STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

DRUG FREE

BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

August 10, 1993

Amoco Production Company
P.O. Box 800
Denver, CO 80201

Attention: J.W. Hawkins

ORIGINAL

Administrative Order NSL-3293

Dear Mr. Hawkins:

Reference is made to your application dated July 9, 1993 for a non-standard gas well location for your Rosa Unit Well No. 132 to be drilled 640 feet from the South line and 950 feet from the West line (Unit M) of Section 22, Township 31 North, Range 5 West, NMPM, Basin Dakota Pool, Rio Arriba County, New Mexico. The W/2 of said Section 22 shall be dedicated to the well forming a standard 320-acre gas spacing and proration unit.

By the authority granted me under the provisions of Rule 2(c) of the Special Rules and Regulations for the Basin Dakota Pool as promulgated by Division Order No. R-8170, as amended, the above-described unorthodox gas well location is hereby approved.

Sincerely,

William J. LeMay
Director

WJL/MES/amg

RECEIVED
AUG 12 1993
OIL CON. DIV.
DIST. 3

cc: Oil Conservation Division - Aztec
US Bureau of Land Management - Farmington
US Forest Service - Blanco

STATE OF NEW MEXICO

ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178

Date: 8-5-93

Attn: Mike Hayne

Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87504-2088

RE: Proposed MC_____ Proposed DHC_____
Proposed NSL X Proposed SWD_____
Proposed WFX_____ Proposed PMX_____
Proposed NSP_____ Proposed DD_____

Gentlemen:

I have examined the application received on 7-21-93

for the Amoco Rosa Unit #132
OPERATOR LEASE & WELL NO.

M-22-31N-5W and my recommendations are as follows:
UL-S-T-R

Approve

Yours truly,

Frank Chavez

Amoco Production Company
Southern Rockies Business Unit
Amoco Building
1670 Broadway
Post Office Box 800
Denver, Colorado 80201
303-830-4040

July 9, 1993

Mr. William J. LeMay, Director
New Mexico Oil Conservation Division
PO Box 2088
Santa Fe, New Mexico 87504

File: CAW-167-986.511

Application for Unorthodox Location
Rosa Unit #132
SW/4 Section 22-T31N-R5W
Basin Dakota Pool
Rio Arriba County, New Mexico

Amoco Production Company hereby requests administrative approval for an unorthodox location in the Basin Dakota Pool. Amoco proposes to drill the Rosa Unit #132 Well at a location 640' FSL and 950' FWL of Section 22. This location is necessary due to the topographical and archeological concerns in this area. Since this well is interior to the Rosa Unit and no offset owners will be adversely affected, the additional cost to directionally drill the well back to an orthodox location is not justified. This spacing unit in the W/2 Section 22 is located within the Rosa Unit and the only affected operator is Williams Production Company. They will receive a copy of the application by certified mail with a request that they furnish your Santa Fe office with a waiver of objection and return one copy to Amoco.

Sincerely,

J. W. Hawkins

JWH/jmc

cc: Julie Acevedo

Williams Production Company
PO Box 58900
Salt Lake City, UT 84158-0900

WAIVER

_____ hereby waives objection to Amoco's application for unorthodox well location for the Rosa Unit #132 Well in the Basin Dakota Pool as proposed above.

By: _____ Date: _____

VERIFICATION AND AFFIDAVIT

STATE OF COLORADO)
) ss
COUNTY OF DENVER)

J. W. Hawkins, of lawful age, being first duly sworn on his oath, deposes and says:

That he is employed in an engineering capacity by Amoco Production Company in its Denver, Colorado office; that he has been qualified as an expert engineering witness by the New Mexico Oil Conservation Division and his qualifications have been made of record; that Amoco's application for administrative approval for unorthodox location for the Rosa Unit #132 well in the Basin Dakota Pool, Rio Arriba County, New Mexico was prepared under his direction and supervision; that the matter and things therein set forth are true and correct to the best of his knowledge and beliefs. Copies of the application have been mailed by certified mail to the affected operators.

J. W. Hawkins

Subscribed and sworn to before me this 9th day of July, 1993.

