 #/sx Gilsomite,
+ 0.25 #/sx Floccle.
1.28 cf/sx, 15.8 ppg.

Hole size: 12 1/4" Excess cement: 100%

Protective Liner (if required):

Quantity (ft)	Size (in)	Weight (ppf)	Description
4900	7"	23	J-55, LT&C

Cement program

Top of liner--- 2950

* 1st Stg Tail:

513 cf Class B, 50/50 poz, 2% gel, 0.4% Haled 413, 0.1% Haled
413, 5# gilsomite, 5% Microbond and .25#/sx Floccle
1.35 cf/sx, 13.4 ppg.

Excess cement 75%

Production Liner (if required):

Quantity (ft)	Size (in)	Weight (ppf)	Description
6400	4 1/2"	11.8	K-55, Hydril 521/563

Cement program

None

Top of liner--- 2950

BY:BRAD BLYEU/BARRY PEISER

5/20/84 10:13

- input depths from form 46 in shaded areas to calculate cement volumes.

RECEIVED

JUN 03 1994

BUREAU OF LAND MANAGEMENT
FARMINGTON DISTRICT OFFICE

Gartner "A" #2

Setting depth

Quantity - 3450'

Mr. William J. LeMay, Director
March 18, 1994
Page 2

RECEIVED

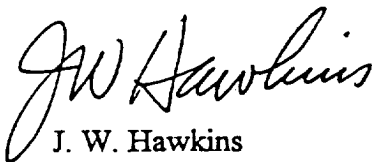
JUN 03 1994

BUREAU OF LAND MANAGEMENT
FARMINGTON DISTRICT OFFICE

- (e) drill the proposed horizontal wellbore to within 790' of the outer boundary of the Project Area.
- 3. Horizontal drilling within the Project Area should result in the recovery of significant volumes of oil and gas which was not recovered by the existing conventional vertical wellbores, thereby preventing waste.
- 4. Approval of this application will otherwise be in the best interest of conservation, the prevention of waste and the protection of correlative rights.

Amoco Production Company requests that this application be set for hearing before a duly appointed Examiner of the Oil Conservation Division on April 14, 1994. A copy of this application will be sent to each of the operators of spacing units offsetting the Project Area by certified mail.

Sincerely,


J. W. Hawkins

cc:
Meridian Oil Inc.
3535 East 30th St.
PO Box 4289
Farmington, NM 87499

CASE _____: Application of Amoco Production Company for a high angle/horizontal directional drilling pilot project area and special operating rules therefore, San Juan County, New Mexico. Applicant seeks authority to institute a horizontal directional drilling project in the Blanco-Mesaverde Pool in the E/2 of Section 8, Township 30 North, Range 8 West. Applicant proposes to drill its Gartner A-2R well as a replacement to its Gartner A-2 well at a surface location to be determined in the NE/4 of Section 28, but no closer than 790' to the boundary of the quarter section; kicking off the vertical, build angle at medium radius curve and continue drilling in said pool. Applicant further seeks special rules and provisions within the project area including authorization to cross quarter and quarter-quarter section lines and the designation of a prescribed area for the wellbore limiting the horizontal displacement of any drainhole to within 790' of the boundary of the project area. Said project is located approximately _____ miles _____ of _____, New Mexico.

RECEIVED

JUN 03 1994

BUREAU OF LAND MANAGEMENT
FARMINGTON DISTRICT OFFICE

R 8 W

Proposed Surface Location

Gartner A-2R

790'

790'

4200

4300

Proposed Horizontal Trajectory
P/134.5° to 149° Azimuth

134.5° Azimuth

149° Azimuth

1500'

2100'

Gartner A-2
Present

Gartner #2-A

Legal
Drilling
Window

Gartner #1-A

28

T 30 N

RECEIVED

JUN 03 1994

BUREAU OF LAND MANAGEMENT
FARMINGTON DISTRICT OFFICE

End of Lateral - 4700' TVD
- 6443' MD
90° Inclination

Option to go further
within drilling window

SAN JUAN BASIN
DAKOTA FORMATION
PRESSURE CONTROL EQUIPMENT

Background

The objective Dakota formation maximum surface pressure is anticipated to be 1400 PSI, based on completion testing. Pressure control equipment working pressure minimum requirements are therefore 2000 PSI. Equipment to be used will conform to API RP-53 (Figure 2.C.2) for a 2000 PSI system per Federal Onshore Order No. 2. Due to available conventional equipment within the area, 3000 PSI rated pressure control equipment will typically be utilized in a double ram type arrangement. Regional drilling rigs to be utilized have substructure height limitations which exclude use of annular preventers; therefore a rotating head will be installed above these rams. This pressure control equipment will be utilized for conventional drilling below surface to total depth. No abnormal temperature, pressure or H₂S anticipated.

