

November 28, 1994

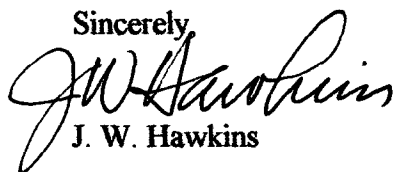
Mr. William J. LeMay, Director
New Mexico Oil Conservation Division
2040 S. Pacheco Street
P. O. Box 6429
Santa Fe, NM 87504

**Application for Exception to Rule 303-A
Downhole Commingling
Jicarilla 146 #29 Well
870' FNL, 840' FEL, Section 9-T25N-R5W
Otero Chacra and So. Blanco Pictured Cliffs Pool
Rio Arriba County, New Mexico**

Amoco Production Company hereby requests administrative approval to downhole commingle production from the Otero Chacra and So. Blanco Pictured Cliffs Pool in the Jicarilla 146 #29 well referenced above. The ownership (WI, RI ORRI) of these two pools is identical in this wellbore. Production methods are limited due to the 4 1/2" casing in the well. Downhole commingling will offer an economical method of production while protecting against reservoir damage, waste of reserve and violation of correlative rights.

Amoco is the only offset operator to this well. If there are any questions concerning this matter, please contact me at (303) 830-5072.

Sincerely


J. W. Hawkins

Enclosures

cc: Wayne Branam
Steve Smethie

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

Robert Kent
Bureau of Land Management
435 Montano NE
Albuquerque, Nm 87107

Application for Exception to Rule 303: SEGREGATION OF PRODUCTION FROM POOLS

Requirements

- (1) Name and address of the operator:

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

- (2) Lease name, well number, well location, name of the pools to be commingled:

Lease Name: Jicarilla 146
Well Number: 29
Well Location: 870' FNL & 840' FEL
Section 9, T25N-R5W
Rio Arriba County, New Mexico
Pools Commingled: Otero Chacra
So. Blanco Pictured Cliffs

- (3) A plat of the area showing the acreage dedicated to the well and the ownership of all offsetting leases.

Attached

- (4) A current (within 30 days) 24-hour productivity test on Division Form C-116 showing the amount of oil, gas and water produced from each zone.

Prior to recompletion, the Otero Chacra produced an average stabilized rate of 60 mcf/d without compression. The Pictured Cliffs zone produced an average stabilized rate of about 60 mcf/d without compression. Additional testing of the zones with compression is underway.

- (5) A production decline curve for both zones showing that for a period of at least one year a steady rate of decline has been established for each zone which will permit a reasonable allocation of the commingled production to each zone for statistical purposes. (This requirement may be dispensed within the case of a newly completed or recently completed well which has little or no production history. However, a complete resume of the well's completion history including description of treating, testing, etc., of each zone, and a prognostication of future production from each zone shall be permitted.)

Otero Chacra Completion: Historical production curve attached.
So. Blanco Pictured Cliffs Completion: Historical production curve attached.

- (6) Estimated bottomhole pressure for each artificially lifted zone. A current (within 30 days) measured bottom hole pressure for each zone capable of flowing.

	BH Pressure	SI Tubing Press.	Fluid Level
Otero Chacra Completion:	421 psi	280 psi	260'
So. Blanco Pictured Cliffs Completion	324 psi	300 psi	0'

- (7) A description of the fluid characteristics of each zone showing that the fluids will not be incompatible in the wellbore.

The fluids have no abnormal components that would prohibit commingling, or promote the creation of emulsions or scale (see attached produced gas and fluid analysis).

- (8) A computation showing that the value of the commingled production will not be less than the sum of the values of the individual streams:

Since the BTU content of the produced fluids are very similar, we would expect the commingled production to have the same value as the sum of the individual streams.

- (9) A formula for the allocation of production to each of the commingled zones and a description of the factors or data used in determining such formula:

Based on the historical production trends with both zones currently producing an average of about 60 mcf/d we would expect an allocation factor of 50% for each zone. The well is undergoing additional testing to aid in determination of the allocation factor between the Otero Chacra and the Pictured Cliffs production.

