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PROPOSED UNIT BOUNDARY FEBRUARY, 1982

WEST BRAVO DOME AREA HARDING COUNTY, NEW MEXICO

-  MITCHELL RANCH
-  STATE
-  FEE
-  FEDERAL

 AMOCO BRAVO DOME
CO₂ UNIT BOUNDARY



*Case 8351
Exhibit # 2*

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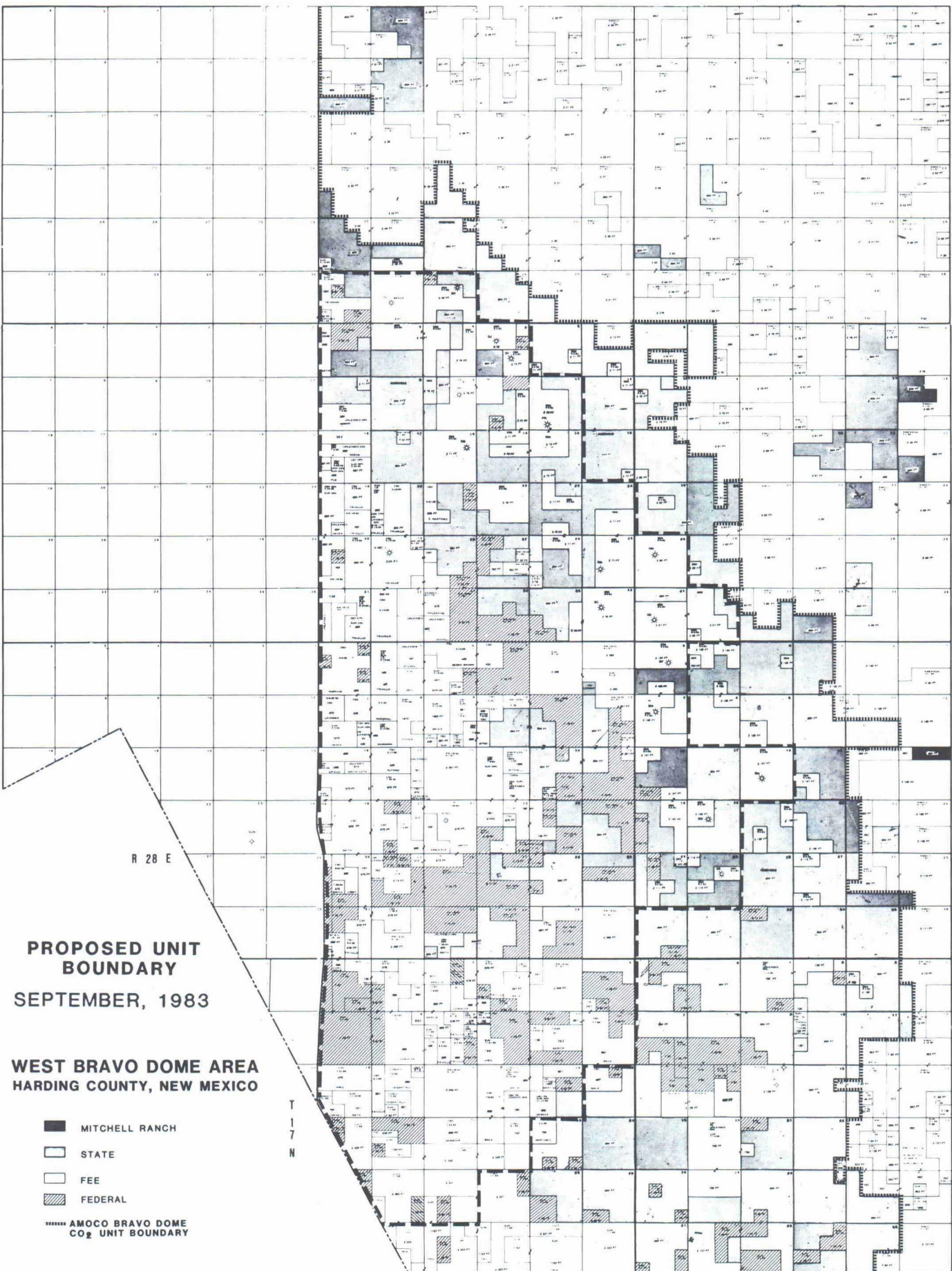
PROPOSED UNIT BOUNDARY
SEPTEMBER, 1983

WEST BRAVO DOME AREA
HARDING COUNTY, NEW MEXICO

-  MITCHELL RANCH
-  STATE
-  FEE
-  FEDERAL
-  AMOCO BRAVO DOME CO₂ UNIT BOUNDARY



Case 8351
Exhibit #3



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PROPOSED UNIT BOUNDARY NOVEMBER, 1983

WEST BRAVO DOME AREA HARDING COUNTY, NEW MEXICO

■ MITCHELL RANCH

□ STATE

□ FEE

▨ FEDERAL

..... AMOCO BRAVO DOME
CO₂ UNIT BOUNDARY



*Case 8351
Exhibit #4*

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

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**PROPOSED UNIT
BOUNDARY
MAY, 1984**

**WEST BRAVO DOME AREA
HARDING COUNTY, NEW MEXICO**

-  MITCHELL RANCH
-  STATE
-  FEE
-  FEDERAL
-  AMOCO BRAVO DOME
CO₂ UNIT BOUNDARY



*Case 835/
Exhibit #5*

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SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
 Put your address and "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to: State of New Mexico Energy & Minerals Department Oil Conservation Division P. O. Box 2088 Santa Fe, New Mexico 87501	4. Article Number P 125 011 370 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input checked="" type="checkbox"/> Return Receipt for Merchandise Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature - Address X <i>File</i>	8. Addressee's Address (ONLY if requested and fee paid) 
6. Signature - Agent X <i>JR</i>	
7. Date of Delivery	

PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT USP

UNITED STATES POSTAL SERVICE
 OFFICIAL BUSINESS

SENDER INSTRUCTIONS

Print your name, address and ZIP Code in the space below.

- Complete items 1, 2, 3, and 4 on the reverse.
- Attach to front of article if space permits, otherwise affix to back of article.
- Endorse article "Return Receipt Requested" adjacent to number.

RECEIVED

JUN 5 1991

**LAND DEPARTMENT
 WESTERN REGION**

PENALTY FOR PRIVATE USE, \$300

Print Sender's name, address, and ZIP Code in the space below.

RETURN TO →

OXY USA INC.
 P. O. Box 50250
 Midland, TX 79710
 Attn: Mr. David B. Evans

R 29 E

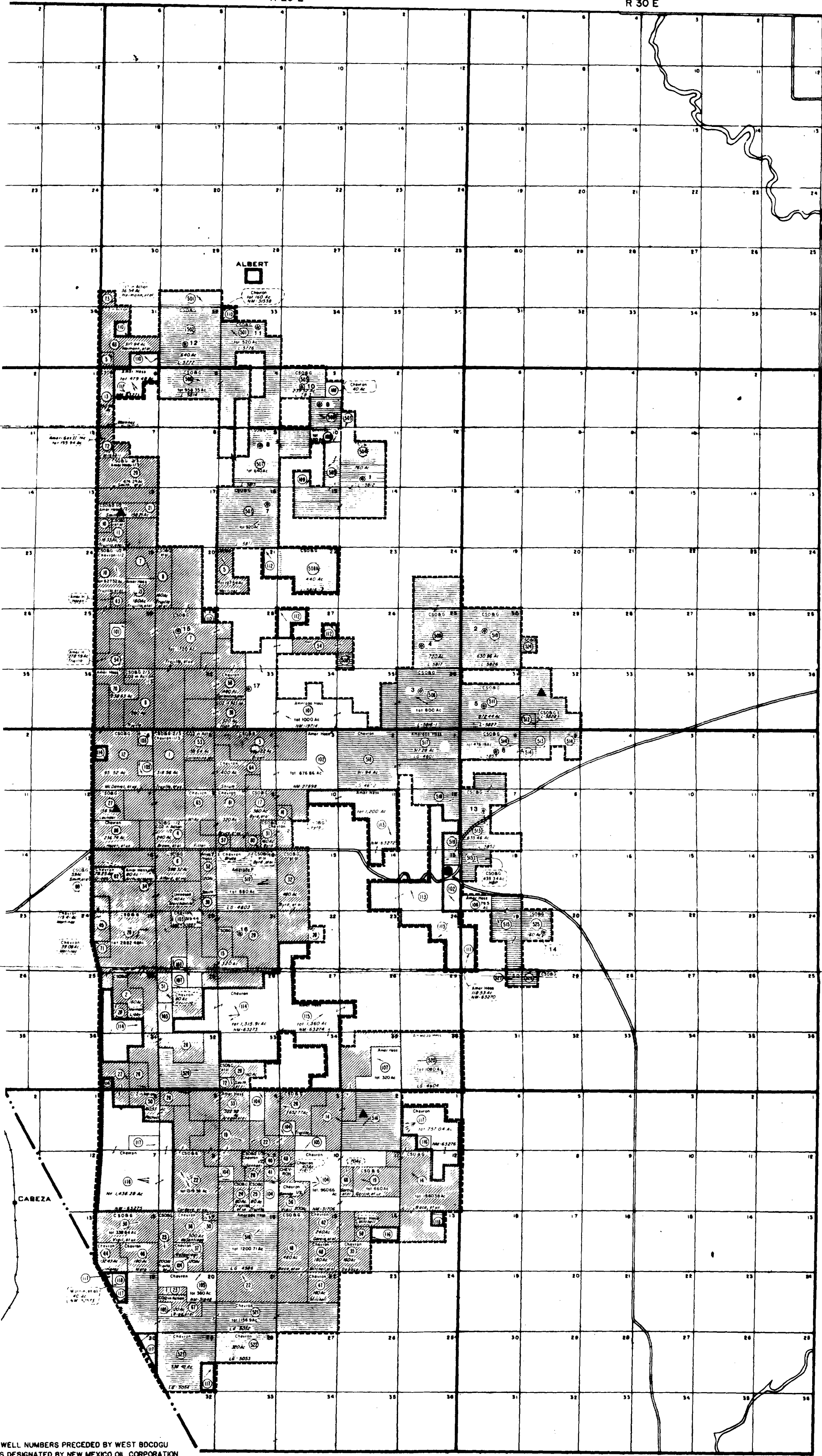
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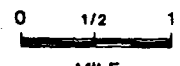


NOTE: WELL NUMBERS PRECEDED BY WEST BDCOGU AS DESIGNATED BY NEW MEXICO OIL CORPORATION COMMISSION.

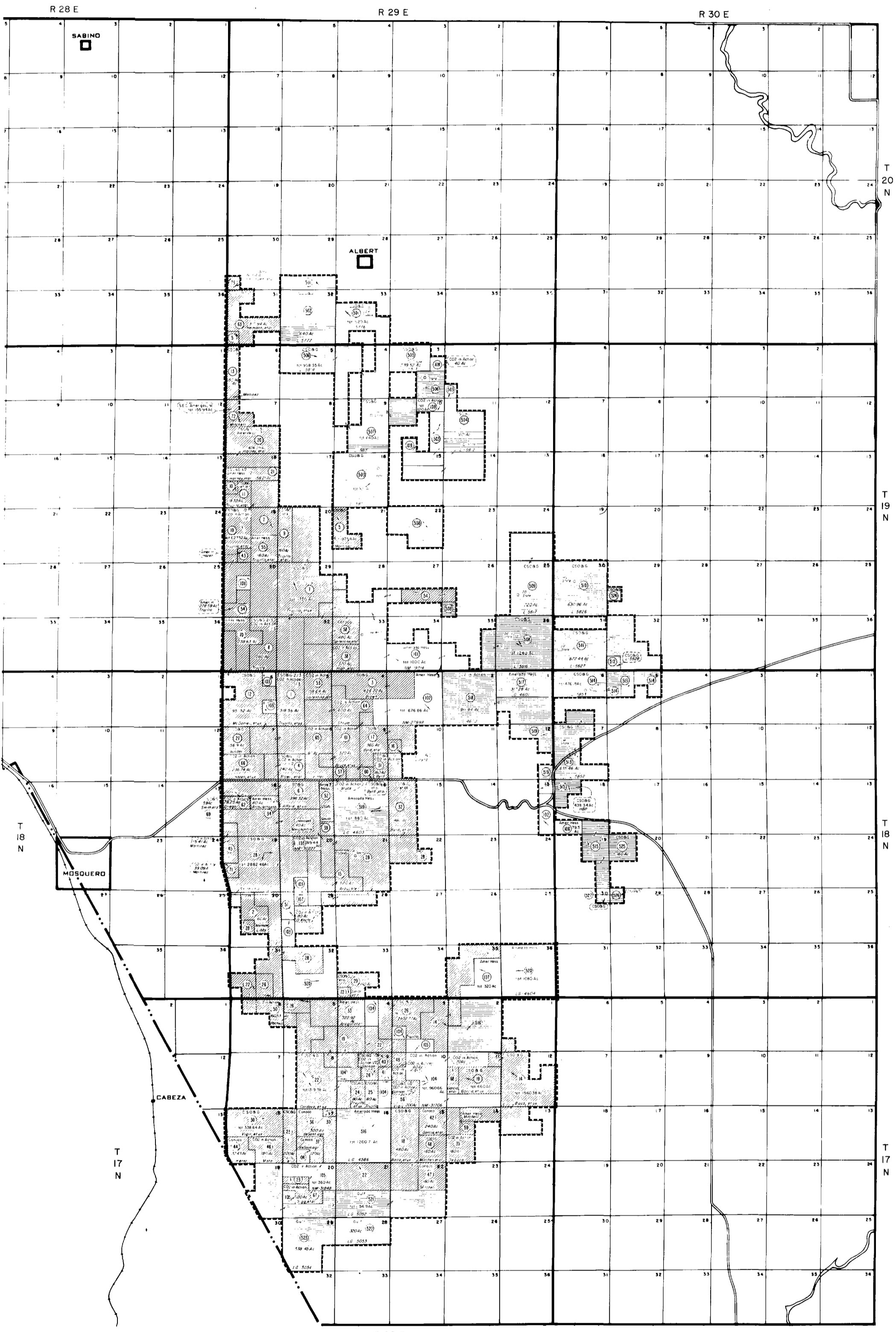
18 FEDERAL TRACTS	10,743.70 AC.	21.48 % OF UNIT
27 STATE TRACTS	16,416.53 AC.	32.82 % OF UNIT
73 PATENTED TRACTS	22,860.55 AC.	45.70 % OF UNIT
TOTAL	50,020.78 AC.	100.00 % OF UNIT

- 1991 Proposed Location
- ▲ 1990 Wells
- FEDERAL LANDS (F-Series numbers on Exhibit "B")
- ▨ STATE OF NEW MEXICO LANDS (S-Series numbers on Exhibit "B")
- ▩ PATENTED LANDS (2000 Series numbers on Exhibit "B")
- TRACT NUMBERS AS LISTED IN EXHIBIT "B"
- - - UNIT BOUNDARY
- FIRST ENLARGEMENT

EXHIBIT "A"
WEST BRAVO DOME UNIT AREA
HARDING COUNTY, NEW MEXICO



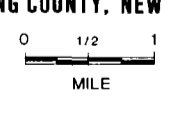
REVISD 8-30-88



9 FEDERAL TRACTS	3,876.46 AC.	8.98 % OF UNIT
27 STATE TRACTS	16,416.53 AC.	38.05 % OF UNIT
73 PATENTED TRACTS	22,860.55 AC.	52.97 % OF UNIT
TOTAL	43,153.54 AC.	100.00 % OF UNIT

- FEDERAL LANDS (F - Series numbers on Exhibit "B")
- ▨ STATE OF NEW MEXICO LANDS (S - Series numbers on Exhibit "B")
- ▩ PATENTED LANDS (2000 Series numbers on Exhibit "B")
- TRACT NUMBERS AS LISTED IN EXHIBIT "B"
- UNIT BOUNDARY

EXHIBIT "A"
WEST BRAVO DOME UNIT AREA
HARDING COUNTY, NEW MEXICO



Revised 7/10/84

R 28 E

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R 28 E

**PROPOSED UNIT
BOUNDARY
JUNE, 1984**

**WEST BRAVO DOME AREA
HARDING COUNTY, NEW MEXICO**

-  MITCHELL RANCH
-  STATE
-  FEE
-  FEDERAL

..... AMOCO BRAVO DOME
CO₂ UNIT BOUNDARY

-  CITIES SERVICE
-  AMERIGAS
-  GULF
-  AMERADA HESS
-  'CO₂-IN-ACTION'



*Case 8351
Exhibit #6*

R 29 E

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R 28 E











T 17 N

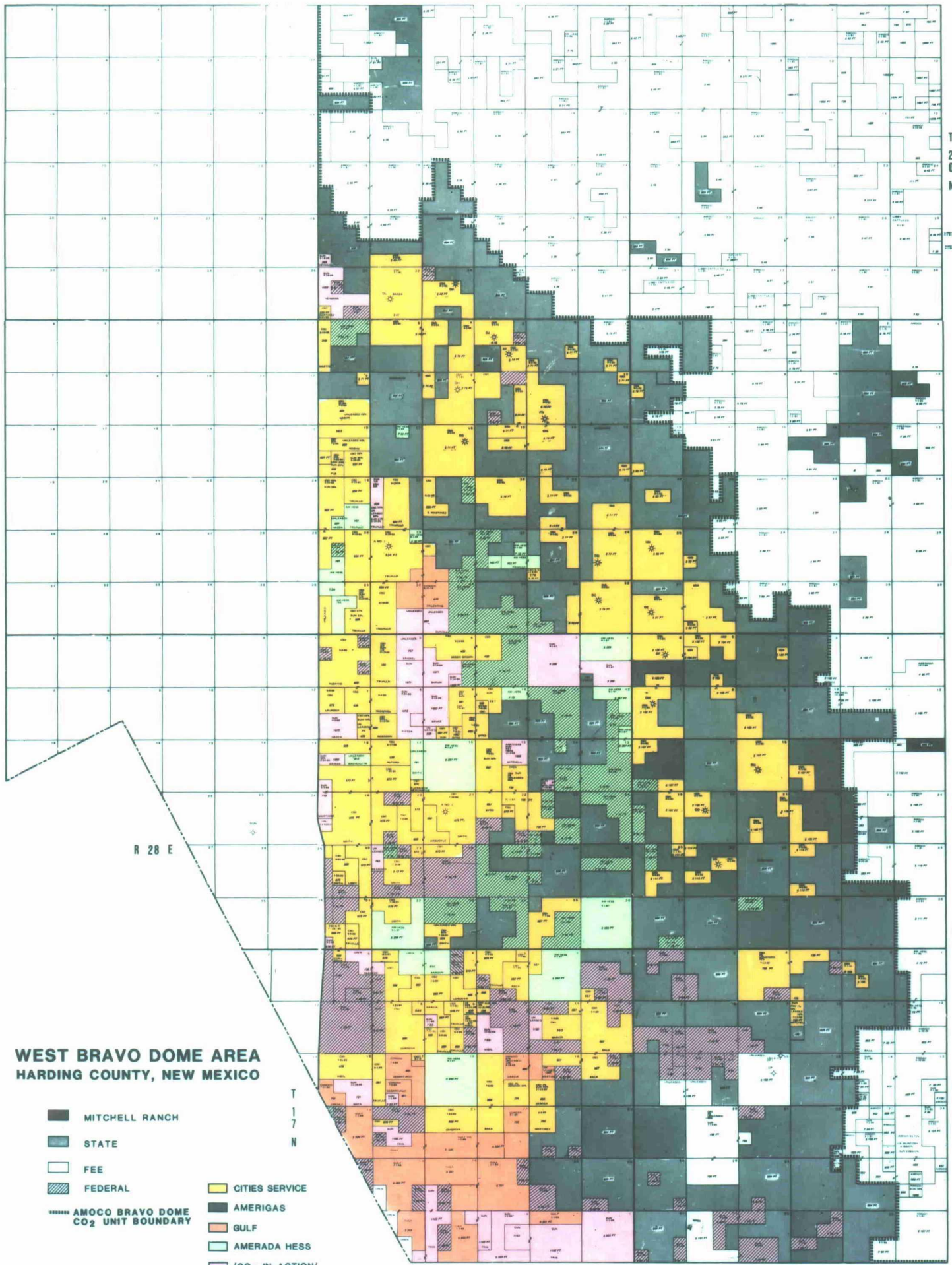
T 17 N

R 29 E

R 30 E

WEST BRAVO DOME AREA HARDING COUNTY, NEW MEXICO

-  MITCHELL RANCH
-  STATE
-  FEE
-  FEDERAL
-  CITIES SERVICE
-  AMERIGAS
-  GULF
-  AMERADA HESS
-  'CO₂-IN-ACTION'
-  AMOCO BRAVO DOME
CO₂ UNIT BOUNDARY



BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico

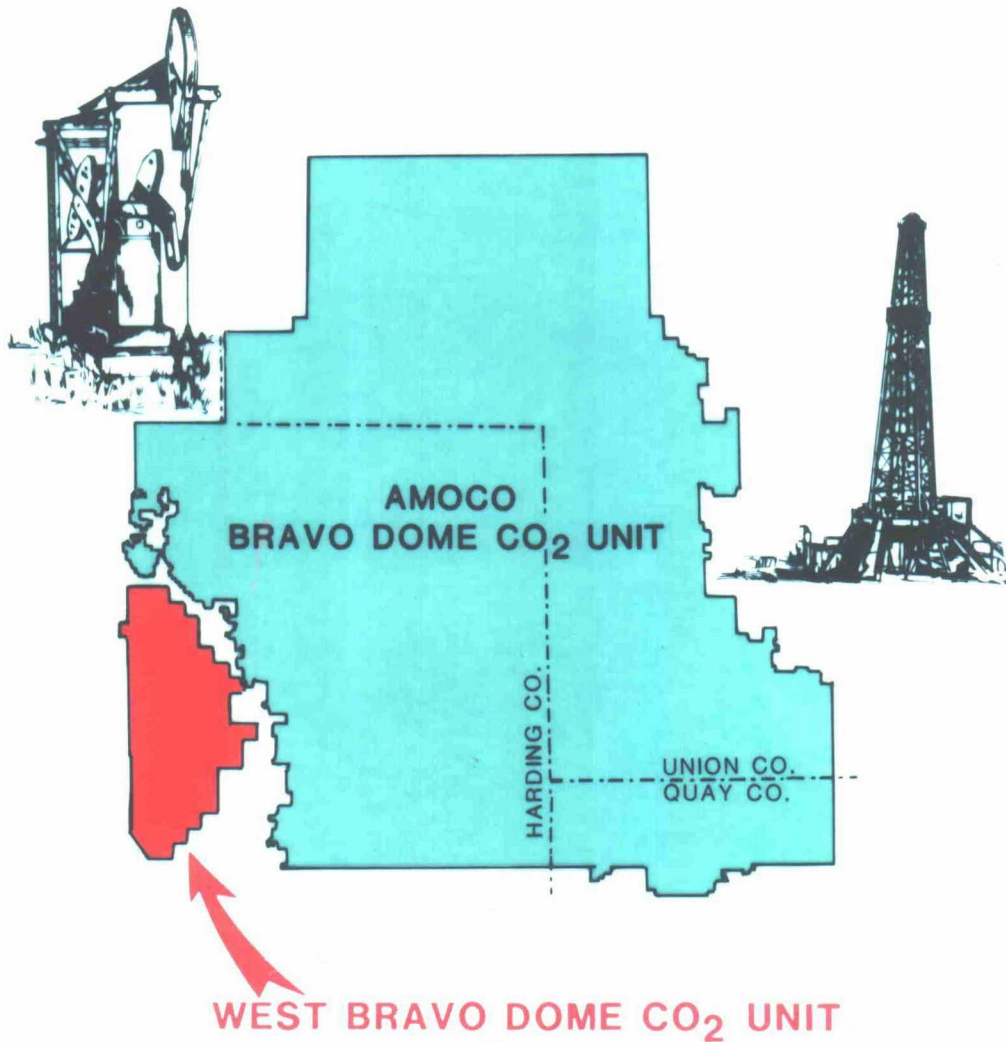
Case No. 8351 Exhibit No. 1

Submitted by CFS

Hearing Date 9/26/84

WEST BRAVO DOME CO₂ UNIT

HARDING COUNTY, NEW MEXICO



CITIES SERVICE
OIL and GAS CORPORATION

SOUTHWEST REGION
MIDLAND, TEXAS

C O N T E N T S

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General Overview.....	1
Environmental Preservation.....	1
Geology.....	2
Unit Development.....	3
Drilling Operations.....	5
Initial Completions.....	6
Automation/Well Testing.....	6

Attachments

1. Unit Boundary
2. CO2 Pipeline for the Permian Basin
3. Structure Map W/Unit Boundary
4. Cross-Section Locator
5. Cross-Section A-A'
6. Cross-Section B-B'
7. Cross-Section C-C'
8. Cross-Section D-D'
9. Paleogeographic Reconstruction
10. Type Log - Permian Section
11. Type Log - Tubb Formation
12. Investment Schedule
13. Detailed Investment Summary
14. Production Schedule
15. Tabulated Production Schedule
16. Gathering System
17. Typical Well Diagram

BEFORE THE OIL CONSERVATION COMMISSION Santa Fe, New Mexico	
Case No. <u>8315</u>	Exhibit No. <u>07</u>
Submitted by <u>CSIS</u>	
Hearing Date <u>9/26/84</u>	

GENERAL OVERVIEW

The proposed West Bravo Dome Unit, Harding County, New Mexico (Attachment 1), to be operated by Cities Service Oil and Gas Corporation, is composed of an area taken from the southwest corner of the original area proposed by Amoco for their Bravo Dome Unit. This area failed to qualify for the Bravo Dome Unit when the Mitchell Ranch elected not to participate. The Unit Area consists of 43,154 acres, including nine (9) federal tracts (8.98%), twenty-seven (27) state tracts (38.05%), and seventy-three (73) patented tracts (52.97%). There are five working interest owners and over one-hundred royalty owners. Recoverable reserves are estimated at 197 billion cubic feet of carbon dioxide.

Cities Service plans to develop the entire area and produce 50 million cubic feet per day CO₂, which will be transported south by existing pipelines or pipelines to be constructed to the Permian Basin for use in enhanced recovery projects (Attachment 2). Initial production is planned in early 1986.

ENVIRONMENTAL PRESERVATION

Cities Service has drilled sixteen (16) wells in the proposed West Bravo Dome Carbon Dioxide Unit, and as a result of this, actively maintains an excellent rapport with land owners in the area. Cities is pledged to protecting the environment and will abide by the rules, procedures and requirements of all regulatory agencies as well as maintaining our fine relationship with land owners.

GEOLOGY

Carbon dioxide is produced from the Permian aged Tubb Formation at Bravo Dome. The Tubb Formation is encountered at a depth of 2000' at a subsurface elevation of 2500' above sea level in the West Bravo Dome Area. The formation's southeast dip is apparent on the structure map of the top of the Tubb Sandstone, included as Attachment 3. The maximum net pay thickness in the West Bravo Dome Area is approximately 50'. A thickening in the eastern portion of the proposed Unit results from Tubb deposition in a northwest-southeast trending paleo-valley in the surface of the underlying granite. Other major features of the Tubb Sandstone include a thinning of net pay to the northwest, resulting from a thinning in gross interval thickness, and a thinning in net pay to the southeast, resulting from the presence of the gas-water contact. The cross-sections, included as Attachments 5, 6, 7 and 8, show these features more clearly. In addition, the CO2-In-Action George Trujillo No. 1 included in Attachment 7 shows that shale has replaced sand deposition west of the proposed Unit. The thinning to the northwest, the facies change to the west, and the gas-water contact to the south form the reservoir boundaries of the Tubb Sandstone.

