



STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION  
AZTEC DISTRICT OFFICE



GARY E. JOHNSON  
GOVERNOR

JENNIFER A. SALISBURY  
CABINET SECRETARY

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

M-E-M-O-R-A-N-D-U-M (3-95-3)

TO: Fruitland Coal Gas Well Operators  
FROM: Ernie Busch, District III Geologist  
SUBJECT: Meeting  
DATE: February 14, 1995

There will be a meeting for all operators of Fruitland coal gas wells in the San Juan Basin in Farmington, New Mexico on March 12, 1995. This meeting will be held at the San Juan Community College, in room 9008 of the Fine Arts Center, starting at 9:00 A.M.. Besides coal gas operators, regulatory agencies will be invited including the BLM, NMOCD, COGCC and the Southern Ute Indian Tribe (Red Willow Company).

This Fruitland coal gas meeting is prompted by the mutual need of operators and regulatory agencies to address issues dealing with coal gas reservoir development. In 1986 a bistate committee was formed to address the questions that regulatory agencies had concerning coal gas well development. In 1988 orders from both the COGCC and NMOCD were created to establish the spacing for orderly development in both states. In 1990 a technical study funded by the operators and GRI was completed. It was recommended that spacing established for coal gas wells in 1988 was adequate. The study also recommended that when it became appropriate, the bistate committee should call the operators and regulatory bodies back together to revisit the question of spacing and other pertinent questions.

A recommended agenda is set forth as follows:

I. SPACING

A. Observed Reservoir drainage characteristics

1. Modeling
  - a. Comparison of Production Data
  - b. Prediction
2. Pressure Observation
3. Interference evidence
  - a. Beneficial
  - b. Nonbeneficial
  - c. Effects

B. Current Spacing

1. Drilling windows
2. Surface constraints
3. Well Density

C. Current Well Density

II. SECONDARY RECOVERY

- A. CO<sub>2</sub> INJECTION
- B. N<sub>2</sub> INJECTION

**Ernie Busch**

---

**From:** Ernie Busch  
**To:** David Catanach  
**Subject:** AMOCO (DHC)  
**Date:** Tuesday, April 11, 1995 1:40PM  
**Priority:** High

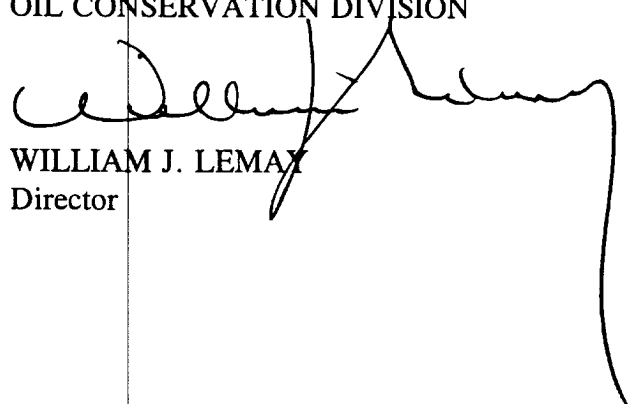
LACKEY B #13M  
C-20-28N-09W  
RECOMMEND: APPROVAL



Pursuant to Rule 303-C-5, the commingling authority granted by the order may be rescinded by the Division Director if, in his opinion, conservation is not being best served by such commingling.

Approved at Santa Fe, New Mexico on this 28th day of April, 1995.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION



WILLIAM J. LEMAY  
Director

S E A L

WJL/DRC

cc: Oil Conservation Division - Aztec ✓



AD - JK  
STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

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

RECEIVED  
MAY - 2 1995

OIL CON. DIV.  
DIST. 3

ADMINISTRATIVE ORDER DHC-1125

Amoco Production Company  
P.O. Box 800  
Denver, Colorado 80201-0800

Attention: Pamela W. Stanley

LS  
Lackey "B" Well No. 13M 30-045-23888  
Unit C, Section 20, Township 28 North, Range 9 West, NMPM,  
San Juan County, New Mexico.  
Blanco Mesaverde (Prorated Gas), Basin Dakota (Prorated Gas)  
and Otero-Chacra Pools

Dear Ms. Stanley:

Reference is made to your recent application for an exception to Rule 303-A of the Division Rules and Regulations to permit the subject well to commingle production from both pools in the wellbore.

It appearing that the subject well qualifies for approval for such exception pursuant to the provisions of Rule 303-C, and that reservoir damage or waste will not result from such downhole commingling, and correlative rights will not be violated thereby, you are hereby authorized to commingle the production as described above and any Division Order which authorized the dual completion and required separation of the two zones is hereby placed in abeyance.