Notary Public

My Commission expires: 4-7-94

Amoco Production Company

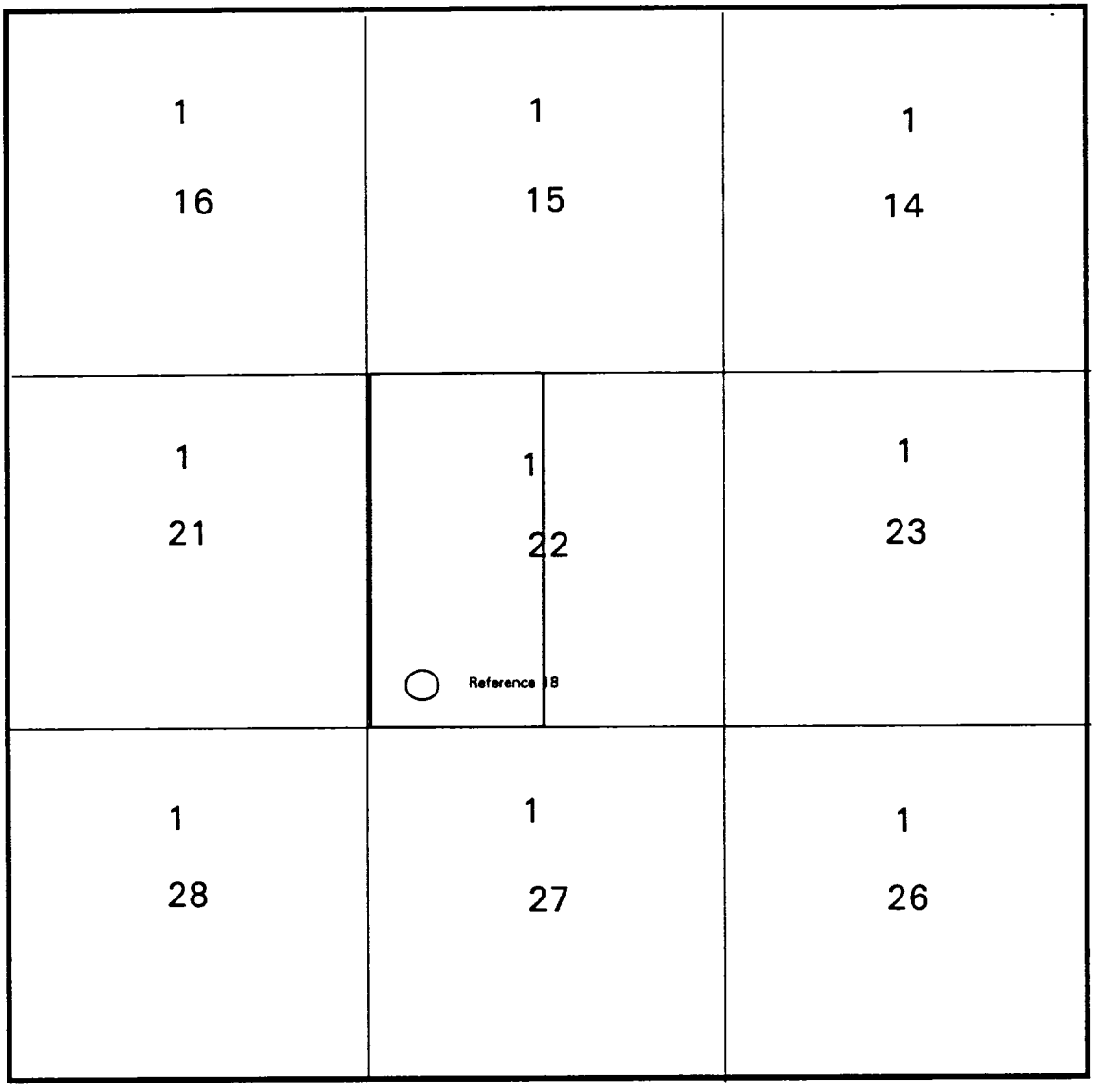
Offset Operator Plat

Rosa Unit #132

Township 31North - Range 5West

Section 22

Basin Dakota Formation



1. Williams Production Company
   P.O. Box 58900, Salt Lake City, UT 84158-0900

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

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

Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator: AMOCO PRODUCTION COMPANY			Lease: Rosa Unit	Well No.: 132
Unit Letter: M	Section: 22	Township: 31 NORTH	Range: 5 WEST NMPM	County: RIO ARRIBA
Actual Footage Location of Well: 640 feet from the SOUTH line and 950 feet from the WEST line				
Ground level Elev.: 6528	Producing Formation: Basin Dakota		Pool: Basin Dakota	Dedicated Acreage: 320 W/2 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

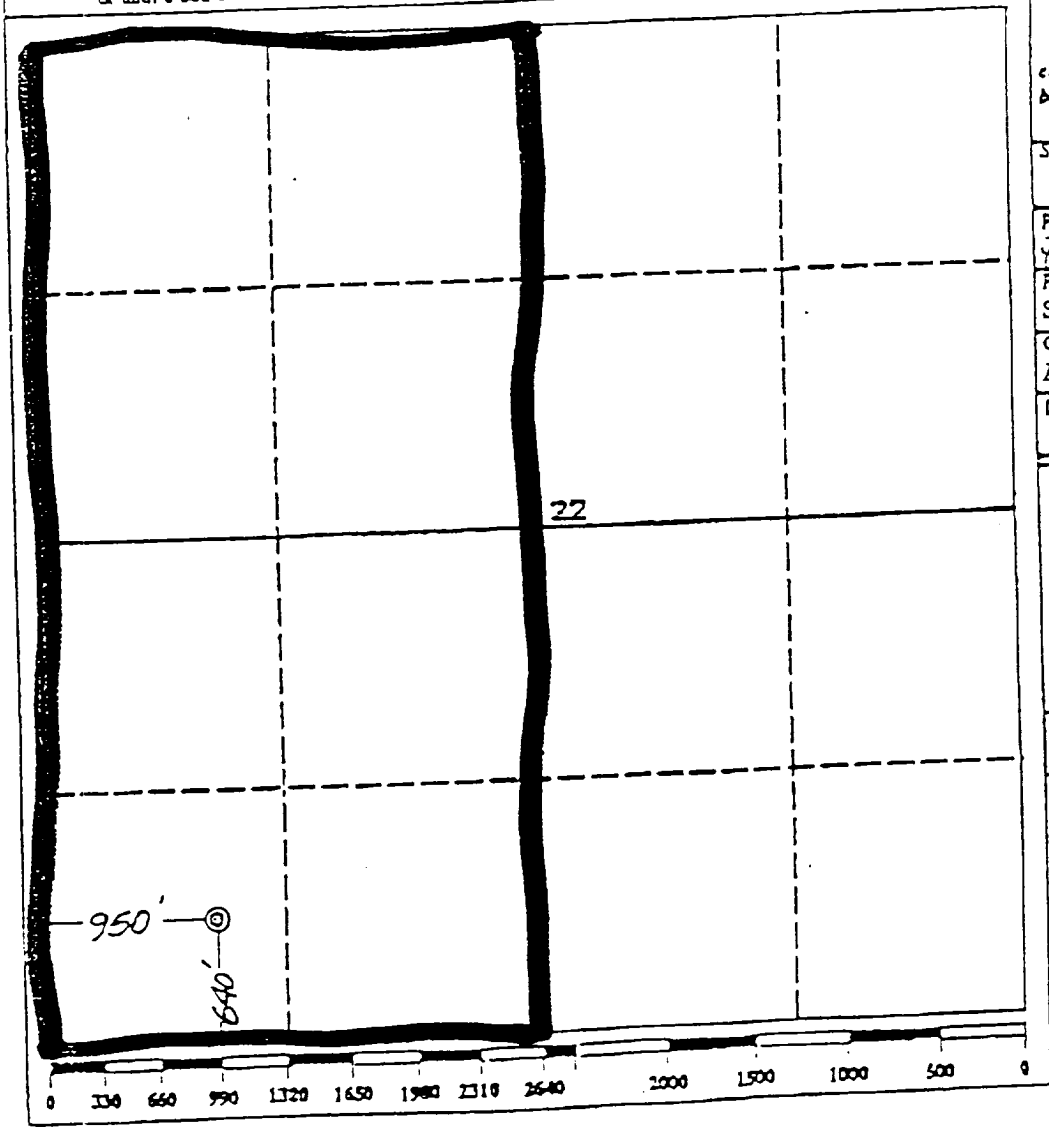
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, 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 communitization, 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: Julie Acevedo