The Tubb Sandstone was deposited on the granite basement or a granite wash by streams transporting sediment from the Sierra Grande uplift to the Palo Duro Basin. The description of the core from Cities Service "DS" #1 is typical of fluvial

deposition. The lowermost conglomerates and conglomeritic sandstones are representative of an alluvial fan - braided stream environment. The overlying sandstone sequence indicates a transition to a meandering stream environment. The uppermost shaley sandstone and limey sandstone is typical of an intertidal region. This sequence of events is illustrated in Attachment 9. The Tubb Sandstone is overlain by the Cimarron Formation, a 20' thick anhydrite deposited uniformly over the Bravo Dome Area, sealing the carbon dioxide reserves below. The formation sequence and an expanded section of the Tubb Formation of the proposed Unit type log from Cities Service State "DC" No. 1 are included as Attachments 10 and 11.

Net pay porosity averages 18% in the wells of the West Bravo Dome Area. The cut-offs used to determine net pay are 12% porosity and 60% water saturation. The average core permeability of the productive intervals of the Cities Service State "DS" No. 1 is 13.2 md.

UNIT DEVELOPMENT

Development of the West Bravo Dome Carbon Dioxide Unit will consist of drilling fifty (50) wells on 640-acre spacing, gathering carbon dioxide from these wells and processing and compressing carbon dioxide for delivery to a transportation pipeline. Seventeen (17) existing wells within the unit boundaries

will also be tied into the gathering system. The \$27.50 million (MM) development program is expected to be approved by Unit working interest owners in the near future and will be commenced in early 1985 and completed in late 1986 (reference Attachment Nos. 12 and 13). The initial CO₂ production rate will be 34.2 MMCFD and is projected to reach a peak rate of 50 MMCFD in 1987 (reference Attachment Nos. 14 and 15).

The gathering system designed for the Unit is based on a compressor suction pressure of 150 PSIG and an average water production rate of 1 barrel per MMCFD. This gathering system will utilize seventeen (17) existing wells and fifty (50) new wells in the Unit for a total deliverability rate of approximately 50 MMCFD. An equivalent of 70.0 miles of line ranging from 4" to 24" in diameter will be utilized to complete the gathering system (reference Attachment No. 16).

The compression/dehydration system will consist of three stages of compression with a triethyleneglycol (T.E.G.) dehydration system between the second and third compression stages. Compression will be provided by two 5000 horsepower (HP) compressors. Compression requirements are considered substantial due to the low bottom hole pressure (500-600 PSI). CO₂ gas will be compressed from 150 PSIG to 2400 PSIG at 120⁰F in order to enter a pressure window in Amoco's Bravo Dome Pipeline via 16 mile 16" trunkline.

Power requirements to operate the compressors and auxiliary processing equipment will be met by accessing a high voltage transmission line near the Amoco Bravo Dome CO2 Unit. An electrical substation will be constructed on the West Bravo Dome Unit processing site to transform the high line voltage to a usable voltage.

DRILLING OPERATIONS

Drilling operations within the West Bravo Dome CO2 Unit will consist of using prudent competitive drilling contractors and efficient supervision to minimize costs and time needed to develop the Unit. Common difficulties in drilling wells in the Unit have been drill stem sticking in the major shale section above the Santa Rosa and lost circulation in the porosity zones of lower San Andres and the Glorieta. Initially, a surface hole will be drilled with fresh water to a depth of +700' where surface casing will be cemented. A KCl system will then be used to drill out below the surface casing to the top of the Tubbs at +1950' where it will be mudded up to establish the required mud properties to minimize formation damage. This KCl mud system will generally exhibit a weight of 9.0 - 9.3 PPG, viscosity of 30-35 centipoise and fluid loss of 5-10 cc.

INITIAL COMPLETIONS

A typical completion for West Bravo Dome Unit wells will consist of perforating underbalanced with 2 jet shots per foot and acidizing with a CO₂-HCl system.

The downhole equipment will consist of plastic coated tubing with a packer set +100' above the perforations. The annulus above the packer will be filled with a non-corrosive packer fluid to protect the external side of the tubing and the inside of the casing. A sketch of a typical completion is included as Attachment No. 17. The wellhead equipment will be designed to facilitate automatic gas measurement and control to allow additional well testing with portable equipment.

AUTOMATION/WELL TESTING

The West Bravo Dome Unit wells will be monitored using State of the Art electronic measurement and telemetry equipment. CO₂ production from each well will be measured continuously by transmitting pressure and temperature data from the wellhead metering point to a field computer located at the plant site. The computer itself will calculate and store production rates and cumulative total production for each well.

The same telemetry used to monitor production will be used to open and/or shut-in wells as needs dictate. Pressure sensors will also be monitored by the same system. This will allow for early detection of leaks in downhole equipment and the gathering system.

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UNIT BOUNDARY

- MITCHELL RANCH
- STATE
- FEE

— — — — — PROPOSED WEST BRAVO DOME CO₂ UNIT BOUNDARY

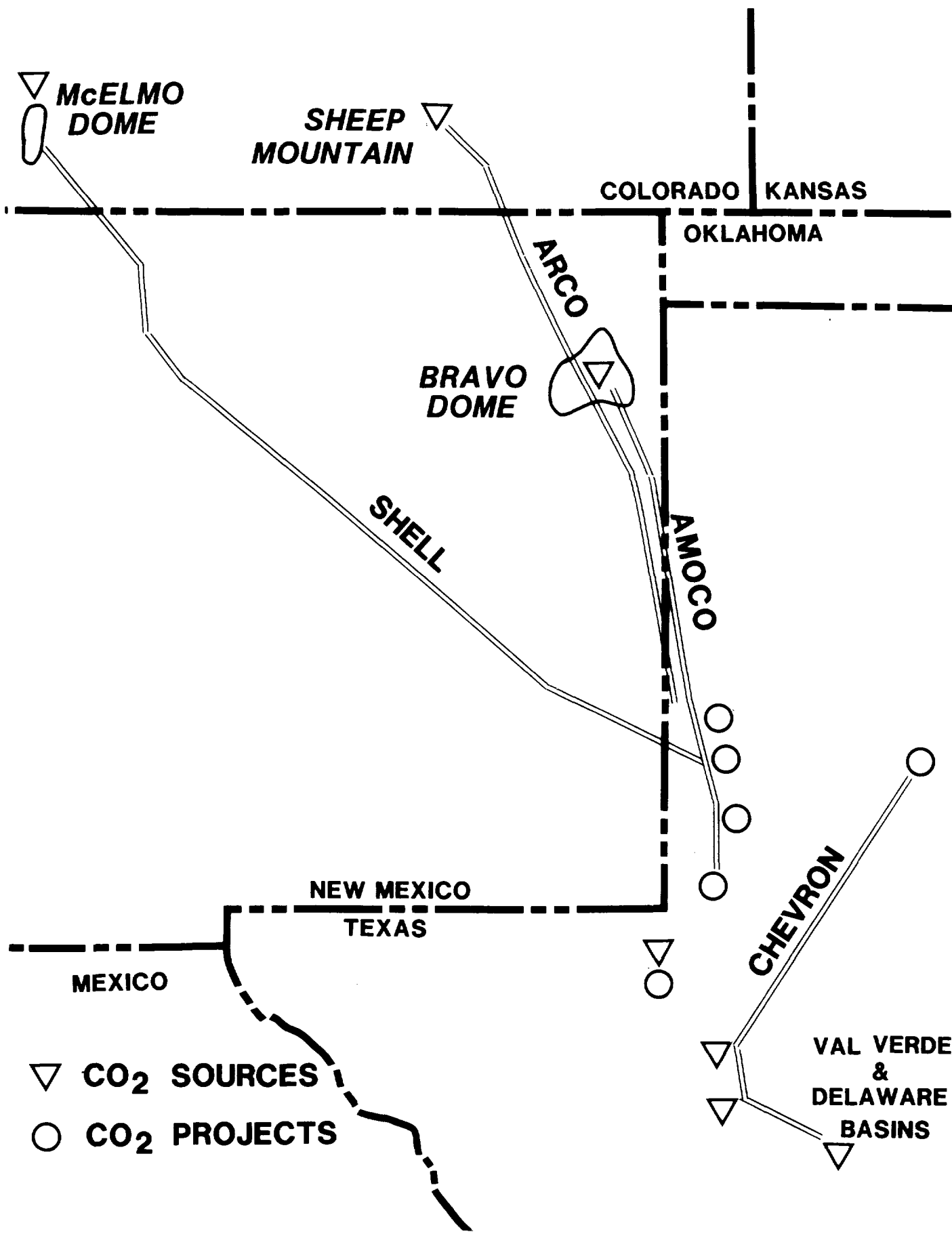
..... AMOCO BRAVO DOME CO₂ UNIT BOUNDARY

T 17 N

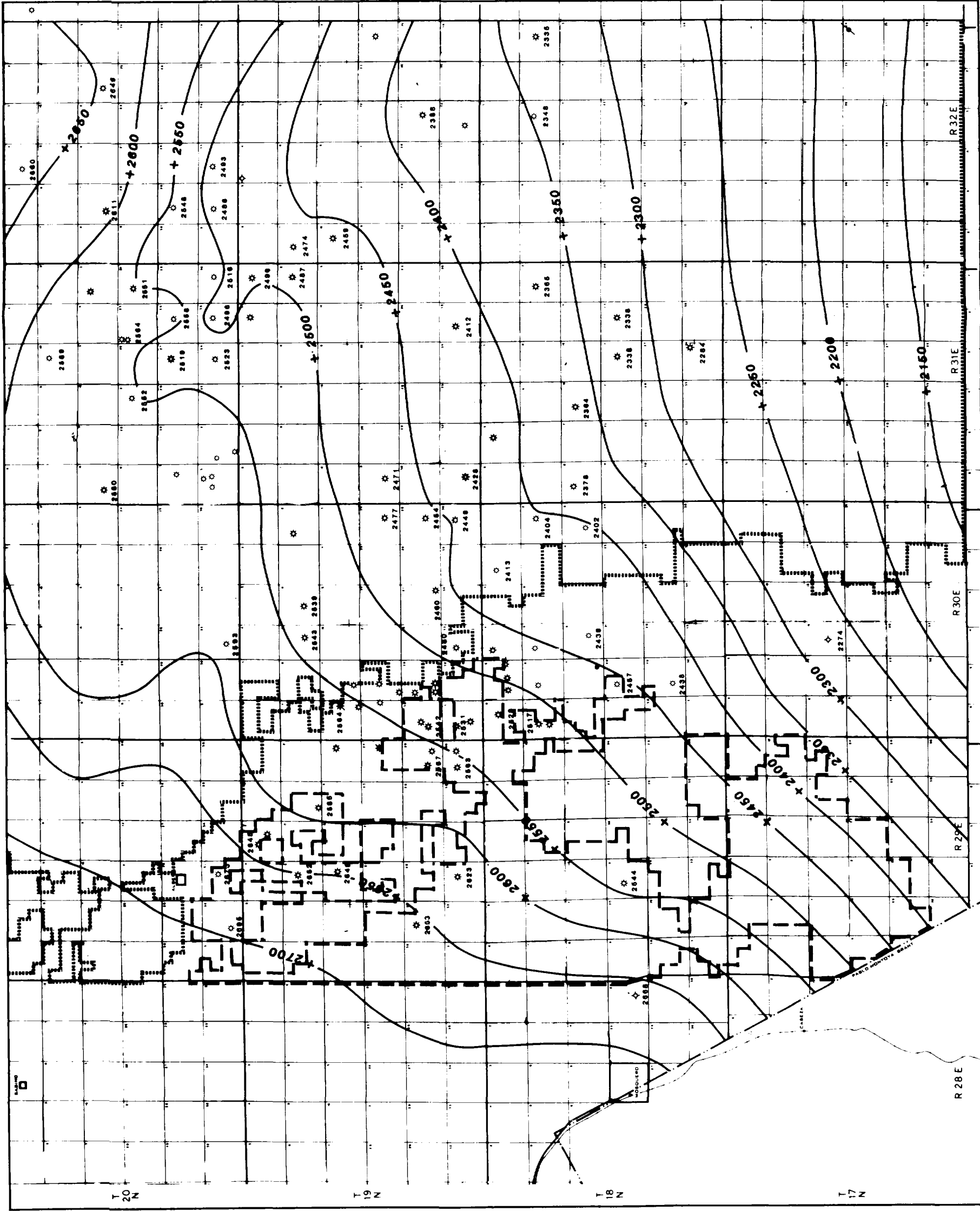
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R 30 E



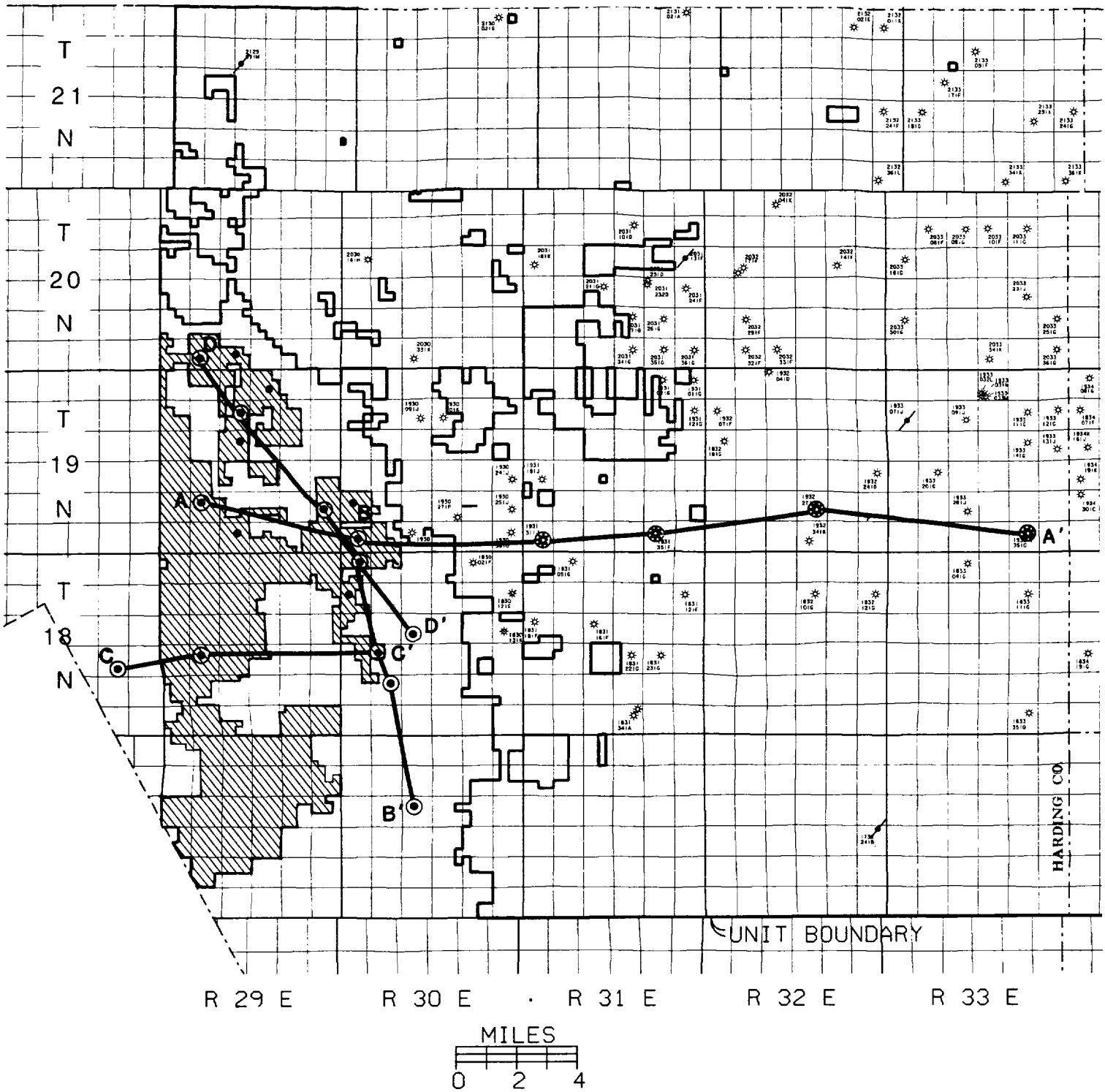
▽ CO₂ SOURCES
 ○ CO₂ PROJECTS



WEST BRAVO DOME
 HARDING COUNTY, NEW MEXICO
 TOP OF TUBB SANDSTONE
 STRUCTURE MAP
 C.1. 50'

----- AMOCO BDCDGU BOUNDARY
 ——— PROPOSED WEST BRAVO DOME
 CO2 UNIT BOUNDARY

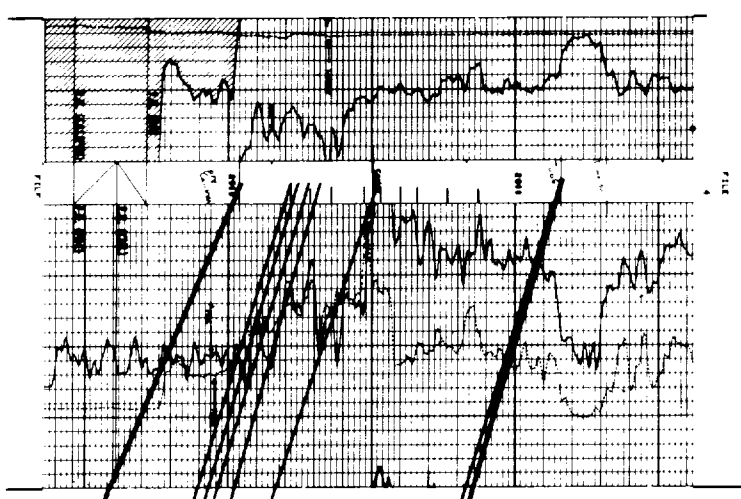
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 MILE



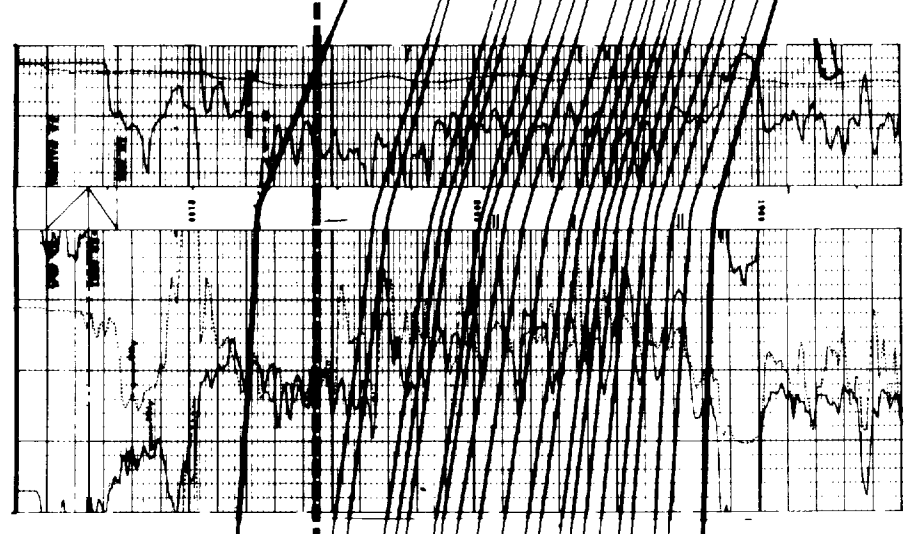
CROSS SECTION LOCATOR MAP
 WEST BRAVO DOME AREA
 HARDING COUNTY, NEW MEXICO

A

CITIES SERVICE
TRUJILLO "A" NO. 1
19-N, 29-E, SEC. 29
SCHLUMBERGER NEUTRON



CITIES SERVICE
STATE "DE" NO. 1
19-N, 30-E, SEC. 31
SCHLUMBERGER NEUTRON DENSITY

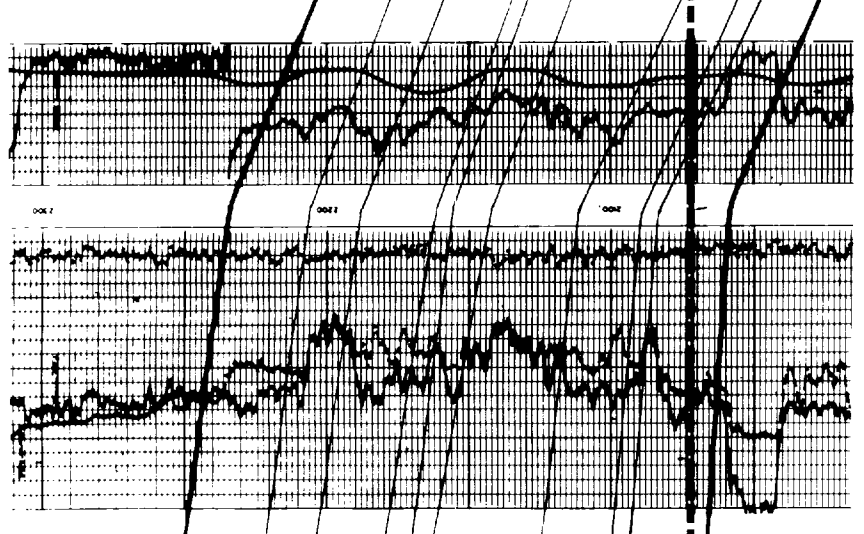


TOP TUBB SANDSTONE
TOP GRANITE WASH

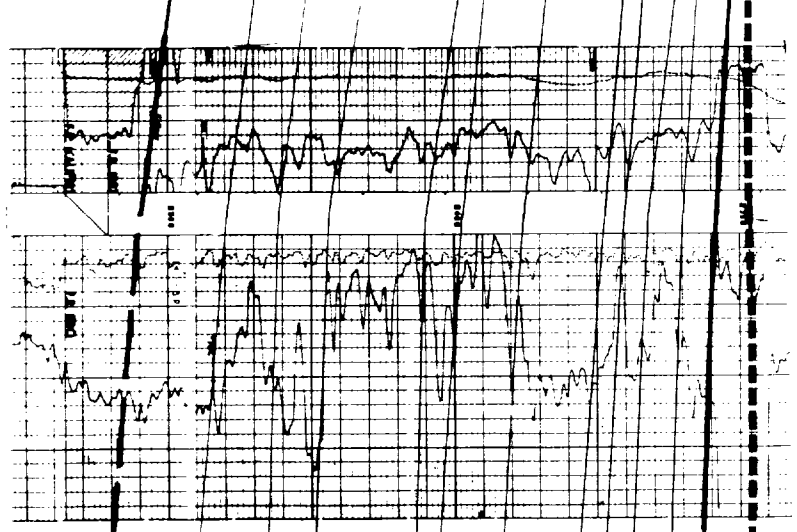
AMOCO
BDCDGU 1931-311 J
19-N, 31-E, SEC. 31
SCHLUMBERGER DENSITY



AMOCO
BDCDGU 1931-351 F
19-N, 31-E, SEC. 35
SCHLUMBERGER NEUTRON DENSITY

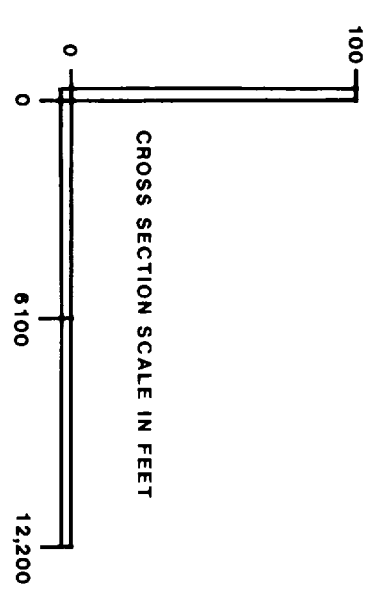
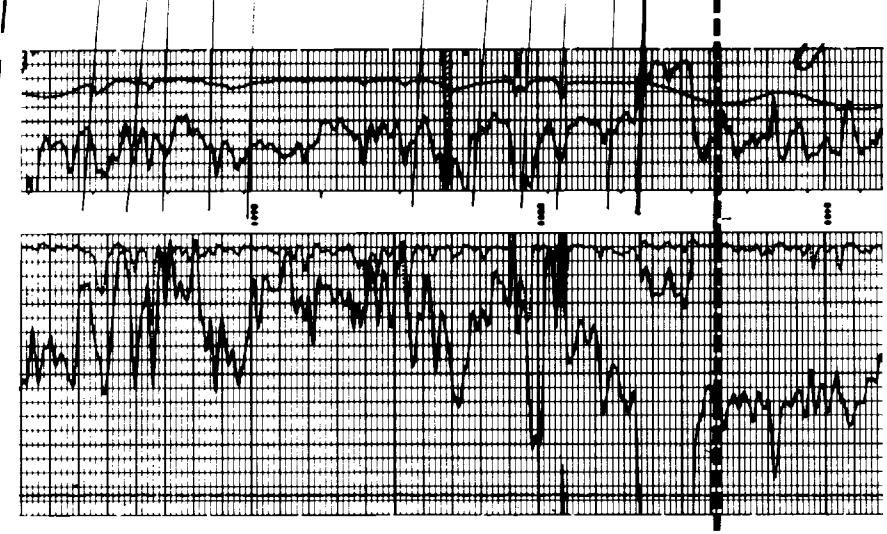


AMOCO
BDCDGU 1932-271 J
19-N, 32-E, SEC. 27
SCHLUMBERGER DENSITY



WEST BRAVO DOME AREA
HARDING COUNTY, NEW MEXICO
E-W CROSS SECTION

AMOCO
BDCDGU 1933-351 G
19-N, 33-E, SEC. 35
SCHLUMBERGER DENSITY

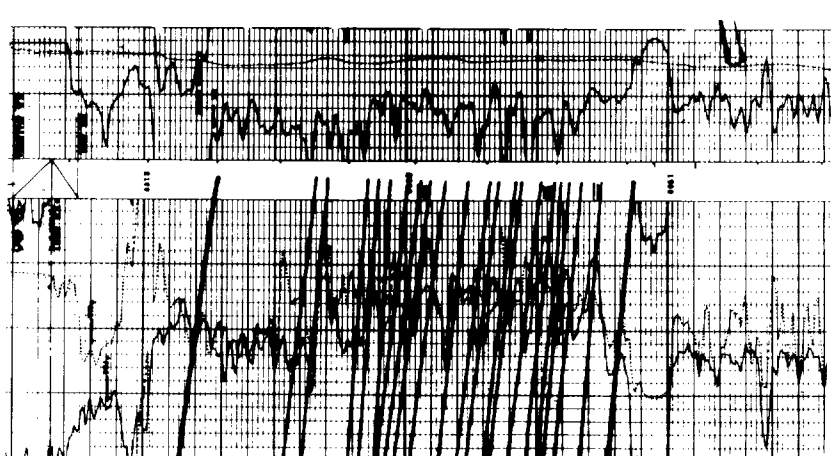


+ 2400

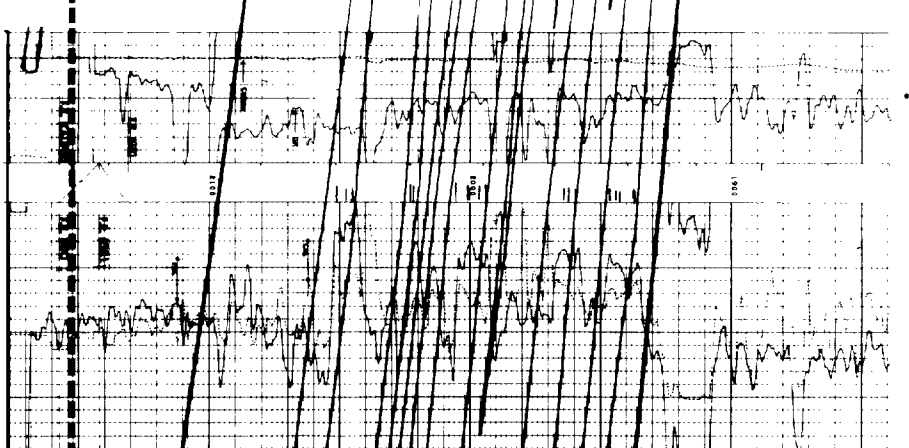
A'

