



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

July 31, 1997

Amoco Production Company
San Juan Business Unit
P. O. Box 800
Denver, Colorado 80201
Attention: Pamela W. Staley

Administrative Order DD-196
and
AMENDED Administrative Order NSL-3068

Dear Ms. Staley:

Reference is made to the following: (i) your application to William J. LeMay, Division Director, dated September 10, 1996; (ii) your letter to Mr. Frank Chaves, Supervisor of the Division's District office in Aztec dated September 12, 1996; (iii) the Division's initial response to said applications by letter from Mr. Michael E. Stogner dated November 25, 1996; (iv) your response by letter dated December 2, 1996; and, (v) to the records of the Division in Santa Fe: all of which concern Amoco Production Company's request to recomplete the existing Lodewick Well No. 1 (API No. 30-045-06463) by intentionally deviating from the vertical wellbore with an intentional azimuth in order to avoid formation damage to both the Pictured Cliffs and Basin-Fruitland Coal Gas intervals generated from earlier completion techniques and methods within the SE/4 of Section 18, Township 27 North, Range 9 West, NMPM, San Juan County, New Mexico.

The Division Director Finds That:

- (1) The application has been duly filed under the provisions of **Rules 111.D and E** of the General Rules and Regulations of the New Mexico Oil Conservation Division ("Division") revised by Division Order No. R-10388, issued by the Oil Conservation Commission in Case 11274 on June 13, 1995;
- (2) The Lodewick Well No. 1, located 990 feet from the South and East lines (Unit P) of said Section 18, was originally drilled in 1951, completed in the Fulcher Kutz-Pictured Cliffs Pool, and had dedicated thereon a standard 160-acre gas spacing and proration unit for said pool comprising the SE/4 of said Section 18;

- (3) By Division Administrative Order NSL-3068, dated October 23, 1991, Amoco was authorized to abandon the Pictured Cliffs interval in the Lodewick Well No. 1 and recompleate up-hole into the Basin-Fruitland Coal (Gas) Pool whereby the 321.08 acres comprising Lots 3 and 4, the E/2 SW/4, and the SE/4 (S/2 equivalent) of said Section 18 was to have been dedicated to said well in order to form a standard "lay-down" gas spacing and proration unit for coal gas production. However, in September, 1992 when the well was actually recompleted the E/2 of said Section 18, being a standard "stand-up" 320-acre gas spacing and proration unit was therein dedicated instead; moreover, said Division Order No. R-3068 was never amended to reflect this acreage rededication;
- (4) The Fulcher Kutz-Pictured Cliffs Pool is subject to the statewide rules and regulations for shallow gas wells above the Dakota formation in Northwest New Mexico, as promulgated by **Rule 104.C(3)(a)**, which provides for 160-acre gas spacing and proration units, or drilling units, and requires that wells be located no closer than 790 feet to the outer boundary of a standard 160-acre unit nor closer than 130 feet to any quarter-quarter section or subdivision inner boundary thereon;
- (5) The Basin-Fruitland Coal (Gas) Pool is subject to the "*Special Rules and Regulations for the Basin-Fruitland Coal Gas Pool*", as promulgated by Division Order No. R-8768, as amended, which includes provisions for 320-acre gas spacing and proration units and wells to be located within either the NE/4 or SW/4 of the section and not closer than 790 feet from any outer boundary of the spacing unit nor closer than 130 feet from any quarter section line nor closer than 10 feet from any quarter-quarter section line or subdivision inner boundary;
- (6) The applicant/operator proposes to kick-off from vertical at a depth of approximately 1,600 feet by milling a window in the existing 5-1/2 inch production casing string, directionally drill in a northwesterly direction in such a manner as to penetrate the Basin-Fruitland Coal (Gas) Pool and bottom said well within the Fulcher Kutz-Pictured Cliffs Pool;
- (7) To satisfy the provisions of both rules and regulations governing both the Pictured Cliffs and Fruitland Coal Gas intervals the applicable drilling window or "producing area" for said wellbore should include that area within the SE/4 of said Section 18 that is no closer than 790 feet to any quarter section line;
- (8) Production from both intervals are to be downhole commingled under the authority of Division Administrative Order DHC-1379, dated October 17, 1996;