In accordance with the provisions of Rule 303-C-4., total commingled oil production from the subject well shall not exceed 50 barrels per day, and total water production shall not exceed 100 barrels per day. The maximum amount of gas which may be produced daily from the well shall be determined by Division Rules and Regulations or by the gas allowable for each respective prorated pool as printed in the Division's San Juan Basin Gas Proration Schedule.

In accordance with the provisions of Rule 303-C, the supervisor of the Aztec District Office of the Oil Conservation Division shall determine the proper allocation of production from the subject well following its completion.

FURTHER: The operator shall notify the Aztec District Office of the Division upon implementation of the commingling process.



**Southern**

**Rockies**

**Business**

**Unit**

March 29, 1995

Mr. William J. LeMay, Director  
New Mexico Oil Conservation Division  
2040 S. Pacheco Street  
P. O. Box 6429  
Santa Fe, NM 87504

**RECEIVED**  
MAR 31 1995  
OIL CON. DIV.  
DIST. 3

**Application for Exception to Rule 303-A**  
**Downhole Commingling**  
**Lackey B #13M Well**  
**1025' FNL, 1655' FWL, Section 20-T28N-R9W**  
**Blanco Mesaverde, Basin Dakota, and Otero Chacra Pools**  
**San Juan County, New Mexico**

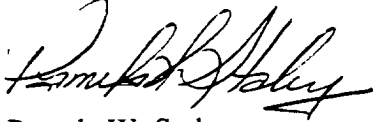
Amoco Production Company hereby requests administrative approval to downhole commingle production from the Blanco Mesaverde, Basin Dakota and Otero Chacra Pools in the Lackey B #13M well referenced above. The Lackey B #13M well was originally completed in the Dakota formation. We plan to recomple the well to the Mesaverde and Chacra formations with all three zones open in the wellbore. The three zones are expected to produce at a total commingled rate of about 285 MCFD. The ownership (WI, RI, ORRI) of these pools is identical in this wellbore. Downhole commingling will offer an economical method of production while protecting against reservoir damage, waste of reserves and violation of correlative rights.

The allocation method that we plan to use for this commingled well is as follows. We plan to determine the stabilized rate from the Dakota formation prior to the recompletion. During the recompletion of each of the other zones we will establish stabilized rates before proceeding. After finalizing the recompletion and placing the well back on production we will establish a rate from the Mesaverde, Chacra and Dakota commingled zones. The allocation percentages would then be fixed at each zone's percentage of the total stabilized post commingling rate. Once these rates have been established we will notify your Aztec District. The actual commercial value of the commingled production will not be less than the sum of the values of the production from each of the common sources of supply.

Attached to aid in your review are plats showing the location of the well and offset wells in the same formation, historical production plots and a C-102 for each formation. This spacing unit is on a federal lease SF-077106. A copy of the application will be sent to the BLM requesting their consent.

Should you have questions concerning this matter, please contact me at (303) 830-5344.

Sincerely,

A handwritten signature in black ink, appearing to read "Pamela W. Staley". The signature is fluid and cursive, with the first name being the most prominent.

Pamela W. Staley

Enclosures

cc: Mike Kutas  
Gail Jefferson

Frank Chavez, Supervisor  
NMOCD District III  
1000 Rio Brazos Road  
Aztec, NM 87410

Duane Spencer  
Bureau of Land Management  
1235 La Plata Hwy  
Farmington, NM 87401