Printed Name: Julie Acevedo

Position: Sr. Staff Assistant

Company: Amoco Production Company

Date: 5/25/93

SURVEYOR CERTIFICATION

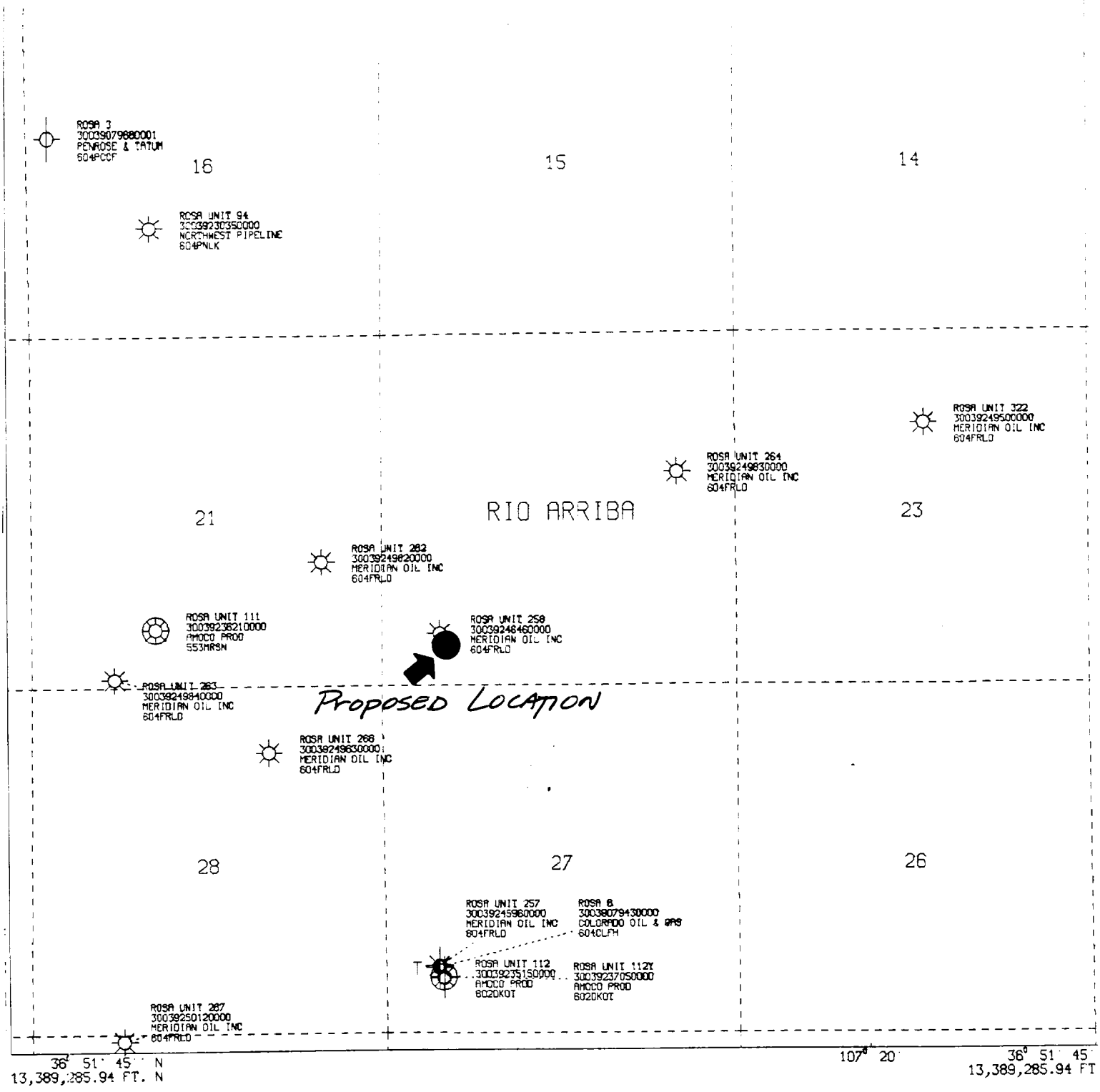
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed: May 13, 1993

Signature & Seal of Professional Surveyor: GARY D. VANN NEW MEXICO 7016 REGISTERED PROFESSIONAL LAND SURVEYOR

Gary Vann

Certificate No. 7016



POLYCONIC CENTRAL MERIDIAN - 107° 20' 56" W LON
SPHEROID - 6

AMOCO PRODUCTION COMPANY
9 SECTION PLAT
ROSA UNIT #132
LOCATED 640 FT FROM SOUTH LINE
950 FT FROM WEST LINE
SEC.22-31N-5W
SCALE 1 IN. = 2,000 FT. JUL 7, 199

AMOCO PRODUCTION COMPANY

640' F/SL 950' F/WL
SEC. 22, T31N, R5W, NMPM
RIO ARRIBA COUNTY, NM

United States Department of Agriculture | Forest Service | Jicarilla Ranger District | Gobernador Route Blanco, NM 87412

Reply to: 2820

Date: July 7, 1993

Mr. John Schwartz
Amoco Production Company
200 Amoco Court
Farmington, New Mexico 87401

Dear Mr. Schwartz:

I have requested that the Amoco Rosa 132 well location be staked at a location which is 640 feet from the south line and 950 from the west line of Section 22, Township 31 North, Runge 5 West. The orthodox location for this well would have an unacceptable impact upon heritage resources. Also the orthodox location would have an unacceptable impact upon an environmentally sensitive area due to new road and location construction. The requested unorthodox location would be constructed in a previously cleared area and no new road construction will be necessary.

If you have any questions or concerns regarding the requested Amoco Road 132 well
location, please do not hesitate to contact me.

Sincerely,

for PHILIP R. SETTLES
District Forest Ranger

Caring for the Land and Serving People

Forest Service Project #1993-02-044
ACA Project no. 93-103

Carson National Forest
Special Use Permit
Holder# 5190-01

An Archaeological Survey of the Proposed Well Pad SFG #18 Rio Arriba County, New Mexico Jicarilla Ranger District Carson National Forest T31N, R5W, Section 22 640'FSL, 950'FWL

for
Amoco Production

prepared and submitted

by
John M. Kershner

Arboles Contract Archaeology

June 26, 1993

Technical report No. 289

Abstract

On May 13, 1993, Arboles Contract Archaeology completed a cultural resources survey of the proposed SFG #18 well pad for Amoco Production. The survey is located in Rio Arriba County, New Mexico and is under the jurisdiction of the Carson National Forest. Approximately 7.9 acres were closely inspected for cultural resources.

John Kershner, ACA archaeologist, surveyed the project area for archaeological material.

AR-03-02-03-351, a previously recorded site (Sofranoff, 1989) is located within the northeast buffer zone of the proposed well pad. Archaeological clearance is recommended for the project with the stipulation that the well pad's northeast construction zone not be utilized with an archaeological monitor present during initial clearing of the proposed well pad.

Introduction

On May 13, 1993 Arboles Contract Archaeology (ACA) conducted an archaeological survey for Amoco Production of Farmington, New Mexico. Ben Benfield of G and L Services requested the survey on May 10, 1993 and John Schwarz administered the project for Amoco Production. John Kershner administered the project for ACA.

Because of the finite and nonrenewable extent of archaeological remains, the Federal government of the United States has enacted legislation that will conserve and protect these resources. Key legislative enactments consist of the Antiquities Act of 1906 (PL 52-209), the Historic Preservation Act of 1966 (PL 89-655) and as amended (PL 96-515), the National Environmental Act of 1969 (PL 91-852), the 1971 Executive Order No. 11593, the Archaeological and Historical Conservation Act of 1974 (PL 93-291), and the Archaeological Resources and Protection Act of 1979 (PL 96-95). To ensure compliance with federal legislation within specific jurisdictional areas, the Carson National Forest and the states of New

Mexico, Arizona, Colorado and Utah have enacted legislation to protect cultural resources.