- (9) At this time Division Administrative Order NSL-3068 should be amended to reflect the 320 acres comprising the E/2 of said Section 18 as the dedicated acreage for Basin-Fruitland coal gas production from this well; and,
- (10) It appearing the applicant has satisfied all of the appropriate requirements prescribed in said Rule 111.D and E, the subject application should be approved and the well should be governed by the provisions contained within this order and all other applicable provisions of Division General Rule 111.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Amoco Production Company, is hereby authorized to recomplete the existing Lodewick Well No. 1 (API No. 30-045-06463), located 990 feet from the South and East lines (Unit P) of said Section 18, Township 27 North, Range 9 West, NMPM, San Juan County, New Mexico, by milling a window in the existing 5-1/2 inch production casing string at a depth of approximately 1,600 feet, kick-off from vertical, and directionally drill in a northwesterly direction in such a manner as to (i) penetrate the Basin-Fruitland Coal (Gas) Pool; and, (ii) bottom said well within the Fulcher Kutz-Pictured Cliffs Pool: within an applicable drilling window or "producing area" which includes an area within the SE/4 of said Section 18 that is no closer than 790 feet to any quarter section line;

PROVIDED HOWEVER THAT prior to commencing directional drilling operations in said wellbore, the applicant shall establish the location of the kick-off point by means of a directional survey acceptable to the Division.

PROVIDED FURTHER THAT during or upon completion of directional drilling operations, the applicant shall conduct an accurate wellbore survey from the kick-off point to total depth in order that the subsurface bottomhole location, as well as the wellbore's true depth and course, may be determined.

(2) The applicant shall notify the supervisor of the Aztec district office of the Division of the date and time said wellbore surveys are to be conducted so that they may be witnessed. The applicant shall further provide a copy of said wellbore surveys to the Santa Fe and Aztec offices of the Division upon completion.

(3) The existing standard 320 acre gas spacing and proration unit in the Basin-Fruitland Coal (Gas) Pool comprising the E/2 of said Section 18 and the SE/4 of said Section 18 being a standard 160-acre gas spacing and proration unit for the Fulcher-Kutz Pictured Cliffs Pool are to be dedicated to said well.

Administrative Order DD-196/Amended Administrative Order NSL-3068
Amoco Production Company
July 31, 1997
Page 4

(4) Division Administrative Order NSL-3068, dated October 23, 1991, shall be amended to show the above-described 320-acre stand-up gas spacing and proration unit comprising the E/2 of said Section 18 as the dedicated acreage for the Basin-Fruitland Coal gas production from the Lodewick Well No. 1. This change to said administrative order shall be made retroactive as of October 23, 1991.

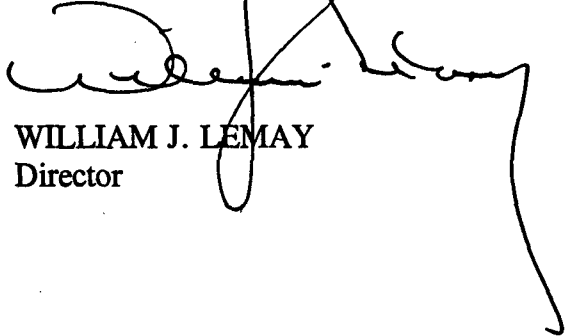
(5) The operator shall comply with all requirements and conditions set forth in Division General Rule 111.E(2) and any applicable requirements in 111.D and F.

(6) Form C-105 shall be filed in accordance with Division Rule 1105 and the operator shall indicate thereon true vertical depth in addition to measured depths.

