

DHC 10-17-95



OIL CONSERVATION DIVISION
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Southern

Rockies

Business

Unit

September 22, 1995

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

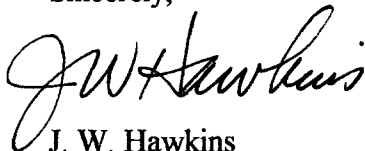
Application for Exception to Rule 303-A - Downhole Commingling
Jicarilla Contract 148 #18 Well
1850' FNL, 1590' FWL, Section 23-T25N-R5W
Otero Chacra and West Lindrith Gallup-Dakota Pool
Rio Arriba County, New Mexico

ALREADY PRODUCING
UNDER TEMPORARY PERMIT

Amoco Production Company hereby requests administrative approval to downhole commingle production from the Otero Chacra and West Lindrith Gallup-Dakota Pool in the Jicarilla Contract 148 #18 well referenced above. These two pools have been producing commingled in this well under temporary approval following an unsuccessful recompletion to the Mesaverde. The ownership of these two pools is identical in this wellbore. Downhole commingling will offer an economical method of production while protecting against reservoir damage, waste of reserve and violation of correlative rights.

The BLM and offset operators to this well will receive a copy of this application by certified mail, return receipt requested. If there are any questions concerning this matter, please contact me at (303) 830-5072.

Sincerely,


J. W. Hawkins

Enclosures

cc: Steve Smethie

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

Amerada Hess Corp
PO BOX 68
Farmington NM 87499

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 Contract 148
Well Number: #18
Well Location: 1850' FNL & 1590' FWL
Section 23, T25N-R5W
Rio Arriba County, New Mexico
Pools Commingled: Otero Chacra
West Lindreth Gallup-Dakota

- (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 15 mcf/d and no liquids. The West Lindreth Gallup-Dakota zone was loaded up and produced only intermittently. Since the two zones have been commingled they have been producing at an average stabilized rate of about 125 mcf/d with some condensate and water.

- (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.
West Lindreth Gallup-Dakota 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:	376 psia	330 psig	0'
West Lindreth Gallup-Dakota Completion	789 psia	5 psig	4000'

The Chacra BHP is calculated at the top of perfs @ 3885'. The Gallup-BHP is calculated at the top of the perf @ 6396'. When the Gallup pressure is calculated at a common datum as the Chacra (3885') using the gas gradient of 0.017 psi/ft at reservoir conditions, the pressure is 744 psia which is within the 50% tolerance of the pressure limitations.

- (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 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 for the Chacra making 15 mcf/d and no liquids and the Chacra and Gallup zones currently commingled producing an average of about 125 mcf/d, we recommend a gas allocation factor of 12% for the Chacra and 88% for the Gallup. We recommend to allocate 100% of the liquids to the Gallup zone.

- (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, Amerada Hess Corp., will receive a copy of this application by certified mail.