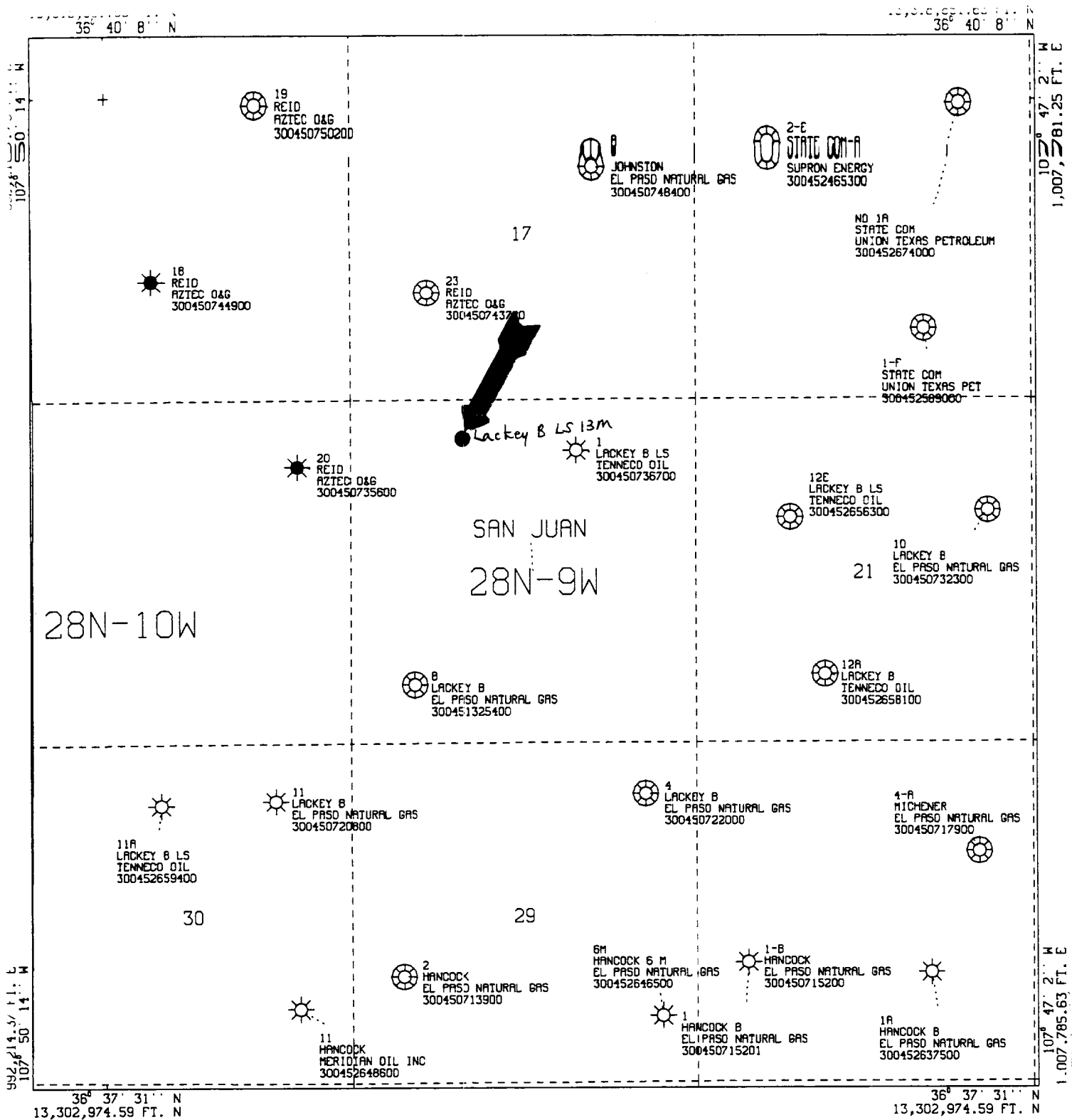
**LIST OF ATTACHMENTS**  
**LACKEY B LS #13E**

**ATTACHMENTS**

- 1 List of offset operators and their addresses
- 2 9 section plat for Mesaverde showing offset wells
- 3 9 section plat for Dakota showing offset wells
- 4 9 section plat for Chacra showing offset wells
- 5 Form C-102 for the Basin Dakota formation
- 6 Form C-102 for the Blanco Mesaverde formation
- 7 Form C-102 for the Otero Chacra formation
- 8 Pressure information for all three horizons
- 9 Historical production Curve for Dakota formation
- 10 Recent production Curve for Dakota formation

**OFFSET OPERATORS ADDRESS LIST**  
**LACKEY B #13M**

- 1 Meridian Oil, Inc.  
P.O. Box 4289  
Farmington, NM 87401
- 2 El Paso Natural Gas  
C/O Meridian Oil, Inc.  
P.O. Box 4289  
Farmington, NM 87401
- 3 Southland Royalty Company  
P.O. Box 840656  
Dallas, Texas 75284
- 4 Union Texas Petroleum Corp.  
P.O. Box 200128  
Houston, TX 77216