(7) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION


WILLIAM J. LEMAY
Director

S E A L

WJL/MES/kv

cc: Oil Conservation Division - Aztec
U. S. Bureau of Land Management - Farmington
File: NSL-3068
DHC-1379



October 1, 1991

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

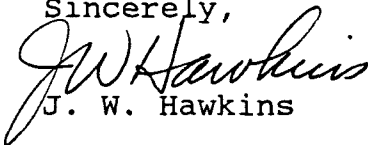
File: CAW-305-986.511

Application for Unorthodox Location
Lodewick Well No. 1
990' FSL, 990' FEL, Section 18-T27N-R9W
Basin Fruitland Coal Pool
San Juan County, New Mexico

Amoco Production Company hereby requests administrative approval for an unorthodox well location in the Basin Fruitland Coal Pool. Amoco plans to recompleate the existing Lodewick Well No. 1 from the Pictured Cliffs formation to the Fruitland Coal formation. This well is currently uneconomic and would be abandoned if not utilized for recompletion. The location of the well is 990' FSL and 990' FEL of Section 18-T27N-R9W. Although this location is orthodox for the Fulcher Kutz Pictured Cliffs pool, it is unorthodox in the Basin Fruitland Coal Pool due to the required NE-SW pattern. All existing wells in the orthodox location are currently economic producers and are not candidates for recompletion.

A copy of this application will be submitted to the offset operators by certified mail with a request that they furnish your Santa Fe office with a Waiver of Objection, and return one copy to this office. Attached is a plat showing the location of the well and offset operators and a plat showing all wells drilled in the section.

Sincerely,


J. W. Hawkins

Attachment

Waiver

_____ hereby waives objection to Amoco's application for an unorthodox well location for the Lodewick Well No. 1 as proposed above.

By: _____

Date: _____

William J. LeMay
October 1, 1991
Page 2

cc: Tom Lapinski
Greg Grotske
Mike Cuba
Cindy Burton
Offset Operators:

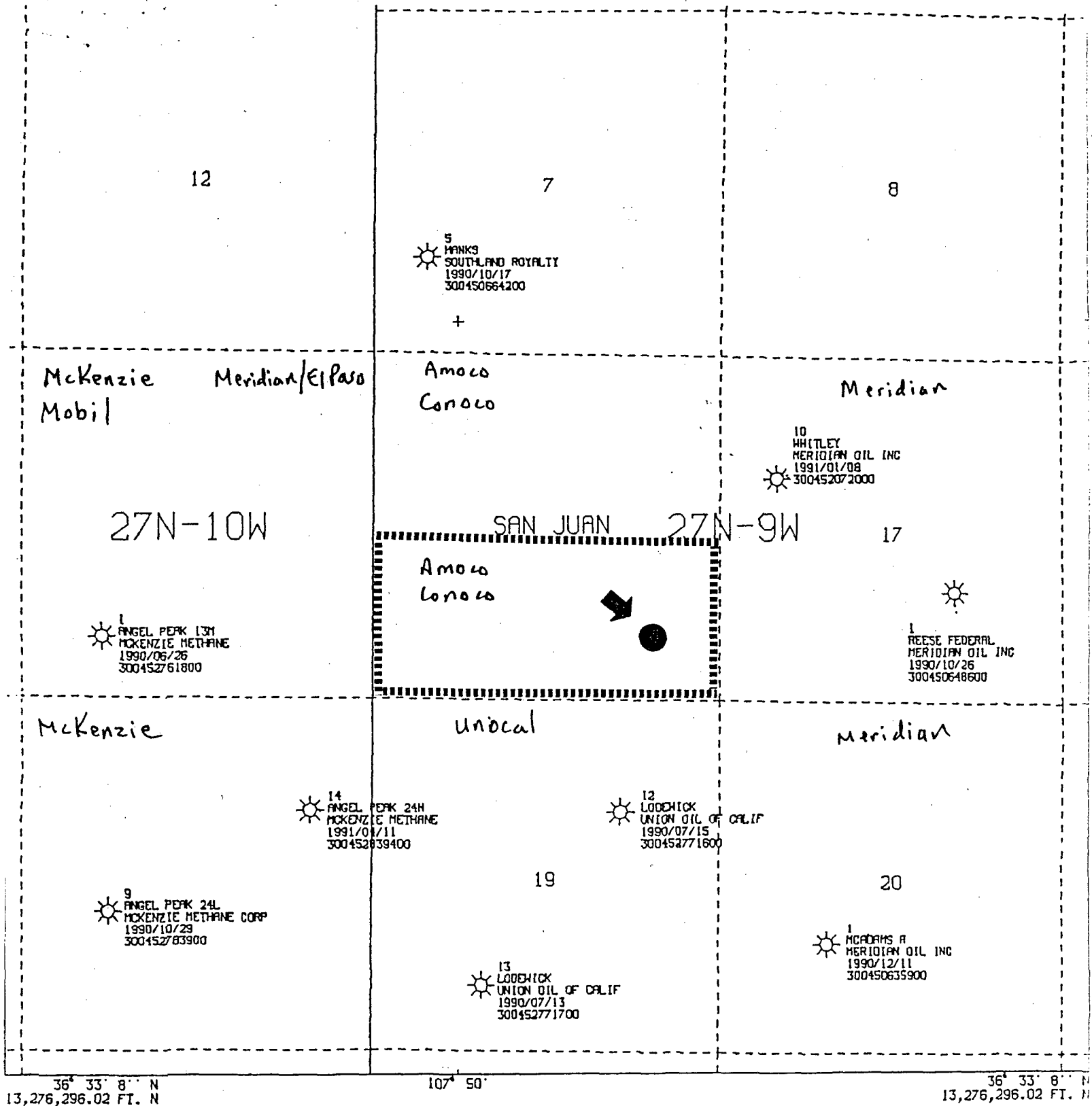
Conoco Inc.
3817 Northwest Expressway
Oklahoma City, OK 73112-1400
Attn: Jerry Hardin