JICARILLA CONTRACT 148 NO 18
CHACRA AND GALLUP OFFSET WELLS
SCALE 1 IN. = 2,000 FT. DEC 16, 1994

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

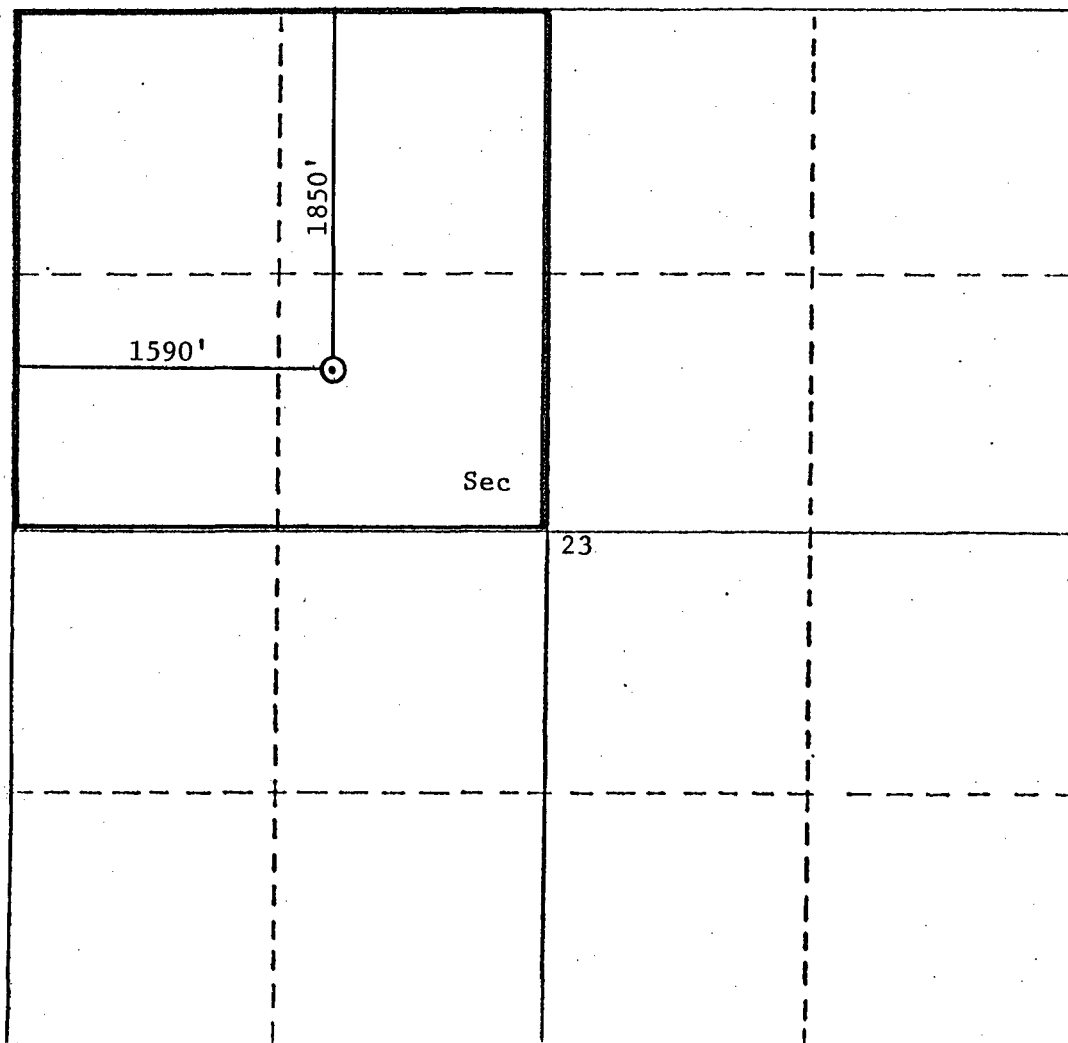
Operator AMOCO PRODUCTION COMPANY			Lease Jicarilla Contract 148		Well No. 18
Unit Letter F	Section 23	Township 25N	Range 5W	County Rio Arriba	
Actual Footage Location of Well:					
1850		North	line and	1590	West
feet from the				feet from the	line
Ground Level Elev. 6815	Producing Formation Chacra		Pool Otero Chacra		Dedicated Acreage: 160 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hatch 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 Division.



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
AUGUST 5, 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
November 30, 1978

Registered Professional Engineer and/or Land Surveyor
**Original signed by
Fred B. Kerr, Jr.**