Methods

The project area was completely surveyed employing straight line transects spaced 5-8m apart. The project consisted of a primary impact area around the well head, a construction zone of 50 feet around the primary impact area, and a cultural resource buffer zone of 100 feet around the construction zone. All archaeological and relevant environmental data were recorded under the guidelines defined by the lead agency on the project area. Archaeological sites were recorded using a Brunton compass and 30m and 3m tapes.

Previously Recorded Sites

Prior to the cultural resources survey of the project areas, a records search was conducted at the Carson National Forest Jicarilla Ranger District Office to identify sites that may have been previously recorded within the project area.

The records search on April 9, 1993 yielded five sites within one within 1000' of the proposed well pad and access road SFG #18.

Site #(AR-03-02-03-)	site type	distance from proposed disturbance
350	PI hearths,artifact scatter	discussed in report 50'
351	PI pot drop	125'

PROJECT DESCRIPTION

Proposed Well Pad MOI SFG #18

Legal Description:

T31N, R5W, Section 22 640'FSL, 950'FWL

well pad: all of SW1/4 SW1/4

N.M.P.M., Rio Arriba County, New Mexico

Map Source: U.S.G.S. 7.5' Bancos Mesa-photo rev. 1982

Land Jurisdiction: Carson National Forest-Jicarilla Ranger District

Project Area: 370' (average) X 400' (proposed well pad and construction zone)

Surveyed Area: 570' (average) X 600' (proposed well pad, construction and buffer zones)

