AMERADA HESS CORPORATION

P. O. DRAWER "D"
MONUMENT, NEW MEXICO 88265

May 25, 1983

State of New Mexico
Energy and Minerals Department
Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87501

RE: Jicarilla Apache "A" #4, Sec. 26, T25N, R5W
Jicarilla Apache "F" #1, Sec. 17, T25N, R5W
Jicarilla Apache "F" #3, Sec. 18, T25N, R5W

Request to downhole commingle the S. Blanco Pictured Cliffs and Otero Chacra Gas zones

Dear Sir:

Amerada Hess Corporation is requesting approval for an exception to Rule 303-C to permit the downhole commingling of the Pictured Cliffs and Chacra gas zones in the wellbores of the Jicarilla Apache "A" #4, Jicarilla Apache "F" #1 and the Jicarilla Apache "F" #3, Permission to dually complete these wells was authorized by administrative orders R-890, MC-1789 and DC-716, respectively.

To aid in the removal of formation fluids from the Pictured Cliffs zone, 3/4" siphon strings are in place in the J. Apache "F" #1 and the "F" #3. These wells are blown down periodically in order to keep the casing side producing. As a result, production increases for a short period of time then decreases as wellbore fluids inhibit the flow of gas. The Pictured Cliffs in the J. Apache "A" #4 produces without a siphon string but the commingled pressures of both zones will more effectively lift fluids from the Chacra zone. Upon receiving approval to downhole commingle, the 3/4" siphon strings will be removed from these wells and they will be produced through a common string of production tubing set open-ended in the Chacra perforations.

Annual packer leakage tests were conducted on these wells in April of this year and the shut-in pressure data obtained from them was used to calculate bottom hole pressures. Calculations showed the formation pressures between zones to be as follows:

J. Apache "A" #4	P.C.	467 psia @ 3936'
	CH.	521 psia @ 3936'
J. Apache "F" #1	P.C.	409 psia @ 3647'
	CH.	342 psia @ 3647'
J. Apache "F" #3	P.C.	381 psia @ 3616'
	CH.	363 psia @ 3616'

Pressures were recorded after a five day buildup for the Pictured Cliffs and after a three day buildup for the Chacra. These surface pressures were then corrected to sand face pressures at common datums. It is evident that there will be no problems with crossflow between zones.

In 1977, Amerada Hess Corporation's Jicarilla Apache "A" #8 and the Jicarilla Apache "F" #12 were downhole commingled in the Pictured Cliffs and Chacra gas zones by administrative order R-5578. To date, there have been no indications of fluid incompatibility between the zones and therefore expect no problems of this nature when the J. Apache "A" #4 and the J. Apache Nos. 1 and 3 are downhole commingled.

The ownership of the zones to be commingled is common with respect to working interest, royalty and overriding royalty.

Presently, Amerada Hess is receiving $0.8070/MCF for the gas from the three subject wells, so, therefore, the value of the commingled production will not be less than the sum of the values of the individual streams.

Attached with this proposal are computations showing the production allocation to each zone in the three wells. Decline curves were used to get annual decline rates and these were used with an algebraic derivation to calculate allocation percentages. These percentages are:

J. Apache "A" #4	P.C.	45%
	CH.	55%

J. Apache "F" #1	P.C.	26%
	CH.	74%
J. Apache "F" #3	P.C.	34%
	CH.	66%

All offset operators as well as the Bureau of Land Management in Farmington, New Mexico, have been notified of this proposal by receipt of this recommendation. If you have any questions concerning this matter, please contact me.

Respectfully,

D.W. Holmes

D.W. Holmes
Petroleum Engineer

AMERADA HESS CORPORATION
Drawer "D"
Monument, New Mexico 88265

Phone: (505) 393-2883

Encl.