B

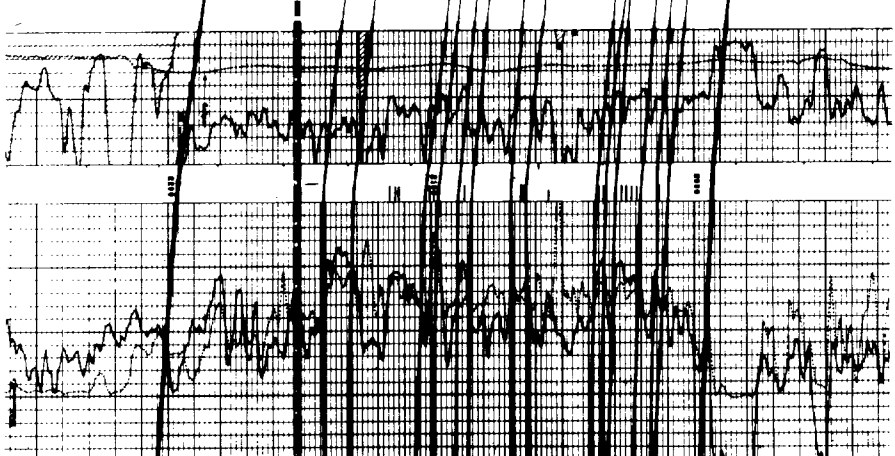
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19-N, 30-E, SEC. 31
SCHLUMBERGER NEUTRON DENSITY



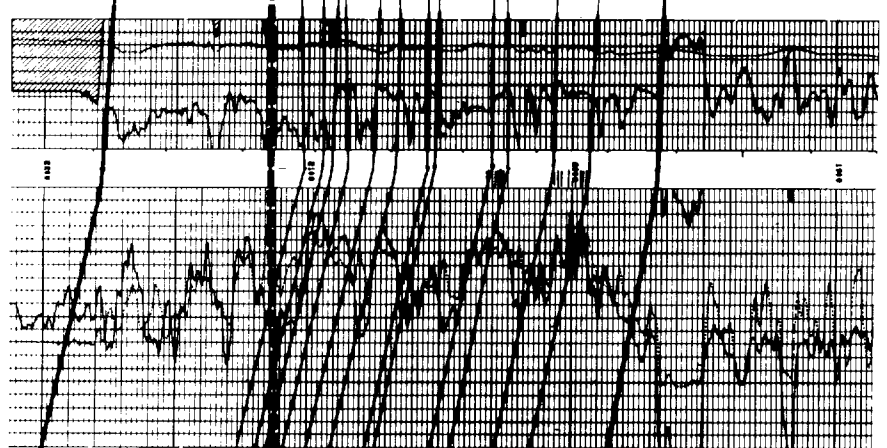
CITIES SERVICE
STATE "DF" NO. 1
18-N, 30-E, SEC. 6
SCHLUMBERGER NEUTRON DENSITY



CITIES SERVICE
STATE "DO" NO. 1
18-N, 30-E, SEC. 20
SCHLUMBERGER NEUTRON DENSITY

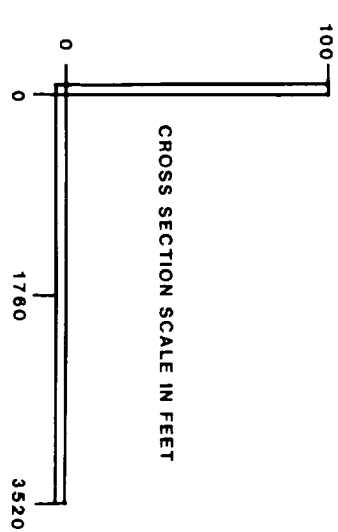
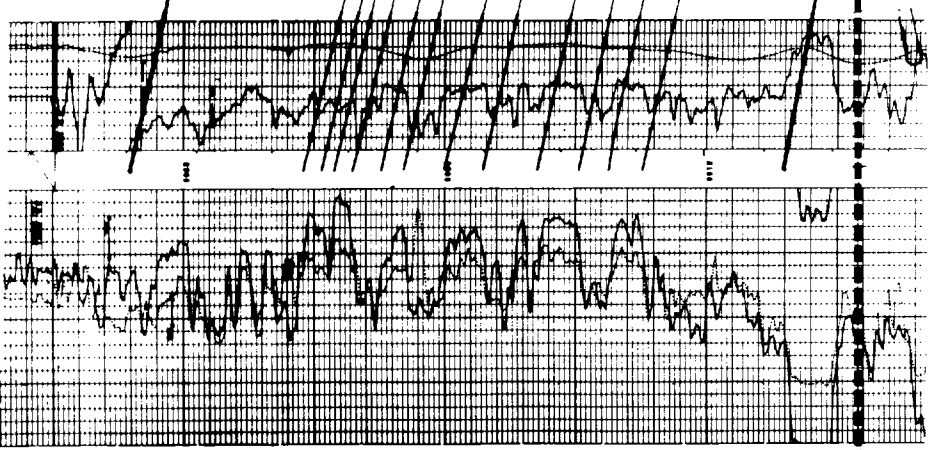


CITIES SERVICE
STATE "DS" NO. 1
18-N, 30-E, SEC. 29
SCHLUMBERGER NEUTRON DENSITY



PROPOSED WEST BRAVO DOME UNIT
HARDING COUNTY, NEW MEXICO
N-S CROSS SECTION

CITIES SERVICE
STATE "DP" NO. 1
17-N, 30-E, SEC. 16
SCHLUMBERGER NEUTRON DENSITY



TOP GRANITE WASH

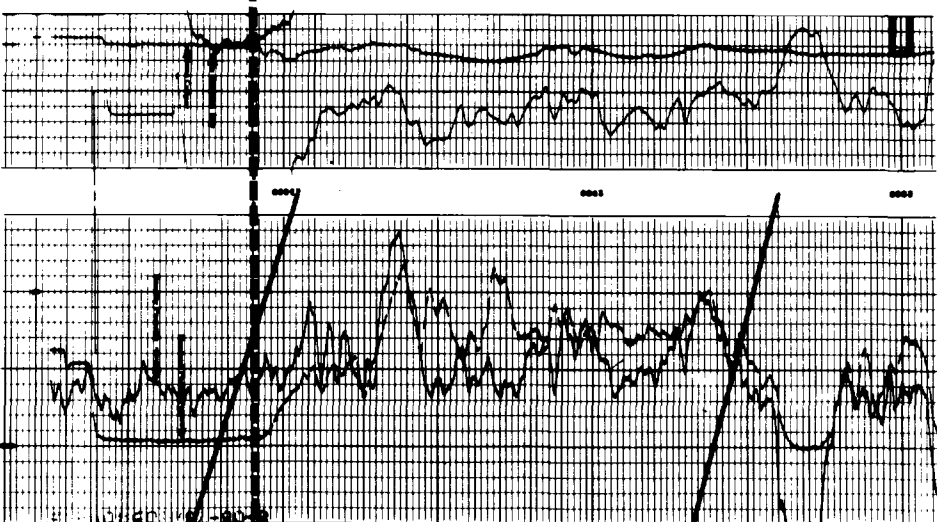
TOP TUBB SANDSTONE

2300

B'

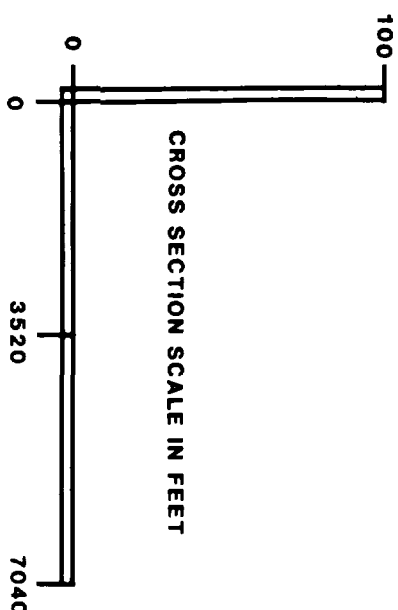
C

CO₂ IN ACTION
GEORGE TRUJILLO NO. 1
18-N, 28-E, SEC. 23
SCHLUMBERGER NEUTRON DENSITY

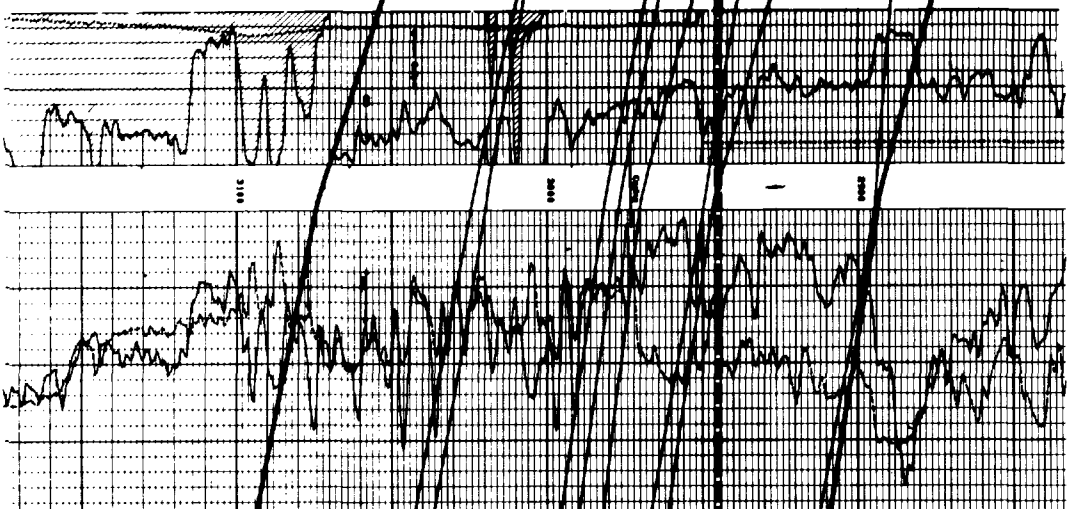


TOP TUBB SANDSTONE

TOP GRANITE WASH



CITIES SERVICE
SMITH "A" NO. 1
18-N, 29-E, SEC. 21
SCHLUMBERGER NEUTRON DENSITY

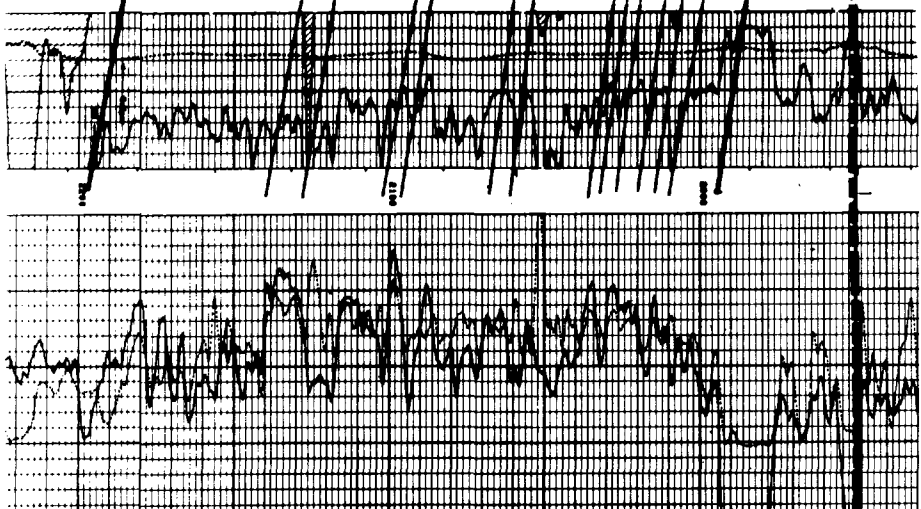


+ 2500'

WEST BRAVO DOME AREA
HARDING COUNTY, NEW MEXICO

E-W CROSS SECTION

CITIES SERVICE
STATE "DO" NO. 1
18-N, 30-E, SEC. 20
SCHLUMBERGER NEUTRON DENSITY

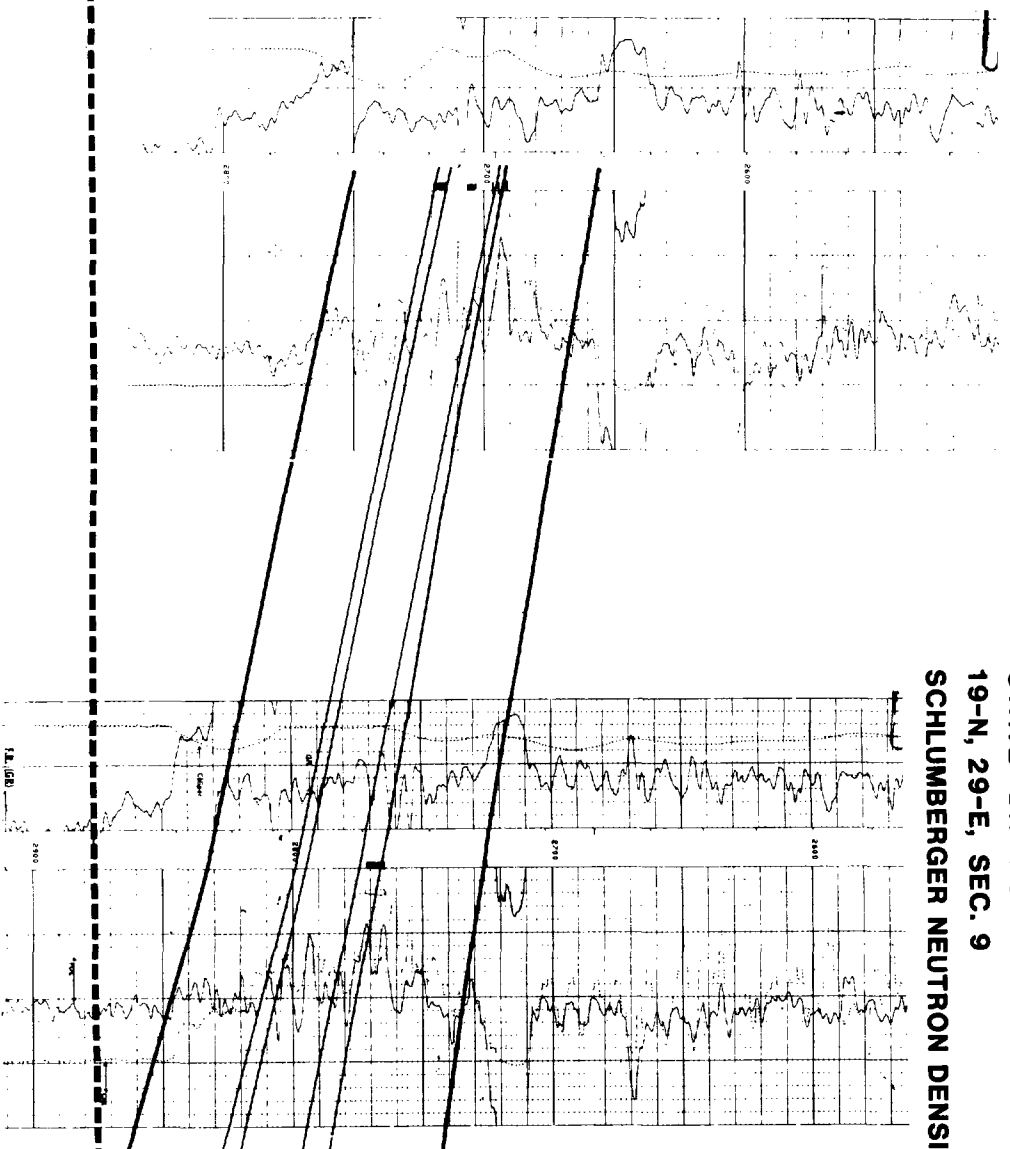


C

D

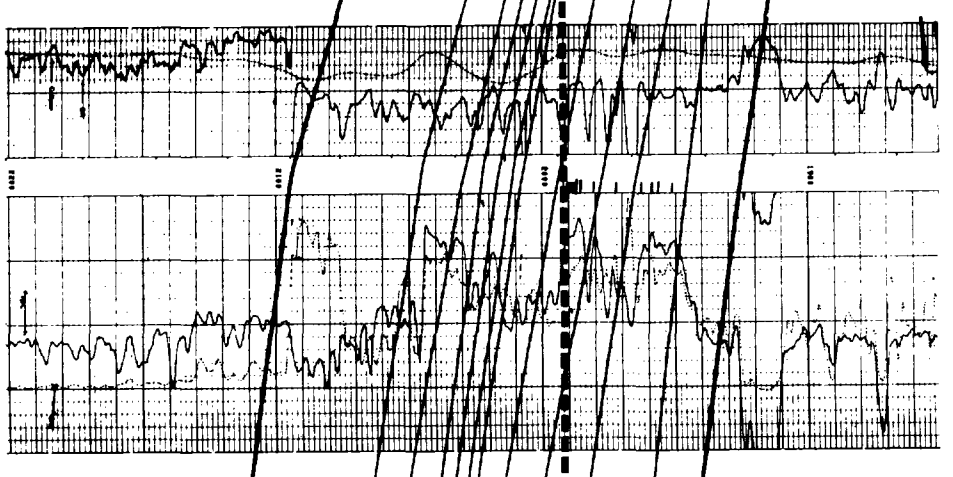
CITIES SERVICE
STATE "DL" NO. 1
20-N, 29-E, SEC. 32
SCHLUMBERGER NEUTRON DENSITY

CITIES SERVICE
STATE "DH" NO. 1
19-N, 29-E, SEC. 9
SCHLUMBERGER NEUTRON DENSITY

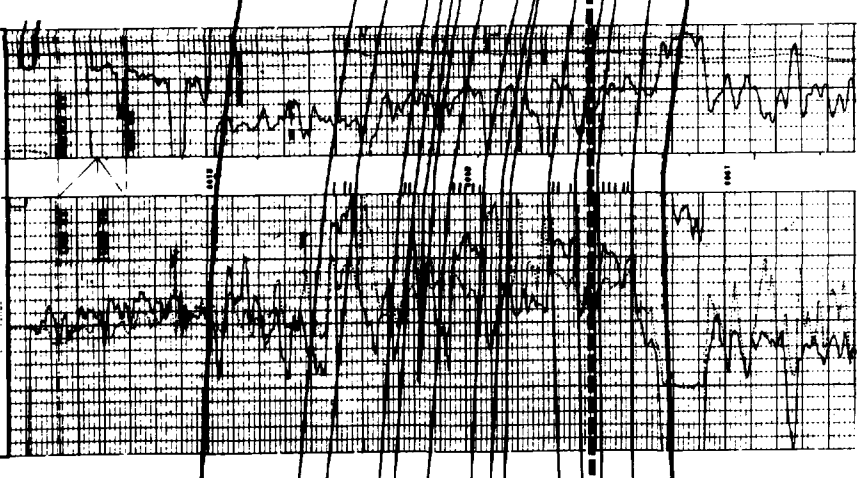


TOP TUBB SANDSTONE
TOP GRANITE WASH

CITIES SERVICE
STATE "DD" NO. 1
19-N, 29-E, SEC. 25
SCHLUMBERGER NEUTRON DENSITY

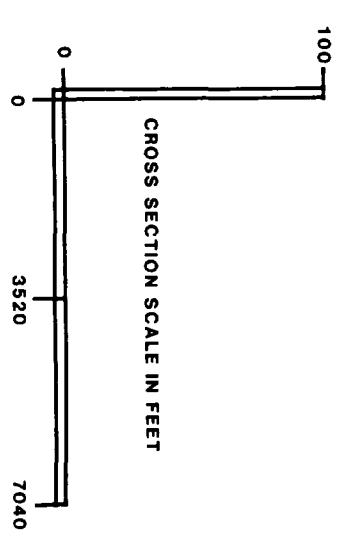
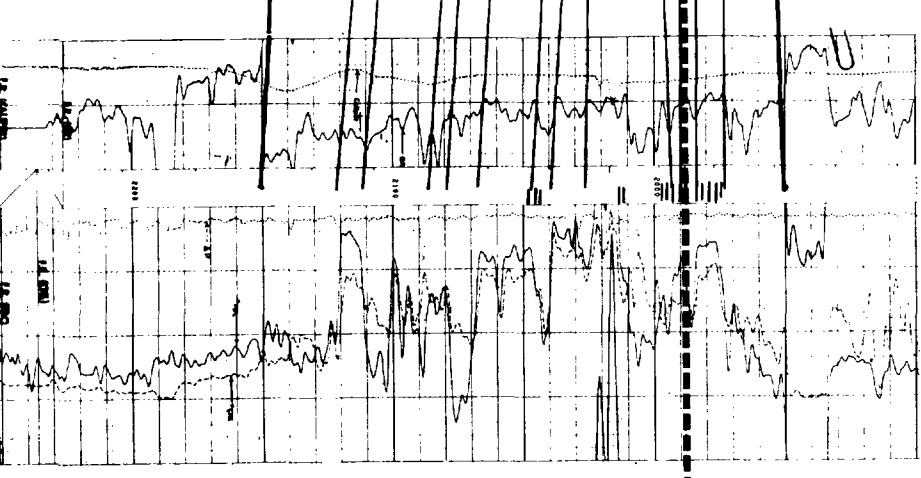


CITIES SERVICE
STATE "DF" NO. 1
18-N, 30-E, SEC. 6
SCHLUMBERGER NEUTRON DENSITY



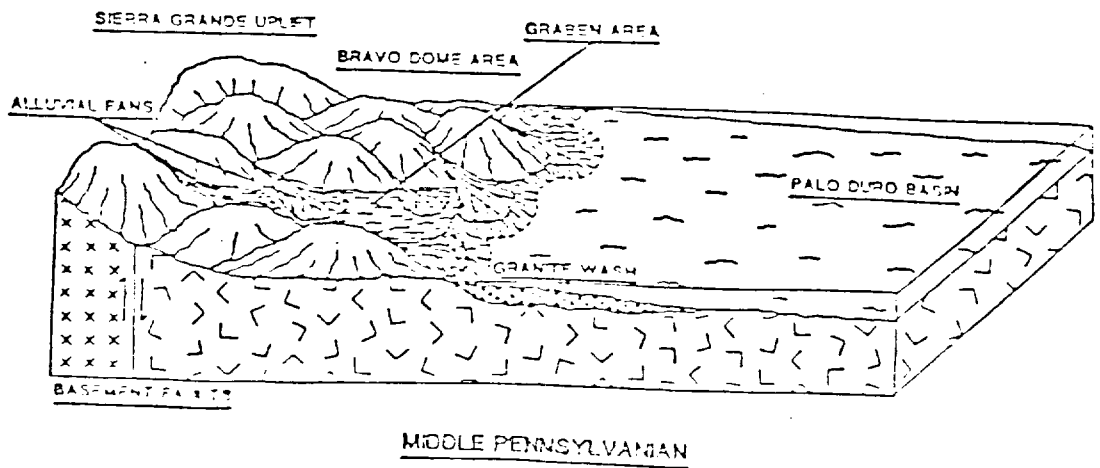
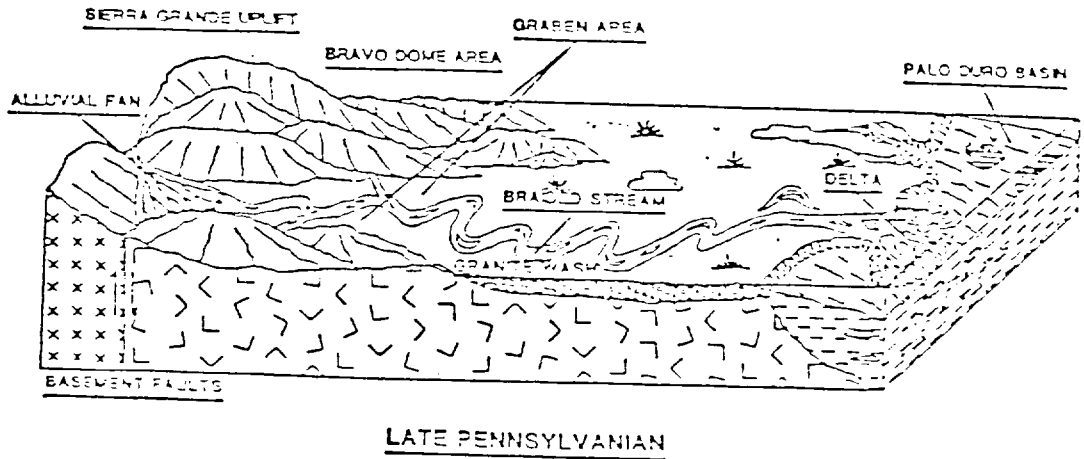
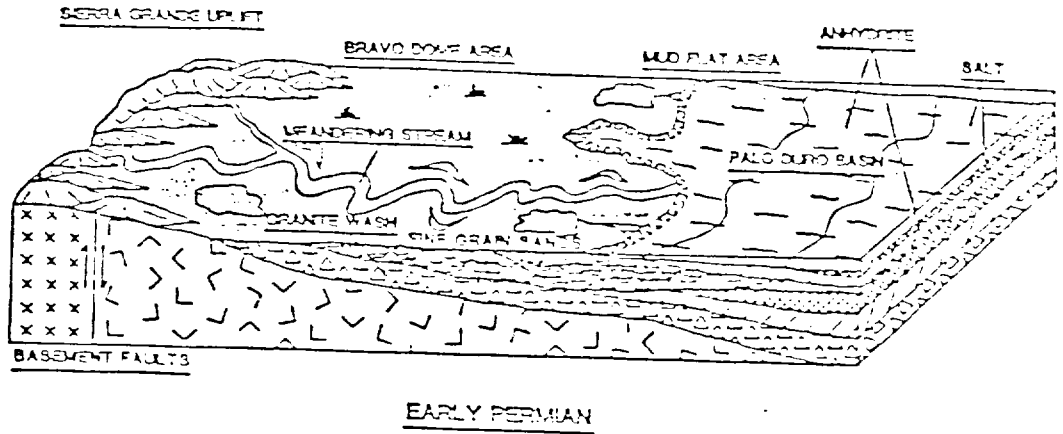
PROPOSED WEST BRAVO DOME
CO2 GAS UNIT
HARDING COUNTY, NEW MEXICO
NW-SE CROSS SECTION