Certificate No.
3950

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

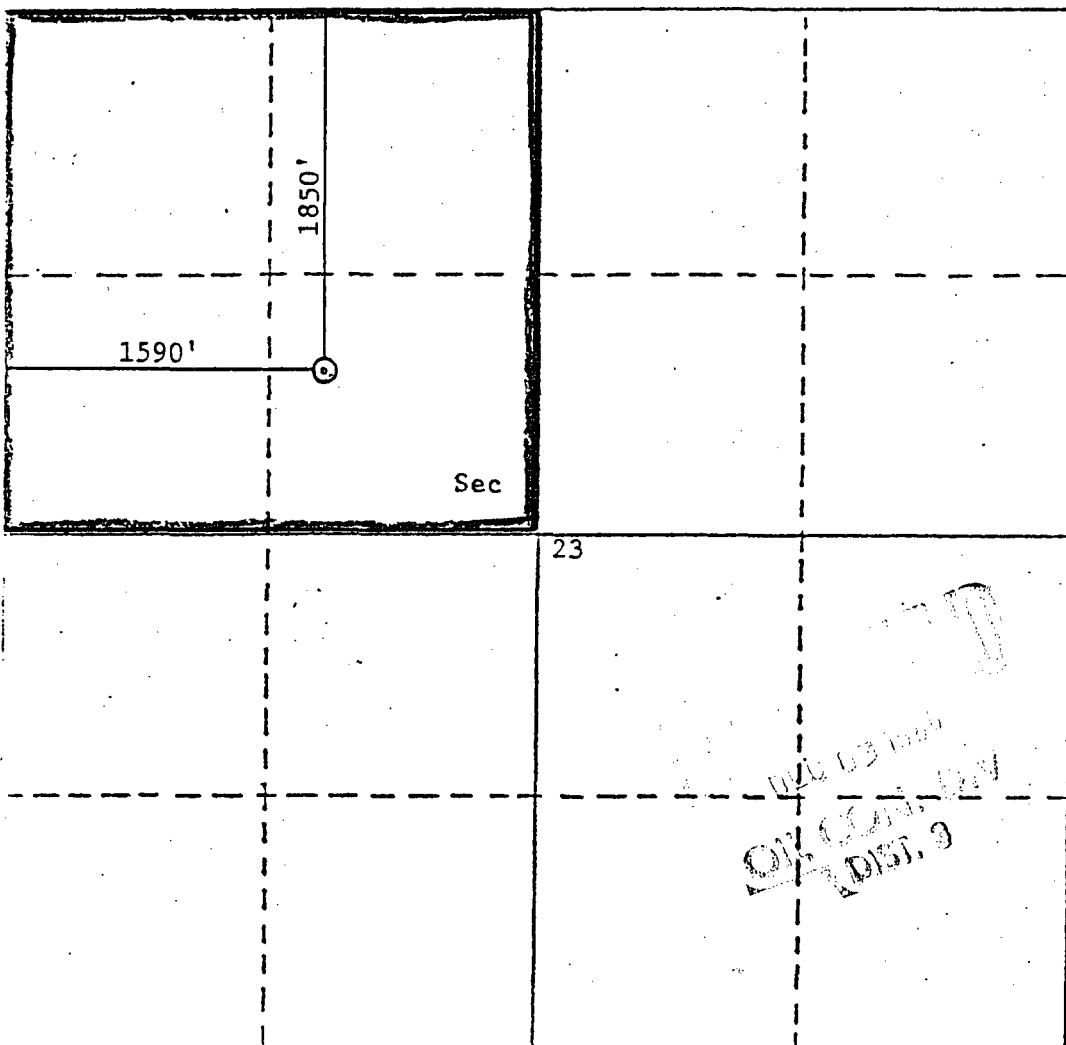
Operator AMOCO PRODUCTION COMPANY			Lease Jicarilla Contract 148		Well No. 18
Well Letter F	Section 23	Township 25N	Range 5W	County Rio Arriba	
Well Location: Location of well: 1850 feet from the North line and 1590 feet from the West line					
Ground Level Elev. 6815	Producing Formation Gallup-Dakota		Pool West Lindrith Gallup-Dakota		Dedicated Acreage: 160 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hatch 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 Division.



CERTIFICATION

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

B. D. Shaw

B. D. Shaw

Adm. Supervisor

Amoco Production Co.

December 1, 1986

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

November 30, 1978

Registered Professional Engineer and/or Land Surveyor

Original signed by
Fred B. Kerr, Jr.

Certificate No.