- (10) A statement that all offset operators and, in the case of a well on federal land, the United States Bureau of Land Management, have been notified in writing of the proposed commingling.

BLM will receive a copy of this application by certified mail. The offsetting operator is Amoco.

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

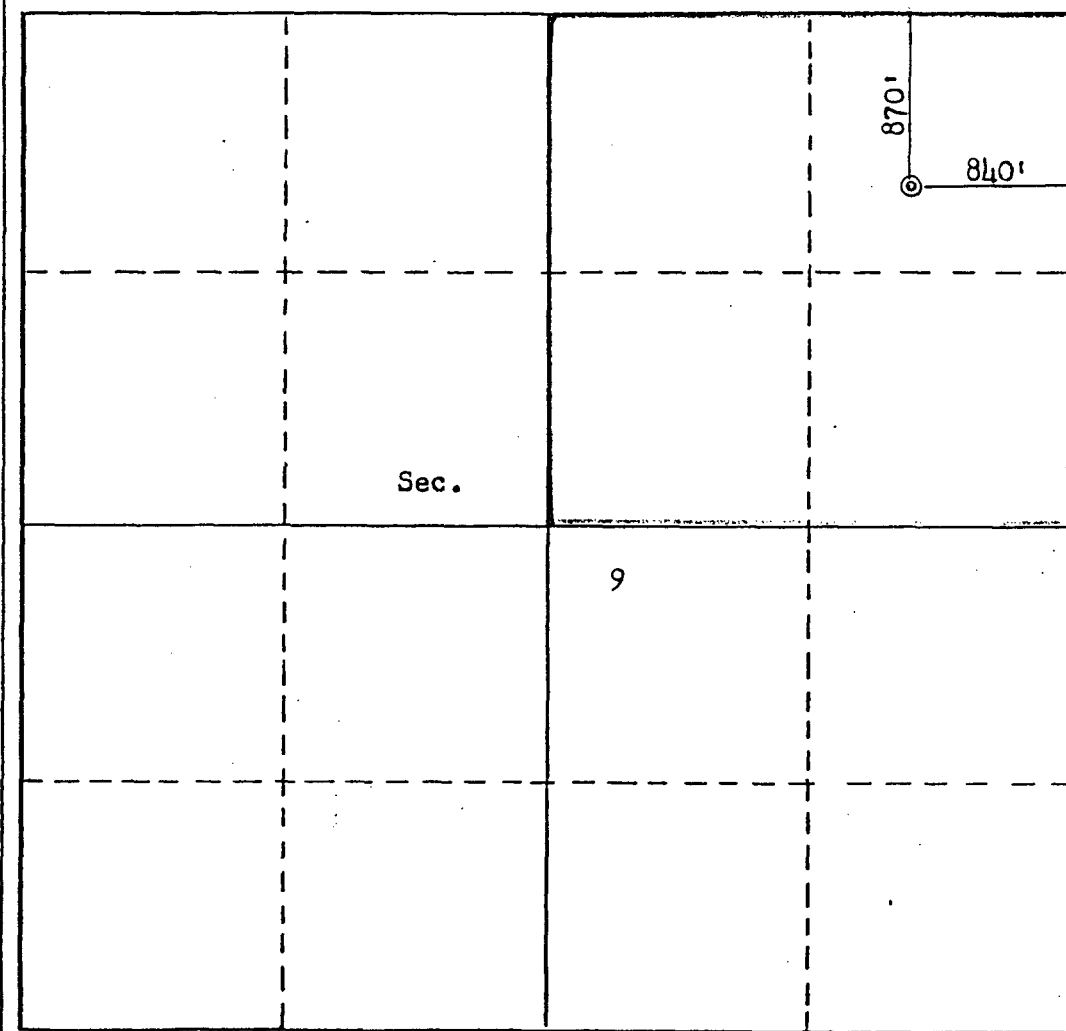
Operator AMOCO PRODUCTION COMPANY			Lease JICARILLA CONTRACT 146		Well No. 29
Unit Letter A	Section 9	Township 25N	Range 5W	County Rio Arriba	
Actual Footage Location of Well: 870 feet from the North line and 840 feet from the East line					
Ground Level Elev. 6743	Producing Formation Chacra		Pool Otero Chacra		Dedicated Acreage: 160 Acres

- Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- 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.