CITIES SERVICE
STATE "DN" NO. 1
18-N, 30-E, SEC. 16
SCHLUMBERGER NEUTRON DENSITY



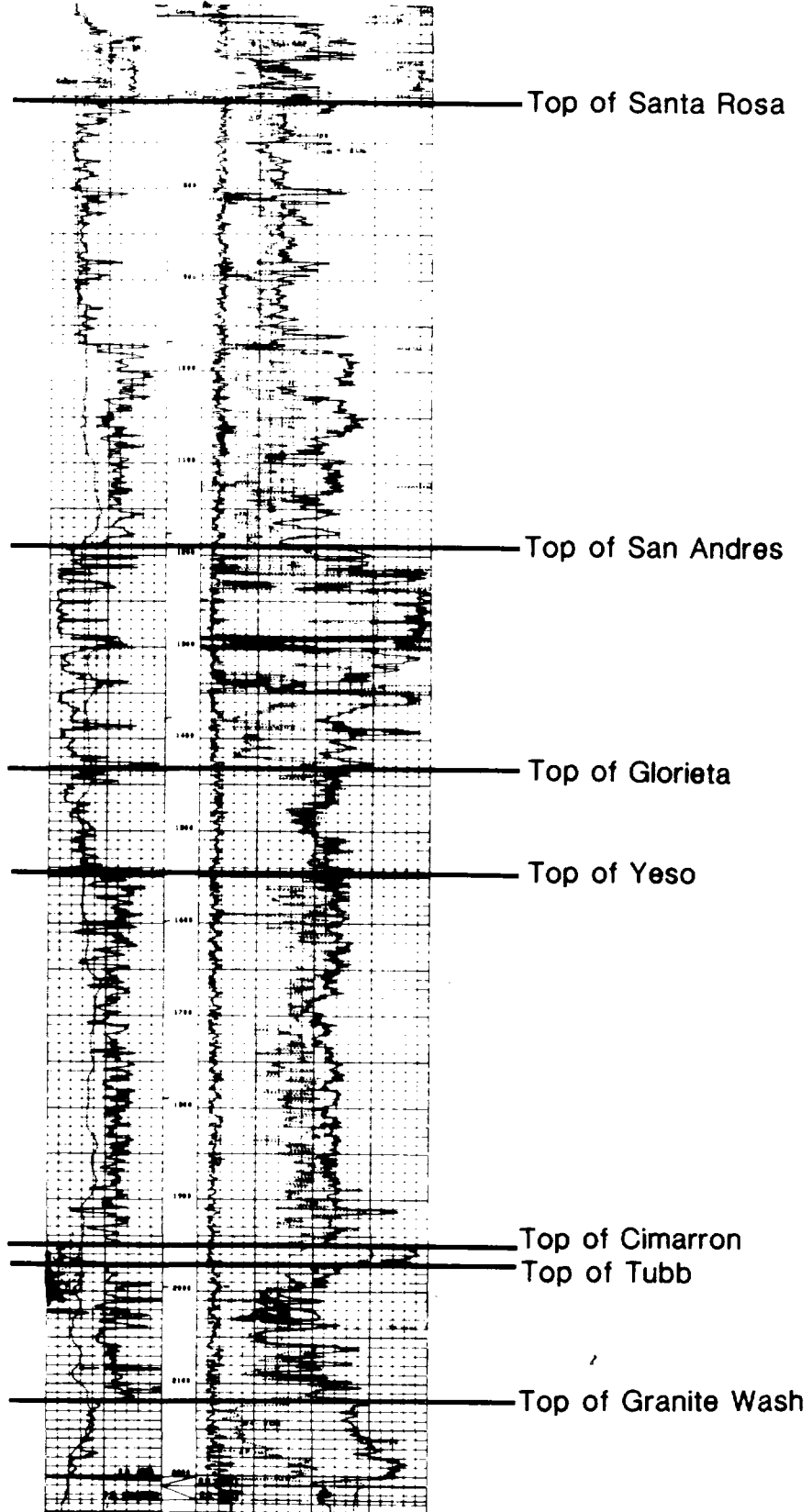
D'

PALEO GEOGRAPHIC RECONSTRUCTION OF BRAVO DOME



CITIES SERVICE
STATE "DC" NO. 1

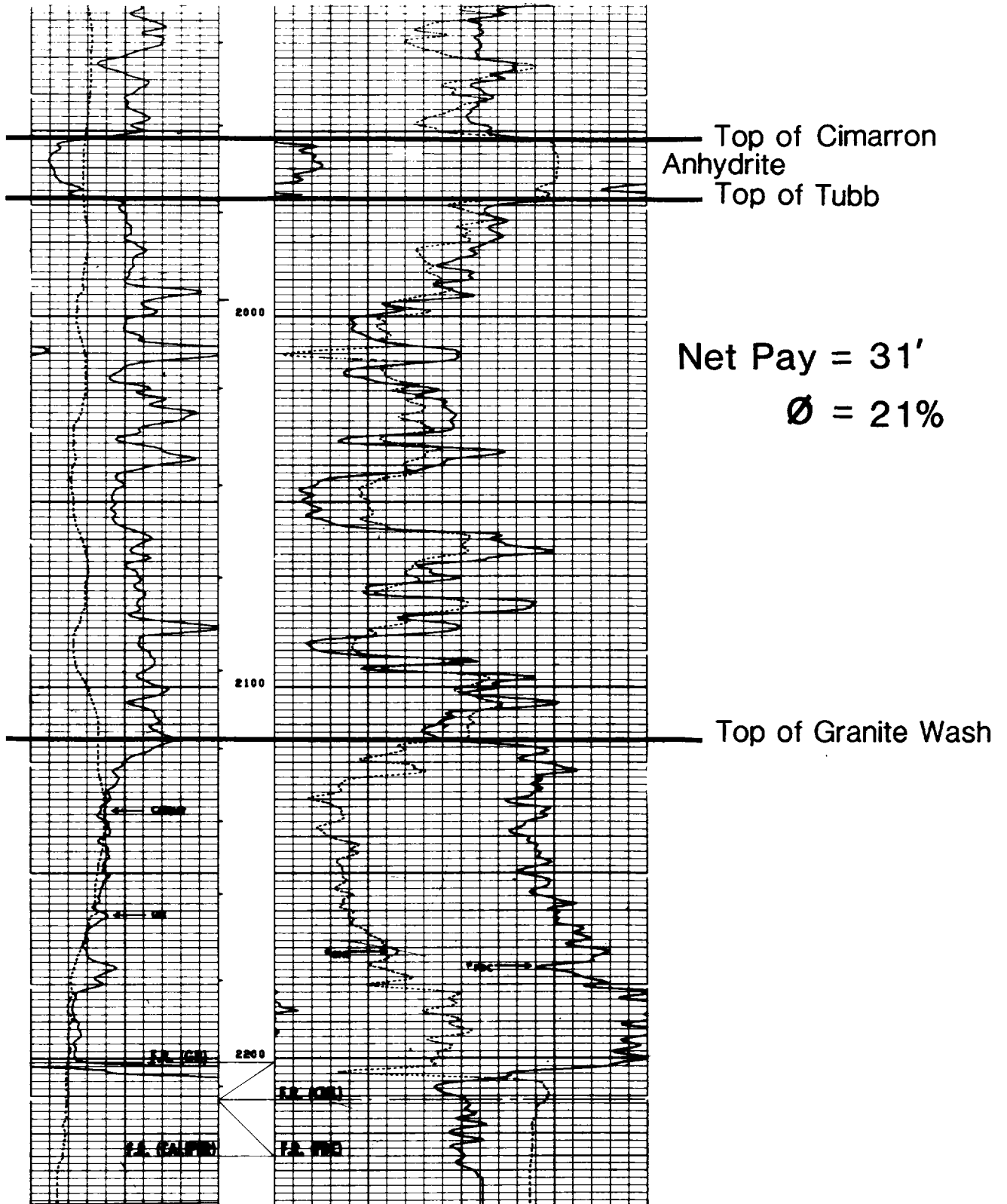
Compensated Neutron-Formation Density Log
Type Log



CITIES SERVICE
STATE "DC" NO. 1

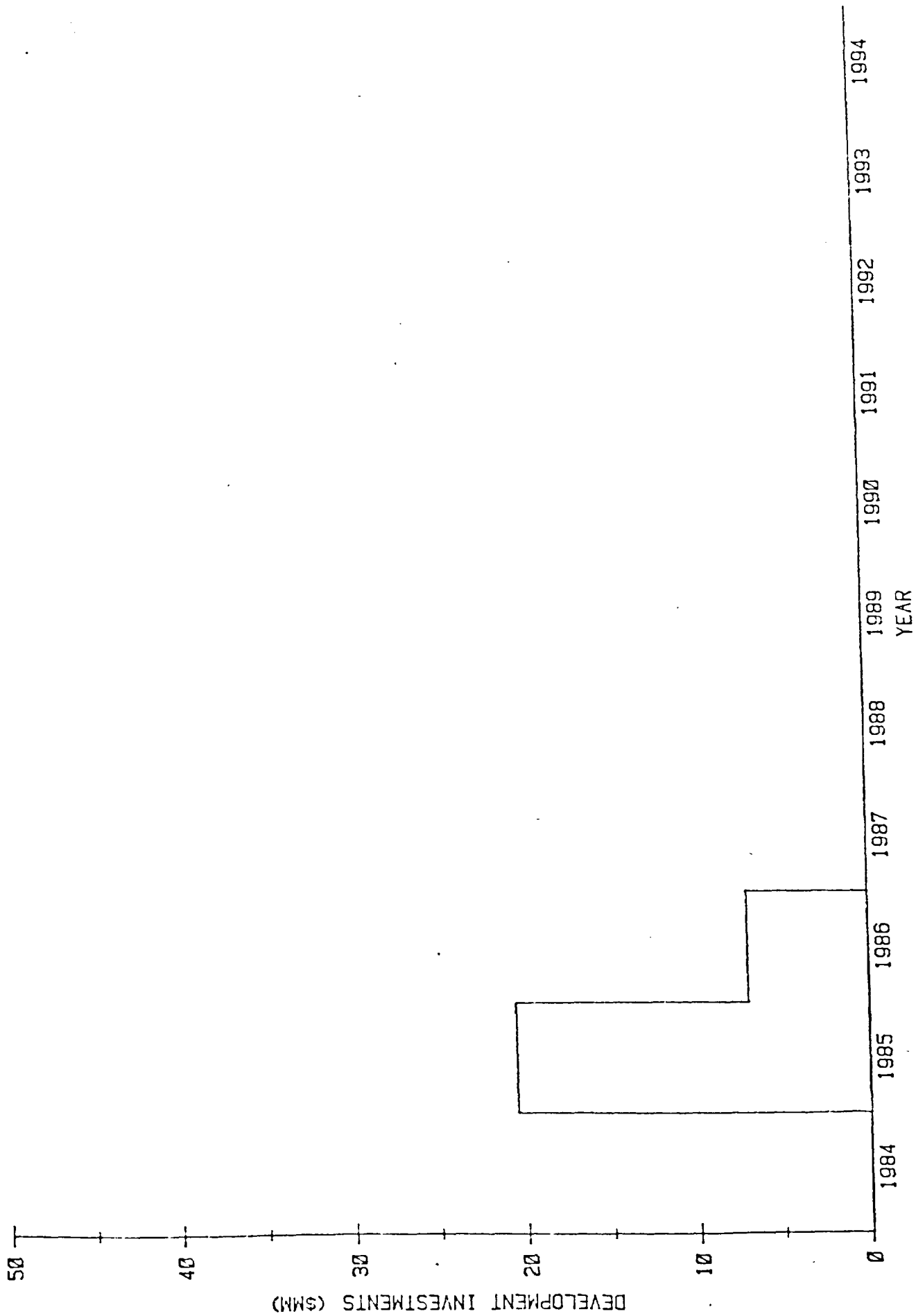
Tubb Formation

Type Log



WEST BRAVO DOME CARBON DIOXIDE UNIT

DEVELOPMENT INVESTMENT SCHEDULE (\$MM)



DETAILED INVESTMENT SUMMARY

WEST BRAVO DOME CO2 UNIT

<u>DESCRIPTION</u>	<u>\$ M</u>	
	<u>1985</u>	<u>1986</u>
Drill 32 Development Wells	8,000	
Drill 18 Development Wells		4,500
Construct Gathering System	4,500	2,500
Construct Compression and Dehydration Plant	6,000	
Construct 23 Mile CO2 Delivery Line	2,000	
TOTAL INVESTMENT	20,500	7,000

**WEST BRAVO DOME CARBON DIOXIDE GAS UNIT
INVESTMENTS**

**Estimated Gross Cost
(MM\$)**

I. Compression

Tangible Costs

Compressors	1.5
Coolers	0.4
Installation Materials	0.4
Spare Parts	0.2
Related Facilities	1.5
Includes: Dehydrator	
Meters	
Separators	
Flash Gas Compressors	
Air Compressor	
Compressor Building	
V.R.U. Compressor	
Miscellaneous Piping	
Electrical Substation	1.0
Total Compression Tangible Costs	5.0

Intangible Costs

Compressor Station Construction	0.6
Electrical Substation Construction	0.2
Land for Compressor Station	0.1
Engineering Drawings	0.1
Total Intangible Compression Cost	1.0

Total Compression 6.0

II. Gathering System

Tangible Costs

Line Pipe (Total 70.0 Miles)	
4" - 46,600'	.200
6" - 78,760'	.600
8" - 84,400'	.900
10" - 42,240'	.400
12" - 23,760'	.400
14" - 15,840'	.250
16" - 10,560'	.200
18" - 0'	0.000
20" - 57,520'	.800
24" - 10,000'	.250

Total Line Pipe 4.000

Estimated Gross Cost
(MM\$)

II. Gathering System (continued)

Wellsite Equipment	.250
Wellsite Automation Equipment	.100
Primary Automation Equipment	.150
Field Communications	.100

Total Gathering Tangible Costs **4.600**

Intangible Costs

Line Pipe Installation	1.250
Well Equipment Installation	.250
Primary Automation Installation	.100
Field Communication Installation	.100
Right-of-Way and Damages	.700

Total Gathering Intangible Cost 2.400

Total Gathering System **7.000**

TOTAL GATHERING AND COMPRESSION **13.000**

III. Delivery Pipeline

Tangible Costs

Line Pipe	
121,440' 16" Linepipe	1.000

Intangible Costs

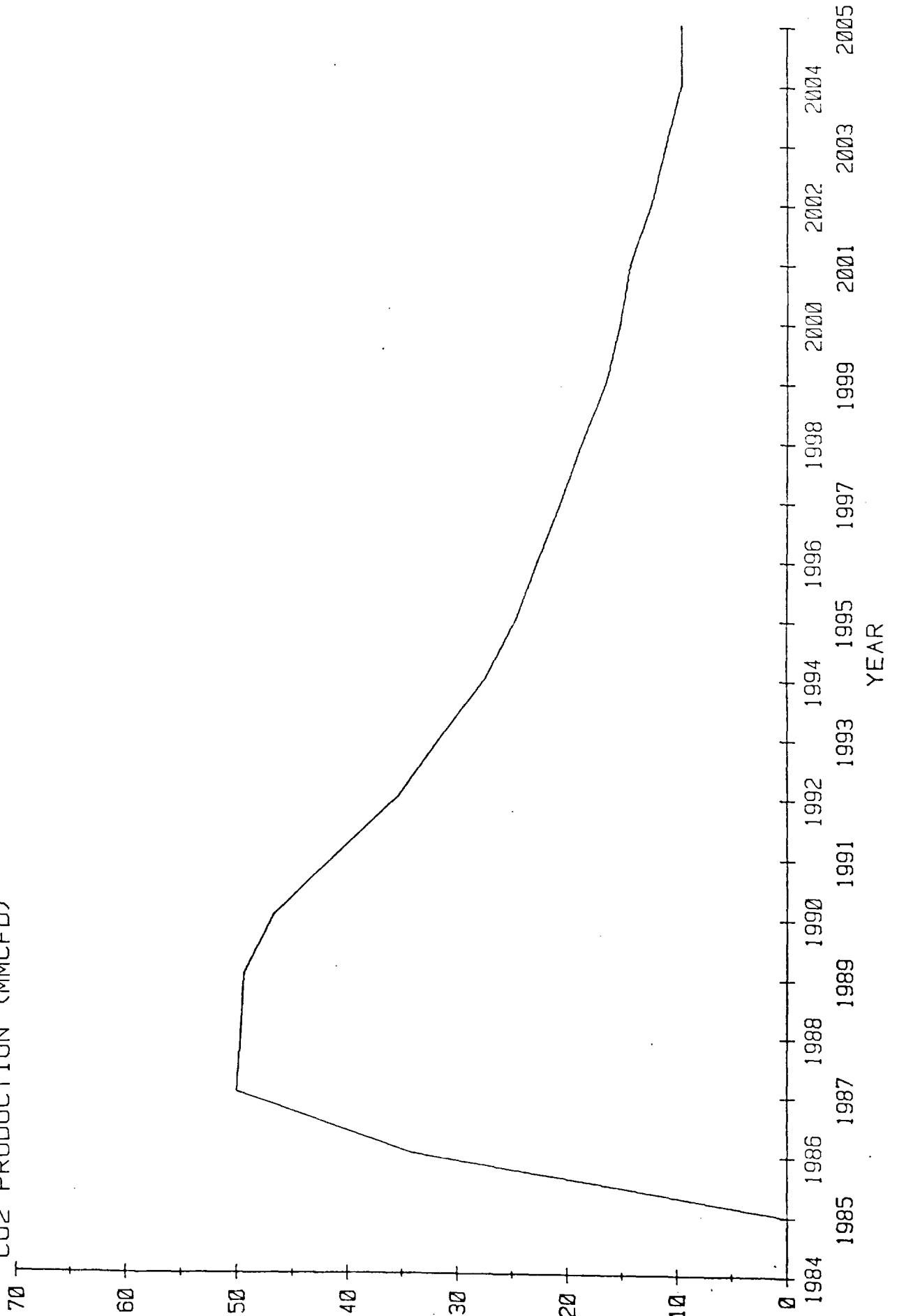
Line Pipe Installation	0.800
Right-of-Way and Damages	0.2000

TOTAL DELIVERY PIPELINE **2.0000**

WEST BRAVO DOME CARBON DIOXIDE UNIT

CO2 PRODUCTION SCHEDULE (MMCFD)

CO2 PRODUCTION (MMCFD)



TABULATED PRODUCTION SCHEDULE

<u>YEAR</u>	<u>PROD. SCHEDULE (MMCF/YR)</u>
1984	0
1985	0
1986	12,500
1987	18,250
1988	18,100
1989	18,000
1990	17,000
1991	15,000
1992	12,900
1993	11,500
1994	10,000
1995	9,000
1996	8,250
1997	7,500
1998	6,800
1999	6,000
2000	5,500
2001	5,200
2002	4,500
2003	4,000
2004	3,500
2005	3,500
TOTAL	197,000

R 28 E

R 29 E

R 30 E

T 20 N

T 19 N

T 18 N

T 17 N

T 17 N

T 17 N

T 17 N

T 17 N

T 17 N

T 17 N

T 17 N

T 17 N

T 17 N

T 17 N

T 20 N

T 19 N

T 18 N

T 17 N

T 17 N

T 17 N

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T 17 N

T 17 N

T 17 N

T 17 N

T 17 N

T 17 N

T 17 N

R 28 E

R 29 E

R 30 E

**WEST BRAVO DOME
CARBON DIOXIDE UNIT
PROPOSED GATHERING
SYSTEM**

- * EXISTING CO₂ WELL
- o PROPOSED LOCATION
- ▨ MITCHELL RANCH
- STATE
- FEE
- - - PROPOSED WEST BRAVO DOME CO₂ UNIT BOUNDARY
- ⋯ AMOCO BRAVO DOME CO₂ UNIT BOUNDARY

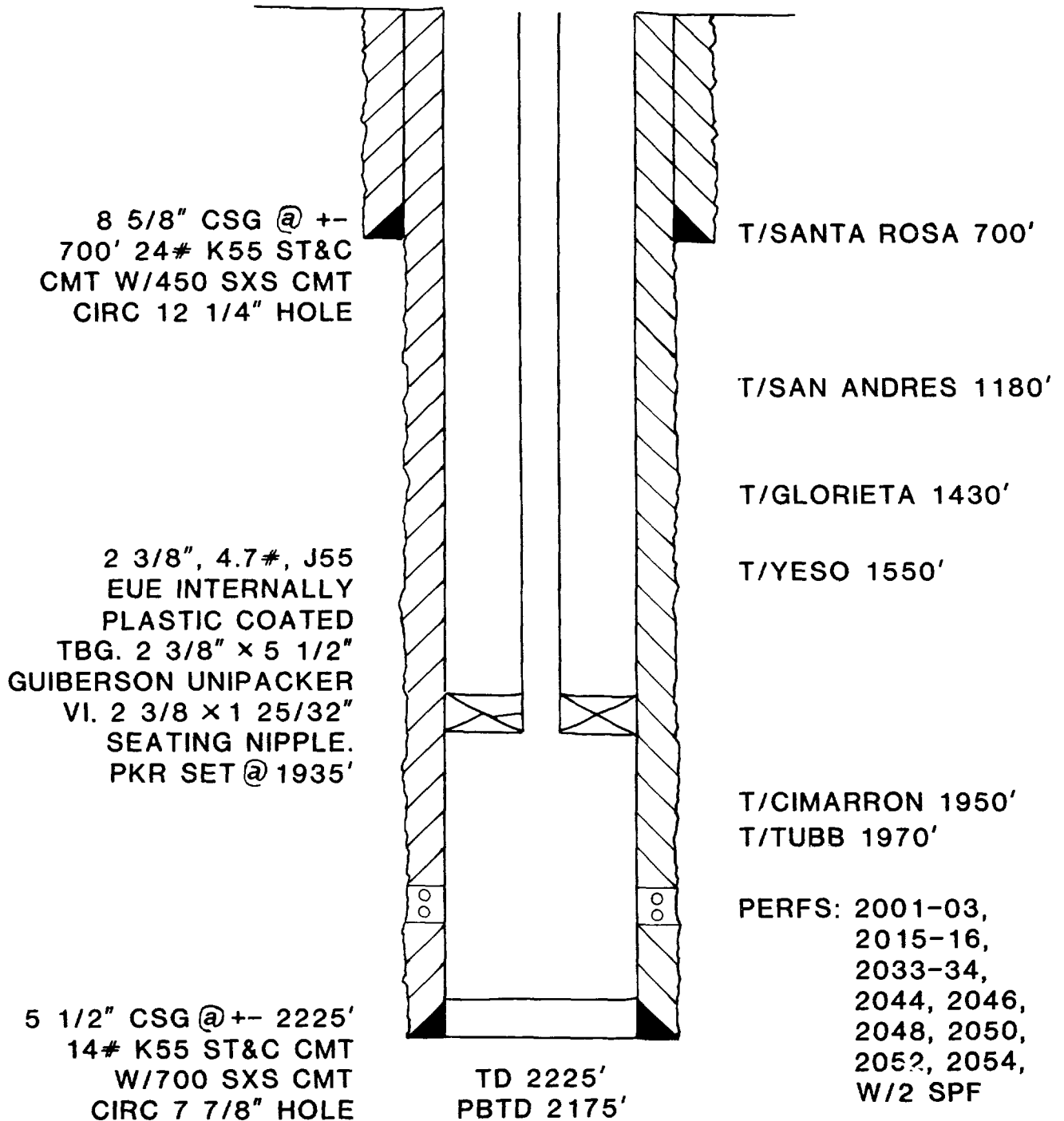
1 MILE

PROCESSING PLANT

TYPICAL WELLBORE DIAGRAM
WEST BRAVO DOME CO₂ UNIT
STATE DC NO. 1
HARDING COUNTY, NEW MEXICO
1980' FNL AND 1980' FWL, SEC. 36-T19N-R29E

COMPLETED 4-14-81

ELEV. 4521 GL
 4533 KB



UNIT AGREEMENT

FOR THE DEVELOPMENT AND OPERATION OF THE
WEST BRAVO DOME CARBON DIOXIDE GAS UNIT

BEFORE THE OIL CONSERVATION COMMISSION Santa Fe, New Mexico	
Case No. <u>8351</u>	Exhibit No. <u>8</u>
Submitted by <u>Cifra</u>	
Hearing Date <u>9/26/84</u>	

HARDING COUNTY, NEW MEXICO



United States Department of the Interior

IN REPLY REFER TO:
West Bravo Dome

BUREAU OF LAND MANAGEMENT ALBUQUERQUE DISTRICT OFFICE

505 Marquette, N.W.
P.O. Box 6770
Albuquerque, New Mexico 87197-6770

AUG 28 1984

Cities Service Oil and Gas Corporation
Attention: Mr. Charles E. Creekmore
P.O. Box 300
Tulsa, OK 74102

Gentlemen:

We have received five copies of the proposed form of unit agreement for the West Bravo Dome Carbon Dioxide Gas Unit. In view of the small percentage of Federal lands (8.98%), designation of this unit by the Bureau of Land Management is not required. This unit will be treated as a non-federal control unit, and normal Federal supervision will be maintained only over the Federal leases involved. Four copies of the unit agreement with appropriate collateral material should be filed with this office after final approval thereof by the New Mexico Oil Conservation Division and performance of all requirements necessary to establish the effective date.

Notwithstanding the above procedure, we would appreciate being kept informed of your progress towards unitization of the area and of the docket dates arranged for the New Mexico Oil Conservation Division hearing.

We are also returning three extra copies of the proposed form of unit agreement.

Sincerely yours,

L. Paul Applegate
for L. Paul Applegate
District Manager

BEFORE THE OIL CONSERVATION COMMISSION Santa Fe, New Mexico	
Case No. <u>8315</u>	Exhibit No. <u>11</u>
Submitted by <u>Cities</u>	
Hearing Date <u>9/26/84</u>	



CITIES SERVICE OIL AND GAS CORPORATION
P.O. BOX 300 TULSA, OKLAHOMA 74102

September 19, 1984

AmeriGas
Carbon Dioxide Division
Suite 1100
4455 LBJ Freeway
Dallas, Texas 75234

ATTN: Mr. W. P. Heckel, Jr.

Re: West Bravo Dome CO₂ Gas Unit
Harding County, New Mexico

Gentlemen:

Please be advised that on Wednesday, September 12, 1984, I contacted your Lessor, Mr. Albert Mitchell of T. E. Mitchell and Son, Inc., in reference to his execution of the Ratification to the West Bravo Dome CO₂ Gas Unit. Mr. Mitchell stated that he was in favor of the Unit as far as the 160 acres we have set out and placed in the Unit under Tract 2072. At that time, Mr. Mitchell informed me the only thing keeping him from executing the Ratification was that he had not received the Segregation of Lease instruments from your company.

Would you please look into this matter, and if there is anything we can do to assist you in expediting his receipt of these instruments, please let us know.

Yours very truly,

Charles E. Creekmore
Land Unitization and Acquisitions

CEC/gw

BEFORE THE	
OIL CONSERVATION COMMISSION	
Santa Fe, New Mexico	
Case No. <u>8315</u>	Exhibit No. <u>10</u>
Submitted by <u>Cities</u>	
<u>9/26/84</u>	

AmeriGas

CARBON DIOXIDE DIVISION

February 24, 1984

Mr. Eugene F. Motter
Engineering Manager
Cities Service Company
Box 1919
Midland, TX 79702

Re: Proposed West Bravo Dome Unit

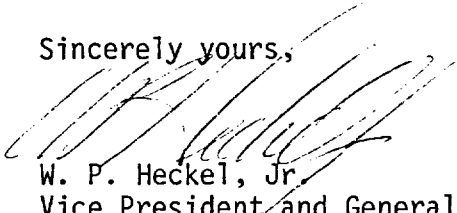
Dear Mr. Motter:

We have carefully reviewed, both internally and with our lessor, the extent of our participation in your proposed West Bravo Dome Unit as described in the draft documents you sent to us most recently on February 3, 1984.

We have concluded that we wish to participate with no more than a 160 acre tract. Please let us know which of our 160 acre tracts you would prefer to include and we will advise.

We appreciate all you have done to keep us informed regarding this proposal, and wish you success in implementing it.