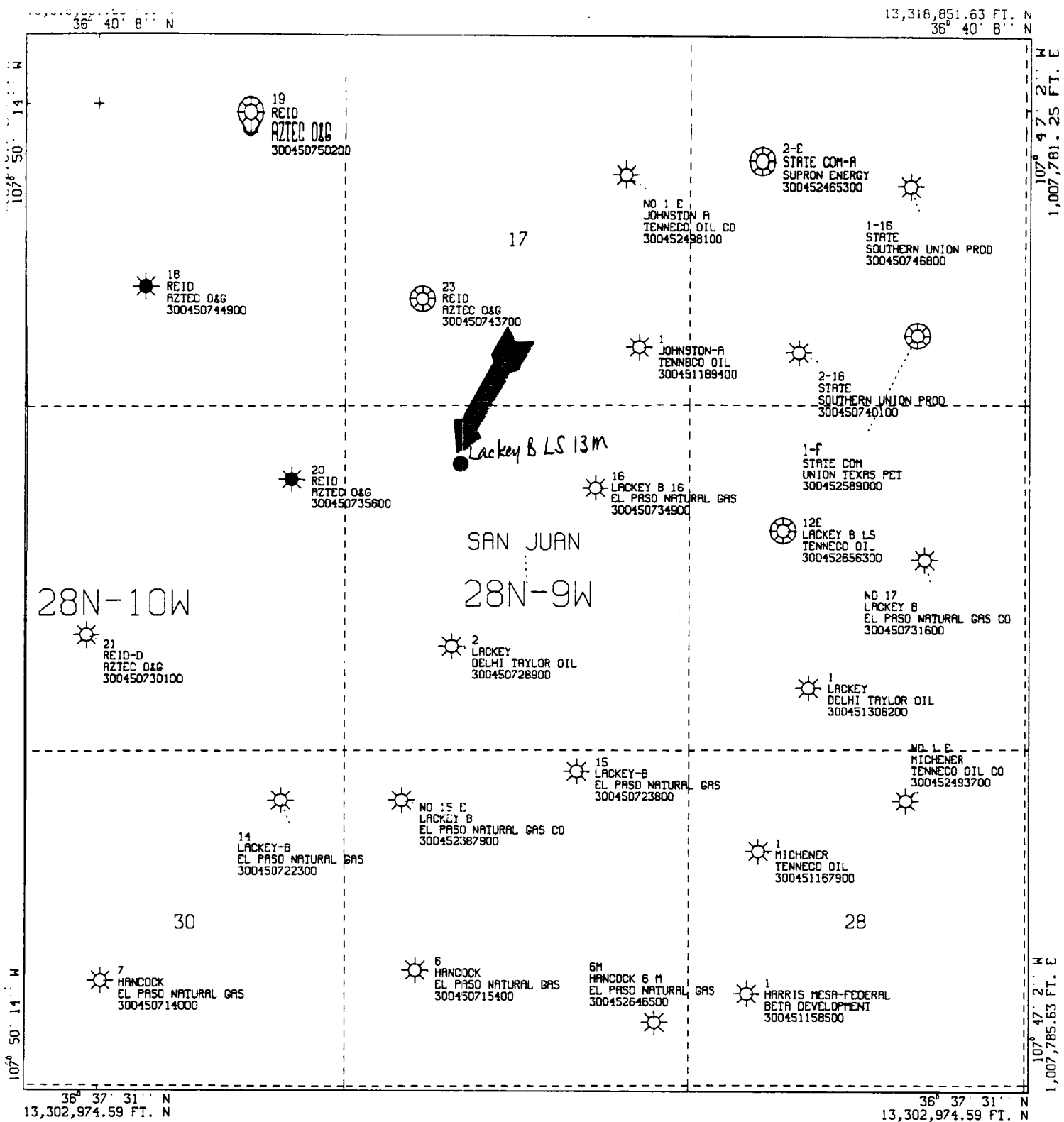


All geological and geophysical data, including the interpretation thereof, appearing on this map is the private and confidential property of Amoco Production Company. The publication or reproduction thereof without the written permission of said Company is strictly prohibited.