El Paso Natural Gas, Southland Royalty Company
and Meridian Oil Inc.
c/o Meridian Oil Inc.
P. O. Box 4289
Farmington, NM 87499-4289
Attn: Kent Beers

McKenzie Methane Corporation
1625 Broadway, Suite 2580
Denver, CO 80202
Attn: Roger Lichty

Mobil Exploration and Producing U. S. Inc.
P. O. Box 633
Midland, TX 79702
Attn: Glenn Cox

Union Oil Company of California
P. O. Box 3100
Midland, TX 79702
Attn: Mike Nixon

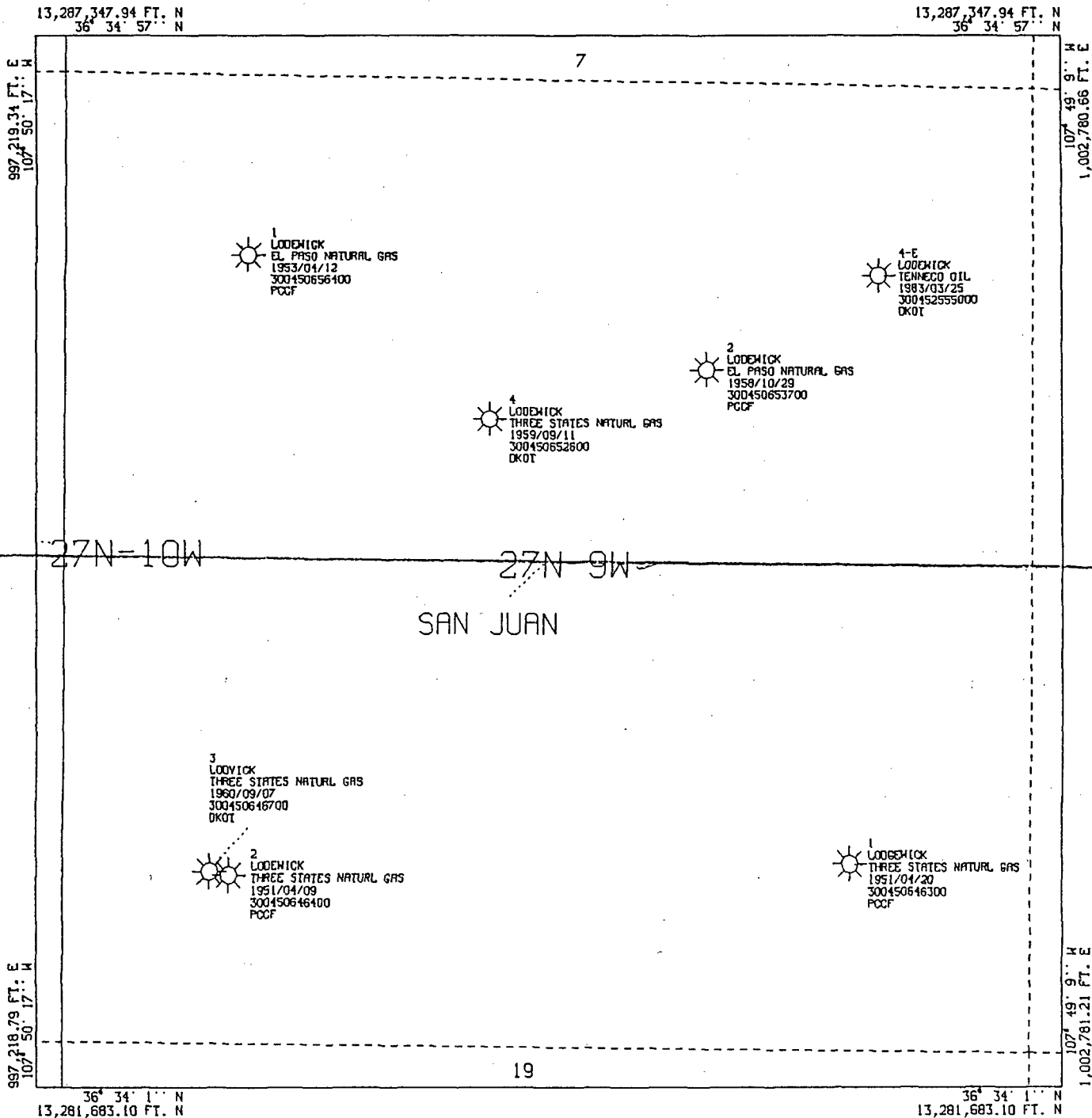


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AMOCO PRODUCTION COMPANY
PLAT MAP

LODEWICK 1
990FSL 990 FEL SEC.18-T27N-R9W

PLOT 1 22.19.01 MON 23 SEP, 1991 JOB-PV553802, ISSCO DISSPLA 10.0



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POLYCONIC CENTRAL MERIDIAN - 107° 49' 43" W LON
SPHEROID - 6

AMOCO PRODUCTION COMPANY PLAT MAP

ALL WELLS
SEC.18-T27N-R9W
SCALE 1 IN. = 700 FT. SEP 23, 1991

HORIZONTAL DATUM NAD27

OKS12545--RUN=91266221612



Amoco Production Company

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

October 1, 1991

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

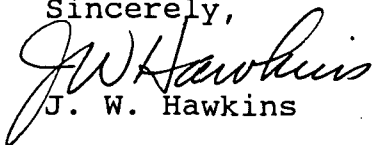
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J. W. Hawkins

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By: _____

Date: _____