Sincerely yours,


W. P. Heckel, Jr.
Vice President and General Manager

WPH/tgl

cc Albert J. Mitchell
William Kerr
Walter F. X. Healy

BEFORE THE OIL CONSERVATION COMMISSION Santa Fe, New Mexico	
Case No. <u>8315</u>	Exhibit No. <u>9</u>
Submitted by <u>CiFis</u>	
Hearing Date <u>9/26/84</u>	

UNIT AGREEMENT
FOR THE DEVELOPMENT AND OPERATION OF THE
WEST BRAVO DOME CARBON DIOXIDE GAS UNIT
HARDING COUNTY, NEW MEXICO

UNIT AGREEMENT

FOR THE DEVELOPMENT AND OPERATION OF THE
WEST BRAVO DOME CARBON DIOXIDE GAS UNIT
HARDING COUNTY, NEW MEXICO

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UNIT AGREEMENT
FOR THE DEVELOPMENT AND OPERATION OF THE
WEST BRAVO DOME CARBON DIOXIDE GAS UNIT
HARDING COUNTY, NEW MEXICO

THIS AGREEMENT, entered into as of the first day of September, 1983, by and between the parties who have signed the original of this instrument, a counterpart hereof, or other instrument agreeing to become a party hereto;

W I T N E S S E T H, T H A T:

WHEREAS, it is necessary to establish the WEST BRAVO DOME CARBON DIOXIDE GAS UNIT in order to prevent waste, promote conservation, provide orderly development, and increase the ultimate recovery of Unitized Substances, and in order to protect the correlative rights of the parties hereto and afford to each of the parties hereto such party's fair and equitable share of Unitized Substances, and it is deemed in the public interest and for the mutual benefit of the parties hereto that the Unit Area be developed and operated as though it were a single lease; and

WHEREAS, the Commissioner of Public Lands of the State of New Mexico is authorized by an Act of the Legislature (Chapter 19, Article 10, Section 45, New Mexico Statutes 1978 Annotated) to consent to and/or approve this agreement on behalf of the State of New Mexico insofar as it covers and includes lands and mineral interests of the State of New Mexico; and

WHEREAS, the Commissioner of Public Lands of the State of New Mexico is authorized by an Act of the Legislature (Chapter 19, Article 10, Section 4, New Mexico Statutes 1978 Annotated) to amend with the approval of the lessee any oil and gas lease embracing State lands so that the length of the term of said lease will coincide with the terms of this agreement; and

WHEREAS, the Oil and Gas Conservation Division of the State of New Mexico is authorized by an Act of the Legislature (Chapter 70, Article 2, Section 17, New Mexico Statutes 1978 Annotated) to approve this agreement and the conservation provisions hereof; and

WHEREAS, the Mineral Leasing Act of February 25, 1920 41 Stat. 437, as amended, 30 U.S.C. Section 181 et seq., authorizes Federal lessees and their representatives to unite with each other, or jointly or separately with others in collectively adopting and operating a unit plan of

1 development or operation of any oil or gas pool, field, or like area, or 1
2 any part thereof for the purpose of more properly conserving the natural 2
3 resources thereof whenever determined and certified by the Secretary 3
4 of the Interior to be necessary or advisable in the public interest; and 4
5

6 WHEREAS, the Mineral Leasing Act of February 25, 1920, as 6
7 amended, supra, and all valid pertinent regulations, including operating 7
8 and unit plan regulations, heretofore issued thereunder are accepted and 8
9 made a part of this Agreement as to Federal lands, provided such regula- 9
10 tions are not inconsistent with the terms of this Agreement, or the oil 10
11 and gas operating regulations of the State of New Mexico in effect as of 11
12 the date hereof; and as to non-Federal lands, the oil and gas operating 12
13 regulations in effect as of the Effective Date hereof governing drilling 13
14 and producing operations, not inconsistent with the terms hereof or the 14
15 laws of the State of New Mexico, are hereby accepted and made a part of 15
16 this Agreement; 16
17

18 NOW THEREFORE, in consideration of the premises, of the mutual 18
19 covenants and agreements herein contained, and of the benefits to be 19
20 derived herefrom, the parties hereto agree as follows: 20
21

22
23 ARTICLE 1 23
24 DEFINITIONS 24
25

26
27 As used in this agreement: 27
28

29 1.1 Unit Area is the land described by Tracts in Exhibit B 29
30 and shown on Exhibit A as to which this agreement becomes effective or 30
31 to which it may be extended as herein provided. 31
32

33 1.2 Unitized Formation is the subsurface portion of the Unit 33
34 Area which includes all of the Tubb formation and is described as follows: 34
35

36
37 That stratigraphic interval which extends from the base 37
38 of the "Cimarron Anhydrite Marker," said marker being 38
39 found at a depth of 1968 feet (Elev. 4521.4', Subsea 39
40 Datum +2563.4) on the Schlumberger Compensated Neutron- 40
41 Formation Density Log of the Cities Service Company State 41
42 "DC" Well No. 1, located 1980' from the North Line and 42
43 1980' from the West Line of Section 36, Township 19 North, 43
44 Range 29 East, NMPM, to the top of the Precambrian Base- 44
45 ment, said top being found at a depth of 2114 feet (Sub- 45
46 sea Datum +2417.4) on this same log. 46
47
48
49
50
51
52
53
54

1 1.3 Unitized Substances are Carbon Dioxide Gas and all asso- 1
2 ciated and constituent liquid or liquefiable carbonates, including all 2
3 non-commercial quantities of hydrocarbons or other combinations of ele- 3
4 ments, within or produced from the Unitized Formation. 4
5

6 1.4 Working Interest is an interest in Unitized Substances 6
7 by virtue of a lease, operating agreement, fee title, or otherwise, 7
8 including a carried interest, the owner of which interest has the 8
9 exclusive right to search for and produce Carbon Dioxide Gas and is 9
10 obligated to pay, either in cash or out of production or otherwise, a 10
11 portion of the Unit Expense; however, Carbon Dioxide Gas Rights that 11
12 are free of lease or other instrument creating a Working Interest shall 12
13 be regarded as a Working Interest to the extent of seven-eighths (7/8) 13
14 thereof and a Royalty Interest to the extent of the remaining one-eighth 14
15 (1/8) thereof. A Royalty Interest created out of a Working Interest 15
16 subsequent to the execution of this agreement by the owner of such 16
17 Working Interest shall continue to be subject to such Working Interest 17
18 burdens and obligations that are stated in this agreement. 18
19

20 1.5 Royalty Interest is a right to or interest in any portion 20
21 of Unitized Substances or proceeds thereof other than a Working Interest. 21
22

23 1.6 Royalty Owner is a party hereto who owns a Royalty 23
24 Interest. 24
25

26 1.7 Working Interest Owner is a party hereto who owns a 26
27 Working Interest. 27
28

29 1.8 Tract is the land described as such and given a Tract 29
30 number in Exhibit B. 30
31

32 1.9 Unit Operating Agreement is the agreement entered into 32
33 by Working Interest Owners, having the same Effective Date as this 33
34 agreement, entitled "Unit Operating Agreement, West Bravo Dome Carbon 34
35 Dioxide Gas Unit, Harding County, New Mexico." 35
36

37 1.10 Unit Operator is the Working Interest Owner designated 37
38 by Working Interest Owners under the Unit Operating Agreement to conduct 38
39 Unit Operations, acting as operator and not as a Working Interest Owner. 39
40

41 1.11 Tract Participation is the percentage shown on Exhibit C 41
42 for allocating Unitized Substances to a Tract. 42
43

44 1.12 Unit Participation of a Working Interest Owner is the sum 44
45 of the percentages obtained by multiplying the Working Interest of such 45
46 Working Interest Owner in each Tract that qualifies for inclusion within 46
47 the Unit Area by the Tract Participation of such Tract. 47
48
49
50
51
52
53
54

1 2.1.2 Exhibit B is a schedule that describes each 1
2 Tract in the Unit Area. 2
3

4 2.1.3 Exhibit C is a schedule which shows Tract 4
5 Participation. 5
6

7 2.1.4 Exhibit D is the form of indemnity agreement 7
8 provided for in Article 9. 8
9

10 2.2 Reference to Exhibits. When reference is made to an 10
11 exhibit, it is to the exhibit as originally attached or, if revised, 11
12 to the last revision. 12
13

14 2.3 Exhibits Considered Correct. Exhibits A, B, and C 14
15 shall be considered to be correct until revised as herein provided. 15
16

17 2.4 Correcting Errors. The shapes and descriptions of the 17
18 respective Tracts have been established by using the best information 18
19 available. If it subsequently appears that any Tract, because of di- 19
20 verse royalty or working interest ownership on the Effective Date should 20
21 have been divided into more than one Tract, or that any mechanical 21
22 miscalculation or clerical error has been made, Unit Operator with 22
23 approval of the Working Interest Owners shall correct the mistake by 23
24 revising the exhibits to conform to the facts. The revision shall not 24
25 include any re-evaluation of data used in determining Tract Participa- 25
26 tion. Each such revision of an exhibit made prior to thirty (30) days 26
27 after the Effective Date shall be effective as of the Effective Date. 27
28 Each such revision thereafter made shall be effective at 7:00 A.M. on 28
29 the first day of the calendar month next following the filing for record 29
30 of the revised exhibit or on such other date as may be determined by the 30
31 Working Interest Owners and set forth in the revised exhibit. 31
32

33 2.5 Filing Revised Exhibits. If an exhibit is revised, Unit 33
34 Operator shall execute an appropriate instrument with the revised exhi- 34
35 bit attached and file the same for record in the county in which this 35
36 agreement is filed. Two copies of such revised exhibit shall be filed 36
37 with the Commissioner and five copies shall be filed with the AO. 37
38

39
40 ARTICLE 3 40
41 CREATION AND EFFECT OF UNIT 41
42

43 3.1 Carbon Dioxide Gas Rights Unitized. All Carbon Dioxide 43
44 Gas Rights of Royalty Owners in and to the lands described in Exhibit 44
45 B, and all Carbon Dioxide Gas Rights of Working Interest Owners in and 45
46 to said lands, are hereby unitized insofar as such respective Carbon 46
47

1 Dioxide Gas Rights pertain to the Unitized Formation, so that Unit Opera- 1
2 tions may be conducted with respect to the Unitized Formation as if the 2
3 Unit Area had been included in a single lease executed by all Royalty 3
4 Owners, as lessors, in favor of Working Interest Owners, as Lessees, and 4
5 as if the leases contained all the provisions of this agreement. 5
6

7 3.2 Personal Property Excepted. All lease and well equip- 7
8 ment, materials, and other facilities heretofore or hereafter placed 8
9 by any of the Working Interest Owners on the lands covered hereby shall 9
10 be deemed to be and shall remain personal property belonging to and may 10
11 be removed by Working Interest Owners. The rights and interests there- 11
12 in as among Working Interest Owners are set forth in the Unit Operating 12
13 Agreement. 13
14

15 3.3 Leases and Contracts Conformed and Extended. The terms, 15
16 conditions, and provisions of all leases, subleases and other contracts 16
17 relating to exploration, drilling, development, or operation for oil or 17
18 gas, including but not limited to Carbon Dioxide Gas, on lands committed 18
19 to this agreement are hereby expressly modified and amended to the ex- 19
20 tent necessary to make the same conform to the provisions hereof but 20
21 otherwise shall remain in full force and effect. Further, the parties 21
22 hereto hereby expressly consent for the Secretary as to the Federal 22
23 leases, for the Commissioner as to the State leases, for the Lessors 23
24 as to other leases (as evidenced by their individual approval hereof or 24
25 by the approval hereof of their duly authorized representative) to 25
26 hereby establish, alter, change, or revoke the drilling, producing, 26
27 rental, minimum royalty, and royalty requirements of Federal, State and 27
28 other leases committed hereto and the regulations in respect thereto 28
29 to conform said requirements to the provisions of this agreement; and, 29
30 without limiting the generality of the foregoing, all leases, subleases, 30
31 and contracts are particularly modified in accordance with the following: 31
32

33 (a) The development and operation of lands subject 33
34 to this agreement under the terms hereof shall 34
35 be deemed full performance of all obligations 35
36 for development and operation with respect to 36
37 each and every separately owned Tract subject 37
38 to this agreement, regardless of whether there 38
39 is any development of any particular Tract of 39
40 the Unit Area. 40
41

42 (b) Drilling and producing operations performed 42
43 hereunder upon any Tract of unitized lands will 43
44 be accepted and deemed to be performed upon and 44
45 for the benefit of each and every Tract of 45
46 unitized land, and no lease shall be deemed to 46
47 expire by reason of failure to drill or produce 47
48 wells situated on the land therein embraced. 48
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- (c) Each lease, sublease or contract relating to the exploration, drilling, development or operation for oil or gas, including but not limited to Carbon Dioxide Gas, of lands other than those of the United States committed to this agreement, which, by its terms might expire prior to the termination of this agreement, is hereby extended beyond any such term provided therein so that it shall be continued in full force and effect for and during the term of this agreement.

- (d) Any Federal lease for a fixed term of twenty (20) years or any renewal thereof or any part of such lease which is made subject to this agreement shall continue in force beyond the term so provided therein until the termination hereof. Any other Federal lease committed hereto shall continue in force beyond the term so provided therein or by law as to the land committed so long as such lease remains subject hereto, provided actual drilling operations are commenced on unitized land, in accordance with the provisions of this agreement, prior to the end of the primary term of such lease. Such lease shall be extended for two years and so long thereafter as oil and gas, including but not limited to Carbon Dioxide Gas, is produced in paying quantities in accordance with the provisions of the Mineral Leasing Act Revision of 1960.

- (e) Each sublease or contract relating to the operation and development of Unitized Substances from lands of the United States committed to this agreement, which by its terms would expire prior to the time at which the underlying lease, as extended by the immediately preceding paragraph, will expire, is hereby extended beyond any such term so provided herein so that it shall be continued in full force and effect for and during the term of the underlying lease as such term is herein extended.

- (f) The segregation of any Federal lease committed to this agreement is governed by the following provisions in the fourth paragraph of Section 17(j) of the Mineral Leasing Act, as amended by the Act of September 2, 1960 (74 Stat. 781-784): "Any (Federal) lease heretofore or hereafter committed to any such (unit) plan embracing lands that are in part within and in part outside of the area covered by any such plan shall be segregated into separate leases as to

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1 the lands committed and the lands not committed 1
2 as of the effective date of unitization: 2
3 Provided, however, that any such lease as to the 3
4 non-unitized portion shall continue in force and 4
5 effect for the term thereof but for not less than 5
6 two years from the date of such segregation and 6
7 so long thereafter as oil or gas is produced in 7
8 paying quantities." 8
9 9

10 (g) Any lease, other than a Federal lease, having only 10
11 a portion of the lands covered thereby committed 11
12 hereto shall be segregated as to the portion commit- 12
13 ted and the portion not committed. The provisions 13
14 of such lease shall apply separately to such segre- 14
15 gated portions commencing as of the effective date 15
16 hereof. In the event any such lease provides for a 16
17 lump-sum rental payment, such payment shall be pro- 17
18 rated between the portions so segregated in propor- 18
19 tion to the acreage of the respective portions. 19
20 20

21 3.4 Continuation of Leases and Term Interests. Production 21
22 from any part of the Unitized Formation, except for the purpose of 22
23 determining payments to Royalty Owners, or other Unit Operations shall 23
24 be considered as production from or operations upon each Tract; and such 24
25 production or operations shall continue in effect each lease or term 25
26 mineral or royalty interest as to all lands and formations covered 26
27 thereby just as if such operations were conducted on and as if a well 27
28 were producing from each Tract. 28
29 29

30 3.4.1 Any lease embracing lands of the State of New Mexico 30
31 which is made subject to this agreement shall continue in force beyond 31
32 the term provided therein as to the lands committed hereto until the 32
33 termination hereof. 33
34 34

35 3.4.2 Any lease embracing lands of the State of New Mexico 35
36 having only a portion of its land committed hereto shall be segregated 36
37 as to that portion committed and that not committed, and the terms 37
38 of such lease shall apply separately as to such segregated portions 38
39 commencing as of the Effective Date hereof, provided, however, that, 39
40 notwithstanding any of the provisions of this agreement to the contrary, 40
41 such lease shall continue in full force and effect beyond the term pro- 41
42 vided therein as to all lands embraced in such lease if oil or gas, 42
43 including but not limited to Carbon Dioxide Gas, is or has heretofore 43
44 been discovered in paying quantities on some part of the lands embraced 44
45 in such lease committed to this agreement or, at any time during the 45
46 term hereof, as to any lease that is valid and subsisting and upon which 46
47 the lessee or the Unit Operator is then engaged in bona fide drilling 47
48 or reworking operations on any part of the lands embraced in such lease, 48
49 then the same as to all lands embraced therein shall remain in full 49
50 force and effect so long as such operations are diligently prosecuted. 50
51 51

1 3.5 Titles Unaffected by Unitization. Nothing herein shall
2 be construed to result in the transfer of title to Carbon Dioxide Gas
3 Rights by any party hereto to any other party or to Unit Operator.

4
5 3.6 Injection Rights. Royalty Owners hereby grant Working
6 Interest Owners the right to inject into the Unitized Formations any
7 substances in whatever amounts Working Interest Owners deem expedient
8 for Unit Operations, together with the right to drill, use, and main-
9 tain injection wells on the Unit Area and to use for injection purposes
10 any nonproducing or abandoned wells or dry holes and any producing wells
11 completed in the Unitized Formation.

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14 ARTICLE 4
15 DEVELOPMENT AND OPERATIONS
16

17 4.1 Unit Operator. Working Interest Owners are concurrent-
18 ly herewith entering into the Unit Operating Agreement, designating
19 CITIES SERVICE OIL AND GAS CORPORATION, a Delaware corporation, as the
20 Initial Unit Operator. Unit Operator shall have the exclusive right
21 to conduct Unit Operations which shall conform to the provisions of
22 this agreement and the Unit Operating Agreement. If there is any con-
23 flict between such agreements, this agreement shall govern.

24
25 4.2 Development. Working Interest Owners have heretofore
26 completed wells capable of producing Unitized Substances. During the
27 first two (2) years after the Effective Date, such additional wells
28 will be drilled as are necessary to gather pertinent information;
29 however, Working Interest Owners shall not be obligated to drill more
30 than four (4) wells per year during this period. Within two years
31 after the Effective Date, Unit Operator shall submit for approval of the
32 Commissioner and the Division an acceptable plan of development and
33 operation which, when approved by the Commissioner, shall constitute the
34 further drilling and operations obligations of the Working Interest
35 Owners for the period specified therein. Thereafter, from time to time
36 before the expiration of any existing plan, Unit Operator shall submit
37 for like approval a plan for an additional specified period. Five copies
38 of all such plans shall be furnished to the AO.

39
40 Any plan submitted pursuant to this Section shall:
41

- 42 (a) specify the number and locations of any wells to
43 be drilled and the proposed order and time for
44 such drilling, and
45
46 (b) to the extent practicable specify the operating
47 practices regarded as necessary and advisable
48 for proper conservation of natural resources.

1 Plans shall be modified or supplemented when necessary to meet changed 1
2 conditions or to protect the interests of all parties to this agreement. 2
3 Reasonable diligence shall be exercised in approving submitted plans 3
4 of development and in complying with the obligations of any such approved 4
5 plan. 5
6

7 4.3 Operations. Nothing herein shall prevent Working Interest 7
8 Owners from discontinuing or changing in whole or in part any method of 8
9 operations which, in their opinion, is no longer in accord with good 9
10 engineering or production practices. Other methods of operation may be 10
11 conducted or changes may be made by Working Interest Owners from time to 11
12 time if determined to be feasible, necessary, or desirable to maintain 12
13 deliverability and increase ultimate recovery of Unitized Substances. 13
14 Unit Operator shall keep the Commissioner and the AO informed of any 14
15 changes in any method of operation by furnishing them notice or a copy 15
16 of any order of the Division authorizing such changes. 16
17

18
19 ARTICLE 5
20 TRACT PARTICIPATION
21

22 5.1 Initial Tract Participations. The Initial Tract Partici- 22
23 pation of each Tract is shown on Exhibit C and was computed as follows: 23
24

25 5.1.1 The Initial Tract Participation of each Tract is 25
26 equal to One Hundred (100) times the ratio of the Total Surface Acres 26
27 contained in the Tract divided by the sum of the Total Surface Acres con- 27
28 tained in all Tracts in the Unit Area. In the event fewer than all of 28
29 the Tracts described in Exhibit B are included in the Unit Area on the 29
30 Effective Date, the Tract Participation shall be calculated by Unit 30
31 Operator on the basis of all such included Tracts rather than all Tracts 31
32 described in Exhibit B and Unit Operator shall revise Exhibits A, B, and 32
33 C accordingly. 33
34

35 5.1.2 Total Surface Acres in a Tract are those surface 35
36 acres contained in the Tract as shown on Exhibit B. 36
37

38 5.2 Redetermination of Tract Participations. Within five 38
39 (5) years after the first sales of Unitized Substances delivered into 39
40 the pipeline described in Section 6.1, but in any event no later than 40
41 ten (10) years after the Effective Date hereof, the Tract Participa- 41
42 tion of each Tract shall be redetermined by Working Interest Owners 42
43 subject to approval of the Commissioner. Any such Tract which is then 43
44 shown to be outside the then known productive limits of the Unit Area 44
45 shall be automatically eliminated from the Unit Area, provided, however, 45
46 if drilling is then occurring on step-out locations from producing wells 46
47 with not more than 90 days elapsing between the completion of one well 47
48 and the beginning of the next well, such redetermination may be deferred 48
49 for a period not to exceed two (2) years. The method of redetermining 49
50 Tract Participation Percentages shall be as follows: 50
51

1 5.2.1 The Productive Acres of each Tract shall be deter- 1
2 mined by establishing a zero net pay isopachous line based on the extra- 2
3 polated net pay intervals in all wells in the Unit Area in accordance 3
4 with industry-wide acceptable practices for interpreting underground 4
5 geologic features on maps. Where the zero net pay isopachous line falls 5
6 outside the boundary line of the Unit Area, said Unit Area boundary line 6
7 shall be considered to be the zero net pay isopachous line. Those 7
8 tracts having no Productive Acres shall be automatically eliminated from 8
9 the Unit Area, and no payments made to any of the Royalty Owners of such 9
10 eliminated Tracts under the Initial Tract Participation shall be further 10
11 accounted for. 11
12

13 5.2.2 The redetermined Tract Participations shall be cal- 13
14 culated by dividing each Tract's Productive Acres by the Total Productive 14
15 Acres contained in all Tracts in the Unit Area remaining after exclusion 15
16 of Tracts under Section 5.2.1 and multiplying by one hundred (100). Unit 16
17 Operator shall prepare revised Exhibits A, B, and C and file such revised 17
18 Exhibits in Harding County, New Mexico. Two copies of such revised 18
19 Exhibits shall be provided the Commissioner and five copies provided the 19
20 AO. 20
21

22 5.3 No Retroactive Adjustments. There shall not be any retro- 22
23 active adjustments or accounting for the difference between the Initial 23
24 Tract Participation and the redetermined Tract Participation and no fur- 24
25 ther redetermination of Tract Participations shall ever be made. 25
26

27 5.4 Relative Tract Participation. Except for the redetermi- 27
28 nation under this Article, if the Unit Area is enlarged or reduced, the 28
29 revised Tract Participations of the Tracts remaining in the Unit Area 29
30 and which were within the Unit Area prior to the enlargement or reduction 30
31 shall remain in the same ratio one to another. 31
32

33
34 ARTICLE 6 34
35 RENTAL AND ROYALTY PAYMENTS 35
36
37

38 6.1 Rental Paid Between Effective Date and Delivery of Unitized 38
39 Substances. It is recognized that, although a market presently exists 39
40 for small volumes of Carbon Dioxide Gas, the primary market for Unitized 40
41 Substances cannot be met until a pipeline and field facilities can be 41
42 built, and delivery of Unitized Substances to such facilities will not 42
43 begin until some time after the Effective Date hereof. Therefore, as part 43
44 of the consideration for execution of this agreement, Working Interest 44
45 Owners will pay to Royalty Owners, and the Royalty Owners hereby will 45
46 accept, an additional rental payment of fifty percent of the annual rental 46
47 as prescribed in their respective leases due during the calendar year in 47
48 which the Unit becomes effective. On paid-up leases covering fee and 48
49 patented lands, the amount paid shall be fifty (50) cents per acre. The 49
50 additional annual payment shall increase the annual rental payment on 50
51
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1 leases of the State of New Mexico and the annual minimum royalty payment on 1
2 leases of the United States to \$1.50 per acre. In each succeeding year in 2
3 which there is no delivery of Unitized Substances to the pipeline con- 3
4 structed for the primary market, rentals paid by Working Interest Owners 4
5 to Royalty Owners shall be increased an additional five percent (5%) over 5
6 those paid in the preceding year. 6
7

8 6.2 Payment of Royalties. Beginning with the first delivery of 8
9 Unitized Substances to the pipeline, no further rentals shall be due or 9
10 payable, except where minimum rental or royalty payments are required 10
11 under lease agreements committed hereto; and royalty payments for Carbon 11
12 Dioxide Gas produced, saved and delivered into the pipeline shall be made 12
13 to Royalty Owners by Working Interest Owners as set out below. The volume 13
14 of Carbon Dioxide Gas shall be measured at the standard conditions of 14
15 measurement for natural gases which are at 60° Fahrenheit and 15.025 15
16 pounds per square inch absolute pressure base. 16
17

18 6.3 Basis of Payment to Royalty Owners. It is recognized by 18
19 the parties hereto that there is now no preeminent market for Carbon 19
20 Dioxide Gas. Therefore, the parties hereto agree that, as further consid- 20
21 eration for entering into this agreement, royalties paid upon the Unitized 21
22 Substances allocated to each Tract shall be based on the greatest of the 22
23 following: 23
24

25 (a) The net proceeds derived from the sale of Carbon 25
26 Dioxide Gas at the well whether such sale is to one or more of the parties 26
27 to this agreement or to any other party or parties. 27
28

29 (b) In no case shall the royalties paid under this agree- 29
30 ment for any calendar year after first delivery of Unitized Substances to 30
31 the pipeline be less than the annual rentals or minimum royalties paid 31
32 for the year preceding first delivery of Carbon Dioxide Gas to the pipe- 32
33 line. In the event of any such occurrence, an appropriate retroactive 33
34 payment shall be made. 34
35

36 (c) Notwithstanding the foregoing provisions, the State, 36
37 acting by its Commissioner of Public lands may require the payment of 37
38 royalty for all or any part of the Unitized Substances allocated to the 38
39 state leases committed to this agreement and marketed or utilized at a 39
40 price per m.c.f. equal to the maximum price being paid for Unitized Sub- 40
41 stances of like kind and quality and under like conditions in the same 41
42 field or area or may reduce the royalty value of any such Unitized Sub- 42
43 stances (to any amount not less than the net proceeds of sale thereof in 43
44 the field) if the Commissioner of Public Lands shall determine such action 44
45 to be necessary to the successful operation of the lands for Unitized 45
46 Substances purposes or to encouragement of the greatest ultimate recovery 46
47 of Unitized Substances or to the promotion of conservation of Unitized 47
48 Substances. 48
49
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1 ARTICLE 7 1
2 ALLOCATION OF UNITIZED SUBSTANCES 2
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4 4

5 7.1 Allocation to Tracts. All Unitized Substances produced 5
6 and saved shall be allocated to the several Tracts in accordance with the 6
7 respective Tract Participations effective during the period that the 7
8 Unitized Substances were produced. The amount of Unitized Substances 8
9 allocated to each Tract, regardless of whether the amount is more or 9
10 less than the actual production of Unitized Substances from the well or 10
11 wells, if any, on such Tract, shall be deemed for all purposes to have 11
12 been produced from such Tract. 12
13 13

14 7.2 Distribution Within Tracts. The Unitized Substances 14
15 allocated to each Tract shall be distributed among, or accounted for to, 15
16 the parties entitled to share in the production from such Tract in the 16
17 same manner, in the same proportions, and upon the same conditions as 17
18 they would have participated and shared in the production from such 18
19 Tract, or in the proceeds thereof, had this agreement not been entered 19
20 into, and with the same legal effect. If any Carbon Dioxide Gas Rights 20
21 in a Tract hereafter become divided and owned in severalty as to different 21
22 parts of the Tract, the owners of the divided interests, in the absence 22
23 of an agreement providing for a different division, shall share in the 23
24 Unitized Substances allocated to the Tract, or in the proceeds thereof, 24
25 in proportion to the surface acreage of their respective parts of the 25
26 Tract. Any royalty or other payment which depends upon per well pro- 26
27 duction or pipeline runs from a well or wells on a Tract shall, after the 27
28 Effective Date, be determined by dividing the Unitized Substances allo- 28
29 cated to the Tract by the number of wells on the Tract capable of pro- 29
30 ducing Unitized Substances on the Effective Date; however, if any Tract 30
31 has no well thereon capable of producing Unitized Substances on the 31
32 Effective Date, the Tract shall, for the purpose of this determination, 32
33 be deemed to have one such well thereon. 33
34 34