AMOCO PRODUCTION COMPANY  
PLAT MAP  
Lackey B ls 13M(E)  
Offset MV wells

SCALE 1 IN. = 2,000 FT. MAR 20, 1995

POLYCONIC CENTRAL MERIDIAN - 107° 48' 38" W LON  
SPHEROID - 6



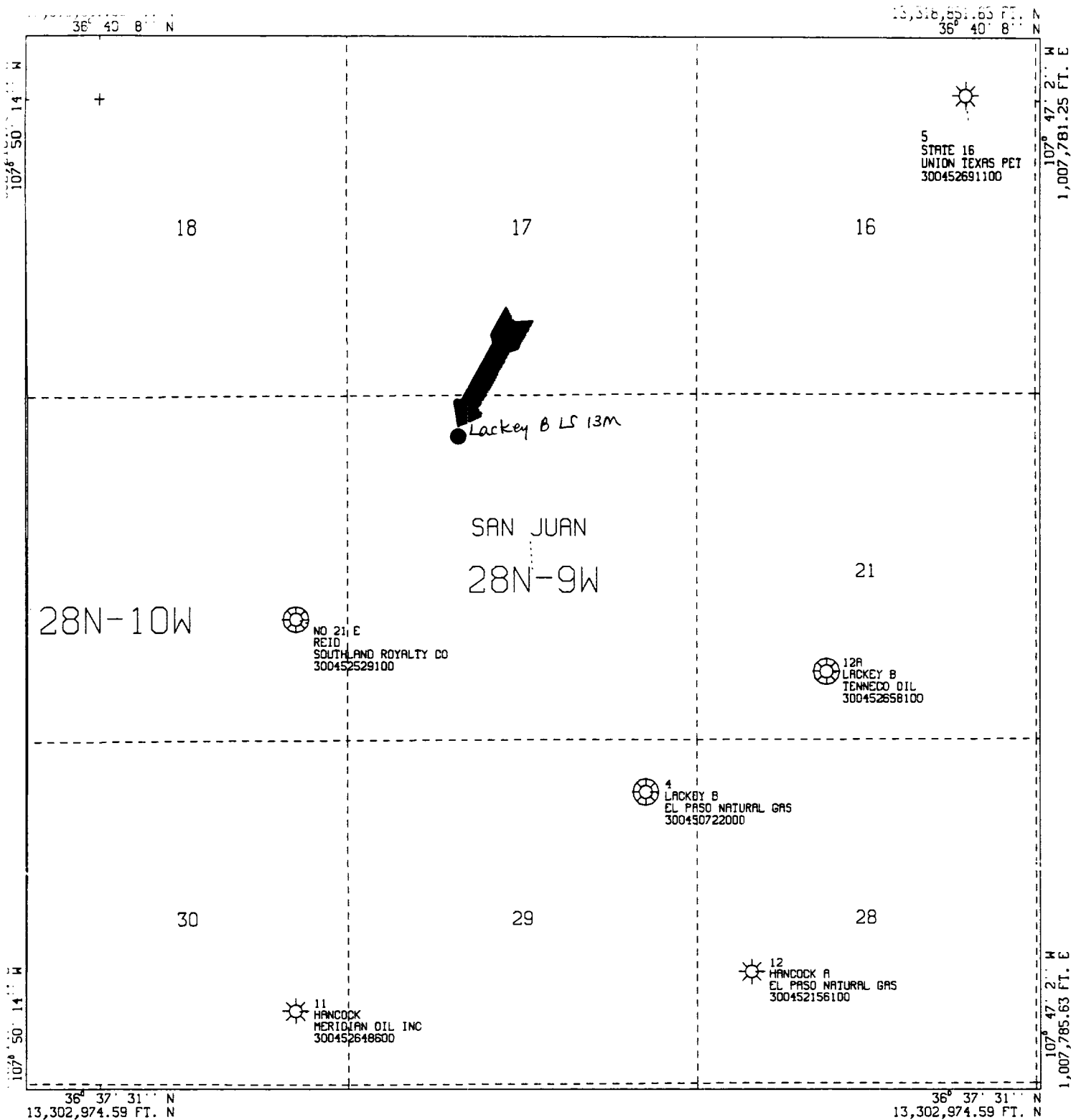
All geological and geophysical data, including the interpretation thereof, appearing on this map is the private and confidential property of Amoco Production Company. The publication or reproduction thereof without the written permission of said Company is strictly prohibited.

POLYCONIC CENTRAL MERIDIAN - 107° 48' 38" W LON  
SPHEROID - 6

AMOCO PRODUCTION COMPANY  
PLAT MAP

Lackey B ls 13M(E)  
Offset DK wells

SCALE 1 IN. = 2,000 FT. MAR 20, 1995



All geological and geophysical data, including the interpretation thereof, appearing on this map is the private and confidential property of Amoco Production Company. The publication or reproduction thereof without the written permission of said Company is strictly prohibited.

POLYCONIC CENTRAL MERIDIAN - 107° 48' 38" W LON  
SPHEROID - 6

AMOCO PRODUCTION COMPANY  
PLAT MAP

Lackey B ls 13M(E)  
Offset CK wells

SCALE 1 IN. = 2,000 FT. MAR 20, 1995

All distances must be from the outer boundaries of the Section.