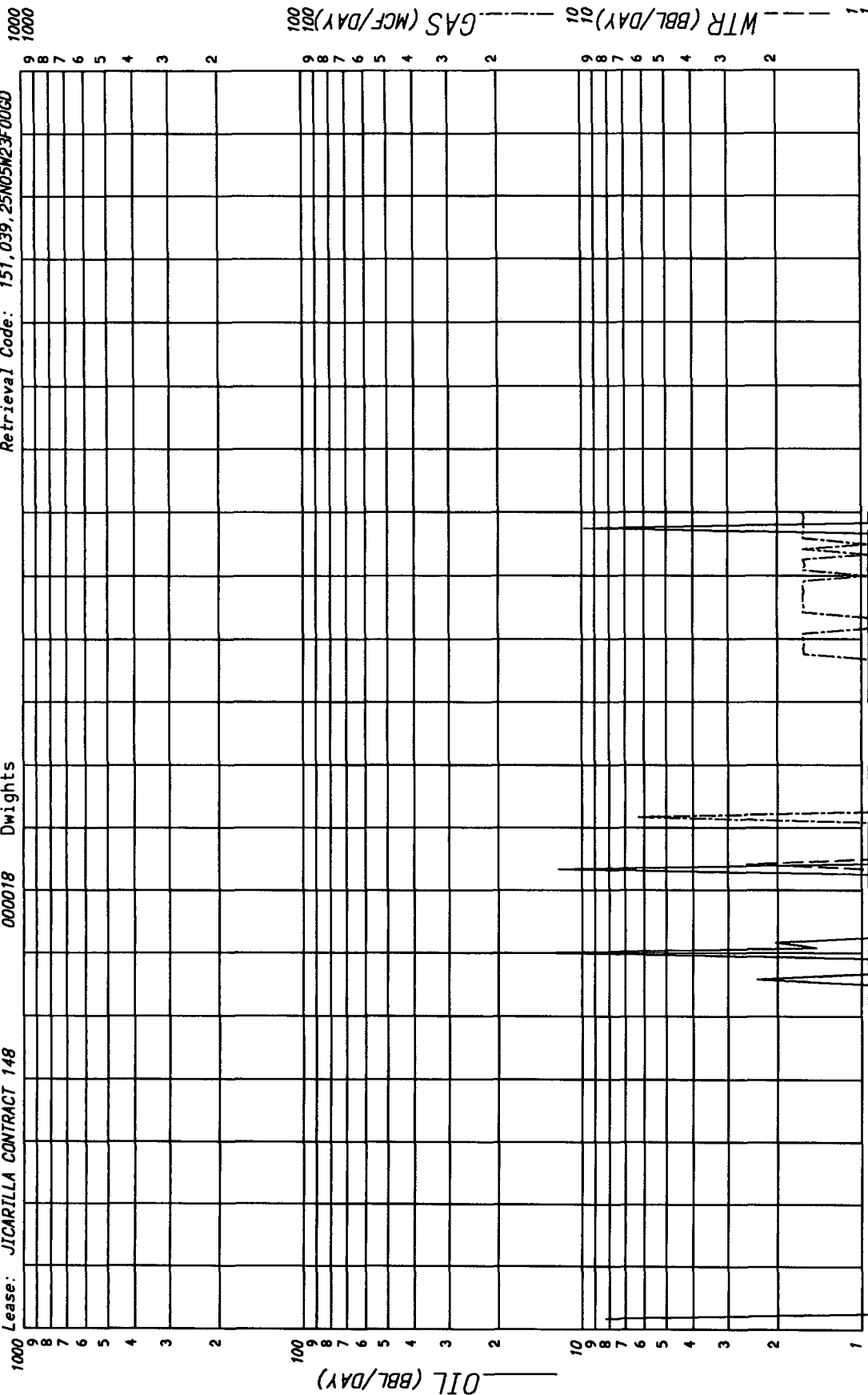
3950

100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 2500 2600 2700 2800 2900 3000 3100 3200 3300 3400 3500 3600 3700 3800 3900 4000 4100 4200 4300 4400 4500 4600 4700 4800 4900 5000 5100 5200 5300 5400 5500 5600 5700 5800 5900 6000 6100 6200 6300 6400 6500 6600 6700 6800 6900 7000 7100 7200 7300 7400 7500 7600 7700 7800 7900 8000 8100 8200 8300 8400 8500 8600 8700 8800 8900 9000 9100 9200 9300 9400 9500 9600 9700 9800 9900 10000

Lease: JICARILLA CONTRACT 148

000018

Retrieval Code: 151,039,25N05W23F00GD



County: RIO ARriba State: NM
Field: LINDRITH WEST (GALLUP DAKOTA) GD
Reservoir: GALLUP DAKOTA
Operator: AMOCO PRODUCTION CO
Oil Cum: 1231 Gas Cum: 1234
Location: 23F 25N 5W

F.P. Date 02-80

Date: 09-20-94



1118 Farmington Avenue
Farmington, N.M. 87401
(505) 326-6622

Analysis No. AMO41531
Cust. No. 12300 15405

WELL/LEASE INFORMATION

Company	: AMOCO PRODUCTION COMPANY	Source	:
Well Name	: JICARILLA CONT. 148 18	Pressure	: 5 PSIG
County	: RIO ARRIBA	Sample Temp.	: N/A DEG. F
State	: NM	Well Flowing	: NO
Location	: 23-25N-5W	Date Sampled	: 11/13/94
Fld/Formation	: GALLUP	Sampled By	: O.D.S.
Cust. Stn. No.	:	Foreman/Engr	: MIKE ROWLAND

Remarks: PRESSURED W/ HELIUM TO 15#,
UNNORMALIZED TOTAL = 70.764

ANALYSIS

COMPONENT	MOLES %	GPM**	B.T.U.*	SP. GR.*
NITROGEN	1.419	0.0000	0.00	0.0137
CO2	1.155	0.0000	0.00	0.0176
METHANE	85.828	0.0000	862.84	0.4754
ETHANE	5.848	1.5543	102.73	0.0607
PROPANE	3.168	0.8731	79.89	0.0482
I-BUTANE	0.505	0.1652	16.46	0.0101
N-BUTANE	0.773	0.2437	25.28	0.0155
I-PENTANE	0.230	0.0842	9.22	0.0057
N-PENTANE	0.172	0.0623	6.91	0.0043
HEXANES	0.902	0.3935	46.37	0.0290
TOTAL	100.000	3.3863	1156.70	0.6802