William J. LeMay
October 1, 1991
Page 2

cc: Tom Lapinski
Greg Grotske
Mike Cuba
Cindy Burton
Offset Operators:

Conoco Inc.
3817 Northwest Expressway
Oklahoma City, OK 73112-1400
Attn: Jerry Hardin

El Paso Natural Gas, Southland Royalty Company
and Meridian Oil Inc.
c/o Meridian Oil Inc.
P. O. Box 4289
Farmington, NM 87499-4289
Attn: Kent Beers

McKenzie Methane Corporation
1625 Broadway, Suite 2580
Denver, CO 80202
Attn: Roger Lichty

Mobil Exploration and Producing U. S. Inc.
P. O. Box 633
Midland, TX 79702
Attn: Glenn Cox

Union Oil Company of California
P. O. Box 3100
Midland, TX 79702
Attn: Mike Nixon

12

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8

5
HANKS
SOUTHLAND ROYALTY
1990/10/17
300450664200

+

McKenzie Meridian/El Paso
Mobil

Amoco
Conoco

Meridian

10
WHITLEY
MERIDIAN OIL INC
1991/01/08
300452072000

27N-10W

SAN JUAN

27N-9W

17

Amoco
Conoco

1
ANGEL PEAK 13N
MCKENZIE METHANE
1990/06/26
300452761800

1
REESE FEDERAL
MERIDIAN OIL INC
1990/10/26
300450648600

McKenzie

unocal

Meridian

14
ANGEL PEAK 24H
MCKENZIE METHANE
1991/01/11
300452839400

12
LODEWICK
UNION OIL OF CALIF
1990/07/15
300452771600

19

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9
ANGEL PEAK 24L
MCKENZIE METHANE CORP
1990/10/29
300452783900