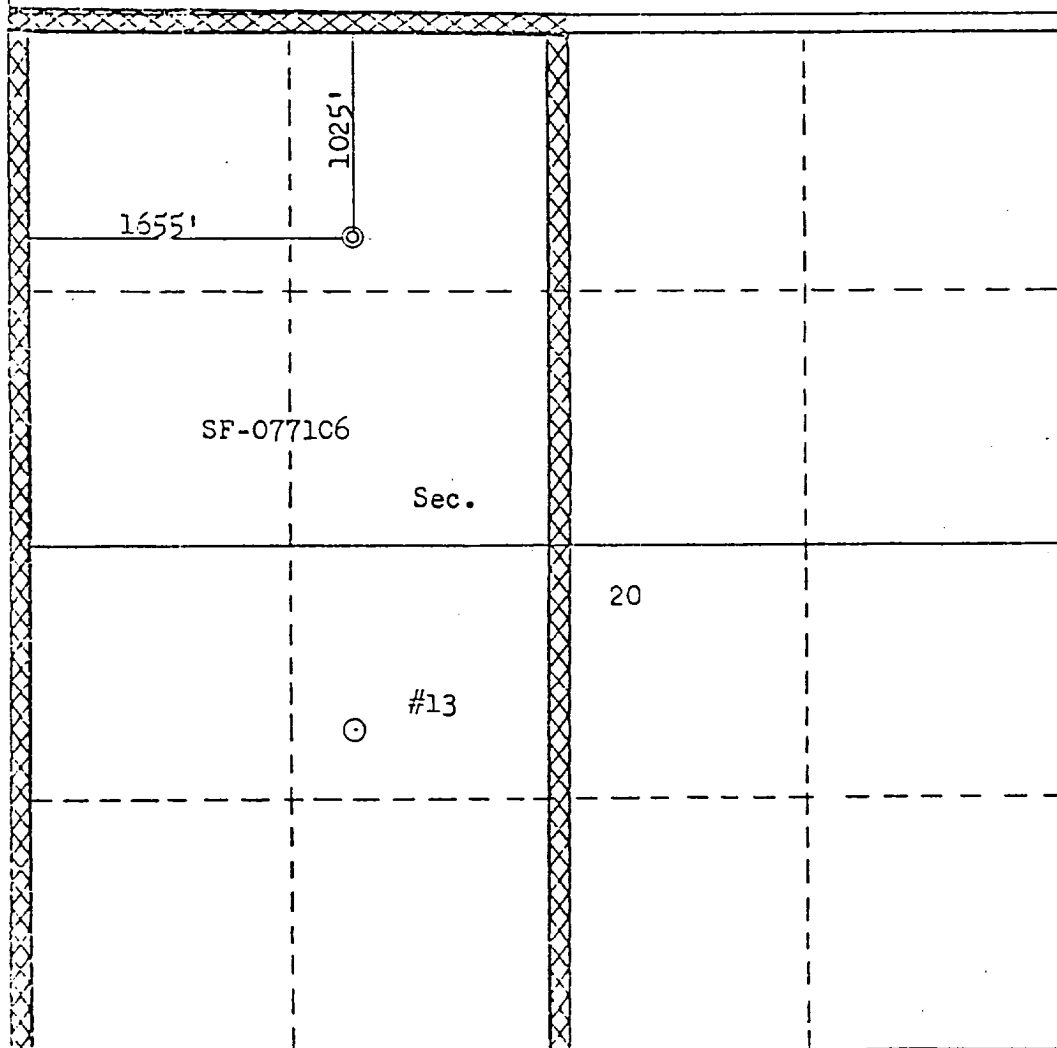
|  |                                      |                        |                                       |                           |   |
|--|--------------------------------------|------------------------|---------------------------------------|---------------------------|---|
| Operator<br><b>EL PASO NATURAL GAS COMPANY</b>   |                                      |                        | Lease<br><b>LACEY "B" (SF-077106)</b> |                           | Well No.<br><b>13-E</b>                   |
| Unit Letter<br><b>C</b>  | Section<br><b>20</b>                 | Township<br><b>28N</b> | Range<br><b>9W</b>                    | County<br><b>San Juan</b> |   |
| Actual Footage Location of Well:<br><b>1025</b> feet from the <b>North</b> line and <b>1655</b> feet from the <b>West</b> line |                                      |                        |                                       |                           |   |
| Ground Level Elev.<br><b>5335</b>  | Producing Formation<br><b>Dakota</b> |                        | Pool<br><b>Basin Dakota</b>           |                           | Dedicated Acreage:<br><b>320.00</b> Acres |

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation \_\_\_\_\_

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) \_\_\_\_\_

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests has been approved by the Commission.