7.9 total acres surveyed

Environment: The proposed well pads located on a bench below Laguna Seca Mesa above Cabresto Canyon. Soils are sandy clay sediments with naturally occurring sandstone slabs and exposed bedrock supporting piñon, juniper and oak woodland. Access to the proposed location will begin at an existing well pad.

Cultural Material: AR-03-02-03-351 is a previously recorded site (Sofranoff 1989) and is the remains of a large PI limited activity occupation that appears to have been reoccupied. Feature 2 of the site is in the northeastern buffer zone. This feature is a "suspicious" concentration of large boulders. During the present survey the area around the boulders (feature 2) were intensively surveyed and three trowel tests of 30x30x15cm deep yielded no apparent evidence of cultural material.

Recommendations: AR-03-02-03-351, a previously recorded site (Sofranoff, 1989) is located within the northeast buffer zone of the proposed well pad. The site boundary closest to the proposed disturbance was flagged with white flagging tape. Archaeological clearance is recommended for the project with the stipulation that the well pad's northeast construction zone not be utilized with an archaeological monitor present during initial clearing of the proposed well pad.

References cited:

Sofranoff, S. 1989 An Archeological Survey of the Proposed Well Pad MOI Rosa #238. Forest Service Project #1989-002-151

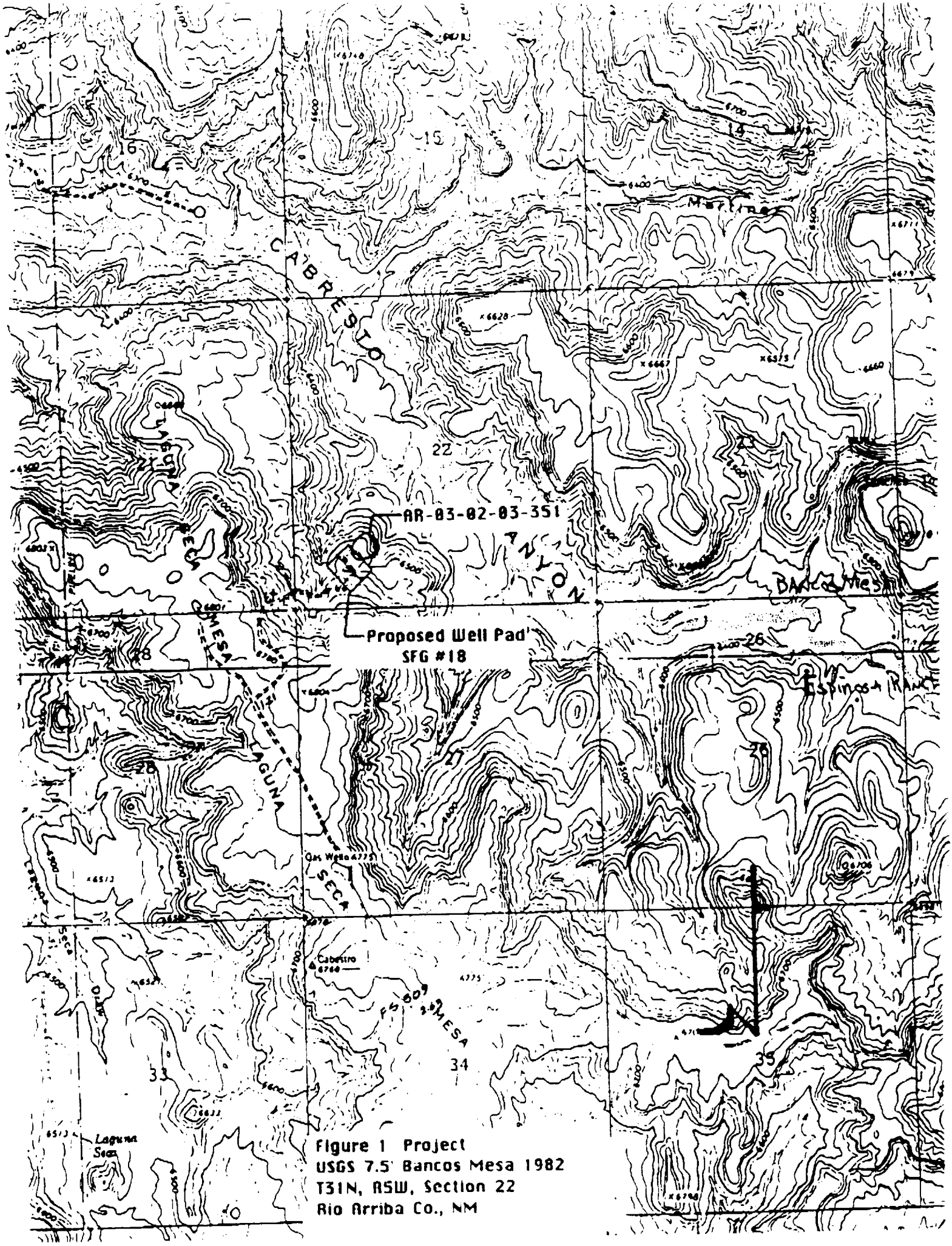
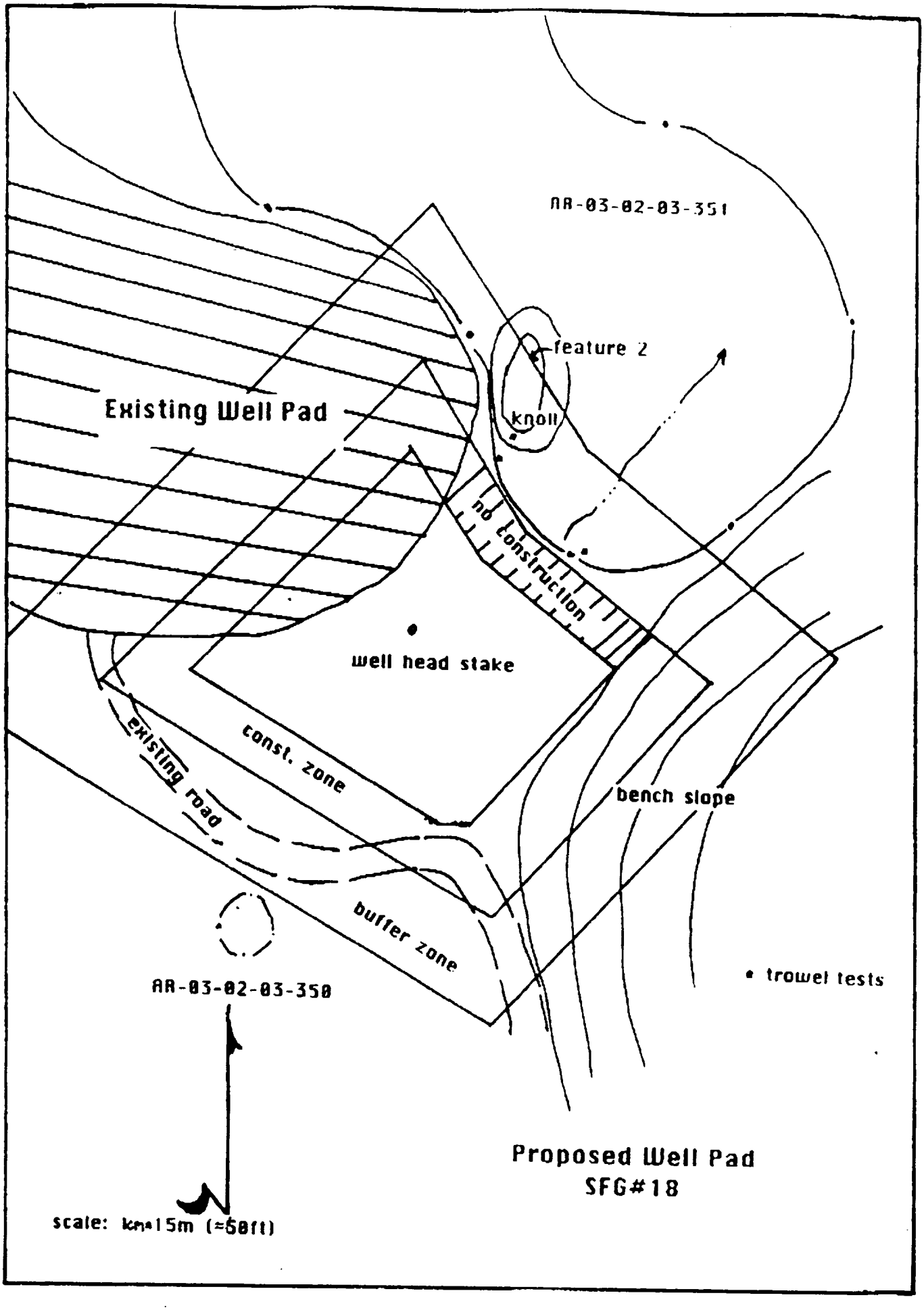