13
LODEWICK
UNION OIL OF CALIF
1990/07/13
300452771700

1
MCADAMS R
MERIDIAN OIL INC
1990/12/11
300450635900

36° 33' 8" N

107° 50'

36° 33' 8" N

13,276,296.02 FT. N

13,276,296.02 FT. N

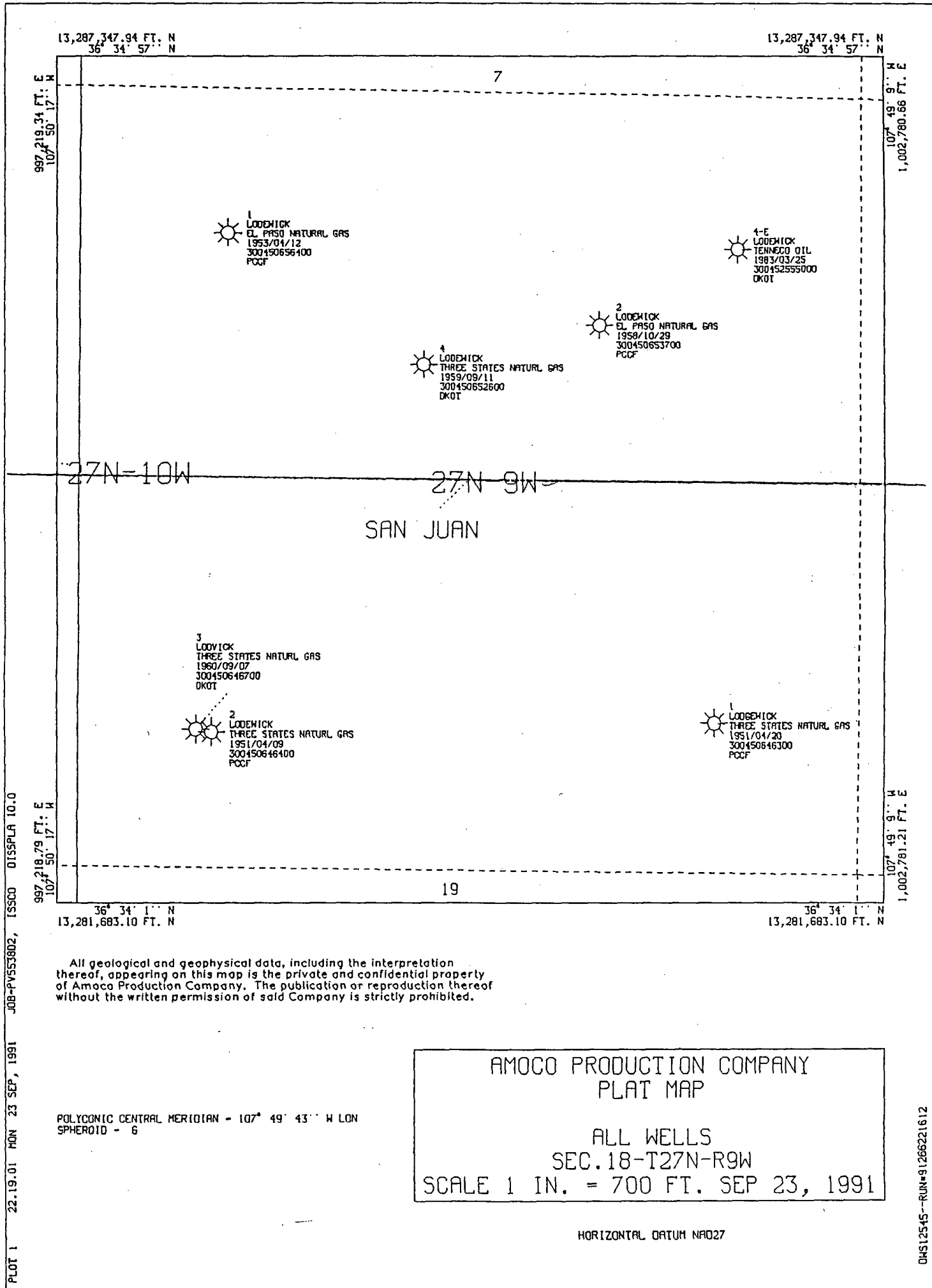
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AMOCO PRODUCTION COMPANY
PLAT MAP