CERTIFICATION

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

*A. G. Bisco*

Name  
**Drilling Clerk**

Position  
**El Paso Natural Gas**

Company  
**October 11, 1979**

Date

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

Date Surveyed  
**September 11, 1979**

Registered Professional Engineer and/or Land Surveyor

*Fred R. Kerr*  
**Fred R. Kerr**

Certificate No.

**3950**

District I  
PO Box 1980, Hobbs, NM 88241-1980  
District II  
PO Drawer D11, Artesia, NM 88211-0719  
District III  
1000 N. H. H. Rd., Azusa, NM 87419  
District IV  
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION  
PO Box 2088  
Santa Fe, NM 87504-2088

OK  
3

Form C-102  
Revised February 21, 1994  
Instructions on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

|                          |  |   |  |                                |                            |
|--------------------------|--|---|--|--------------------------------|----------------------------|
| API Number<br>3004523888 |  | Pool Code<br>72319                        |  | Pool Name<br>Blanco Mesa Verde |                            |
| Property Code<br>71599   |  | Property Name<br>Lackey "B" LS            |  |                                | Well Number<br>13 <b>M</b> |
| OGRID No.<br>000778      |  | Operator Name<br>Amoco Production Company |  |                                | Elevation<br>5835' GL      |

<sup>10</sup> Surface Location

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County   |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|----------|
| C             | 20      | 28 N     | 9W    | C       | 1025          | North            | 1655          | West           | San Juan |

<sup>11</sup> Bottom Hole Location If Different From Surface

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
|               |         |          |       |         |               |                  |               |                |        |

| <sup>12</sup> Dedicated Acres | <sup>13</sup> Joint or Infill | <sup>14</sup> Consolidation Code | <sup>15</sup> Order No. |
|-------------------------------|-------------------------------|----------------------------------|-------------------------|
| 3.20                          |                               |                                  |                         |

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

|   |  |  |  |  |
|---|--|--|--|--|
| <div>16</div> <div>1655'</div> <div>1025'</div> |  |  | <div>17 OPERATOR CERTIFICATION</div> <div>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</div> <div><i>Lois Raeburn</i></div> <div>Signature</div> <div>Lois Raeburn</div> <div>Printed Name</div> <div>Business Assistant</div> <div>Title</div> <div>12 13 94</div> <div>Date</div>  |  |
|   |  |  |  |  |
|   |  |  |  |  |
|   |  |  |  |  |
|   |  |  | <div>18 SURVEYOR CERTIFICATION</div> <div>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</div> <div>Sept. 11, 1979</div> <div>Date of Survey</div> <div>Signature and Seal of Professional Surveyor:</div> <div>On File</div> <div>3950</div> <div>Certificate Number</div> |  |
|   |  |  |  |  |
|   |  |  |  |  |
|   |  |  |  |  |

District I  
PO Box 1980, Hobbs, NM 88241-1980

District II

811 South First, Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION  
2040 South Pacheco  
Santa Fe, NM 87505

Form C-102

Revised October 18, 1994

Instructions on back

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

|                            |  |   |  |                             |                         |  |
|----------------------------|--|---|--|-----------------------------|-------------------------|--|
| 1 API Number<br>3004523888 |  | 2 Pool Code<br>82329                        |  | 3 Pool Name<br>Otero Chacra |                         |  |
| 4 Property Code<br>71599   |  | 5 Property Name<br>Lackey "B" LS            |  |                             | 6 Well Number<br>13M    |  |
| 7 OGRID No.<br>000778      |  | 8 Operator Name<br>Amoco Production Company |  |                             | 9 Elevation<br>5835' GL |  |

10 Surface Location

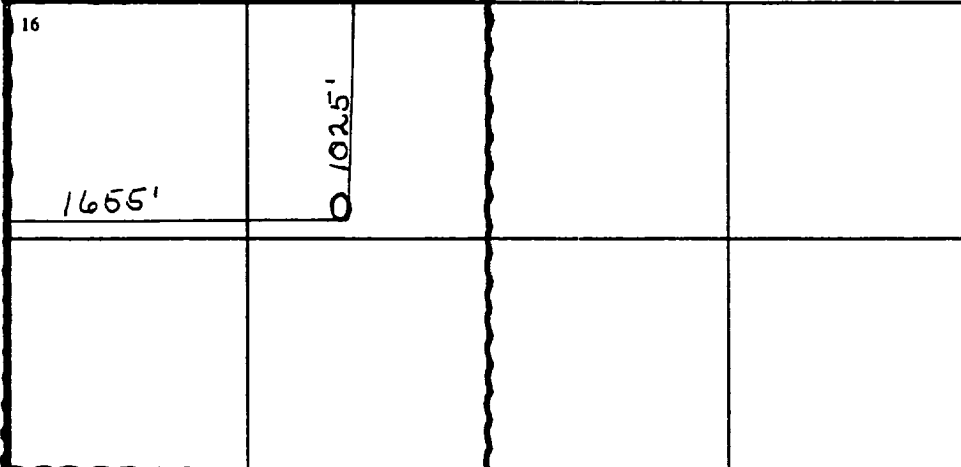
|               |         |          |       |         |               |                  |               |                |          |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|----------|
| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County   |
| C             | 20      | 28N      | 9W    |         | 1025          | North            | 1655          | West           | San Juan |