Figure 1 Project
USGS 7.5' Bancos Mesa 1982
T31N, R5W, Section 22
Rio Arriba Co., NM

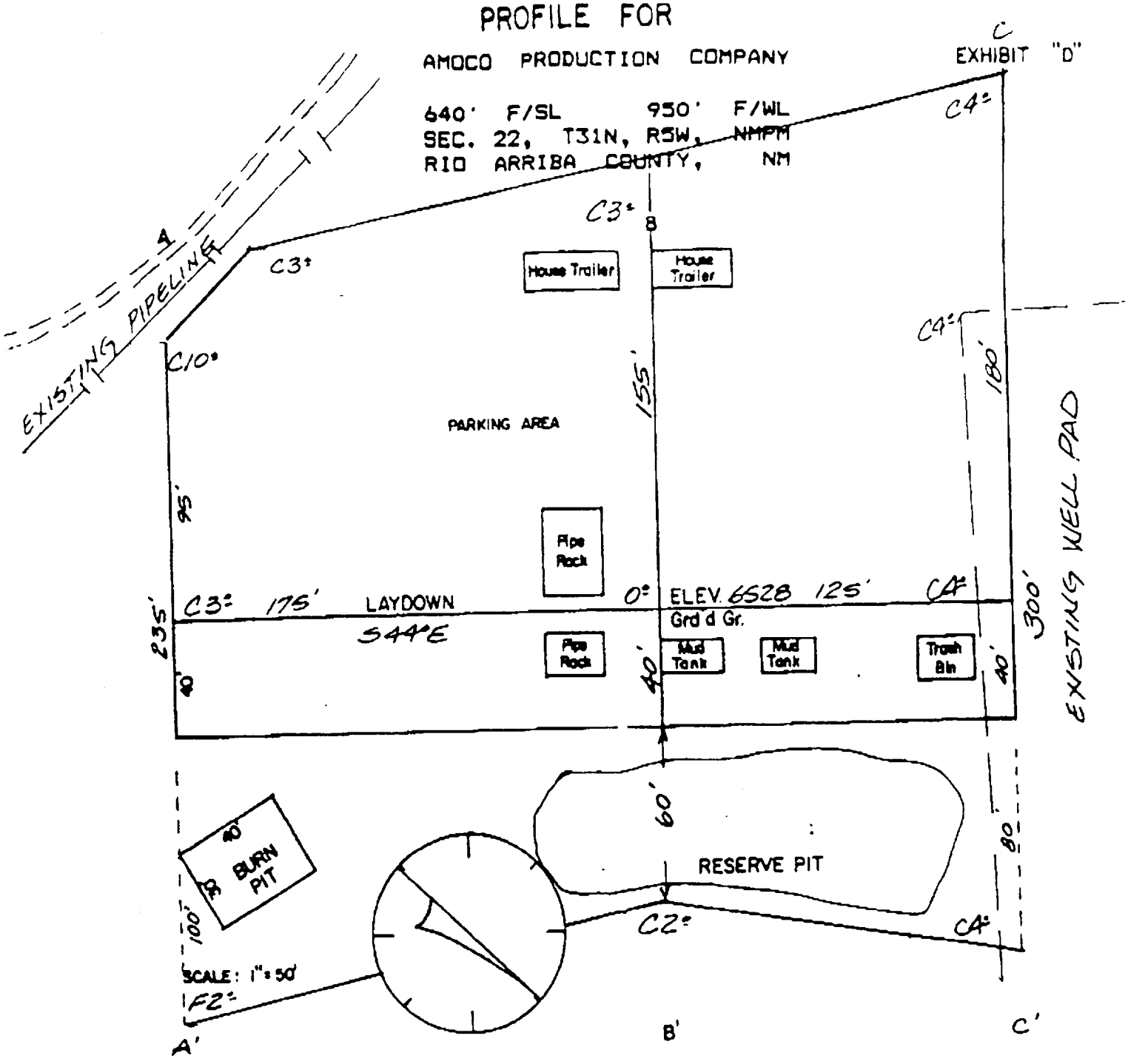

AR-03-02-03-351
feature 2
knoll
Existing Well Pad
no construction
well head stake
const. zone
existing road
bench slope
buffer zone
AR-03-02-03-350
• trowel tests
Proposed Well Pad
SFG#18
scale: km=15m (≈50ft)

PROFILE FOR

AMOCO PRODUCTION COMPANY

EXHIBIT "D"

640' F/SL 950' F/WL
SEC. 22, T31N, R5W, NMPM
RIO ARRIBA COUNTY, NM



NOTE: Contractor should call 1-800-321-2537 for location of any marked or unmarked buried pipelines or cables on well pad and/or access road at least 2 days prior to construction.

Form 3160-3
(December 1990)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

5. LEASE DESIGNATION AND SERIAL NO.: SF- 78770

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME, WELL NO.: Rosa Unit #132

9. API WELL NO.:

10. FIELD AND POOL, OR WILDCAT: Basin Dakota

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Section 22 Township 31N Range 5W

12. COUNTY OR PARISH: Rio Arriba

13. STATE: New Mexico

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ]

b. TYPE OF WELL: OIL WELL [ ] GAS WELL [X] OTHER — SINGLE ZONE [X] MULTIPLE ZONE [ ]

2. NAME OF OPERATOR: Amoco Production Company — Attention: Julie 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: 640' FSL 950' FWL
At proposed prod. zone:

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 69 miles from Aztec

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

16. NO. OF ACRES IN LEASE: 2560.00

17. NO. OF ACRES ASSIGNED TO THIS WELL: 320 W/2

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

19. PROPOSED DEPTH: 8440'

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR., etc.): 6528 GR

22. APPROX. DATE WORK WILL START*:

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4	9 5/8" K-55	36#	400'	282cf Cl B W/2% CaCl2 (Cement to surface)
8 3/4"	7" K-55	23#	3825'	1068cf Cl B(cement to surface)
6 1/4"	4 1/2" N-80	11.6#	8440' - 3725'	808 cf Cl G

Notice of staking was submitted on 5/25/93 under the temporary name of Reference # 18.

Lease Description: T31N, R5W
Sec 10 S/2
Sec 15 all
Sec 22 all
Sec 23 N/2
Sec 27 all

CONFIDENTIAL

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 Julie Acevedo TITLE Sr. Staff Assistant DATE 06-10-1993

(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 _____ DATE _____

*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.

FEDERAL CEMENTING REQUIREMENTS

1. All permeable zones containing fresh water and other usable water containing 10,000 ppm or less total dissolved solids will be isolated and protected from contamination by cement circulated in place for the protection of permeable zones per the NTL-FRA 90-1 section III A.

2. The hole size will be no smaller than 1 1/2" larger diameter than the casing O.D. across all usable water zones.

3. An adequate spacer will be pumped ahead of the cement slurry to help prevent mud contamination of the cement.

4. An adequate number of casing centralizers will be run through usable water zones to ensure that the casing is centralized through these zones. The adequate number of centralizers to use will be determined by API Spec 10D.

5. Centralizers will impart a swirling action around the casing and will be used just below and into the base of the lowest usable water zone.

6. A chronological log will be kept recording the pump and slurry information and will be sent to the BLM with the subsequent sundry.

RW #18

Amoco proposes to drill the well to further develop the Dakota reservior.
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 to the top of the Dakota and then drilled with
non-dispersed mud system to TD.

Surface Casing:

Quanity (ft)	Size (in)	Weight (ppf)	Description	Cement program
400	9.625	36	K-55, LT&C	282 cf Class B, 2% CaCl2 1.18 cf/sx, 15.6 ppg

Hole size 12.25", 125% excess, circulate cement to surface.

Intermediate Casing:

	Size (in)	Weight (ppf)	Description	Cement program
3825	7	23	K-55, LT&C	* 2 stage

* 1st Stg Lead: 78 cf Class B, 65:35:6, 10% salt, 0.25 pps cellophane, 0.25% dispersar
1.7 cf/sx, 13.1 ppg.

* 1st Stg Tail: 118 cf Class B, 0.4% CFR-3, 0.4% Halad 344.
1.18 cf/sx, 15.6 ppg.

Top of Fruitland Coal 3223 ft
Stage tool depth 3123 ft, 100' above top of Fruitland Coal.

* 2nd Stg Lead: 695 cf Class B, 65:35:6, 10% salt, 0.25 pps cellophane, 0.25% dispersar
1.7 cf/sx, 13.1 ppg.

* 2nd Stg Tail: 177 cf Class B, 0.4% CFR-3, 0.4% Halad 344.
1.18 cf/sx, 15.6 ppg.

Hole size 8.75", washed out to 9.25", 40% excess, circulate cement to surface.

Production Liner:

Quanity (ft)	Size (in)	Weight (ppf)	Description	Cement program
4715	4.5	11.6	N-80, LT&C	* single stage

* 1st Stg Lead: 656 cf Class G, 50/50 poz, 2% gel, 0.6% Halad 9, 0.2% SCR 100.
1.19 cf/sx, 13.7 ppg.

* 1st Stg Tail: 152 cf Class G, 35% SSA 1, 1.0% CFR 3, 0.5% Halad 24, 0.2% SCR 100.
1.52 cf/sx, 15.8 ppg.

Estimated Total Depth 8440 ft
Estimated Top of Liner 3725 ft 100' overlap into intermediate casing.

Hole size 6.25", washed out to 6.75", 25% excess.

BY: FRANK SEIDEL 06/03/93
= input depths from form 46 in shaded areas to calculate cement volumes.
H:\GROUP\SRBU\NMEXDK\CMTFORM.WK3

:O PRODUCTION COMPANY
. AND COMPLETION PROGRAM
:RELIMINARY COPY

File: H:\group\srbu\nmexdk\dak18f46.wk3
Revision Date: 06/03/93

Lease: Rosa Unit
County: Rio Arriba, New Mexico
Formerly Reference Well #18

Well No.
Location: 640' FSL x 950' FWL, Sec. 22, 31N–5W

Field: Basin Dakota

OBJECTIVE: Evaluate and develop Pictu[illegible]d Cliff, Mesa Verde and Dakota reserves.