LODEWICK 1

990FSL 990 FEL SEC.18-T27N-R9W

POLYCONIC CENTRAL MERIDIAN - 107° 49' 42" W LON
SPHEROID - 6





OIL CONSERVATION DIVISION
RECEIVED

91 OCT 3 AM 8 53

Amoco Production Company

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

October 1, 1991

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

File: CAW-305-986.511

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Sincerely,

J. W. Hawkins
J. W. Hawkins

Attachment

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By: _____

Date: _____

William J. LeMay
October 1, 1991
Page 2

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5
HANKS
SOUTHLAND ROYALTY
1990/10/17
300450664200

+

McKenzie
Mobil

Meridian/El Paso

① Amoco
Conoco
40.69

Meridian

27N-10W

②
40.63

SAN JUAN

27N-9W

10
WHITLEY
MERIDIAN OIL INC
1991/01/08
300452072000

57
51
1.08

17



1
REESE FEDERAL
MERIDIAN OIL INC
1990/10/26
300450648600

1
ANGEL PEAK 13N
MCKENZIE METHANE
1990/06/26
300452761800

③ Amoco
Conoco
40.51
④
40.51



McKenzie

Unocal

Meridian

14
ANGEL PEAK 24N
MCKENZIE METHANE
1991/01/11
300452839400

12
LODEWICK
UNION OIL OF CALIF
1990/07/15
300452771600

19

20

9
ANGEL PEAK 24L
MCKENZIE METHANE CORP
1990/10/29
300452783900

13
LODEWICK
UNION OIL OF CALIF
1990/07/13
300452771700

1
MCADAMS R
MERIDIAN OIL INC
1990/12/11
300450635900

36° 33' 8" N
13,276,296.02 FT. N

107° 50'