XC: Division Director (5)
District Office
Offset Operators
Bureau of Land Management (6)

DWH/car

OFFSET OPERATORS

AMOCO Production Company
501 Airport Drive
Farmington, New Mexico 87401

CONOCO, Inc.
501 Airport Drive
Farmington, New Mexico 87401

Energy Reserves Group, Inc.
P.O. Box 977
Farmington, New Mexico 87499

El Paso Natural Gas Company
P.O. Box 990
Farmington, New Mexico 87499

Getty Oil Company
P.O. Box 501
Farmington, New Mexico 87499

Union Texas Petroleum Corporation
P.O. Box 808
Farmington, New Mexico 87499

Western Oil and Minerals, LTD
3001 Northridge Drive
Farmington, New Mexico 87401

JICARILLA APACHE "A" #4

Allocation of Production to Each Zone

Decline Rate Computations:

Pictured Cliffs Zone

qi = 1850 MCF/mo.
q = 1600 MCF/mo.
t = 4 years

$$a_n = \frac{\ln 1850/1600}{4}$$

$a_n = 0.03630/yr.$ (P.C.)

Chacra Zone

qi = 2500 MCF/mo.
q = 1800 MCF/mo.
t = 4 years

$$a_n = \frac{\ln 2500/1800}{4}$$

$a_n = 0.08213/yr.$ (CH)

Pictured Cliffs/Chacra Combined

qi = 4350/MCF mo.
q = 3400 MCF/mo.
t = 4 years

$$a_n = \frac{\ln 4350/3400}{4}$$

$a_n = 0.06160/yr.$ (COMB)

Actual Allocation:

X = Pictured Cliffs Allocation
X-1 = Chacra Allocation

$$0.06160 = (X)(0.03630) + (1-X)(0.08213)$$
$$0.06160 = (X)(0.03630) + (0.08213) - (X)(0.08213)$$
$$-0.02053 = (X)(-0.04583)$$

X = 0.44796
1-X = 0.55204

Therefore:

Pictured Cliffs Production Allocation = 45%
Chacra Production Allocation = 55%

Jicarilla Apache "F" #1
Allocation of Production to Each Zone

Decline Rate Computations:

Pictured Cliffs
Zone

qi = 540 MCF/mo.
q = 500 MCF/mo.
t = 4 years

$$a_n = \frac{\ln 540/500}{4}$$

$$a_{n(PC)} = 0.01924/yr.$$

Chacra
Zone

qi = 1600 MCF/mo.
q = 1400 MCF/mo.
t = 4 years

$$a_n = \frac{\ln 1600/1400}{4}$$

$$a_{n(CH)} = 0.03338/yr.$$

Pictured Cliffs/Chacra
Combined

qi = 2140 MCF/mo.
q = 1900 MCF/mo.
t = 4 years

$$a_n = \frac{\ln 2140/1900}{4}$$

$$a_{n(COMB)} = 0.02974/yr.$$

Actual Allocation:

X = Pictured Cliffs Allocation
1-X = Chacra Allocation

$$0.02974 = (X)(0.01924) + (1-X)(0.03338)$$
$$0.02974 = (X)(0.01924) + (0.03338) - (X)(0.03338)$$
$$-0.00364 = (X)(-0.01414)$$

X = 0.25743
1-X = 0.74257

Therefore:

Pictured Cliffs Production Allocation = 26%
Chacra Production Allocation = 74%

Jicarilla Apache "F" #3
Allocation of Production to Each Zone

Decline Rate Computations:

Pictured Cliffs
Zone

qi = 1300 MCF/mo.
q = 970 MCF/mo.
t = 4 years

$$a_n = \frac{\ln 1300/970}{4}$$

$$a_{n_{(PC)}} = 0.07321/yr$$

Chacra
Zone

qi = 2600 MCF/mo.
q = 1750 MCF/mo.
t = 4 years

$$a_n = \frac{\ln 2600/1750}{4}$$

$$a_{n_{(CH)}} = 0.09897/yr.$$

Pictured Cliffs/Chacra
Combined

qi = 3900 MCF/mo.
q = 2720 MCF/mo.
t = 4 years

$$a_n = \frac{\ln 3900/2720}{4}$$

$$a_{n_{(COMB)}} = 0.09009/yr.$$

Actual Allocation:

X = Pictured Cliffs Allocation
1-X = Chacra Allocation

$$0.09009 = (X)(0.07321) + (1-X)(0.09897)$$
$$0.09009 = (X)(0.07321) + (0.09897) - (X)(0.09897)$$
$$-0.00888 = (X)(-0.02576)$$

X = 0.34472
1-X = 0.65528

Therefore:

Pictured Cliffs Production Allocation = 34%
Chacra Production Allocation = 66%

Equations Used:

Decline Rates

$$a_n = \frac{qi/q}{t}$$

a_n = nomical decline, per yr.
qi = initial flow rate, MCF/mo.
q = later flow rate, MCF/mo.
t = time between rates, yrs.