Prior to drilling below intermediate casing, a modified two (2) double ram pressure control equipment system will be installed. This system is designed for Dakota formation interval drilling with air and water. A service unit will typically be used to drill this interval, and the wellbore will be completed as an uncased open hole if commercial productivity is established. If not, the wellbore will be cased and cemented with a 4 1/2" contingency liner. Based upon maximum surface pressure criteria, 2000 PSI equipment is required. However, as stated above, 3000 PSI working pressure equipment will typically be utilized. The No. 3 pipe ram in Exhibit 2 will be 4 3/4" if 4 3/4" drill collars are run in the bottom hole assembly.

Equipment Specification

Interval

BOP Equipment

Below Surface Casing
to
Total Depth

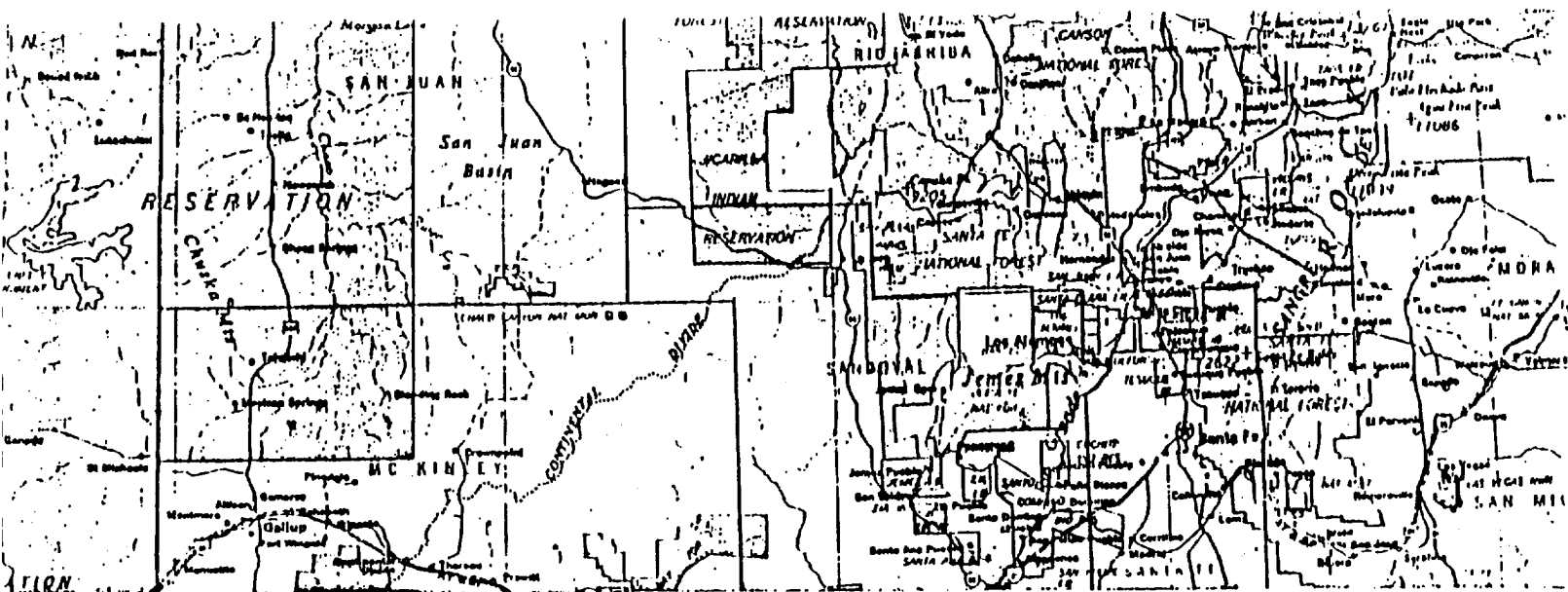
12" nominal, 3000 PSI double ram preventer with
with rotating head

All ram type preventers and related control equipment will be hydraulically tested to 250 PSI (low pressure) and 2000 PSI (high pressure), upon installation, following any repairs or equipment replacements, or at 30 day intervals. Accessories to BOP equipment will include kelly cock, floor safety valved and choke manifold which will also be tested to equivalent pressure.

Please direct any questions to Frank Seidel at (303) 830-4832 in our Denver office.

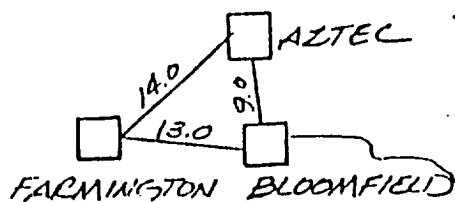


AMOCO PRODUCTION COMPANY
GARTNER A # 2 R
790' F/NL 1840' F/EL
SEC. 28, T30N, RBW, NMPM
SAN JUAN COUNTY, NEW MEXICO



GARTNER A # 2 R
 790' F/NL 1840' F/EL
 SEC. 28, T30N, R8W, NMPM
 RAIL POINT: 174 miles from Montrose, CO
 MUD POINT: 31 miles from Aztec, NM
 CEMENT POINT: 35 miles from Farmington, NM

GARTNER
 A # 2R



BLANCO
 US HWY 64