11 Bottom Hole Location If Different From Surface

|               |         |          |       |         |               |                  |               |                |        |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|               |         |          |       |         |               |                  |               |                |        |

|                              |                    |                       |              |
|------------------------------|--------------------|-----------------------|--------------|
| 12 Dedicated Acres<br>160.00 | 13 Joint or Infill | 14 Consolidation Code | 15 Order No. |
|                              |                    |                       |              |

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

|   |  |  |  |   |  |  |  |
|---|--|--|--|---|--|--|--|
| 16  |  |  |  | 17 OPERATOR CERTIFICATION   |  |  |  |
|  |  |  |  | I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief  |  |  |  |
|   |  |  |  | Signature<br>Gail M. Jefferson  |  |  |  |
|   |  |  |  | Printed Name<br>Business Assistant  |  |  |  |
|   |  |  |  | Title<br>3/21/1995  |  |  |  |
|   |  |  |  | Date  |  |  |  |
|   |  |  |  | 18 SURVEYOR CERTIFICATION   |  |  |  |
|   |  |  |  | I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. |  |  |  |
|   |  |  |  | September 11, 1979  |  |  |  |
|   |  |  |  | Date of Survey  |  |  |  |
|   |  |  |  | Signature and Seal of Professional Surveyor:  |  |  |  |
|   |  |  |  | 3950  |  |  |  |
|   |  |  |  | Certificate Number  |  |  |  |



**RECOMPLETION PRESSURE EVALUATION**

**LACKEY B LS 13M**

**Estimated Dakota BHP (from 3 surface pressure tests) = 900 psi**

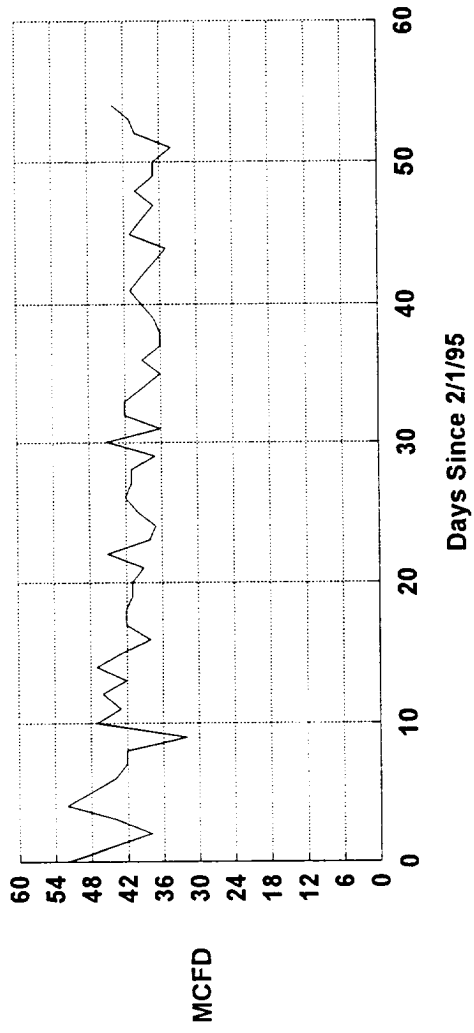
**Estimated BHP for Chacra completions in area = 1248 psi**

**Estimated BHP for Mesaverde Infill completions in area = 1343 psi**

**Maximum BHP differential = DK BHP / MV BHP = 900 PSI / 1343 PSI OR 67%**

**NOTE: Dakota pressure is anticipated to be higher since pressure was still building at  
2.25 psi/day**

San Juan O.C.  
WELL: LACKEY B LS 013E-DK (97959501)  
(Downtime excluded)



Engr: zr06

LACKEY B LS 13E

Operator- AMOCO PRODUCTION CO

300452388800DK

C202809-013EDK

APC\_WI - 0.50000000