Allocation

$$a_{n\,(COMB)} = (X)(a_{n\,(PC)}) + (1-X)(a_{n\,(CH)})$$

$a_{n\,(COMB)}$ = combined decline rates
$a_{n\,(PC)}$ = Pictured Cliffs decline rate
$a_{n\,(CH)}$ = Chacra decline rate

CALCULATION OF STATIC BOTTOM-HOLE PRESSURES

Equation to be Used:

$$Psfs = Pwhs \times e^{C/\bar{z}}$$

Where: $C = \frac{(\gamma g)(TVD)}{53.34\ \bar{T}}$

Psfs = Static sandface pressure, psia
Pwhs = Static wellhead pressure, psia
e = 2.7183
γg = Gas gravity
TVD = True vertical depth, feet
$\bar{T}$ = Average temperature, °R
$\bar{z}$ = Average compressibility factor

Assumptions:

Patm = 12.2 psia
Temp. Grad. = 0.028 °F/ft.
Avg. Surf. Temp. = 60 °F

Jicarilla Apache "A" #4

Pictured Cliffs Zone:

P.C. $\gamma_g = 0.679$
Pwhs = 422 psia from pkr. leak. test
TVD = 3064'

$\bar{T} = (60 + 86)/2 = 73\ ^oF = 533\ ^oR$

$C = \frac{(0.679)(3064)}{53.34\ (533)} = 0.073$

Ppc = 670 psia
Tpc = 383 ^oR

Tr = 533/383 = 1.39

Assume: Psfs = 470 psia $\qquad \bar{p} = (470 + 422)/2 = 446$ psia

Pr = 446/670 = 0.67 $\quad \therefore \bar{z} = 0.912$

$Psfs = (422)\ e^{.073/.912} = 457$ psia

Assume: $\bar{p} = (457 + 422)/2 = 440$ psia

Pr = 440/670 = 0.66 $\quad \therefore \bar{z} = 0.913$

$Psfs = (422)e^{.073/.913} = 457$ psia

Psfs = 457 psia for Pictured Cliffs zone

Chacra Zone:

CH $\gamma_g = 0.664$
Pwhs = 472 psia from pkr. leak. test
TVD = 3936'

$\bar{T} = (60 + 110)/2 = 85\ ^oF = 545\ ^oR$

$C = \frac{(0.664)(3936)}{53.34\ (545)} = 0.090$

Ppc = 670 psia
Tpc = 379 ^oR

Tr = 545/379 = 1.44

J. Apache "A" #4 - Cont.

Assume: Psfs = 510 psia $\quad \bar{p} = (510 + 472)/2 = 491$ psia

Pr = 491/670 = 0.73 $\quad \therefore \bar{z} = 0.915$

$$Psfs = (472)\, e^{.090/.915} = 521 \text{ psia}$$

Assume: $\bar{p} = (521 + 472)/2 = 497$ psia

Pr = 497/670 = 0.74 $\quad \therefore \bar{z} = 0.914$

$$Psfs = (472)\, e^{.090/.914} = 521 \text{ psia}$$

Psfs = 521 psia for Chacra Zone

To correct P.C. press. to common datum of 3936':

$T = (86 + 110)/2 = 98\ ^{o}F = 558\ ^{o}R$

Ppc = 670 psia
Tpc = 383 ^{o}R $\quad$ Tr = 558/383 = 1.46

$$C = \frac{(0.679)(872)}{53.34\ (558)} = 0.020$$

Assume: Psfs = 480 psia $\quad \bar{p} = (480 + 457)/2 = 469$ psia

Pr = 469/670 = 0.70 $\quad \therefore \bar{z} = 0.925$

$$Psfs = (457)\, e^{.02/.925} = 467 \text{ psia}$$

Assume: $\bar{p} = (467 + 457)/2 = 462$ psia

Pr = 462/670 = 0.69 $\quad \therefore \bar{z} = 0.926$

$$Psfs = (457)\, e^{.02/.926} = 467 \text{ psia}$$

Psfs = 467 psia for P.C. zone at common datum of 3936'

Pictured Cliffs SBHP at 3936' = 467 psia

Chacra SBHP at 3936' = 521 psia

Therefore:

No crossflow between zones will take place since the low pressure zone (467 psia) is greater than 50% of the high pressure zone (261 psia).