R. A. Downey

Name

R.A. DOWNEY

Position

DISTRICT ENGINEER

Company

AMOCO PRODUCTION COMPANY

Date

MAY 28, 1980

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

Date Surveyed

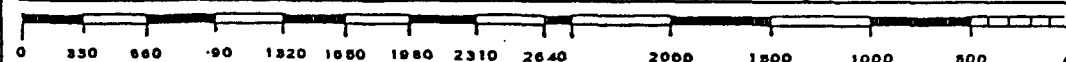
May 27, 1980

Registered Professional Engineer and/or Land Surveyor

Fred B. Kerr Jr.
Fred B. Kerr Jr.

Certificate No.

3950



District I
PO Box 1980, Hobbs, NM 88241-1980
District II
PO Drawer D10, Artesia, NM 88211-0719
District III
1000 Rio Huerfano Rd., Aztec, NM 87410
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

Form C-102
Revised February 21, 1987

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 30-039-22480	² Pool Code 72439	³ Pool Name South Blanco Pictured Cliffs
⁴ Property Code	⁵ Property Name Jicarilla Contract 146	⁶ Well Number 29
⁷ OGRID No. 000778	⁸ Operator Name Amoco Production Company	⁹ Elevation

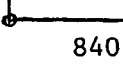
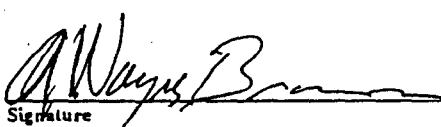
¹⁰ Surface Location

UL or lot no. A	Section 9	Township 25N	Range 5W	Lot Idn	Feet from the 870	North/South line North	Feet from the 840	East/West line East	County Rio Arriba
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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 160	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				870		¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief  Signature A. Wayne Branam Printed Name Business Analyst Title 07/20/94 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. 05/21/80 Date of Survey Signature and Seal of Professional Surveyer: 3950 Certificate Number
						"On File"