METHOD OF DRILLING

TYPE OF TOOLS	DEPTH OF DRILLING
Rotary	0 – TD

LOG PROGRAM

Type	Depth Interval
DIL–CAL–NGT–GR	SFC to TD
FDC–CNL	SFC to TD
MICROLOG	TD + 1000'

REMARKS:

APPROXIMATE DEPTHS OF GEOLOGICAL MARKER

6,528 Est. GL Elev. 6,540 Est. KB Elev.

Marker	Depth (ft)	SS Elev. (ft)
Ojo Alamo	2,684	3,856
Fruitland	3,223	3,317
Pictured Cliffs *	3,419	3,121
Lewis Shale	3,675	2,865
Cliff House	5,500	1,040
Menefee	5,650	890
Point Lookout	5,844	696
Mancos Shale	6,079	461
Dakota #	8,124	(1,584)
TOTAL DEPTH:	8,440	(1,900)

Probable completion interval
* Possible pay.

SPECIAL TESTS

TYPE	DEPTH INTERVAL, ETC
None	

Remarks:

DRILL CUTTING SAMPLES

FREQUENCY	DEPTH
None	

DRILLING TIME

FREQUENCY	DEPTH
Geolograph	0 – TD

Remarks:

MUD PROGRAM:

Approx Interval	Type Mud	Weight, #/gal	Vis, sec/qt	W/L, cc's/30 min
0 – 400'	SPUD	8.5 – 9.0	Sufficient to clean hole and maintain hole conditions for logs.	
400'–INT CSG	LSND	8.8 – 11.0		
INT CSG– T. Dakota	AIR	–		
T. Dakota – TD	LSND	8.8 – 9.0		

REMARKS:

* Use minimum mud weight to control formation pressures.

CASING PROGRAM:

Casing String	Estimated Depth (ft)	Casing Size	Hole Size	Landing Point, Cement, Etc
Conductor				
Surface	400	9–5/8"	12–1/4"	1,2
Intermediate	3,825	7"	8–3/4"	1,2,3
Production	8,440	4–1/2"	6–1/4"	2

Remarks:
1. Circulate cement to surface.
2. Southern Rockies Drilling Team to design cement programs.
3. Casing set 100'–150' into Lewis Shale.

GENERAL REMARKS:
Southern Rockies Dakota Engineer to design completion program.

Form 46 Reviewed by:

PREPARED BY:
F. Seidel/R. Gierhart
Form 46 7–84bw

Logging program reviewed by:

APPROVED:
For Production Dept

APPROVED:
For Exploration Dept

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.

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.

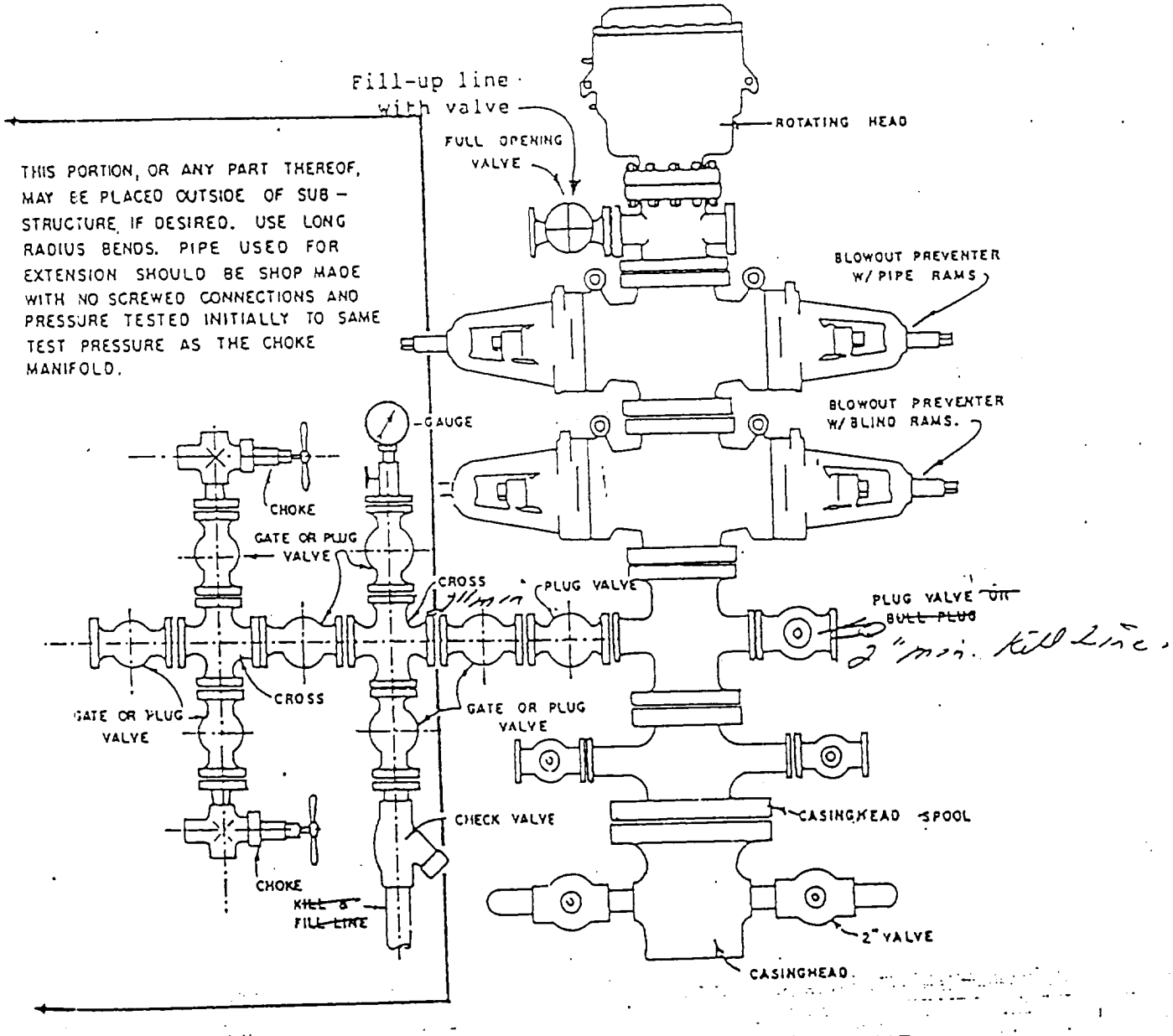
Equipment Specification

Interval	BOP Equipment
Below Surface Casing to Total Depth	12" nominal, 3000 PSI double ram preventer with 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.