Jicarilla Apache "F" #1

Pictured Cliffs Zone:

P.C. $\gamma_g = 0.683$
Pwhs = 372 psia from pkr. leak. test
TVD = 2757'

$\bar{T} = (60 + 77)/2 = 69\ ^{o}F = 529\ ^{o}R$

$C = \frac{(0.683)(2757)}{53.34\ (529)} = 0.067$

Ppc = 669 psia
Tpc = 385 ^{o}R

Tr = 529/385 = 1.37

Assume: Psfs = 400 psia $\qquad \bar{p} = (400 + 372)/2 = 386$ psia

Pr = 386/669 = 0.58 $\qquad \therefore \bar{z} = 0.924$

$Psfs = (372)\ e^{.067/.924} = 400$ psia

Psfs = 400 psia for Pictured Cliffs Zone

Chacra Zone:

CH $\gamma_g = 0.672$
Pwhs = 312 psia from pkr. leak. test
TVD = 3647'

$\bar{T} = (60 + 102)/2 = 81\ ^{o}F = 541\ ^{o}R$

$C = \frac{(0.672)(3647)}{53.34\ (541)} = 0.085$

Ppc = 669 psia
Tpc = 380 ^{o}R

J. Apache "F" #1 - Cont.

$Tr = 541/380 = 1.42$

Assume: $Psfs = 345$ psia $\qquad \bar{p} = (345 + 312)/2 = 329$ psia

$Pr = 329/669 = 0.49 \qquad \therefore \bar{z} = 0.940$

$$Psfs = (312)\, e^{.085/.940} = 342 \text{ psia}$$

Psfs = 342 psia for Chacra Zone

To correct P.C. press. to common datum of 3647':

$\bar{T} = (77 + 102)/2 = 90\ ^{o}F = 550\ ^{o}R$

$Ppc = 669$ psia
$Tpc = 385\ ^{o}R$

$Tr = 550/385 = 1.43$

$$C = \frac{(0.683)(890)}{53.34\ (550)} = 0.021$$

Assume: $Psfs = 410$ psia $\qquad \bar{p}$ $(410 + 400)/2 = 405$ psia

$Pr = 405/669 = 0.61 \qquad \therefore \bar{z} = 0.930$

$$Psfs = (400)\, e^{.021/.930} = 409 \text{ psia}$$

Psfs = 409 psia for P.C. zone at common datum of 3647'

Pictured Cliffs SBHP at 3647' = 409 psia

Chacra SBHP at 3647' = 342 psia

Therefore:

No crossflow between zones will take place since the low pressure zone (342 psia) is greater than 50% of the high pressure zone (205 psia).

Jicarilla Apache "F" #3

Pictured Cliffs Zone:

P.C. $\gamma_g = 0.685$
Pwhs = 347 psia from pkr. leak. test
TVD = 2770'

$\bar{T} = (60 + 78)/2 = 69\ ^{o}F = 529\ ^{o}R$

$C = \frac{(0.685)(2770)}{53.34\ (529)} = 0.067$

Ppc = 669 psia
Tpc = 385 ^{o}R

Tr = 529/385 = 1.37

Assume: Psfs = 375 psia $\qquad \bar{p}\ (375 + 347)/2 = 361$ psia

Pr = 361/669 = 0.54 $\qquad \therefore \bar{z} = 0.927$

$Psfs = (347)\ e^{.067/.927} = 373$ psia

Psfs = 373 psia for Pictured Cliffs Zone

Chacra Zone:

CH $\gamma_g = 0.675$
Pwhs = 332 psia from pkr. leak. test
TVD = 3616'

$\bar{T} = (60 + 101)/2 = 81\ ^{o}F = 541\ ^{o}R$

$C = \frac{(0.675)(3616)}{53.34\ (541)} = 0.085$

Ppc = 669 psia
Tpc = 380 ^{o}R $\qquad$ Tr = 541/380 = 1.42

Assume: Psfs = 355 psia $\qquad \bar{p} = (355 + 332)/2 = 344$ psia

Pr = 344/669 = 0.51 $\qquad \therefore \bar{z} = 0.940$

$Psfs = (332)\ e^{.085/.940} = 363$ psia

J. Apache "F" #3 - Cont.

Assume: $\bar{p} = (363 + 332)/2 = 348$ psia

$Pr = 348/669 = 0.52 \qquad \therefore \bar{z} = 0.939$

$Psfs = (332)\, e^{.085/.939} = 363$ psia

Psfs = 363 psia for Chacra Zone

To correct P.C. press. to common datum of 3616':