13,233,999.54 FT. N
30° 25' 33" N

13,233,999.54 FT. N
30° 25' 33" N

26N-5W

Amoco

Amoco

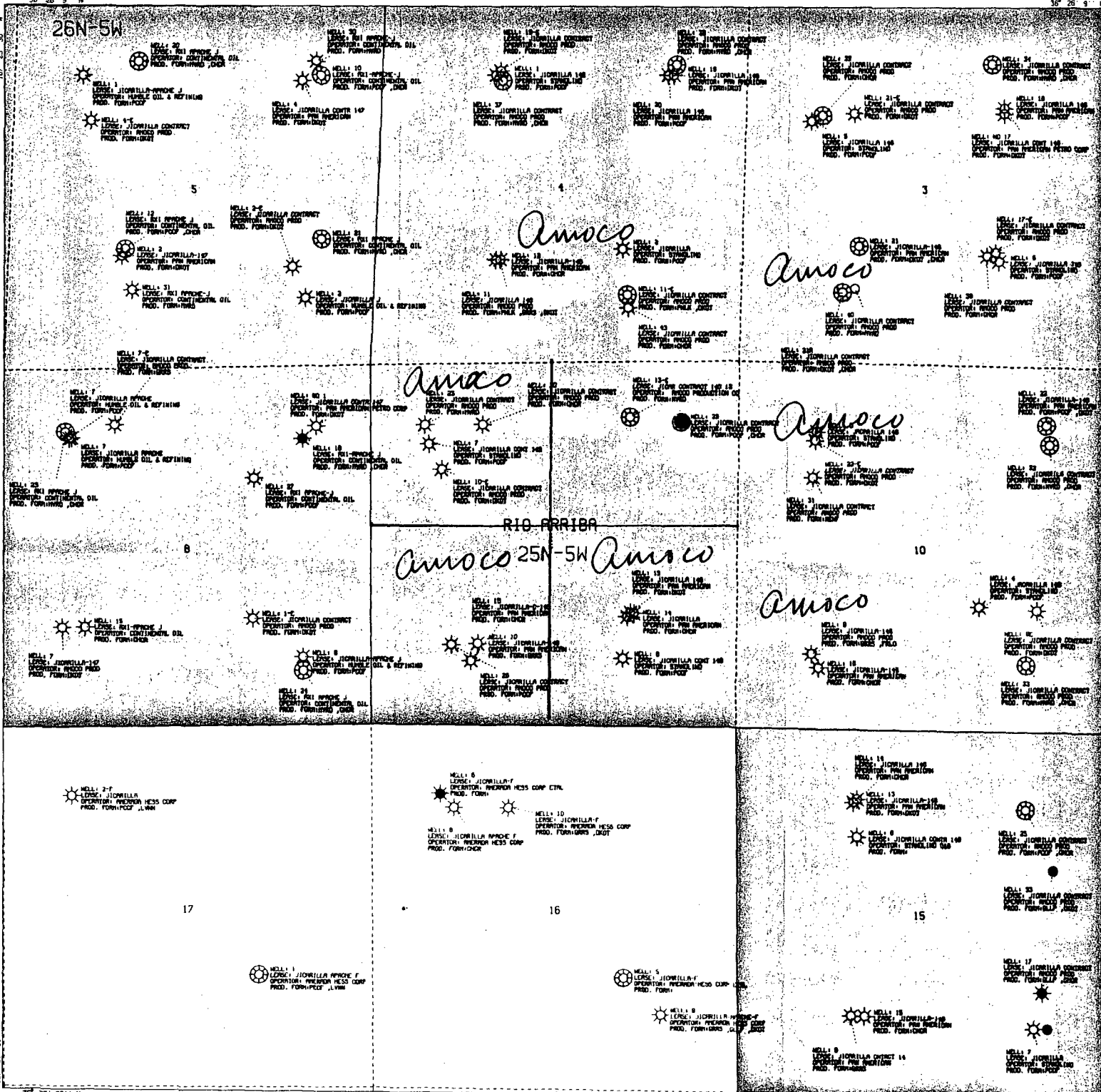
Amoco

Amoco

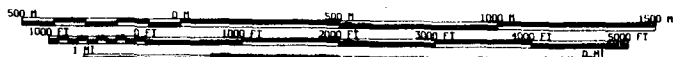
Amoco 25N-5W

Amoco

RIO ARRIBA



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 = 100° 21' 54" W 12W
SPHEROID = 8



