

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. CO2 INJECTION
 - B. N2 INJECTION

Ernie Busch

From: To: Ernie Busch David Catanach

Subject:

AMOCO (DHC) Tuesday, April 11, 1995 1:40PM

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Pursuant to Rule 303-C-5, the commingling authority granted by the order may be rescinded by the Division Director if, in his opinion, conservation is not being best served by such commingling.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

Director

SEAL

WJL/DRC

cc: Oil Conservation Division - Aztec

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STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION 2D40 S. PACHECO SANTA FE, NEW MEXICO 87505 (505) 827-7131



OIL COM, DAY. DIST. 3

ADMINISTRATIVE ORDER DHC-1125

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

Attention: Pamela W. Stanley

Lackey "B" Well No. 13M 30-045-2388 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

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 recomplete 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.

Amoco Production Company 1670 Broadway Post Office Box 800 Denver, Colorado 80201 (303) 830-4311

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

Sincerely,

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

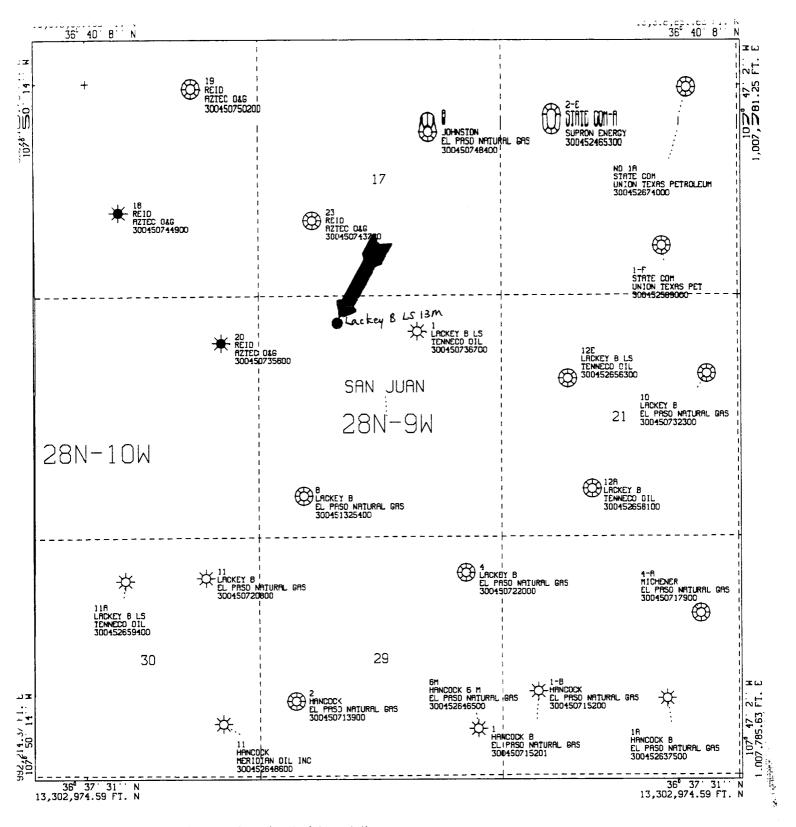
LIST OF ATTACHMENTS LACKEY B LS #13E

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

- 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
- 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.