$\bar{T} = (78 + 101)/2 = 90\ ^{o}F = 550\ ^{o}R$

Ppc = 669 psia
Tpc = 385 ^{o}R

$Tr = 550/385 = 1.43$

$c = \dfrac{(0.685)(846)}{53.34\ (550)} = 0.020$

Assume: Psfs = 383 psia $\qquad \bar{p} = (383 + 373)/2 = 378$ psia

$Pr = 378/669 = 0.57 \qquad \therefore \bar{z} = 0.933$

$Psfs = (373)\, e^{.020/.933} = 381$ psia

Psfs = 381 psia for P.C. zone at common datum of 3616'

Pictured Cliffs SBHP at 3616' = 381 psia
Chacra SBHP at 3616' = 363 psia

Therefore:

No crossflow between zones will take place since the low pressure zone (363 psia) is greater than 50% of the high pressure zone (191 psia).

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-116
Revised 10-1-78

GAS - OIL RATIO TESTS

Operator	Pool	County
AMERADA HESS CORPORATION	S. Blanco Pictured Cliffs	Rio Arriba

Address	TYPE OF TEST - (X)	Scheduled ☐	Completion ☐	Special ☒
Drawer "D", Monument, New Mexico 88265				

LEASE NAME	WELL NO.	LOCATION U	S	T	R	DATE OF TEST	STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST WATER BBLS.	GRAV. OIL	OIL BBLS.	GAS M.C.F.	GAS - OIL RATIO CU.FT/BBL
Jicarilla Apache "A"	4	P	26	25	5	5-21-83	F	--	180	--	24	0	--	0	53	---
Jicarilla Apache "F"	1	J	17	25	5	5-21-83	F	--	170	--	24	0	--	0	18	---
Jicarilla Apache "F"	3	D	18	25	5	5-21-83	F	--	200	--	24	0	--	0	37	---

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Division.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Division in accordance with Rule 301 and appropriate pool rules.

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

D. W. Holmes
(Signature)

Petroleum Engineer
(Title)

May 24, 1983
(Date)

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-116
Revised 10-1-78

GAS - OIL RATIO TESTS

Operator: AMERADA HESS CORPORATION
Pool: Otero Chacra
County: Rio Arriba
Address: Drawer "D", Monument, New Mexico 88265
TYPE OF TEST - (X): Scheduled ☐ Completion ☐ Special ☒

LEASE NAME	WELL NO.	LOCATION U	S	T	R	DATE OF TEST	STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST WATER BBLS.	GRAV. OIL	OIL BBLS.	GAS M.C.F.	GAS - OIL RATIO CU.FT/BBL.
Jicarilla Apache "A"	4	P	26	25	5	5-21-83	F	--	170	--	24	0	--	0	90	---
Jicarilla Apache "F"	1	J	17	25	5	5-21-83	F	--	180	--	24	0	--	0	35	---
Jicarilla Apache "F"	3	D	18	25	5	5-21-83	F	--	200	--	24	0	--	0	92	---