AMOCO PRODUCTION COMPANY

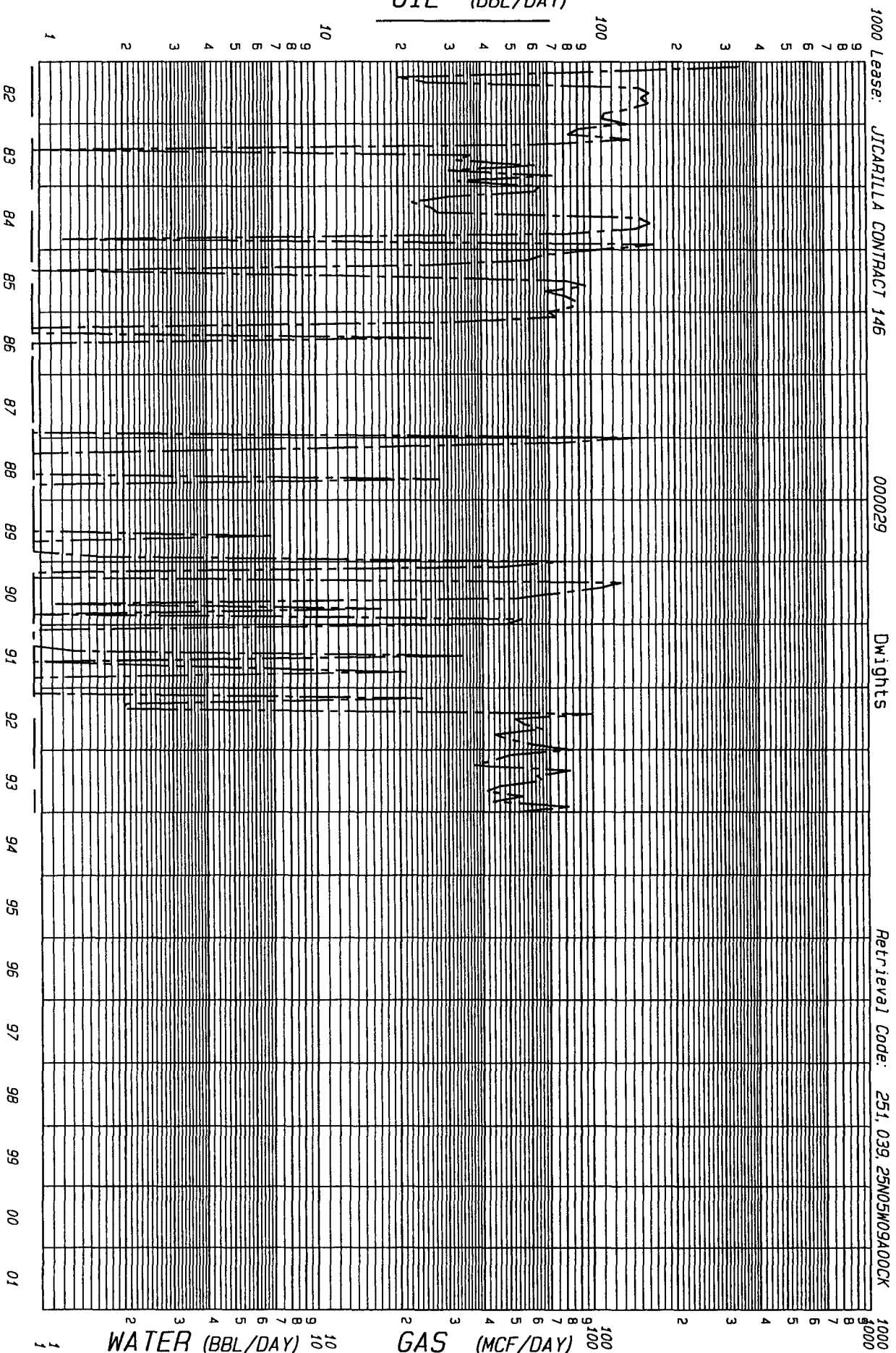
PLAT MAP

SEC. 9-T25N-R5W

SCALE 1 IN. = 1,000 FT. SEP 7, 1994

HOME/20414, 1011104, 1011104

OIL (BBL/DAY)