36° 33' 8" N
13,276,296.02 FT. N

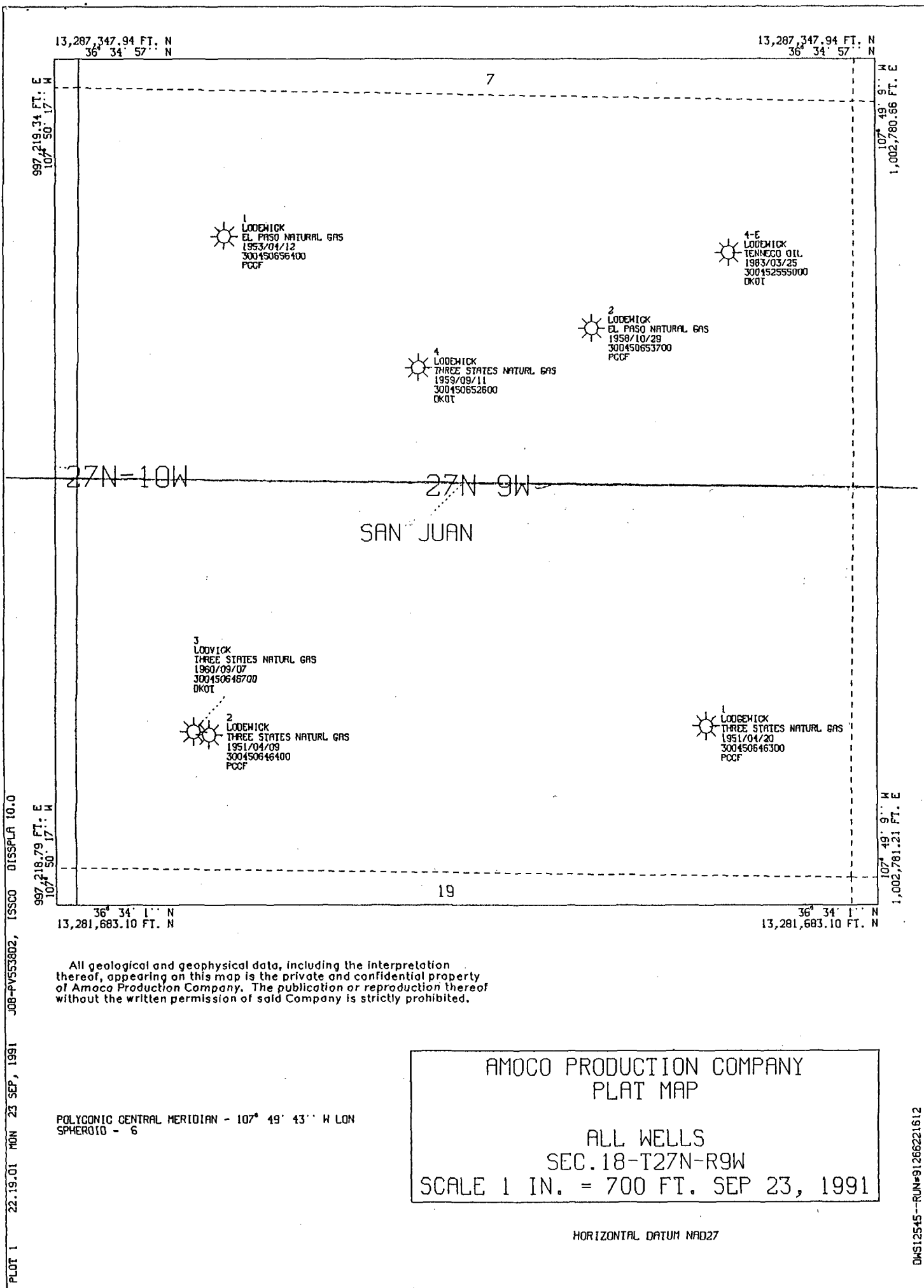
no other coal wells in
Unit

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AMOCO PRODUCTION COMPANY
PLAT MAP

POLYCONIC CENTRAL MERIDIAN - 107° 49' 42" W LON
SPHEROID - 6

LODEWICK 1
990FSL 990 FEL SEC.18-T27N-R9W





OIL CONSERVATION DIVISION
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'91 OCT 15 AM 9 13

Amoco Production Company

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

October 1, 1991

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

File: CAW-305-986.511

Application for Unorthodox Location
Lodewick Well No. 1
990' FSL, 990' FEL, Section 18-T27N-R9W
Basin Fruitland Coal Pool
San Juan County, New Mexico

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Sincerely,

JW Hawkins
J. W. Hawkins

Attachment

Waiver

UNOCAL hereby waives objection to Amoco's application for an unorthodox well location for the Lodewick Well No. 1 as proposed above.

By: *WJL*

Date: 10/14/91



NSL-2068

Jan

October 1, 1991

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

File: CAW-305-986.511

Application for Unorthodox Location
Lodewick Well No. 1
990' FSL, 990' FEL, Section 18-T27N-R9W
Basin Fruitland Coal Pool
San Juan County, New Mexico

Amoco Production Company

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



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Sincerely,

JW Hawkins
J. W. Hawkins

Attachment

Waiver

Meridian Oil Inc hereby waives objection to Amoco's application for an unorthodox well location for the Lodewick Well No. 1 as proposed above.

By: *Tom R. [Signature]*

Date: Nov. 5, 1991



NSL - 3068

OIL CONSERVATION DIVISION
RECEIVED

KLL

October 1, 1991

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

Amoco Production Company

'91 OCT 28 AM 9 52

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

File: CAW-305-986.511

RECEIVED
DIV. LAND DEPARTMENT

OCT 04 1991

OKLAHOMA CITY

Application for Unorthodox Location
Lodewick Well No. 1
990' FSL, 990' FEL, Section 18-T27N-R9W
Basin Fruitland Coal Pool
San Juan County, New Mexico

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Sincerely,

JWH
J. W. Hawkins

Attachment

Waiver

CONOCO INC hereby waives objection to Amoco's application for an unorthodox well location for the Lodewick Well No. 1 as proposed above.

By:

Frank [unclear]
JES
10/17/91
10-18-91

Date: 10-21-91