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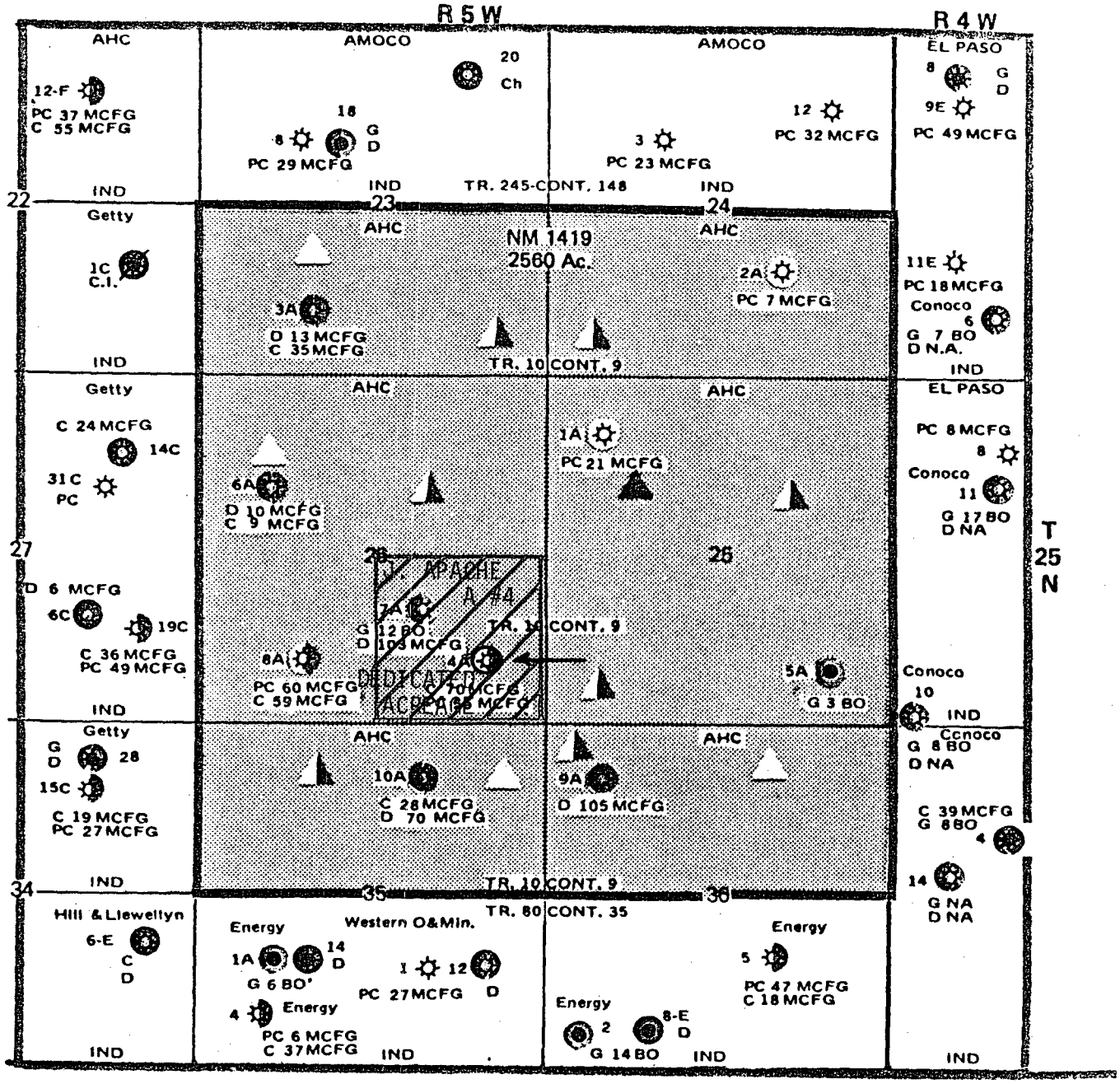
D. W. Holmes
(Signature)
Petroleum Engineer
(Title)
May 24, 1983
(Date)



LOCATION MAP

LEGEND

- AHC
- Pictured Cliffs
- Chacra
- Gallup
- Dakota/Graneros
- Dual Completion (Zones as color coded)
- Lease Outline
- Offsetting Wells Outline
- Proposed Wells

TYPE OF OWNERSHIP

Ind. - Jicarilla Apache
Fed. - Federal
St. - State

TULSA EXPLORATION REGION

JICARILLA APACHE "A"