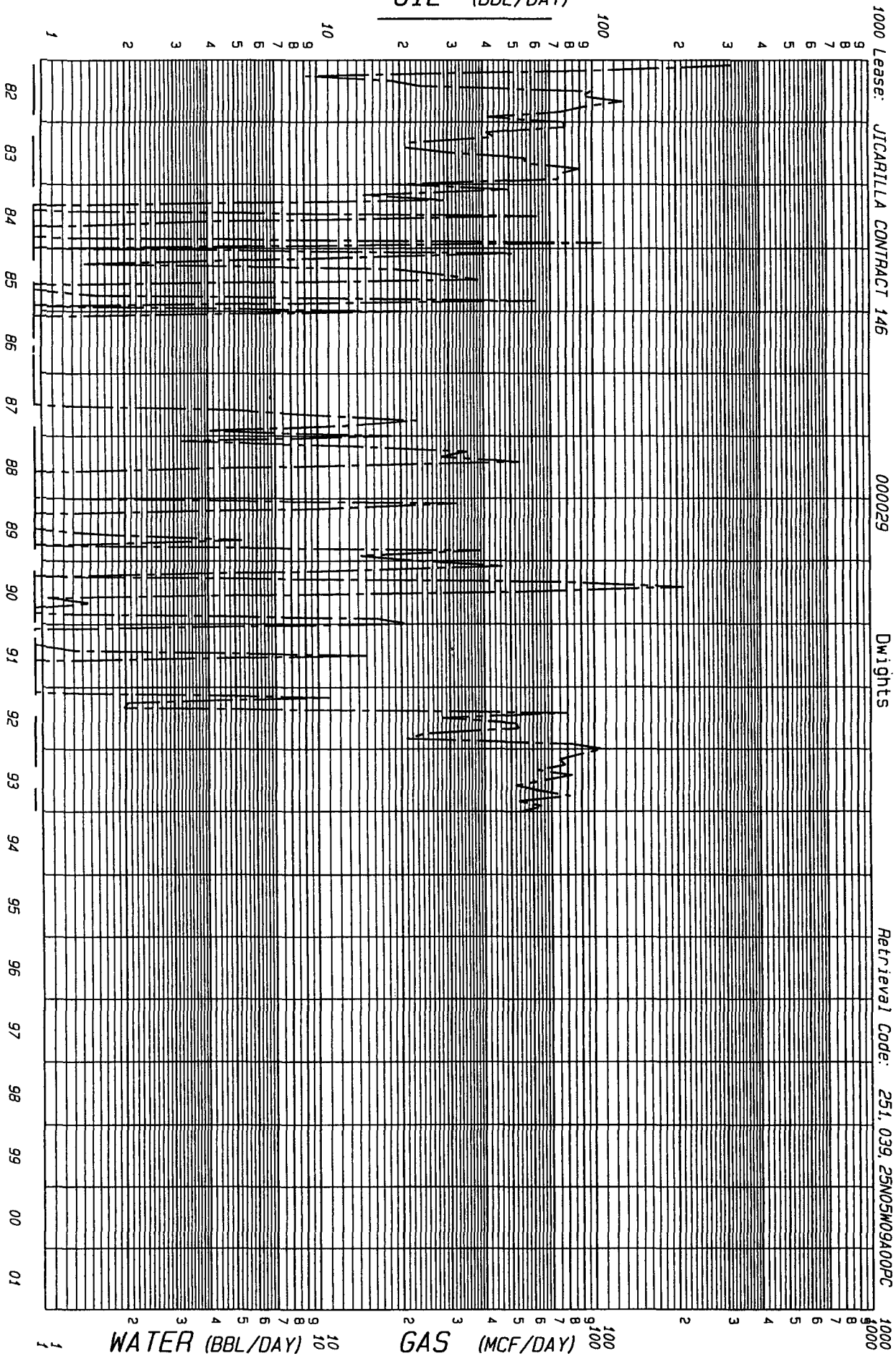
F.P. Date 01-82

County: RIO ARriba
Field: DIERO (CHACRA) CK
Reservoir: CHACRA
Operator: AMOCO PRODUCTION CO
Oil Cum: 0 Gas Cum: 192974
Location: 9A 25N 5W

State: NM

Date: 11-02-94

OIL (BBL/DAY)



1000 Lease: JICARILLA CONTRACT 146 000029 Dwrights Retrieval Code: 251, 039, 25N05H09A00PC

F.P. Date 01-82

County: RIO ARriba State: NM
Field: BLANCO SOUTH (PICTURE CLIFFS) PC
Reservoir: PICTURE CLIFFS
Operator: AMOCO PRODUCTION CO
Oil Cum: 0 Gas Cum: 129766
Location: 9A 25N 5W

Date: 11-02-94



1115 Farmington Avenue
Farmington, N.M. 87401
(505) 325-6622

Analysis No. AMO40631
Cust. No. 12300-12775

WELL/LEASE INFORMATION

Company	: AMOCO PRODUCTION COMPANY	Source	:
Well Name	: JICARILLA CONT. 146-29	Pressure	: N/A PSIG
County	:	Sample Temp.	: N/A DEG.F
State	:	Well Flowing	: YES
Location	:	Date Sampled	: 06/19/94
Fld/Formation	: PICTURED CLIFFS	Sampled By	: GREG VIGIL
Cust.Stn.No.	:	Foreman/Engr	: JAKE NUNEZ