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

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

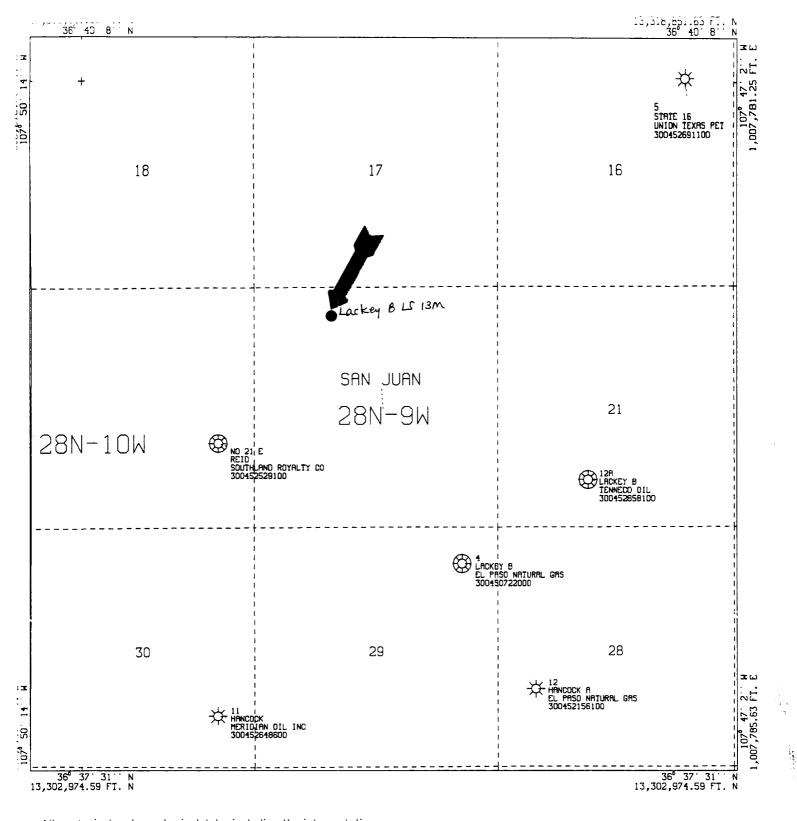
SCALE 1 IN. = 2,000 FT. MAR 20, 1995

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POLYCONIC CENTRAL MERIDIAN - $107^{\rm o}$ 48 $^{\circ}$ 38 $^{\circ}$ 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' H 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

STATE OF NEW MEXICO

OIL CONSERVATION DIVISION P. O. DOX 2088 ETITIE OF NEW MEXICO P. O. DOX 2088 [HERGY AND MINERALS DEPARTMENT SANTA FE, NEW MEXICO 87501

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

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102 Revised February 21, 1994 Instructions on back

Submit to Appropriate District Office State Lease - 4 Copies

2 Pool Nume

Fee Lease • 3 Copies

☐ AMENDED REPORT

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District I PO Box 1980, Hubbs, NM 88241-1980 District II 811 South First, Artesia, NM 88210 District III 1000 Rio Brazos Rd., Aztec, NM 87410 District IV

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

District IV 2040 South Pacheco, Santa F	e, NM 87505			Danta I	C, 14	1141 07303			Г	7 AME	NDED REPORT
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WELL LOCATION AND ACREAGE DEDICA API Number 1 Pool Code 82329 Otero Chacre								³ Pool Na			
⁴ Property Code					operty	Name		 		•	Well Number
71599		Lack	key "B"								13M
'ogrid no. 000778	Am	oco Pi	roductio	•	erator	Name					'Elevation 5835
				10 Sur	face	Location					
UL or lot no. Section	Towaship	Range	Lot Ida	Feet from		North/South line	1	t from the	East/Wes		County
C 20	28N	9W		1025		North	<u> </u>	1655	West		San Juan
				, 		f Different Fro	_				
UL or lot no. Section	Township	Range	Lot Idn	Feet from	the	North/South line	Fee	t from the	East/Wes	t line	County
Dedicated Acres Doint	or Infill 14 Co	onsolidatio	n Code 15 O	rder No.			<u> </u>		1		1
NO ALLOWABLE						ON UNTIL ALL EEN APPROVED				EN CON	SOLIDATED
16551	0 1025							I hereby certificate and complete and complete and complete and complete and correct to the series of the series and correct to the series and corre	fy that the is plete to the land the is usines 21/199 EYOR fy that the warm field not may supervision the best of Septembery	Jeffe S Assi CERT rell location tes of actual ton, and the my belief.	STANT SIFICATION In shown on this plat It surveys made by In the same is true 1979

RECOMPLETION PRESSURE EVALUATION

LACKEY B LS 13M

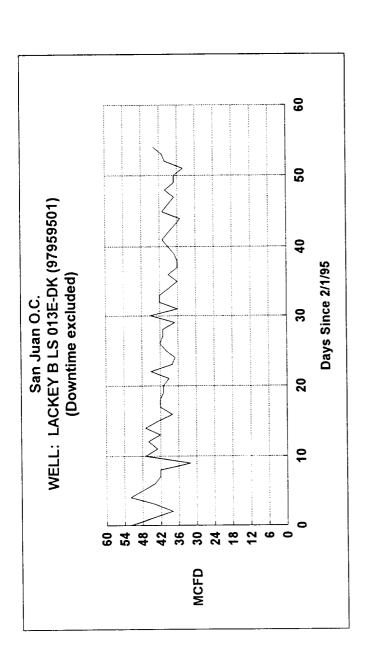
Estimated Dakota BHP (from 3 surface pressure tests) = 900 psi

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



Engr: zrar06