1. Upper kelly cock valve, with handle will be utilized.
2. There will be safety valves and subs to fit all drill strings in use.



BLOWOUT PREVENTER HOOKUP

NEW MEXICO MULTIPOINT REQUIREMENTS

1. Existing Roads

A. The proposed location is staked as shown on the Certified Plat.
B. Route and distance from nearest town is identified on the form 3160-3, item #14 (also, see Exhibit A).
C. Access road(s) to location are identified on Exhibits A and B.
D. Not applicable unless exploratory well.
E. All existing roads within one-mile radius of the well site are shown on Exhibit B.
F. Improvement and/or maintenance of existing roads may be done as deemed necessary for Amoco's operations, or as required by the surface management agency.

2. Access Roads

A. Width 18'.
B. Maximum grades 8%.
C. Turnouts None.
D. Drainage will be used as required.
E. Size and location of culverts, if needed, will be determined at the onsite inspection or during construction.
F. Surfacing materials may be applied to the proposed road and/or location if conditions merit it.
G. Gates and/or cattle guards will be installed at fence crossings if deemed necessary by the land owner or the surface management agency.
H. The proposed new access road is center-line flagged, if applicable.

3. Location of Existing Wells

A-H. All existing wells, to the best of our knowledge, are identified on Exhibit C (9 section plat).

4. Location of Existing and/or Proposed Facilities

A. All existing facilities owned or controlled by Amoco are shown on Exhibits D and E.
B. If this proposed well is productive, Amoco will own or have control of these facilities on location: storage tanks, wellhead, production unit, and if applicable, a pump jack and/or compressor. Also there will be buried production lines from the wellhead to the production unit and/or storage tanks. Amoco will submit a Sundry Notice when off-pad plans are finalized.

C. Rehabilitation, whether the well is productive or not, will be made on all unused areas in accordance with surface owner or manager approval.

C. Reclamation, whether the well is productive or not, will be made on all unused areas in accordance with surface owner or manager approval.

5. Location of Type of Water Supply

Water will be obtained from a privately permitted water source secured through a contract water hauling company. It will be hauled in vacuum trucks via the access road (Exhibit A). The appropriate permits for this activity have been obtained by the water transporter.

6. Source of Construction Materials

A.-D. No off-site materials will be needed to build the proposed location or access road.

7. Methods of Handling Waste Disposal

A. Cuttings, drilling fluids, and produced fluids will be contained in the reserve pit and be allowed to evaporate. The reserve pit will be fenced on three sides and the 4th side will be fenced upon removal of the rig. The pits will be allowed to sit for 90 days and then pulled as required by NTL-2B. Produced water will be disposed of at an approved injection well or an evaporation site. Sanitary facilities and a steel mesh portable trash container will remain on location throughout drilling operations and will then be removed to a designated disposal area. The well site will be properly cleaned up upon removal of the rig.

8. Ancillary Facilities

A. To the best of our knowledge, no ancillary facilities will be needed at this time.

9. Well Site Layout

A.-C. Cross-sections, etc. - See Exhibit D. Exact location of rig related equipment will be determined when Amoco contracts a drilling rig; however, all this equipment will be contained on location. The location diagram reflects actual area of well pad. Total disturbed area will vary due to cut and fill slopes.

D. Reserve pit(s) Unlined _____
Lined ✓ (8-10 mil reinforced plastic, size sufficient to cover pit area and fit underneath a rig tank.)

10. Plans for Restoration of Surface

A. Restoration of the surface will be conducted after the reserve pit has dried. The pit will then be cleaned up and back filled and the entire disturbed area will be re-contoured. The topsoil stockpile will then be uniformly placed over this area and reseeding of the site will be carried out as instructed by the appropriate management agency. Methods to protect against erosion will be employed. After final abandonment, additional restoration efforts will be applied.

11. Surface Ownership

A. The surface owner is BLM.

12. Other Information

A. General Description

1. Archeological clearance, topography, soil character, and flora and fauna are detailed in the archeologist's report forwarded by an approved contract archeologist to the appropriate management agency.

2. Land uses include recreation, grazing and oil and gas development.

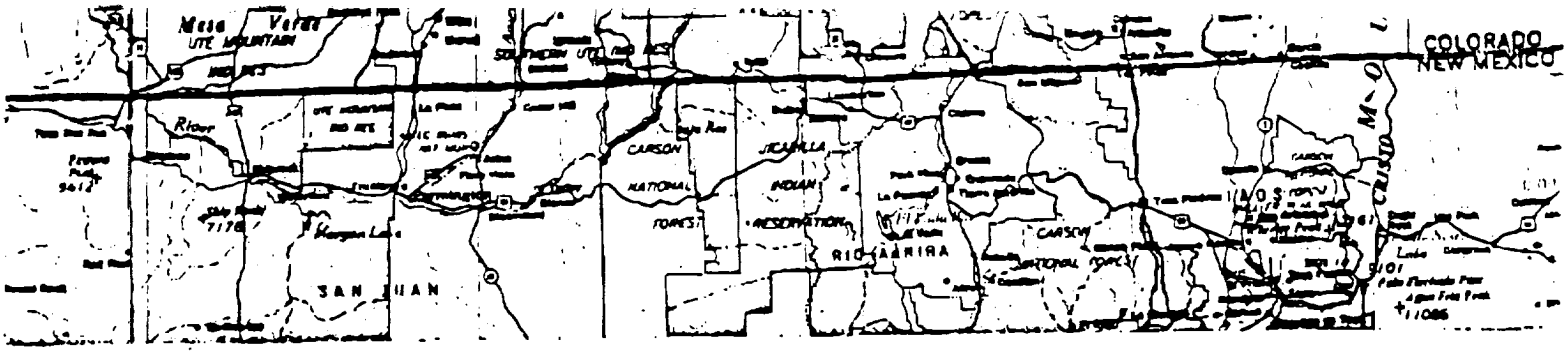
13. Operator's Representative and Certification

Amoco Production Company
John R. Pantaleo
Drilling Superintendent
P.O. Box 800
Denver, Colorado 80201
(303) 830-4822

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by AMOCO PRODUCTION COMPANY and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

Date: June 11, 1993 J.R. Pantaleo JR

J.R. Pantaleo, Drilling Supt.



540' F/SL 950' F/WL
SEC. 22, T31N, R5W, NMPM
RIO ARRIBA COUNTY, NM
RAIL POINT: 97 miles from montrose
MUD POINT: 69 miles from aztec
CEMENT POINT: 74 miles from farmington

0.73
1.81
FS 309
1.96
2.63
FS 310
ROSA ROAD
8.88
TO SIMS MESA
STATE ROAD 527
TURN-OFF TO
LA JARA STA.
STATE ROAD 527
1.91
GOBERNADOR
CAMP
US HWY 64
37.4
AZTEC
14.0
9.0
13.0
BLOOMFIELD
FARMINGTON