35 7.3 Taking Unitized Substances in Kind. The Unitized Sub- 35
36 stances allocated to each Tract shall be delivered in kind at the wellhead 36
37 to the respective parties entitled thereto by virtue of the ownership of 37
38 Carbon Dioxide Gas Rights therein or by purchase from such owners. Such 38
39 parties shall have the right to construct, maintain, and operate within 39
40 the Unit Area all necessary facilities for that purpose, provided they 40
41 are so constructed, maintained, and operated as not to interfere with 41
42 Unit Operations. Any extra expenditures incurred by Unit Operator by 42
43 reason of the delivery in kind of any portion of Unitized Substances 43
44 shall be borne by the owner of such portion. If a Royalty Owner has the 44
45 right to take in kind a share of Unitized Substances and fails to do so, 45
46 the Working Interest Owner whose Working Interest is subject to such 46
47 Royalty Interest shall be entitled to take in kind such share of Unitized 47
48 Substances. 48
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1 7.4 Failure to Take in Kind. If any party fails to take in 1
2 kind or separately dispose of such party's share of Unitized Substances, 2
3 Unit Operator shall have the right, but not the obligation, for the time 3
4 being and subject to revocation at will by the party owning the share, to 4
5 purchase or sell to others such share; however, all contracts of sale by 5
6 Unit Operator of any other party's share of Unitized Substances shall be 6
7 only for such reasonable periods of time as are consistent with the mini- 7
8 mum needs of the industry under the circumstances, but in no event shall 8
9 any such contract be for a period in excess of one year. The proceeds 9
10 from the Unitized Substances so disposed of by Unit Operator shall be 10
11 paid to the Working Interest Owners of each affected Tract or a party 11
12 designated by such Working Interest Owners who shall distribute such pro- 12
13 ceeds to the parties entitled thereto. 13
14

15 7.5 Responsibility for Payments. At any and all times while 15
16 Unitized Substances are being produced from the Unit Area, each Working 16
17 Interest Owner will make settlement with the respective Royalty Owners 17
18 to whom said Working Interest Owner is accountable just as if each 18
19 Working Interest Owner were taking and delivering to a purchaser its 19
20 share, and its share only, of such Unitized Substances exclusive of 20
21 Unitized Substances used in Unit Operations, vented or lost. Each Working 21
22 Interest Owner agrees to indemnify and hold harmless each and every other 22
23 Working Interest Owner from any and all claims for royalty payments 23
24 asserted by royalty owners to whom each indemnifying Working Interest 24
25 Owner is accountable. Each Working Interest Owner and Royalty Owner pro- 25
26 ducing and taking or delivering Unitized Substances to its purchaser 26
27 shall pay any and all production taxes due on such Unitized Substances. 27
28

29 7.6 Allocation of Carbon Dioxide Gas for Use in the State of 29
30 New Mexico. It is recognized that in fields located in the State of New 30
31 Mexico there are oil reservoirs in which the use of Carbon Dioxide Gas 31
32 (i.e., Unitized Substances produced under this agreement) as an injection 32
33 fluid may be necessary or desirable to increase the ultimate recovery of 33
34 oil from such oil reservoirs as part of enhanced or tertiary recovery 34
35 operations. If any such use develops and if at that time there are no 35
36 other reasonable available sources of Carbon Dioxide Gas for such use 36
37 either within the State of New Mexico or from sources outside the State 37
38 of New Mexico within the geographic area reasonably accessible which may 38
39 be utilized as a source of such injection fluid more economically than 39
40 the allocated volume of Carbon Dioxide Gas under this agreement, there 40
41 then is allocated by the Working Interest Owners for primary use in the 41
42 State of New Mexico a maximum not to exceed ten percent (10%) of the 42
43 then total daily production of Carbon Dioxide Gas under this agreement; 43
44 provided, that the use thereof shall be only as an injection fluid into 44
45 suitable oil reservoirs located in the State of New Mexico as a part of 45
46 enhanced or tertiary recovery operations. 46
47

48 Any operator or operators of leases in oil fields in the State of New 48
49 Mexico shall have the right to apply to the Unit Operator hereunder for 49
50 purchase from the Working Interest Owners of all or part of such alloca- 50
51 ted volume of Carbon Dioxide Gas by giving at least one (1) year's advance 51
52
53
54

1 written notice by certified mail directed to the Unit Operator hereunder 1
2 of the date such Carbon Dioxide Gas will be needed and of the anticipated 2
3 volumes of such Carbon Dioxide Gas along with the details related to the 3
4 proposed use. Upon receipt of any and every such application, the Unit 4
5 Operator shall promptly so advise the Working Interest Owners by certified 5
6 mail setting forth the details of each application which has been made. 6
7 The one (1) year notice period mentioned above shall begin with the 7
8 receipt of such notice by the Unit Operator, and each applicant shall be 8
9 notified thereof by the Unit Operator. However, subject to the terms and 9
10 provisions hereof, Unit Operator, if allocated Carbon Dioxide Gas is 10
11 available at any time during the one (1) year period mentioned above, may 11
12 commence delivery of such gas to any applicant then ready and willing to 12
13 accept such delivery. 13
14

15 The price and terms of any such sale of Carbon Dioxide Gas shall be a 15
16 matter of bargaining and negotiations between the Working Interest Owners 16
17 of such gas and each purchaser thereof. There shall not be, in any event, 17
18 any obligation on the part of the Working Interest Owners thereof to sell 18
19 and deliver any such Carbon Dioxide Gas either for any use which is not 19
20 in conformity with the provisions hereof or at any point other than either 20
21 at the wellhead or wellheads in the field covered by this agreement or at 21
22 any central manifold measuring, or delivery point of such gas maintained 22
23 by the Working Interest Owners. Further, the Working Interest Owners 23
24 during the period of allocation of Carbon Dioxide Gas shall not be liable 24
25 for any failure to deliver upon demand such maximum ten percent (10%) or 25
26 any lesser portion thereof in the event other markets or uses may have 26
27 absorbed the then current capacity of Carbon Dioxide Gas produced under 27
28 this agreement. 28
29

30 The initial purchaser of Carbon Dioxide Gas under this allocation may 30
31 take to the extent then available all of said ten percent (10%) of 31
32 Carbon Dioxide Gas so allocated or any lesser portion thereof; provided 32
33 that the volume of gas so taken by said initial purchaser, as well as 33
34 subsequent purchasers, shall be subject to diminution and reduction by 34
35 the proportionate allocation thereof between purchasers and fields 35
36 located in New Mexico. Proportionate allocation shall be made by the 36
37 Unit Operator for the Working Interest Owners of the Carbon Dioxide Gas. 37
38 However, anything to the contrary notwithstanding, the owners of Carbon 38
39 Dioxide Gas under this agreement expressly reserve and retain a prior, 39
40 preferred, and continuing right, exercisable at any and all times without 40
41 notice, to use all or a part of this allocated gas in oil fields which 41
42 they operate in whole or part in the State of New Mexico. Any amount of 42
43 such Carbon Dioxide Gas so used by such Working Interest Owners shall be 43
44 counted against the ten percent (10%) volume of allocated gas hereunder. 44
45

46 ARTICLE 8 46
47 USE OR LOSS OF UNITIZED SUBSTANCES 47
48 48
49 49

50 8.1 Use of Unitized Substances. Working Interest Owners may 50
51 use or consume Unitized Substances for Unit Operations, including but 51
52 not limited to the injection thereof into the Unitized Formation. 52
53

1 8.2 Royalty Payments. No royalty, overriding royalty, pro- 1
2 duction, or other payments shall be payable on account of Unitized 2
3 Substances used, lost or consumed in Unit Operations. 3
4 4
5 5
6 6

7 ARTICLE 9 6
8 TRACTS TO BE INCLUDED IN UNIT 7
9 8
10 9

11 9.1 Qualification of Tracts. On and after the Effective Date 10
12 and until the enlargement or reduction thereof, the Unit Area shall be 11
13 composed of the Tracts listed in Exhibit B that corner or have a common 12
14 boundary (Tracts separated only by a public highway and/or a railroad 13
15 right-of-way shall be considered to have a common boundary) and that 14
16 otherwise qualify as follows: 15
17 16

18 9.1.1 Each Tract as to which Working Interest Owners 17
19 owning one hundred percent (100%) of the Working Interest have become 18
20 parties to this agreement and as to which Royalty Owners owning 19
21 seventy-five percent (75%) or more of the Royalty Interest have become 20
22 parties to this agreement; 21
23 22

24 9.1.2 Each Tract as to which Working Interest Owners 23
25 owning one hundred percent (100%) of the Working Interest have become 24
26 parties to this agreement and as to which Royalty Owners owning less 25
27 than seventy-five percent (75%) of the Royalty Interest have become 26
28 parties to this agreement and as to which (a) Working Interest Owners 27
29 owning seventy-five percent (75%) or more of the Working Interest in 28
30 such Tract, including the Working Interest Owner who operates the Tract, 29
31 have joined in a request for the inclusion of the Tract in the Unit Area 30
32 and as to which (b) Working Interest Owners having seventy-five percent 31
33 (75%) or more of the combined voting interest in all Tracts that meet 32
34 the requirements of Section 9.1.1 have voted in favor of the inclusion 33
35 of such Tract. 34
36 35

37 9.1.3 Each Tract as to which Working Interest Owners 36
38 owning less than one-hundred percent (100%) of the Working Interest 37
39 have become parties to this agreement, regardless of the percentage of 38
40 royalty Interest therein that is committed hereto, and as to which 39
41 (a) one or more of the Working Interest Owners in such Tract who have 40
42 become parties to this agreement, one of which must be the operator of 41
43 such Tract, have joined in a request for inclusion of such Tract in the 42
44 Unit Area and have executed and delivered, or have obligated themselves 43
45 to execute and deliver, an indemnity agreement identical in form to the 44
46 agreement attached hereto as Exhibit D indemnifying and agreeing to hold 45
47 harmless all other Working Interest Owners in the Unit Area, their 46
48 successors and assigns, against all claims and demands that may be made 47
49 by the owners of Working Interests in such Tract who are not parties to 48
50 this agreement and which arise out of the inclusion of the Tract in the 49
51 Unit Area; and as to which (b) Working Interest Owners having seventy-five 50
52 51
53 52
54 53

1 percent (75%) or more of the combined voting interest in all Tracts that 1
2 meet the requirements of Sections 9.1.1 and 9.1.2 have voted in favor of 2
3 the inclusion of such Tract and to accept the indemnity agreement. Upon 3
4 the inclusion of such a tract in the Unit Area, the Unit Participation 4
5 that would have been attributed to the nonsubscribing owners of Working 5
6 Interest in such Tract, had they become parties to this agreement and the 6
7 Unit Operating Agreement, shall be attributed in proportion to their 7
8 respective Working Interests in such Tract to the Working Interest Owners 8
9 in the Tract who have executed indemnity agreements. 9

10
11 9.2 Commitment of Interests to Unit. The execution of this 11
12 agreement by a party shall commit all interests owned or controlled by 12
13 such a party as of the date of execution and additional interests acquired 13
14 before the Effective Date. After the Effective Date, the commitment of 14
15 any interest in any Tract within the Unit Area shall be upon such terms 15
16 as may be negotiated by Working Interest Owners and the owner of such 16
17 interest and upon approval of the Commissioner, provided, however, any 17
18 formerly committed interest as to which title has failed may be recommit- 18
19 ted by the rightful owners on its former basis of participation as pro- 19
20 vided in Section 10.1 hereof. 20
21

22 9.3 Acquisition of Uncommitted Interests. In the event any 22
23 party bound by this agreement acquires an uncommitted interest in any 23
24 Tract included within the Unit Area, such interest upon being so ac- 24
25 quired, shall, upon approval by the Working Interest Owners, be subject 25
26 to this agreement; shall receive its share of the Unit Participation 26
27 allocated to said Tract; and, where the interest acquired is a Working 27
28 Interest, shall also be subject to the Unit Operating Agreement. 28
29

30 9.4 Revision of Exhibits. If any of the Tracts described in 30
31 Exhibit B fail to qualify for inclusion in the Unit Area, Unit Operator 31
32 shall recompute the Tract Participation of each of the qualifying Tracts, 32
33 using the original basis of computation, and shall revise Exhibits A, B, 33
34 and C accordingly. Such revised exhibits shall be effective as of 7:00 34
35 A.M. on the Effective Date. 35
36

37
38 ARTICLE 10 38
39 TITLES 39
40

41
42 10.1 Removal of Tract from Unit Area. If a Tract ceases to 42
43 have sufficient Working Interest Owners or Royalty Owners committed to 43
44 this agreement to meet the conditions of Article 9 because of failure 44
45 of title of any party hereto, such Tract shall be removed from the Unit 45
46 Area effective as of 7:00 A.M. on the first day of the calendar month 46
47 in which the failure of title is finally determined unless within ninety 47
48 (90) days after the date of final determination of the failure of title, 48
49 the Tract qualifies under a Section of Article 9. 49
50

1 10.2 Revision of Exhibits. If a Tract is removed from the Unit
2 Area because of failure of title, Unit Operator, subject to Section 5.4,
3 shall recompute the Tract Participation of each of the Tracts remaining
4 in the Unit Area and shall revise Exhibits A, B, and C accordingly. The
5 revised exhibits shall be effective as of 7:00 A.M. on the first day of
6 the calendar month in which such failure of title is finally determined.
7

8 10.3 Working Interest Titles. If title to a Working Interest
9 fails, the rights and obligations of Working Interest Owners by reason of
10 the failure of title shall be governed by the Unit Operating Agreement.
11

12 10.4 Royalty Interest Titles. If title to a Royalty Interest
13 fails but the Tract to which it relates is not removed from the Unit Area,
14 the party whose title failed shall not be entitled to share hereunder with
15 respect to such interest.
16

17 10.5 Production Where Title is in Dispute. If the title or
18 right of any party claiming the right to receive in kind all or any por-
19 tion of the Unitized Substances allocated to a Tract is in dispute, Unit
20 Operator shall either:
21

22 (a) require that the party to whom such Unitized Sub-
23 stances are delivered or to whom the proceeds thereof are paid furnish
24 security for the proper accounting therefor to the rightful owner if
25 title or right of such party fails in whole or in part, or
26

27 (b) withhold and market the portion of Unitized Sub-
28 stances with respect to which title or right is in dispute and impound
29 the proceeds thereof until such time as the title or right thereto is
30 established by a final judgment of a court of competent jurisdiction or
31 otherwise to the satisfaction of Unit Operator whereupon the proceeds so
32 impounded shall be paid to the party rightfully entitled thereto.
33

34 (c) Notwithstanding any provisions contained herein to
35 contrary, no payments or funds due the State of New Mexico or the United
36 States shall be withheld; but such funds shall be deposited as directed
37 by the Commissioner or the AO to be held as unearned money pending final
38 settlement of the title dispute and then applied as earned or returned in
39 accordance with such final settlement.
40

41 10.6 Payment of Taxes to Protect Title. The owner of surface
42 rights to lands within in the Unit Area, or severed mineral interests or
43 Royalty Interests in such lands, or lands outside the Unit Area on which
44 Unit Equipment is located is responsible for the payment of any ad valorem
45 taxes on all such rights, interests, or property, unless such owner and
46 Working Interest Owners otherwise agree. If any ad valorem taxes are not
47 paid by or for such owner when due, Unit Operator may, with approval of
48 Working Interest Owners, at any time prior to tax sale, or expiration of
49 period of redemption after tax sale, pay the tax, redeem such rights,
50 interests, or property, and discharge the tax lien. Unit Operator shall,
51
52
53
54

1 if possible, withhold from any proceeds derived from the sale of Unitized 1
2 Substances otherwise due any delinquent taxpayer an amount sufficient to 2
3 defray the costs of such payment or redemption, such withholding to be 3
4 credited to Working Interest Owners. Such withholding shall be without 4
5 prejudice to any other remedy available to Unit Operator. 5
6
7
8

9 ARTICLE 11 8
10 EASEMENTS OR USE OF SURFACE 9
11

12 11.1 Grant of Easements. The parties hereto, to the extent 12
13 of their rights and interests, hereby grant to Working Interest Owners 13
14 the right to use as much of the surface of the land within the Unit Area 14
15 as may be reasonably necessary for Unit Operations and the removal of 15
16 Unitized Substances from the Unit Area; however, nothing herein shall be 16
17 construed as leasing or otherwise conveying to Working Interest Owners a 17
18 camp site or a plant site for water injection, gas injection, or gas 18
19 processing. 19
20

21 11.2 Use of Water. Working Interest Owners shall have and are 21
22 hereby granted free use of water from the Unit Area for Unit Operations, 22
23 except water from any well, lake, pond, or irrigation ditch of a Royalty 23
24 Owner. 24
25

26 11.3 Surface Damages. Working Interest Owners shall pay the 26
27 owner for damages to growing crops, timber, fences, improvements, and 27
28 structures on the Unit Area that result from Unit Operations. 28
29
30

31 ARTICLE 12 31
32 ENLARGEMENTS OF UNIT AREA 32
33
34

35 12.1 Enlargements of Unit Area. The Unit Area may be enlarged 35
36 from time to time to include acreage reasonable proved to be productive 36
37 of Unitized Substances upon such terms as may be determined by Working 37
38 Interest Owners and the owners of such acreage and upon approval by the 38
39 Commissioner and the AO with regard to State and Federal lands respec- 39
40 tively, including, but not limited to, the following: 40
41

42 12.1.1 The participation to be allocated to the acreage 42
43 shall be fair and reasonable, considering all available information. 43
44

45 12.1.2 There shall be no retroactive allocation or ad- 45
46 justment of Unit Expense or of interests in the Unitized Substances 46
47 produced, or proceeds thereof; however, this limitation shall not prevent 47
48 an adjustment of investment by reason of the enlargement. 48
49
50
51
52
53
54

1 12.2 Determination of Tract Participation. Unit Operator, sub- 1
2 ject to Section 5.4 shall determine the Tract Participation of each Tract 2
3 within the Unit Area as enlarged, and shall revise Exhibits A, B, and 3
4 C accordingly. 4
5

6 12.3 Effective Date. The effective date of any enlargement of 6
7 the Unit Area shall be 7:00 A.M. on the first day of the calendar month 7
8 following compliance with conditions for enlargement as specified by 8
9 Working Interest Onwers and the filing for record of revised Exhibits A, 9
10 B, and C in the county in which this agreement is recorded. 10
11

12
13 ARTICLE 13 13
14 TRANSFER OF TITLE-PARTITION 14
15
16

17 13.1 Transfer of Title. Any asignment, conveyance, or transfer 17
18 of all or any part of any interest owned by any party hereto with respect 18
19 to any Tract shall be made expressly subject to this agreement. No 19
20 change of title shall be binding upon Unit Operator, or upon any party 20
21 hereto other than the party so transferring, until 7:00 A.M. on the 21
22 first day of the calendar month next succeeding the date of receipt by 22
23 Unit Operator of a photocopy, or a certified copy, of the recorded instru- 23
24 ment evidencing such change in ownership. 24
25

26 13.2 Waiver or Rights to Partition. Each party hereto agrees 26
27 that, during the existence of this agreement, it will not resort to any 27
28 action to partition the Unitized Formation or the Unit Equipment and to 28
29 that extent waives the benefits of all laws authorizing such partition. 29
30

31
32 ARTICLE 14 32
33 RELATIONSHIP OF PARTIES 33
34
35

36 14.1 No Partnership. The duties, obligations, and liabilities 36
37 of the parties hereto are intended to be several and not joint or collec- 37
38 tive. This agreement is not intended to create, and shall not be con- 38
39 strued to create, an association or trust or to impose a partnership duty, 39
40 obligation, or liability with regard to any one or more of the parties 40
41 hereto. Each party hereto shall be individually responsible for its own 41
42 obligations as herein provided. This provision does not exclude the 42
43 Working Interest Owners from entering into a partnership solely for 43
44 Federal income tax purposes whereby they would elect to be subject to 44
45 the application of all the provisions of Subchapter K, Chapter 1, Sub- 45
46 title A of the Internal Revenue Code of 1954 as permitted and authorized 46
47 by Section 761 of the Code and the regulation promulgated thereunder, 47
48 said election found under ARTICLE 15, LAWS AND REGULATIONS, of the 48
49 Unit Operating Agreement. 49
50

1 14.2 No Joint Refining or Marketing. This agreement is not in- 1
2 tended to provide, and shall not be construed to provide, directly or 2
3 indirectly, for any joint refining or marketing of Unitized Substances. 3
4

5 14.3 Royalty Owners Free of Costs. This agreement is not in- 5
6 tended to impose, and shall not be construed to impose, upon any Royalty 6
7 Owner any obligation to pay Unit Expense unless such Royalty Owner is 7
8 otherwise so obligated. 8
9

10 14.4 Information to Royalty Owners. Each Royalty Owner shall 10
11 be entitled to all information in possession of Unit Operator to which 11
12 such Royalty Owner is entitled by an existing agreement with any Working 12
13 Interest Owner. 13
14

15
16 ARTICLE 15
17 LAWS AND REGULATIONS
18

19
20 15.1 Laws and Regulations. This agreement shall be subject to 20
21 all applicable federal, state and municipal laws, rules, regulations, 21
22 and orders. 22
23

24
25 ARTICLE 16
26 FORCE MAJEURE
27

28
29 16.1 Force Majeure. All obligations imposed by this agreement 29
30 on each party, except for the payment of money, shall be suspended while 30
31 compliance is prevented, in whole or in part, by a labor dispute, fire, 31
32 war, civil disturbance, act of God; by federal, state, or municipal laws; 32
33 by any rule, regulation, or order of a governmental agency; by inability 33
34 to secure materials; or by any other cause or causes, whether similar or 34
35 dissimilar, beyond reasonable control of the party. No party shall be 35
36 required against its will to adjust or settle any labor dispute. Neither 36
37 this agreement nor any lease or other instrument subject hereto shall be 37
38 terminated by reason of suspension of Unit Operations due to any one or 38
39 more of the causes set forth in this Article. 39
40

41
42 ARTICLE 17
43 EFFECTIVE DATE
44

45
46 17.1 Effective Date. This agreement shall become binding upon 46
47 each party as of the date such party signs the instrument by which it be- 47
48 comes a party hereto and, unless sooner terminated as provided in Section 48
49 17.2, shall become effective subject to the terms and provisions hereof no 49
50 later than 7:00 A.M. on the first day of the second calendar month next 50
51 following: 51
52

1 (a) The qualification in accordance with Article 9 of 1
2 Tracts representing not less than seventy-five percent (75%) of Tract 2
3 Participation in the Unit Area as shown on Exhibit C attached hereto. 3
4 4

5 (b) The approval of this agreement by the Division and 5
6 Commissioner; provided, however, if the Commissioner fails or refuses to 6
7 commit the described lands of the State of New Mexico to this agreement, 7
8 this paragraph (b) shall not be a condition precedent to the Effective 8
9 Date as between the parties hereto who have committed their interests; 9
10 and this agreement shall become effective as to all other lands so commit- 10
11 ted that have qualified as described in paragraph (a) above; and 11
12 12

13 (c) The filing of at least one counterpart of this agree- 13
14 ment for record in Harding County, New Mexico. 14
15 15

16 17.2 Ipsa Facto Termination. If the requirements of Section 16
17 17.1 are not accomplished on or before December 31, 1984, this agreement 17
18 shall ipso facto terminate on that date (hereinafter called "termination 18
19 date") and thereafter be of no further effect, unless prior thereto 19
20 Working Interest Owners of at least sixty-five percent (65%) of Unit 20
21 Participation have become parties to this agreement and Working Interest 21
22 Owners owning sixty-five percent (65%) or more of that percent have 22
23 decided to extend the termination date for a period not to exceed one 23
24 year. If the termination date is so extended and the requirements of 24
25 Section 17.1 are not accomplished on or before the extended termination 25
26 date, this agreement shall ipso facto terminate on the extended termina- 26
27 tion date and thereafter be of no further effect. 27
28 28

29 17.3 Certificate of Effectiveness. Unit Operator shall file 29
30 for record in Harding County, New Mexico, a certificate stating the 30
31 Effective Date. Two copies of such certificate shall be filed with the 31
32 Commissioner and five copies shall be filed with the AO. 32
33 33

34 34
35 ARTICLE 18 35
36 TERM AND TERMINATION 36
37 37

38 38
39 18.1 Term and Termination. This agreement shall become effec- 39
40 tive as of the Effective Date herein provided and, subject to the terms 40
41 and provisions hereof, shall continue in full force and effect from said 41
42 date as to the leases and/or interests subjected hereto, for so long as 42
43 payments are made hereunder, Unitized Substances are produced, or other 43
44 Unit Operations are conducted, or until Working Interest Owners owning 44
45 seventy-five percent (75%) or more of the Unit Participation determine 45
46 that Unit Operations are no longer profitable or feasible. 46
47 47

48 18.2 Effect of Termination. Upon termination of this agreement, 48
49 the further development and operation of the Unitized Formation as a unit 49
50 shall be abandoned; and Unit Operations shall cease. Each oil and gas 50
51 51
52 52
53 53
54 54

1 lease and other agreement covering lands within the Unit Area shall remain 1
2 in force for sixty (60) days after the date on which this agreement ter- 2
3 minates and for such further period as is provided by the lease or other 3
4 agreement. 4
5

6 18.3 Salvaging Equipment Upon Termination. If not otherwise 6
7 granted by the leases or other instruments affecting each Tract, Royalty 7
8 Owners hereby grant Working Interest Owners a period of six (6) months 8
9 after the date of termination of this agreement within which to salvage 9
10 and remove Unit Equipment. 10
11

12 18.4 Certificate of Termination. Upon termination of this agree- 12
13 ment, Unit Operator shall file for record in Harding County, New Mexico, a 13
14 certificate that this agreement has terminated, stating its termination 14
15 date. Two copies of such certificate shall be filed with the Commissioner 15
16 and five copies shall be filed with the AO. 16
17
18

19 ARTICLE 19 19
20 EXECUTION 20
21
22

23 19.1 Original, Counterpart, or Other Instrument. An owner of 23
24 Carbon Dioxide Gas Rights may become a party to this agreement by signing 24
25 the original of this instrument, a counterpart thereof, or other instru- 25
26 ment agreeing to become a party hereto. The signing of any such instru- 26
27 ment shall have the same effect as if all parties had signed the same 27
28 instrument. 28
29

30 19.2 Joinder in Dual Capacity. Execution as herein provided by 30
31 any party as either a Working Interest Owner or a Royalty Owner shall 31
32 commit all interests owned or controlled by such party. 32
33
34

35 ARTICLE 20 35
36 GENERAL 36
37
38

39 20.1 Amendments Affecting Working Interest Owners. Amendments 39
40 hereto relating wholly to Working Interest Owners may be made if signed by 40
41 all Working Interest Owners. 41
42

43 20.2 Action by Working Interest Owners. Except as otherwise 43
44 provided in this agreement, any action or approval required by Working 44
45 Interest Owners hereunder shall be in accordance with the provisions of 45
46 the Unit Operating Agreement. 46
47

48 20.3 Lien and Security Interest of Unit Operator. Unit Opera- 48
49 tor shall have a lien upon and a security interest in the interests of 49
50 Working Interest Owners in the Unit Area as provided in the Unit Operating 50
51 Agreement. 51
52
53

ARTICLE 21
NONDISCRIMINATION

21.1 Nondiscrimination. In connection with the performance of work under this agreement, Unit Operator agrees to comply with all of the provisions of Section 202 (1) to (7) inclusive of Executive Order 11246 (30 FR 12319), as amended, which are hereby incorporated by reference in this agreement.