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

** @ 14.730 & 60 DEG. F

COMPRESSIBILITY FACTOR	(1/Z)	1.0030
BTU/CU. FT. (DRY) CORRECTED FOR	(1/Z)	1160.2
BTU/CU. FT. (WET) CORRECTED FOR	(1/Z)	1140.0
REAL SPECIFIC GRAVITY		0.6820

ANALYSIS RUN AT 14.730 PSIA & 60 DEGREES F

CYLINDER #	: AZT009
CYLINDER PRESSURE	: 5 PSIG
DATE RUN	: 11/14/94
ANALYSIS RUN BY	: CHELLE DURNIN



1115 Farmington Avenue
Farmington, N.M. 87401
(505) 325-6522

Analysis No. AMO41530
Cust. No. 12300-15400

WELL/LEASE INFORMATION

Company	: AMOCO PRODUCTION COMPANY	Source	:
Well Name	: JICARILLA CONT. 148-18	Pressure	: 280 PSIG
County	: RIO ARRIBA	Sample Temp.	: N/A DEG. F
State	: NM	Well Flowing	: NO
Location	: 23-25N-5W	Date Sampled	: 11/13/94
Fld/Formation	: CHACRA	Sampled By	: O.D.B.
Cust. Sth. No.	:	Foreman/Engr	: MIKE ROWLAND

Remarks:

ANALYSIS

COMPONENT	MOLE %	GPM**	B.T.U. *	SP. GR. *
NITROGEN	1.208	0.0000	0.00	0.0117
CO2	0.177	0.0000	0.00	0.0027
METHANE	87.284	0.0000	883.58	0.4835
ETHANE	6.468	1.7302	114.72	0.0672
PROPANE	3.244	0.8946	81.86	0.0494
I-BUTANE	0.492	0.1609	16.04	0.0099
N-BUTANE	0.645	0.2034	21.09	0.0129
I-PENTANE	0.156	0.0871	6.26	0.0039
N-PENTANE	0.087	0.0315	3.60	0.0022
HEXANE	0.237	0.1024	12.19	0.0076
TOTAL	100.000	3.1811	1139.22	0.6510

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

** @ 14.730 & 60 DEG. F

COMPRESSIBILITY FACTOR	(1/E)	1.0028
BTU/CU. FT. (DRY) CORRECTED FOR (1/E)		1142.4
BTU/CU. FT. (WET) CORRECTED FOR (1/E)		1122.5
REAL SPECIFIC GRAVITY		0.6526

ANALYSIS RUN AT 14.730 PSIA & 60 DEGREES F

CYLINDER #	: 047A
CYLINDER PRESSURE	: 307 PSIG
DATE RUN	: 11/14/94
ANALYSIS RUN BY	: CHELLE DURBIN

JICARILLA CONTACT 148 #18
PRODUCTION ALLOCATION PERCENTAGES

PRODUCING WITH A PLUNGER APPROX 125 MCFD

THE CHACRA PRODUCED 15 MCFD, 0 BOD AND 0 BWD BEFORE PRODUCTION WAS COMMINGLED. THE WELL IS PRODUCING OIL AND WATER NOW, SO THE LIQUIDS SHOULD BE ALLOCATED TO THE GALLUP. THE RECOMMEDED PRODUCTION ALLOCATION FAFACTORS ARE:

<u>FORMATION</u>	<u>GAS</u>	<u>OIL</u>	<u>WATER</u>
CHACRA	.12	0	0
GALLUP	.88	1.00	1.00

IF THERE ARE ANY QUESTIONS OR CONCERNS REGARDING THESE RECOMMEDED PRODUCTION ALLOCATION FACTORS, PLEASE CONTACT STEVE SMETHIE (303) 830-5892.

14818DHC



BRUCE KING
GOVERNOR

STATE OF NEW MEXICO

ENERGY, MINERALS and NATURAL RESOURCES DIVISION
OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

ANITA LOCKWOOD
CABINET SECRETARY

'95 NOV 3 AM 8 52

1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6170

Date: 11/2/95

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 9/27/95
for the Amoco Jicamilla Contract 148 #18
OPERATOR LEASE & WELL NO.

F-23-25N-SW and my recommendations are as follows:
UL-S-T-R

Approve

Yours truly,

[Signature]