Remarks: JICARILLA FIELD

ANALYSIS

COMPONENT	MOLE %	GPM**	B.T.U.*	SP.GR.*
NITROGEN	0.709	0.0000	0.00	0.0069
CO2	0.108	0.0000	0.00	0.0016
METHANE	83.411	0.0000	844.37	0.4620
ETHANE	7.786	2.0828	138.10	0.0808
PROPANE	4.625	1.2746	116.64	0.0704
I-BUTANE	0.984	0.3219	32.07	0.0197
N-BUTANE	1.192	0.3758	38.98	0.0239
I-PENTANE	0.408	0.1493	16.36	0.0102
N-PENTANE	0.267	0.0967	10.73	0.0067
HEXANES	0.510	0.2225	26.22	0.0164
TOTAL	100.000	4.5236	1223.47	0.6985

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

** @ 14.730 & 60 DEG. F

COMPRESSIBILITY FACTOR	(1/Z)	1.0033
BTU/CU.FT. (DRY) CORRECTED FOR	(1/Z)	1227.5
BTU/CU.FT. (WET) CORRECTED FOR	(1/Z)	1206.1
REAL SPECIFIC GRAVITY		0.7005

ANALYSIS RUN AT 14.730 PSIA & 60 DEGREES F

CYLINDER #	: N/A
CYLINDER PRESSURE	: 220 PSIG
DATE RUN	: 06/21/94
ANALYSIS RUN BY	: SHEILA FELTMAN



1115 Farmington Avenue
Farmington, N.M. 87401
(505) 325-6622

Analysis No. AMO40630
Cust. No. 12300-12770

WELL/LEASE INFORMATION

Company	: AMOCO PRODUCTION COMPANY	Source	:
Well Name	: JICARILLA CONT. 146-29	Pressure	: N/A PSIG
County	:	Sample Temp.	: N/A DEG.F
State	:	Well Flowing	: YES
Location	:	Date Sampled	: 06/19/94
Fld/Formation	: CHACRA	Sampled By	: GREG VIGIL
Cust.Stn.No.	:	Foreman/Engr	: JAKE NUNEZ

Remarks: JICARILLA FIELD

ANALYSIS

COMPONENT	MOLE %	GPM**	B.T.U.*	SP.GR.*
NITROGEN	0.416	0.0000	0.00	0.0040
CO2	0.244	0.0000	0.00	0.0037
METHANE	85.329	0.0000	863.78	0.4726
ETHANE	8.100	2.1668	143.67	0.0841
PROPANE	3.513	0.9682	88.59	0.0535
I-BUTANE	0.563	0.1842	18.35	0.0113
N-BUTANE	0.882	0.2781	28.84	0.0177
I-PENTANE	0.279	0.1021	11.19	0.0070
N-PENTANE	0.207	0.0750	8.32	0.0052
HEXANES	0.467	0.2037	24.01	0.0150
TOTAL	100.000	3.9781	1186.75	0.6740

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

** @ 14.730 & 60 DEG. F

COMPRESSIBILITY FACTOR	(1/Z)	1.0031
BTU/CU.FT. (DRY) CORRECTED FOR	(1/Z)	1190.4
BTU/CU.FT. (WET) CORRECTED FOR	(1/Z)	1169.7
REAL SPECIFIC GRAVITY		0.6758

ANALYSIS RUN AT 14.730 PSIA & 60 DEGREES F

CYLINDER #	: N/A
CYLINDER PRESSURE	: 215 PSIG
DATE RUN	: 06/21/94
ANALYSIS RUN BY	: SHEILA FELTMAN



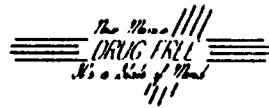
STATE OF NEW MEXICO

ENERGY, MINERALS and NATURAL RESOURCES DIVISION

OIL CONSERVATION DIVISION

AZTEC DISTRICT OFFICE

ANITA LOCKWOOD
CABINET SECRETARY



BRUCE KING
GOVERNOR

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

Date: 12/19/94

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

RE: Proposed MC _____
Proposed NSL _____
Proposed WFX _____
Proposed NSP _____

Proposed DHC X _____
Proposed SWD _____
Proposed PMX _____
Proposed DD _____

Gentlemen:

I have examined the application received on 12/2/94
for the Amoco Jicarilla 146 #29
OPERATOR LEASE & WELL NO.

A-9-25N-SW and my recommendations are as follows:
UL-S-T-R

Approve

Yours truly,

[Signature]