ARTICLE 22
SUCCESSORS AND ASSIGNS

22.1 Successors and Assigns. This agreement shall extend to, be binding upon, and inure to the benefit of the parties hereto and their respective heirs, devisees, legal representatives, successors, and assigns, and shall constitute a covenant running with the lands, leases, and interests covered hereby.

IN WITNESS WHEREOF, the parties hereto have executed this agreement on the dates opposite their respective signatures.

WORKING INTEREST OWNERS

CITIES SERVICE OIL AND GAS CORPORATION	Date Signed	Attest, if a Corporation or Witness, if an Individual
By _____	_____	_____
Attorney-in-Fact		
_____	_____	_____
_____	_____	_____

ROYALTY OWNERS

Name	Date Signed	Attest, if a Corporation or Witness, if an Individual
_____	_____	_____
_____	_____	_____
_____	_____	_____

STATE OF _____)
COUNTY OF _____) SS

(Attorney-in-Fact)

The foregoing instrument was acknowledged before me this ____ day of _____, 19 ____, by _____, as Attorney-in-Fact, on behalf of _____, a _____ corporation.

My commission expires:

Notary Public

STATE OF _____)
COUNTY OF _____) SS

(Corporation)

The foregoing instrument was acknowledged before me this ____ day of _____, 19 ____, by _____ of _____, a _____ corporation, on behalf of said corporation.

My commission expires:

Notary Public

STATE OF _____)
COUNTY OF _____) SS

(Individual)

The foregoing instrument was acknowledged before me this ____ day of _____, 19 ____, by _____.

My commission expires:

Notary Public

R 29 E

R 30 E

T 20 N

T 19 N

T 18 N

T 17 N

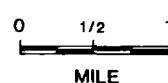
R 29 E

R 30 E

9 FEDERAL TRACTS	3,876.46 AC.	8.98 % OF UNIT
27 STATE TRACTS	16,416.53 AC.	38.05 % OF UNIT
73 PATENTED TRACTS	22,860.55 AC.	52.97 % OF UNIT
TOTAL	43,153.54 AC.	100.00 % OF UNIT

- FEDERAL LANDS (F--Series numbers on Exhibit "B")
- ▨ STATE OF NEW MEXICO LANDS (S--Series numbers on Exhibit "B")
- ▩ PATENTED LANDS (2000 Series numbers on Exhibit "B")
- TRACT NUMBERS AS LISTED IN EXHIBIT "B"
- UNIT BOUNDARY

EXHIBIT "A"
WEST BRAVO DOME UNIT AREA
HARDING COUNTY, NEW MEXICO



TRACT NO.	DESCRIPTION	NO. OF ACRES	SERIAL NO. & EXPIRATION DATE	PERCENTAGE OWNERSHIP OF BASIC ROYALTY	LESSEE OF RECORD	OVERRIDING ROYALTY & PERCENTAGE	WORKING INTEREST & PERCENTAGE
<u>ALL IN HARDING COUNTY</u>							
F-101	<u>T-19N, R-29E</u> NWSW SEC. 27 E/2SE & SWSE SEC. 28; SESW SEC. 30; E/2 SEC. 33; S/2 & SWNE SEC. 34; S/2SW & NWSW SEC. 35	1000.00	NM-19714 3-31-84	U.S.A. - ALL	AMERADA HESS CORPORATION	PUBLIC LANDS ROYALTY TRUST 10% GEORGE L. SCOTT 2.5%	AMERADA HESS CORPORATION 100%
F-102	<u>T-18N, R-29E</u> LOTS 1 & 2 & S/2 NE & S/2 SEC. 3; E/2SE SEC. 4; SENE, E/2SE SEC. 13	676.86	NM-27898 8-31-86	U.S.A. - ALL	AMERADA HESS CORPORATION	PUBLIC LANDS ROYALTY TRUST 10% GEORGE L. SCOTT 2.5%	AMERADA HESS CORPORATION 100%
F-103	<u>T-18N, R-29E</u> LOTS 1 & NESE SEC. 6; NENW & NWNE SESW SEC. 20; NWNE & W/2SW SEC. 29	319.44	NM-30227 8-31-87	U.S.A. - ALL	CO2-IN-ACTION	RIO PETRO, LTD. 2.2%	CO2-IN-ACTION 100%
F-104	<u>T-17N, R-29E</u> NWSW SEC. 3; LOT 2 & SWNE SEC. 4; SWNW & E/2SE SEC. 9; E/2NW & E/2 SEC. 10; N/2NW & NWNE & S/2S/2 SEC. 11; SESW SEC. 17	960.66	NM-31706 12-31-87	U.S.A. - ALL	CO2-IN-ACTION	RIO PETRO, LTD. 2.2%	CO2-IN-ACTION 100%

TRACT NO.	DESCRIPTION	NO. OF ACRES	SERIAL NO. & EXPIRATION DATE	PERCENTAGE OWNERSHIP OF BASIC ROYALTY	LESSEE OF RECORD	OVERRIDING ROYALTY & PERCENTAGE	WORKING INTEREST & PERCENTAGE
F-105	T-17N, R-29E SWSE & SESW SEC. 3; N/2NW & NWSW & NE SEC. 20	360.00	NM-31848 1-31-88	U.S.A. - ALL	CO2-IN-ACTION		CO2-IN-ACTION 100%
F-106	T-18N, R-30E LOT 4, SESW SEC. 18	79.50	NM-19705 11-30-84	U.S.A. - ALL	AMERADA HESS CORPORATION	PUBLIC LANDS ROYALTY TRUST 10% GEORGE L. SCOTT 2.5%	AMERADA HESS CORPORATION 100%
F-107	T-18N, R-29E NEW SEC. 29; SESW & SE & S/2NE SEC. 35	320.00	NM-31154 10-30-87	U.S.A. - ALL	AMERADA HESS CORPORATION		AMERADA HESS CORPORATION 100%
F-108	T-19N, R-29E SENE SEC. 3	40.00	NM-44598 6-30-86	U.S.A. - ALL	CO2-IN-ACTION		CO2-IN-ACTION 100%
F-109	T-19N, R-29E N/2NE & SESW SEC. 10	120.00	NM-44599 6-30-86	U.S.A. - ALL	CO2-IN-ACTION		CO2-IN-ACTION 100%

9 FEDERAL TRACTS CONTAINING 3,876.46 ACRES OR 8.98% OF THE UNIT AREA

TRACT NO.	DESCRIPTION	NO. OF ACRES	SERIAL NO. & EXPIRATION DATE	PERCENTAGE OWNERSHIP OF BASIC ROYALTY	LESSEE OF RECORD	OVERRIDING ROYALTY & PERCENTAGE	WORKING INTEREST & PERCENTAGE
S-501	<u>T-20N, R-29E</u> S/2S/2 SEC. 29; S/2NW & SWNE & N/2S/2 & SESE & SWSW SEC. 33	520.00	L-5776-2 HBP	STATE OF NEW MEXICO - ALL	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%
S-502	<u>T-20N, R-29E</u> ALL SEC. 32	640.00	L-5777-2 HBP	STATE OF NEW MEXICO - ALL	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%
S-503	<u>T-19N, R-29E</u> SWSW SEC. 2; SENE & E/2SE SEC. 10; N/2NE & NENW SEC. 15; ALL SEC. 16	920.00	L-5811-2 HBP	STATE OF NEW MEXICO - ALL	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%
S-504	<u>T-19N, R-29E</u> SW & W/2SE & SWNE & S/2NW & NWNW SEC. 11; W/2NE & NW SEC. 14; S/2NE & SENW SEC. 15	760.00	L-5812-2 HBP	STATE OF NEW MEXICO - ALL	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%
S-505	<u>T-19N, R-29E</u> LOTS 2, 3 & 4 & S/2NW & SWNE SEC. 3	239.52	L-5813-2 HBP	STATE OF NEW MEXICO - ALL	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%
S-506	<u>T-19N, R-29E</u> SE SEC. 3; LOTS 1, 3 & 4 & S/2NW & SENE & SE & W/2SW SEC. 4; LOTS 1, 2, 3 & 4 & S/2N/2 SEC. 5	958.35	L-5814-2 HBP	STATE OF NEW MEXICO - ALL	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%

TRACT NO.	DESCRIPTION	NO. OF ACRES	SERIAL NO. & EXPIRATION DATE	PERCENTAGE OWNERSHIP OF BASIC ROYALTY	LESSEE OF RECORD	OVERRIDING ROYALTY & PERCENTAGE	WORKING INTEREST & PERCENTAGE
S-507	<u>T-19N, R-29E</u> E/2 & W/2NW & E/2SW SEC. 9; NW SEC. 10	640.00	L-5815-2 HBP	STATE OF NEW MEXICO - ALL	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%
S-508	<u>T-19N, R-29E</u> N/2 & N/2SE & NESW SEC. 22; SWSW SEC. 26; SENE & E/2SE SEC. 35; ALL SEC. 36	1240.00	L-5816-2 HBP	STATE OF NEW MEXICO - ALL	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%
S-509	<u>T-19N, R-29E</u> E/2SW & SE SEC. 24; E/2 & E/2W/2 SEC. 25	720.00	L-5817-2 HBP	STATE OF NEW MEXICO - ALL	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%
S-510	<u>T-19N, R-30E</u> LOTS 1, 2, 3 & 4 & E/2W/2 & E/2 SEC. 30	630.96	L-5826-2 HBP	STATE OF NEW MEXICO - ALL	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%
S-511	<u>T-19N, R-30E</u> LOTS 2, 3 & 4 & E/2SW & SENW & S/2NE & SE SEC. 31; NW & N/2SW & SESW & W/2SE & SESE SEC. 32	872.44	L-5827-2 HBP	STATE OF NEW MEXICO - ALL	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%
S-512	<u>T-19N, R-30E</u> SWSW SEC. 32	40.00	L-5828-2 HBP	STATE OF NEW MEXICO - ALL	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%

<u>TRACT NO.</u>	<u>DESCRIPTION</u>	<u>NO. OF ACRES</u>	<u>SERIAL NO. & EXPIRATION DATE</u>	<u>PERCENTAGE OWNERSHIP OF BASIC ROYALTY</u>	<u>LESSEE OF RECORD</u>	<u>OVERRIDING ROYALTY & PERCENTAGE</u>	<u>WORKING INTEREST & PERCENTAGE</u>
S-513	T-18N, R-30E LOTS 3, 4 & SENW SEC. 5; SWSE & SESW SEC. 6; LOTS 1, 2, 3 & 4 & E/2W/2 & NWNE & S/2SE SEC. 7	635.46	L-5852-2 HBP	STATE OF NEW MEXICO - ALL	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%
S-514	T-18N, R-30E LOTS 1, 2 & SWNW, SENE SEC. 5; LOTS 1, 2, 3, 4 & 5 & SENW & S/2NE SEC. 6	476.18	L-5853-2 HBP	STATE OF NEW MEXICO - ALL	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%
S-515	T-18N, R-30E LOTS 1 & 2 & NENW & S/2SE SEC. 18; NE & E/2SE SEC. 19	438.34	L-5856-2 HBP	STATE OF NEW MEXICO - ALL	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%
S-516	T-17N, R-29E LOTS 1, 2 & 3 & S/2NE & SENW & S/2 SEC. 2; ALL SEC. 16	1200.71	LG-4586 9-1-87	STATE OF NEW MEXICO - ALL	AMERADA HESS CORPORATION		AMERADA HESS CORPORATION 100%
S-517	T-18N, R-29E LOTS 1, 2 3 & 4 & S/2N/2 SEC. 1	317.28	LG-4601 9-1-87	STATE OF NEW MEXICO - ALL	AMERADA HESS CORPORATION	CLARENCE BRICE AND ANNIE B. BRICE, HIS WIFE 6.25%	AMERADA HESS CORPORATION 100%

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S-518	<u>T-18N, R-29E</u> N/2S/2, SESE S/2SE SEC. 1	911.94	LG-4602-3 9-1-87	STATE OF NEW MEXICO - ALL	CO2-IN-ACTION	RIO PETRO, LTD. 2.2%	CO2-IN-ACTION 100%
S-519	<u>T-18N, R-29E</u> NEW & N/2NE & SENE & SESE SEC. 12; NENE SEC. 13; ALL SEC. 16	880.00	LG-4603 9-1-87	STATE OF NEW MEXICO - ALL	AMERADA HESS CORPORATION		AMERADA HESS CORPORATION 100%
S-520	<u>T-18N, R-29E</u> E/2NE & SWW & S/2 SEC. 32; ALL SEC. 36	1080.00	LG-4604 9-1-87	STATE OF NEW MEXICO - ALL	AMERADA HESS CORPORATION		AMERADA HESS CORPORATION 100%
S-521	<u>T-17N, R-29E</u> LOTS 4, 5 & 6 & NE & E/2SE SEC. 19; S/2S/2 & NESE SEC. 20; S/2 SEC. 21; S/2 SEC. 22	1156.90	LG-5052 1-1-88	STATE OF NEW MEXICO - ALL	GULF OIL CORPORATION		GULF OIL CORPORATION 100%
S-522	<u>T-17N, R-29E</u> N/2 SEC. 28	320.00	LG-5053 1-1-88	STATE OF NEW MEXICO - ALL	GULF OIL CORPORATION		GULF OIL CORPORATION 100%
S-523	<u>T-17N, R-29E</u> LOTS 4 & 6 & N/2 & W/2SE & E/2SW SEC. 29	538.45	LG-5054 1-1-88	STATE OF NEW MEXICO - ALL	GULF OIL CORPORATION		GULF OIL CORPORATION 100%
S-524	<u>T-19N, R-30E</u> NWSW SEC. 29	40.00	L-5823-2 HBP	STATE OF NEW MEXICO - ALL	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%

EXHIBIT "B"

<u>TRACT NO.</u>	<u>DESCRIPTION</u>	<u>NO. OF ACRES</u>	<u>SERIAL NO. & EXPIRATION DATE</u>	<u>PERCENTAGE OWNERSHIP OF BASIC ROYALTY</u>	<u>LESSEE OF RECORD</u>	<u>OVERRIDING ROYALTY & PERCENTAGE</u>	<u>WORKING INTEREST & PERCENTAGE</u>
S-525	T-18N, R-30E NW SEC. 20	160.00	L-5857-2 HBP	STATE OF NEW MEXICO - ALL	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%
S-526	T-18N, R-30E NWNW SEC. 29	40.00	L-5859-2 HBP	STATE OF NEW MEXICO - ALL	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%
S-527	T-18N, R-30E NENE SEC. 30	40.00	HBP	STATE OF NEW MEXICO - ALL	UNLEASED		UNLEASED 100%

27 STATE TRACTS CONTAINING 16,416.53 ACRES OR 38.04% OF THE UNIT AREA

TRACT NO.	DESCRIPTION	NO. OF ACRES	SERIAL NO. & EXPIRATION DATE	PERCENTAGE OWNERSHIP OF BASIC ROYALTY	LESSEE OF RECORD	OVERRIDING ROYALTY & PERCENTAGE	WORKING INTEREST & PERCENTAGE
2001	T-18N, R-29E W/2 SEC. 5	318.56	5-19-85 HBP 5-20-85	R. E. TRUJILLO SR. ET UX 4.16667% GEORGE E. TRUJILLO 4.16667% ERNEST V. TRUJILLO 4.16666% 12.50000%	CITIES SERVICE OIL AND GAS CORPORATION 67% CO2-IN-ACTION 33%	RIO PETRO, LTD. .73333%	CITIES SERVICE OIL AND GAS CORPORATION 66.666667%
2002	T-18N, R-29E SWNE & E/2NW & NWSE SEC. 30	160.00	9-22-85	NORMAN W. LIBBY ET UX 12.5%	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%
2003	T-18N, R-29E NW SEC. 3; NE & N/2NW & SESW SEC. 4	434.22	3-15-85	BESSIE BROWN 12.5%	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%
2004	T-18N, R-29E E/2SE SEC. 7 SW SEC. 8	240.00	3-15-85 2-22-89 2-7-89	R. E. BROWN ET UX 6.25000% REGINA ACKER WARREN ET VIR 0.26041% KATHERINE C. ACKER 3.125%	CITIES SERVICE OIL AND GAS CORPORATION 50% CO2-IN-ACTION 50%	G. D. BOWIE, JR., ET AL 6.625% ON 85% OF 50% TOTAL PRODUCTION	CITIES SERVICE OIL AND GAS CORPORATION 50% CO2-IN-ACTION 50% 100%

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2004 CONT'D			2-22-89	MARY ANN ACKER WALTERSCHIED ET VIR 0.26041%			
			2-22-89	AURELIA ACKER SCHOENENBERGER ET VIR 0.26041%			
			2-22-89	LAWRENCE ACKER ET UX 0.26041%			
			2-22-89	JOSEFIA ACKER HEINRICH ET VIR 0.26042%			
			2-22-89	GERALD ACKER ET UX 0.26042%			
			2-22-89	LORENE ACKER DICK ET VIR 0.26042%			
			2-22-89	JAMES ACKER ET UX 0.26042%			
			2-22-89	ROBERT ACKER ET UX 0.26042%			
			2-22-89	IRENE ACKER GIDDEN ET VIR 0.26042%			
			2-22-89	BERNICE ACKER BREWER 0.26042%			
			2-22-89	CHARLES ACKER ET UX 0.26042%			
				<u>12.50000%</u>			

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2005	T-19N, R-29E W/2NW & N/2SW SEC. 21 T-20N, R-29E LOT 4 SEC. 31	197.54	5-21-85	SAM MARTINEZ <u>12.5%</u>	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%
2006	T-18N, R-29E NW & W/2NE SEC. 17; N/2N/2 SEC. 18	398.32	5-17-85	JANETTE J. ALFORD, ET VIR <u>12.5%</u>	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%
2007	T-19N, R-29E NE SEC. 19 E/2W/2 & W/2E/2 SEC. 20; SWNW SEC. 28; W/2 & W/2E/2 & SENE & NESE SEC. 29; E/2 SEC. 30; W/2 SEC. 32	1720.00	5-19-85	R. E. TRUJILLO SR., ET UX <u>12.5%</u>	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%
2008	T-19N, R-29E N/2NE & SENE & SE SEC. 31	280.00	5-19-85 5-20-85 2-24-88	R. E. TRUJILLO SR., ET UX 4.16667% GEORGE E. TRUJILLO 4.16667% ERNEST V. TRUJILLO <u>4.16666%</u> <u>12.50000%</u>	CITIES SERVICE OIL AND GAS CORPORATION 67% CO2-IN-ACTION 33%	CITIES SERVICE OIL AND GAS CORPORATION 66.66667% CO2-IN-ACTION <u>33.33333%</u> <u>100.00000%</u>	

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2009	T-19N, R-29E W/2W/2 SEC. 20	160.00	2-24-88	ERNEST V. TRUJILLO 2.08334%	CO2-IN-ACTION 17%	RIO PETRO, LTD. .36667%	CO2-IN-ACTION 16.66667%
			5-19-85	R. E. TRUJILLO SR., ET UX 2.08333%	CITIES SERVICE OIL AND GAS CORPORATION 83%		CITIES SERVICE OIL AND GAS CORPORATION 83.33333%
			5-20-85	GEORGE E. TRUJILLO 2.08333%			<u>100.00000%</u>
			6-18-89	CHARLES G. PARKE ET AL <u>9.37500%</u> <u>15.62500%</u>			
2010	T-19N, R-29E LOT 3 & SE SEC. 18; LOTS 1, 2, 3 & 4 & E/2NW & NESW SEC. 19; LOTS 1, 2 & 3 & NEW SEC. 30	627.52	5-20-85	GEORGE E. TRUJILLO 6.25%	CITIES SERVICE OIL AND GAS COR- PORATION 50%		CITIES SERVICE OIL AND GAS CORPORATION 50%
			2-24-88	ERNEST V. TRUJILLO <u>6.25%</u> <u>12.50%</u>	CO2-IN-ACTION 50%	RIO PETRO, LTD. 1.10000%	CO2-IN-ACTION <u>50%</u> <u>100%</u>

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2011	T-19N, R-29E LOT 4 & E/2SW SEC. 18	118.33	5-20-85	GEORGE E. TRUJILLO 3.125% ELLEN DRAKE KINGSBURY 2.34375% BETTY DRAKE RIPPEL 2.34375% ERNEST V. TRUJILLO 3.125%	CITIES SERVICE OIL AND GAS CORPORATION 50%	CITIES SERVICE OIL AND GAS CORPORATION 50%	CITIES SERVICE OIL AND GAS CORPORATION 50%
			2-24-88	FEDERAL LAND BANK OF WICHITA 4.6875% 15.625%	CO2-IN-ACTION RIO PETRO, LTD. 25%	CO2-IN-ACTION .55000%	CO2-IN-ACTION 25%
			3-19-85	FEDERAL LAND BANK OF WICHITA 4.6875% 15.625%	AMERADA HESS CORPORATION 25%	AMERADA HESS CORPORATION 25%	AMERADA HESS CORPORATION 25% 100%

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2012	T-18N, R-29E LOTS 2, 3, 4, 6 & 7 & S/2NE & E/2SW & NWSE & S/2SE SEC. 6; NE SEC. 7; NW SEC. 8;	951.52	6-4-85	RAY C. MCDANIEL ET UX 12.5%	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%
2013	T-19N, R-29E LOTS 2, 3 & 4 SEC. 31	150.96	6-10-85	CELSO MARTINEZ 12.5%	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%
2014	T-17N, R-29E SWSW SEC. 1; LOT 4 & SWNW SEC. 2; LOT 1 & S/2NE & N/2SE & SESE SEC. 3; NENE SEC. 11; W/2 & SE & SENE SEC. 12; NW & SWNE SEC. 13; N/2NE & NENW SEC. 14;	1560.38	7-7-85	EUFRACIO BACA ET UX 12.5%	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%
	T-18N, R-29E N/2NE & NENW & S/2NW & N/2SW & SWSW SEC. 35						

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2015	T-18N, R-29E SWNE & NWSE & S/2SE SEC. 20; SWNW & NWSW & S/2SW SEC. 21	320.00	7-3-85	EDWARD ARBUCKLE ET UX 12.5%	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%
2016	T-18N, R-29E SWNW SEC. 10	40.00	9-15-91	JAMES K. BYRD ET UX 12.5%	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%
2017	T-18N, R-29E NE & NWSE & SESW SEC. 9; NWNW & E/2NW SEC. 10	360.00	9-15-91 8-31-84	JAMES K. BYRD ET UX 6.25% SUN OIL COMPANY 9.375% 15.625%	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%
2018	T-17N, R-29E W/2 SEC. 15 NW SEC. 22	480.00	7-8-85	ELOY BACA ET UX 12.5%	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%
2019	T-17N, R-29E SW SEC. 4; NESE & S/2SE SEC. 5; NENE SEC. 8; NWNW & W/2NENW & W. 30 AC. OF SENW SEC. 9; S/2NE & N/2SE & SENW & NENW & E/2E/2E/2SWNW & E/2E/2E/2NWSW SEC. 11	660.00	7-9-85	MARGARITO GARCIA ET UX 12.5%	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%

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2020	T-19N, R-29E LOTS 3 & 4 & E/2 SW & SE SEC. 7; LOT 1 & NEW & N/2NE SEC. 18	474.29	7-2-85 2-2-90 2-2-90	ROY G. HARNEY* ET UX 8.3333% BETTY DRAKE RIPPEL 2.0833% ELLEN DRAKE KINGSBURY 2.0833% 12.5000%	CITIES SERVICE OIL AND GAS CORPORATION 66.66667% AMERADA HESS CORPORATION 33.33333%		CITIES SERVICE OIL AND GAS CORPORATION 66.66667% AMERADA HESS CORPORATION 33.33333% 100.00000%
				*RATIFIED BY ALFRED D. KOEHN, ET UX			
2021	T-19N, R-29E LOT 2 & SEW & S/2NE SEC. 18	158.21	7-2-85 3-19-85 2-2-90 2-2-90	ROY G. HARNEY* ET UX 6.25% FEDERAL LAND BANK OF WICHITA 4.6875% BETTY DRAKE RIPPEL 1.5625% ELLEN DRAKE KINGSBURY 1.5625% 14.0625%	CITIES SERVICE OIL AND GAS CORPORATION 50% AMERADA HESS CORPORATION 50%		CITIES SERVICE OIL AND GAS CORPORATION 50% AMERADA HESS CORPORATION 50% 100%
				*RATIFIED BY ALFRED D. KOEHN, ET UX			

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2022	<u>T-17N, R-29E</u> SWSW SEC. 3; SESE & W/2SE SEC. 4; SENE & E/2SW & NWSE SEC. 5; LOT 3 SEC. 6; E/2W/2 & W/2E/2 & SENE & E/2SE SEC. 8; W/2SW SEC. 9; N/2 SEC. 21;	1319.38	7-23-85	JOE N. CORDOVA ET UX <u>12.5%</u>	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%
2023	<u>T-18N, R-29E</u> LOT 3 & E/2SW SEC. 31	200.00	8-1-85	ALECIO TRUJILLO ET AL <u>12.5%</u>	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%
2024	<u>T-17N, R-29E</u> E/2SW SEC. 9	80.00	8-2-85	ALECIO TRUJILLO ET UX <u>12.5%</u>	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%
2025	<u>T-17N, R-29E</u> W/2SE SEC. 9	80.00	8-2-85	JUAN J. TRUJILLO <u>12.5%</u>	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%

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2026	T-17N, R-29E LOTS 2, 3 & 4 & S/2NW & NESW SEC. 3; LOT 1 & SENE & NESE SEC. 4; LOTS 3 & 4 SEC. 5; W/2NE & E/2NE&W & E. 10 AC. OF SE&W SEC. 9	652.77	8-5-85	ALECIO TRUJILLO & JUAN J. TRUJILLO <u>12.5%</u>	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%
2027	T-18N, R-29E LOTS 1 & 2 & E/2NW SEC. 7	156.90	6-5-85	DOROTHY J. LAUNDER <u>12.5%</u>	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%

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2028	T-18N, R-29E W/2SE & SW SEC. 17; SE & E/2SW & LOT 3 SEC. 18, EXCEPT 5.85 ACRES DESCRIBED IN TRACT 2062; LOT 4 & E/2W/2 & E/2 SEC. 19; W/2W/2 & SENW & NESW & E/2NE & NESE SEC. 20; NWNW & E/2NW & NESW & E/2 SEC. 21; SWNE SEC. 22; NWNE & N/2NW SEC. 28; NENE & SWNE & NWSE & NESW & SENW SEC. 29; E/2E/2 & NWNE & NESW & LOT 1 SEC. 30; NENE & S/2NE & E. 51 AC. OF SE SEC. 31; N/2NW & W/2NE & SENW SEC. 32	2882.46	7-30-85	ARMAND LEE SMITH ET AL 12.5%	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%
2029	T-18N, R-29E N/2SW & SE5W & NWSE SEC. 33	160.00	7-30-85	ARMAND LEE SMITH ET AL 6.25% BENJAMIN F. BROWN 3.125% ALFRED KRESS 3.125% 12.50%	CITIES SERVICE OIL AND GAS CORPORATION 50% BENJAMIN F. BROWN UNLEASED 25% ALFRED KRESS UNLEASED 25%		CITIES SERVICE OIL AND GAS CORPORATION 50% BENJAMIN F. BROWN 25% ALFRED KRESS 25% 100%

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2030	T-17N, R-29E N/2NE NE SEC. 17; LOTS 1 & 2 & E/2NW & NE SEC. 18	338.64	7-31-85	CELEDONIA VIGIL ET UX 12.5%	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%
2031	T-18N, R-29E E/2SE SEC. 9; W/2SW SEC. 10	160.00	9-15-91	JAMES K. BYRD ET UX 6.25% RUFUS P. RANDOLPH ET AL 6.25% 12.50%	CITIES SERVICE OIL AND GAS CORPORATION 50% CO2-IN-ACTION 50%	G. D. BOWIE, JR., ET AL 6.625% OF 85% OF 50% TOTAL PRODUCTION	CITIES SERVICE OIL AND GAS CORPORATION 50% CO2-IN-ACTION 50% AMERADA HESS CORPORATION 20% 100%
2032	T-18N, R-29E W/2 SEC. 15; NW SEC. 22	480.00	9-15-91 11-3-88	JAMES K. BYRD ET UX 6.25% H. W. ALLEN ET UX 6.25% 12.50%	CITIES SERVICE OIL AND GAS CORPORATION 50% CO2-IN-ACTION 50%		CITIES SERVICE OIL AND GAS CORPORATION 50% CO2-IN-ACTION 30% AMERADA HESS CORPORATION 20% 100%

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2033	T-17N, R-29E LOTS 3, 4 & S/2NW SEC. 4; LOTS 1 & 2 & S/2NE SEC. 5	322.92	1-10-90	ANNIE ARAGON 1.38889% ABENECIO ARCHULETA, AKA JOE A. ARCHULETA 1.38889% ADELINA ACOSTA 1.38889% NICK ARCHULETA 1.38888% PAULA PACHECO 1.38889% PROCOPIO ARCHULETA 1.38889% TOMASITA ARCHULETA MARTINEZ 1.38889% RAFAELITA ARGUELLO 1.38889% MARY GARCIA 1.38889% <u>12.50000%</u>	AMERADA HESS CORPORATION		AMERADA HESS CORPORATION 100%
2034	T-18N, R-29E S/2NE SEC. 18	80.00	5-9-85	ANCELETO ARCHULETA AKA NICK ARCHULETA, ET UX 14.58333%	CO2-IN-ACTION 78%		CO2-IN-ACTION 77.78%

TRACT NO.	DESCRIPTION	NO. OF ACRES	SERIAL NO. & EXPIRATION DATE	PERCENTAGE OWNERSHIP OF BASIC ROYALTY	LESSEE OF RECORD	OVERRIDING ROYALTY & PERCENTAGE	WORKING INTEREST & PERCENTAGE
2034 CONT'D			1-10-90	ADELINA ACOSTA 1.38889% PROCOPIO ARCHULETA 1.38889% <u>17.36111%</u>	AMERADA HESS CORPORATION 22%		AMERADA HESS CORPORATION 22.22%
2035	<u>T-17N, R-29E</u> SW SEC. 14	160.00	11-13-88	FRANK L. C. DEBACA <u>12.5%</u>	CO2-IN-ACTION		CO2-IN-ACTION 100%
2036	<u>T-17N, R-29E</u> E/2NW & W/2NE & S/2NE & E/2SE & SE NE SEC. 17	300.00	7-5-88	ANTONIA V. DESANTIAGO <u>12.5%</u>	CONOCO		CONOCO 100%
2037	<u>T-17N, R-29E</u> W/2SE & NESW SEC. 17	120.00	7-5-88	LUGARDITO DESANTIAGO <u>12.5%</u>	CONOCO		CONOCO 100%
2038	<u>T-19N, R-29E</u> SE SEC. 32; SW SEC. 33	320.00	4-16-89	DOROTHY D. HIGH ET AL <u>12.5%</u>	CO2-IN-ACTION	G. D. BOWIE, JR., ET AL 6.625% ON 85% OF TOTAL PRODUCTION	CO2-IN-ACTION 100%
2039	<u>T-18N, R-29E</u> SESE SEC. 17	40.00		FLOERSHEIM MERCANTILE <u>12.5%</u>	UNLEASED		UNLEASED 100%

EXHIBIT "B"

TRACT NO.	DESCRIPTION	NO. OF ACRES	SERIAL NO. & EXPIRATION DATE	PERCENTAGE OWNERSHIP OF BASIC ROYALTY	LESSEE OF RECORD	OVERRIDING ROYALTY & PERCENTAGE	WORKING INTEREST & PERCENTAGE
2040	T-17N, R-29E SENE SEC. 9	40.00	9-10-84	E. J. GANNON IV 1.17188% W. D. GANNON 1.17188% IGNACIO VIGIL 6.25% PATSY GANNON CAMPBELL .58594% PATSY GANNON CAMPBELL CHILDREN'S TRUST .97656% JEANNE GANNON HUNT .58594% JEANNE GANNON HUNT CHILDREN'S TRUST .97656% LUCILLE GANNON MURCHISON .58594% LUCILLE GANNON MURCHISON CHILDREN'S TRUST .97656% <u>.97656%</u> <u>13.28126%</u>	CITIES SERVICE OIL AND GAS CORPORATION 12.5% CO2-IN-ACTION 50% UNLEASED 37.5%	CO2-IN-ACTION UNLEASED <u>100.00%</u>	CITIES SERVICE OIL AND GAS CORPORATION 12.5%
2041	T-17N, R-29E SENE SEC. 9	40.00	9-10-84	E. J. GANNON IV 1.17188% W. D. GANNON 1.17188%	CITIES SERVICE OIL AND GAS CORPORATION 12.5%	CITIES SERVICE OIL AND GAS CORPORATION 12.5%	CITIES SERVICE OIL AND GAS CORPORATION 12.5%

TRACT NO.	DESCRIPTION	NO. OF ACRES	SERIAL NO. & EXPIRATION DATE	PERCENTAGE OWNERSHIP OF BASIC OWNERSHIP	LESSEE OF RECORD	OVERRIDING ROYALTY & PERCENTAGE	WORKING INTEREST & PERCENTAGE
2041	CONT'D		11-21-88	IGNACIO VIGIL 6.25% PATSY GANNON CAMPBELL .58594% PATSY GANNON CAMPBELL CHILDREN'S TRUST .97656% JEANNE GANNON HUNT .58594% JEANNE GANNON HUNT CHILDREN'S TRUST .97656% LUCILLE GANNON MURCHISON .58594% LUCILLE GANNON MURCHISON CHILDREN'S TRUST .97656% <u>13.18125%</u>	CO2-IN-ACTION 50% UNLEASED 37.5%		CO2-IN-ACTION 50.0% UNLEASED 37.5% <u>100.0%</u>
2042	T-17N, R-29E W/2NW SEC. 14; NE SEC. 15	240.00	6-19-88	MAGDALENA PACHECO 6.94444% FRANK GARCIA AKA FRANCISCO GARCIA 5.55556% <u>12.50000%</u>	CONOCO 100%		CONOCO 100%
2043	T-19N, R-29E SESW SEC. 19	40.00	12-10-89	LYEELL G. HAZEN ET UX <u>12.5%</u>	AMERADA HESS CORPORATION		AMERADA HESS CORPORATION 100%

EXHIBIT "B"

TRACT NO.	DESCRIPTION	NO. OF ACRES	SERIAL NO. & EXPIRATION DATE	PERCENTAGE OWNERSHIP OF BASIC ROYALTY	LESSEE OF RECORD	OVERRIDING ROYALTY & PERCENTAGE	WORKING INTEREST & PERCENTAGE
2044	<u>T-17N, R-29E</u> LOTS 3 & 4 & W/2NESW & SESW SEC. 18	132.43	7-31-88	CLORINDA JIMENEZ <u>12.5%</u>	CONOCO		CONOCO 100%
2045	<u>T-18N, R-29E</u> LOT 4 SEC. 18; LOTS 1 & 2 SEC. 19	115.41	5-3-88	ALBIRIA MARTINEZ <u>12.5%</u>	CO2-IN-ACTION	RIO PETRO, LTD. 2.2%	CO2-IN-ACTION 100%
2046	<u>T-17N, R-29E</u> SE & E/2NESW SEC. 18	180.00	11-18-88	VICENTITA MATA 12.5%	CO2-IN-ACTION		CO2-IN-ACTION 100%
2047	<u>T-17N, R-29E</u> NE SEC. 22	160.00	9-1-88	SAMUEL T. MITCHELL <u>12.5%</u>	CONOCO		CONOCO 100%

EXHIBIT "B"

TRACT NO.	DESCRIPTION	NO. OF ACRES	SERIAL NO. & EXPIRATION DATE	PERCENTAGE OWNERSHIP OF BASIC ROYALTY	LESSEE OF RECORD	OVERRIDING ROYALTY & PERCENTAGE	WORKING INTEREST & PERCENTAGE
2048	T-17N, R-29E SE SEC. 15	160.00	9-1-88	SAMUEL T. MITCHELL <u>12.5%</u>	CONOCO 100%		CONOCO 100%
2049	T-17N, R-29E NW/4 SEC. 10	40.00	11-21-88	IGNACIO VIGIL ET UX <u>12.5%</u>	CO2-IN-ACTION		CO2-IN-ACTION 100%
2050	T-17N, R-29E SW/4 SEC. 5; LOTS 1 & 2 & SENE SEC. 6	160.53	6-16-89 6-16-89	BENITO PACHECO 6.25% JOE A. PACHECO 6.25% <u>12.50%</u>	CO2-IN-ACTION	G. D. BOWIE, JR., ET AL 6.625% ON 85% OF TOTAL PRODUCTION	CO2-IN-ACTION 100%

TRACT NO.	DESCRIPTION	NO. OF ACRES	SERIAL NO. & EXPIRATION DATE	PERCENTAGE OWNERSHIP OF BASIC ROYALTY	LESSEE OF RECORD	OVERRIDING ROYALTY & PERCENTAGE	WORKING INTEREST & PERCENTAGE
2051	T-18N, R-29E W/2NW SEC. 29	80.00	12-27-88	WILLIAM C. O'KEEFE CONSERVATOR OF THE ESTATE OF ALICE MABEL REXRoad <u>12.5%</u>	CO2-IN-ACTION		CO2-IN-ACTION 100%
2052	T-18N, R-29E E/2NE & NESE SEC. 17	120.00	2-25-85 2-25-85	ARMAND L. SMITH ET UX 6.25% SIDNEY C. SMITH ET UX 6.25% <u>12.50%</u>	AMERADA HESS CORPORATION		AMERADA HESS CORPORATION 100%
2053	T-18N, R-29E LOTS 1 & 2 & S/2NE SEC. 5	158.64	5-16-85 5-16-85 5-16-85 5-16-85 5-16-85 5-16-85	SAMANTHA S. GALLENTINE ET VIR 2.5000% BARBARA G. SCHEIBLING ET VIR .62500% JAMES S. STICKEL ET UX .62500% STEVE STICKEL .62500% PATRICIA HENSEL ET VIR .83333%	CO2-IN-ACTION	G. D. BOWIE, JR., ET AL 6.625% ON 85% OF TOTAL PRODUCTION	CO2-IN-ACTION 100%

TRACT NO.	DESCRIPTION	NO. OF ACRES	SERIAL NO. & EXPIRATION DATE	PERCENTAGE OWNERSHIP OF BASIC ROYALTY	LESSEE OF RECORD	OVERRIDING ROYALTY & PERCENTAGE	WORKING INTEREST & PERCENTAGE
2053	CONT'D		5-16-85	JOYCE K. MILLER ET VIR .83333%			
			5-16-85	AUGUST C. STICKEL III .83334%			
			5-16-85	DANIEL A. STICKEL .41666%			
			5-16-85	EUGENE S. STICKEL III, ET UX .41667%			
			5-16-85	DORTHEA K. STICKEL ET AL .41667%			
			5-16-85	T. J. STICKEL ET UX 1.25000%			
			5-16-85	SARAH E. WORK ET VIR .62500%	UNLEASED		
				<u>2.50000%</u>			
				<u>12.50000%</u>			
2054	T-19N, R-29E NWSW SEC. 26; NESW & N/2SE SEC. 27; LOT 4 & E/2SW SEC. 30	278.59	7-19-87	ANTONIO TRUJILLO <u>12.5%</u>	AMERADA HESS CORPORATION		AMERADA HESS CORPORATION 100%
2055	T-19N, R-29E SE SEC. 19	160.00	8-15-87	R. E. TRUJILLO ET UX <u>12.5%</u>	AMERADA HESS CORPORATION		AMERADA HESS CORPORATION 100%

TRACT NO.	DESCRIPTION	NO. OF ACRES	SERIAL NO. & EXPIRATION DATE	PERCENTAGE OWNERSHIP OF BASIC ROYALTY	LESSEE OF RECORD	OVERRIDING ROYALTY & PERCENTAGE	WORKING INTEREST & PERCENTAGE
2056	T-17N, R-29E SW & SSW SEC. 10	200.00	11-21-88	IGNACIO VIGIL ET UX 12.5%	CO2-IN-ACTION		CO2-IN-ACTION 100%
2057	T-18N, R-29E SWSW SEC. 9	40.00	2-14-88	MARION BRUCE ET UX 12.5%	CO2-IN-ACTION	RIO PETR LTD. 2.2%	CO2-IN-ACTION 100%
2058	T-19N, R-29E W/2SW & SESW SEC. 28; SESE SEC. 29; NE SEC. 32; NW SEC. 33	480.00	6-22-78	SAMANTHA S. GALLENTINE ET VIR 2.5% BARBARA G. SCHEIBLING .62500% JAMES S. STICKEL .62500% STEVE STICKEL .62500% PATRICIA HENSEL .83333% JOYCE K. MILLER .83333%	CONOCO		CONOCO 100%

TRACT NO.	DESCRIPTION	SERIAL NO. & EXPIRATION DATE	NO. OF ACRES	PERCENTAGE OWNERSHIP OF BASIC ROYALTY	LESSEE OF RECORD	OVERRIDING ROYALTY & PERCENTAGE	WORKING INTEREST & PERCENTAGE
2058	CONT'D	6-22-78		AUGUST C. STICKEL III .83334%			
		6-22-78		DANIEL A. STICKEL .41666%			
		6-22-78		EUGENE S. STICKEL III .41667%			
		6-22-78		MARY C. STICKEL ET AL .41667%			
		6-22-78		T. J. STICKEL 1.25000%			
		6-22-78		SARAH E. WORK ET VIR 2.50000%			
		6-22-78		DAVID STICKEL .62500%			
				<u>12.50000%</u>			
2059	T-17N, R-29E SEW SEC. 14	12-8-79	40.00	NATALIE G. MITCHELL, AND SHERRIE G. MITCHELL, JOINT TENANTS <u>12.5%</u>	AMERADA HESS CORPORATION		AMERADA HESS CORPORATION 100%
2060	T-18N, R-29E SWSE SEC. 9	9-15-91	40.00	JAMES K. BYRD ET UX 6.25% SUN OIL COMPANY <u>12.5%</u> <u>18.75%</u>	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%

TRACT NO.	DESCRIPTION	NO. OF ACRES	SERIAL NO. & EXPIRATION DATE	PERCENTAGE OWNERSHIP OF BASIC ROYALTY	LESSEE OF RECORD	OVERRIDING ROYALTY & PERCENTAGE	WORKING INTEREST & PERCENTAGE
2061	T-18N, R-29E SWSE SEC. 4; NESE SEC. 8; NW & N/2SW SEC. 9	320.00	2-14-88	MARION BRUCE ET UX <u>12.5%</u>	CO2-IN-ACTION	RIO PETRO, LTD. 2.2%	CO2-IN-ACTION 100%
2062	T-18N, R-29E LOT 2 & SENW SEC. 18 INCLUDING TWO TRACTS IN N/2 SW/4 CON- TAINING 3.85 ACRES, M/L, AND 2.00 ACRES, M/L, RESPECIFULLY, AND EXCLUDING TRACTS IN THE SE/4 NW/4 CONTAINING 3.9 ACRES, M/L AND SW/4NW/4 CON- TAINING 2.00 ACRES, M/L.	78.25	2-24-88	ANTONIO GRIEGO ET UX <u>12.5%</u>	CO2-IN-ACTION	RIO PETRO, LTD. 2.2%	CO2-IN-ACTION 100%

TRACT NO.	DESCRIPTION	NO. OF ACRES	SERIAL NO. & EXPIRATION DATE	PERCENTAGE OWNERSHIP OF BASIC ROYALTY	LESSEE OF RECORD	OVERRIDING ROYALTY & PERCENTAGE	WORKING INTEREST & PERCENTAGE
2063	<u>T-20N, R-29E</u> LOTS 1, 2 & 3 & NEW & E/2SW & N/2SE SEC. 31	310.94	5-18-88	KATHERINE V. HEIMANN 8.33333% E. J. GANNON, JR. <u>6.25%</u> <u>14.58333%</u>	CO2-IN-ACTION 50% UNLEASED 50%	RIO PETRO, LTD. 1.1%	CO2-IN-ACTION 50% E. J. GANNON, JR. <u>50%</u> <u>100%</u>
2064	<u>T-18N, R-29E</u> SW & NWSE & SWNW SEC. 4; SE SEC. 5	400.00	2-10-88	EDITH SHRUM <u>12.5%</u>	CO2-IN-ACTION	RIO PETRO, LTD. 2.2%	CO2-IN-ACTION 100%
2065	<u>T-18N, R-29E</u> NE & W/2SE & SESE SEC. 8	280.00	2-24-88	LOLA B. FITTER <u>12.5%</u>	CO2-IN-ACTION	RIO PETRO, LTD. 2.2%	CO2-IN-ACTION 100%
2066	<u>T-18N, R-29E</u> LOTS 3 & 4 & E/2 SW & W/2SE SEC. 7	236.74	4-3-88	BILLY M. HAZEN ET UX <u>12.5%</u>	CO2-IN-ACTION	RIO PETRO, LTD. 2.2%	CO2-IN-ACTION 100%

TRACT NO.	DESCRIPTION	NO. OF ACRES	SERIAL NO. & EXPIRATION DATE	PERCENTAGE OWNERSHIP OF BASIC ROYALTY	LESSEE OF RECORD	OVERRIDING ROYALTY & PERCENTAGE	WORKING INTEREST & PERCENTAGE
2067	T-17N, R-29E S/2S/2NW & NESW & NWSE SEC. 20	120.00	5-13-85	KRISTEN GALEN TRIGG 3.51562% STEPHEN TALBOT TRIGG ET AL 10.54688% THOMAS E. MCCULLOUGH 1.17188% LOUISE TALBOT TRIGG 2.34375% LINDA M. DECKER 1.17187% <u>18.75000%</u>	CO2-IN-ACTION	G. D. BOWIE, JR., ET AL 6.625% ON 85% OF TOTAL PRODUCTION	CO2-IN-ACTION 100%
2068	T-17N, R-29E W/2SWNW & W/2E/2SWNW & W/2E/2E/2SWNW & W/2NWSW & W/2E/2NWSW & W/2E/2E/2NWSW SEC. 11	70.00	6-19-88	MAGDALENA PACHECO 6.94444% FRANK GARCIA 5.55556% <u>12.50000%</u>	CO2-IN-ACTION		CO2-IN-ACTION 100%

TRACT NO.	DESCRIPTION	NO. OF ACRES	SERIAL NO. & EXPIRATION DATE	PERCENTAGE OWNERSHIP OF BASIC ROYALTY	LESSEE OF RECORD	OVERRIDING ROYALTY & PERCENTAGE	WORKING INTEREST & PERCENTAGE
2069	T-18N, R-29E 5.9 ACRES DESCRIBED AS FOLLOWS; A STRIP OF LAND 4 RODS WIDE AND 80 RODS LONG ADJOINING THE EASTERN BOUNDARY, AND A STRIP OF LAND 4 RODS WIDE AND 76 RODS LONG ADJOINING THE NORTHERN BOUNDARY, SE/4NW/4, CONTAINING 3.9 ACRES, MORE OR LESS; AND A STRIP OF LAND 4 RODS WIDE AND 80 RODS LONG ALONG THE NORTHERN BOUNDARY, SW/4NW/4, CONTAINING 2.00 ACRES, M/L IN SEC. 18	5.9	6-19-84	ARMAND LEE SMITH AND SIDNEY CRAIG SMITH <u>18.75%</u>	CITIES SERVICE OIL AND GAS CORPORATION		CITIES SERVICE OIL AND GAS CORPORATION 100%
2070	T-19N, R-29E LOT 1, E/2W/2 SWNE SEC. 31	238.63	7-19-87	ANTONIO TRUJILLO <u>12.5%</u>	AMERADA HESS CORPORATION		AMERADA HESS CORPORATION 100%
2071	T-18N, R-29E LOT 3, SEC. 19	39.09	5-3-88	ALBIRIA MARTINEZ <u>12.5%</u>	CO2-IN-ACTION RIO PETRO, LTD.	RIO PETRO, LTD. 2.2%	CO2-IN-ACTION 100%

TRACT NO.	DESCRIPTION	NO. OF ACRES	SERIAL NO. & EXPIRATION DATE	PERCENTAGE OWNERSHIP OF BASIC ROYALTY	LESSEE OF RECORD	OVERRIDING ROYALTY & PERCENTAGE	WORKING INTEREST & PERCENTAGE
2072	T-18N, R-29E SWSW SEC. 33 T-19N, R-29E LOTS 1, 2, & SESW SEC. 7	155.94	HBP	T. E. MITCHELL & SON INC.-ALL	SEC DIVISION AMERIGAS, INC.		SEC DIVISION AMERIGAS, INC. 100%
2073	T-20N, R-29E LOT 4 SEC. 30	36.54	5-18-88	KATHERINE V. HEINMANN <u>12.5%</u>	CO2-IN-ACTION	RIO PEIRO, LTD. 2.2%	CO2-IN-ACTION 100%

73 FEE TRACTS CONTAINING 22,860.55 ACRES OR 52.97% OF THE UNIT AREA

EXHIBIT "C"
 WEST BRAVO DOME UNIT
 HARDING COUNTY, NEW MEXICO

<u>TRACT NUMBER</u>	<u>NUMBER OF ACRES</u>	<u>PERCENTAGE OF PARTICIPATION</u>
F-101	1000.00	2.31731
F-102	676.86	1.56849
F-103	319.44	0.74024
F-104	960.66	2.22614
F-105	360.00	0.83423
F-106	79.50	0.18423
F-107	320.00	0.74154
F-108	40.00	0.09269
F-109	120.00	0.27808
S-501	520.00	1.20500
S-502	640.00	1.48308
S-503	920.00	2.13192
S-504	760.00	1.76115
S-505	239.52	0.55504
S-506	958.35	2.22079
S-507	640.00	1.48308
S-508	1240.00	2.87346
S-509	720.00	1.66846
S-510	630.96	1.46213
S-511	872.44	2.02171
S-512	40.00	0.09269
S-513	635.46	1.47256
S-514	476.18	1.10346
S-515	438.34	1.01577
S-516	1200.71	2.78241
S-517	317.28	0.73524
S-518	911.94	2.11325
S-519	880.00	2.03923
S-520	1080.00	2.50269
S-521	1156.90	2.68089
S-522	320.00	0.74154
S-523	538.45	1.24775
S-524	40.00	0.09269
S-525	160.00	0.37077
S-526	40.00	0.09269
S-527	40.00	0.09269
2001	318.56	0.73820
2002	160.00	0.37077
2003	434.22	1.00622

REVISED EXHIBIT 7/10/84

EXHIBIT "C"
Page Two

<u>TRACT NUMBER</u>	<u>NUMBER OF ACRES</u>	<u>PERCENTAGE OF PARTICIPATION</u>
2004	240.00	0.55615
2005	197.54	0.45776
2006	398.32	0.92303
2007	1720.00	3.98577
2008	280.00	0.64885
2009	160.00	0.37077
2010	627.52	1.45416
2011	118.33	0.27421
2012	951.52	2.20496
2013	150.96	0.34982
2014	1560.38	3.61588
2015	320.00	0.74154
2016	40.00	0.09269
2017	360.00	0.83423
2018	480.00	1.11231
2019	660.00	1.52942
2020	474.29	1.09908
2021	158.21	0.36662
2022	1319.38	3.05741
2023	200.00	0.46346
2024	80.00	0.18538
2025	80.00	0.18538
2026	652.77	1.51267
2027	156.90	0.36359
2028	2882.46	6.67955
2029	160.00	0.37077
2030	338.64	0.78473
2031	160.00	0.37077
2032	480.00	1.11231
2033	322.92	0.74831
2034	80.00	0.18538
2035	160.00	0.37077
2036	300.00	0.69519
2037	120.00	0.27808
2038	320.00	0.74154
2039	40.00	0.09269
2040	40.00	0.09269
2041	40.00	0.09269
2042	240.00	0.55615
2043	40.00	0.09269

EXHIBIT "C"
Page Three

<u>TRACT NUMBER</u>	<u>NUMBER OF ACRES</u>	<u>PERCENTAGE OF PARTICIPATION</u>
2044	132.43	0.30688
2045	115.41	0.26744
2046	180.00	0.41712
2047	160.00	0.37077
2048	160.00	0.37077
2049	40.00	0.09269
2050	160.53	0.37200
2051	80.00	0.18538
2052	120.00	0.27808
2053	158.64	0.36762
2054	278.59	0.64558
2055	160.00	0.37077
2056	200.00	0.46346
2057	40.00	0.09269
2058	480.00	1.11231
2059	40.00	0.09269
2060	40.00	0.09269
2061	320.00	0.74154
2062	78.25	0.18133
2063	310.94	0.72054
2064	400.00	0.92692
2065	280.00	0.64885
2066	236.74	0.54860
2067	120.00	0.27808
2068	70.00	0.16221
2069	5.90	0.01367
2070	238.63	0.55298
2071	39.09	0.09058
2072	155.94	0.36136
2073	<u>36.54</u>	<u>0.08467</u>
TOTAL	43,153.54	100.00000

EXHIBIT D

ATTACHED TO AND MADE A PART OF THE UNIT AGREEMENT
WEST BRAVO DOME CARBON DIOXIDE GAS UNIT
HARDING COUNTY, NEW MEXICO

I N D E M N I T Y A G R E E M E N T

WHEREAS, Section 9.1.3 of an agreement entitled "Unit Agreement, West Bravo Dome Carbon Dioxide Gas Unit, Harding County, New Mexico," dated September 1, 1983, provides that under certain circumstances and conditions therein stated a Tract that fails to qualify for inclusion in the Unit Area may be included if the requisite Working Interest Owners in the Tract as specified in said Section request the inclusion of the Tract in the Unit Area and execute and deliver, or obligate themselves to execute and deliver, an indemnity agreement; and

WHEREAS, Tract _____, described in the Unit Agreement is such a Tract; and

WHEREAS, the undersigned are owners of Working Interest in such Tract and have become parties to the Unit Agreement and the Unit Operating Agreement and desire the inclusion of the Tract in the Unit Area;

NOW THEREFORE, in consideration of and conditioned upon said Tract meeting the other requirements of the aforesaid Section of the Unit Agreement and its inclusion in the Unit Area, the undersigned hereby requests the inclusion of the above Tract in the Unit Area and agrees, together with other owners of Working Interest in the Tract who execute and deliver, or who obligate themselves to execute and deliver, like indemnity agreements, to indemnify and hold harmless all other Working Interest Owners in the Unit Area against all claims and demands required by said Section to be the subject of such indemnity. Any liability arising hereunder shall be borne by the undersigned and other Working Interest Owners in the Tract who are committed to like indemnity agreements in the proportion that the Working Interest of each in the Tract bears to the Total Working Interest therein of all the owners of Working Interest in the Tract committed to such indemnity agreement.

This indemnity shall become void with respect to all claims and demands based upon occurrences subsequent to the time when the conditions are met that would have initially qualified such Tract for inclusion in the Unit Area without this indemnity.

This agreement shall be binding upon and inure to the benefit of the heirs, devisees, legal representatives, successors, and assigns of the respective parties initially bound or benefited by the provisions hereof.

IN WITNESS WHEREOF, each of the undersigned has executed this instrument on the date opposite its signature.