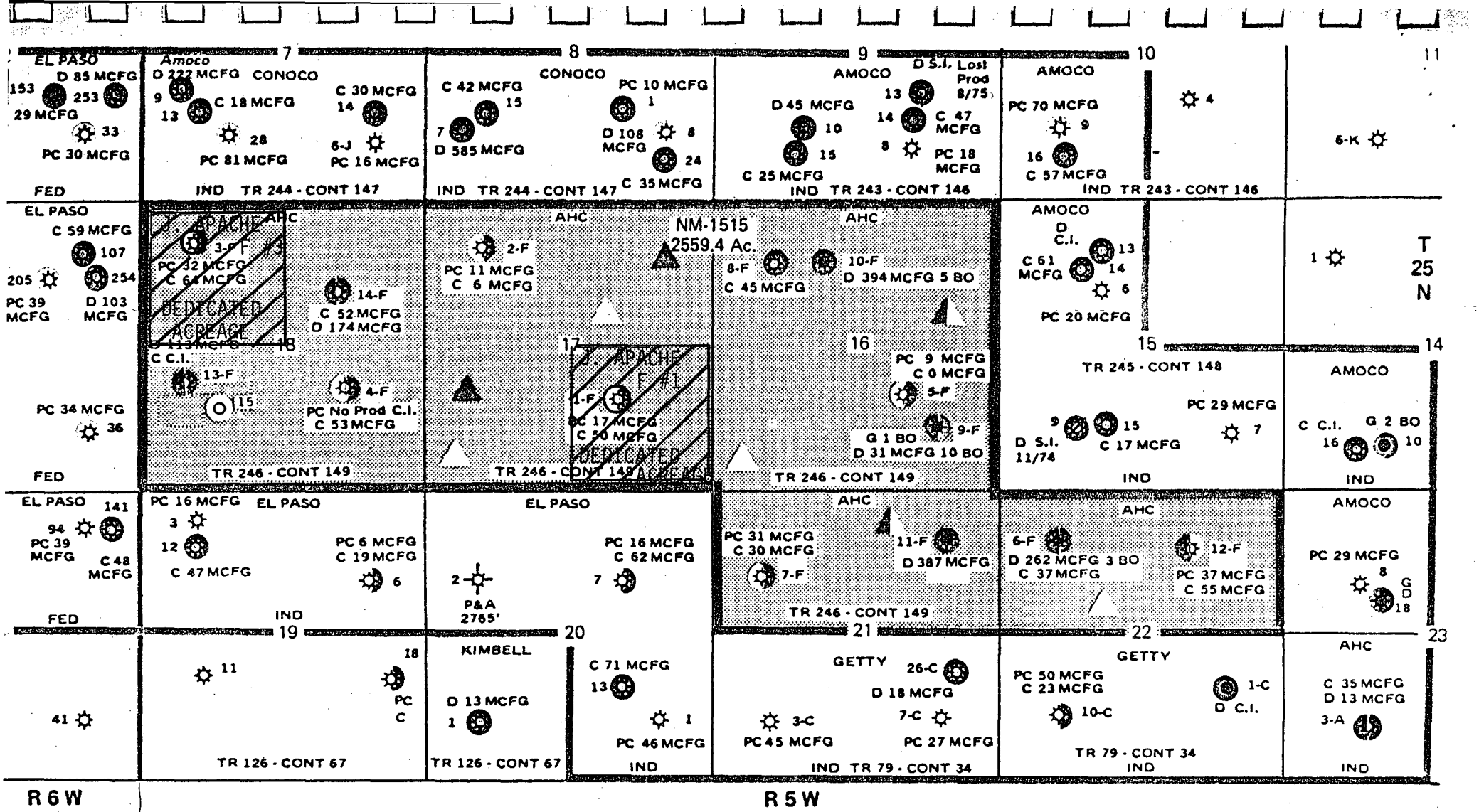
Rio Arriba County, New Mexico

AMERADA HESS

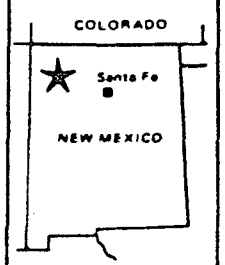
CONTRACT NO. 9 LEASE N M-1419

0 1/2 1 Mile

Volumes indicate average daily production for 1st half of 1981.



LOCATION MAP



LEGEND

- AHC
- Pictured Cliffs
- Chacra
- Gallup
- Dakota/Graneros
- Dual Completion (Zones as color coded)
- Lease Outline
- Offsetting wells Outline
- Proposed Wells

TYPE OF OWNERSHIP

Ind. - Jicarilla Apache

Fed.- Federal

St. - State

TULSA EXPLORATION REGION

JICARILLA APACHE "F"

Rio Arriba County, New Mexico

AMERADA HESS

CONTRACT NO. 149, LEASE NM-1515

0 1/2 1 Mile

Volumes indicate average daily production for 1st half of 1981.

PRODUCTION PLOT

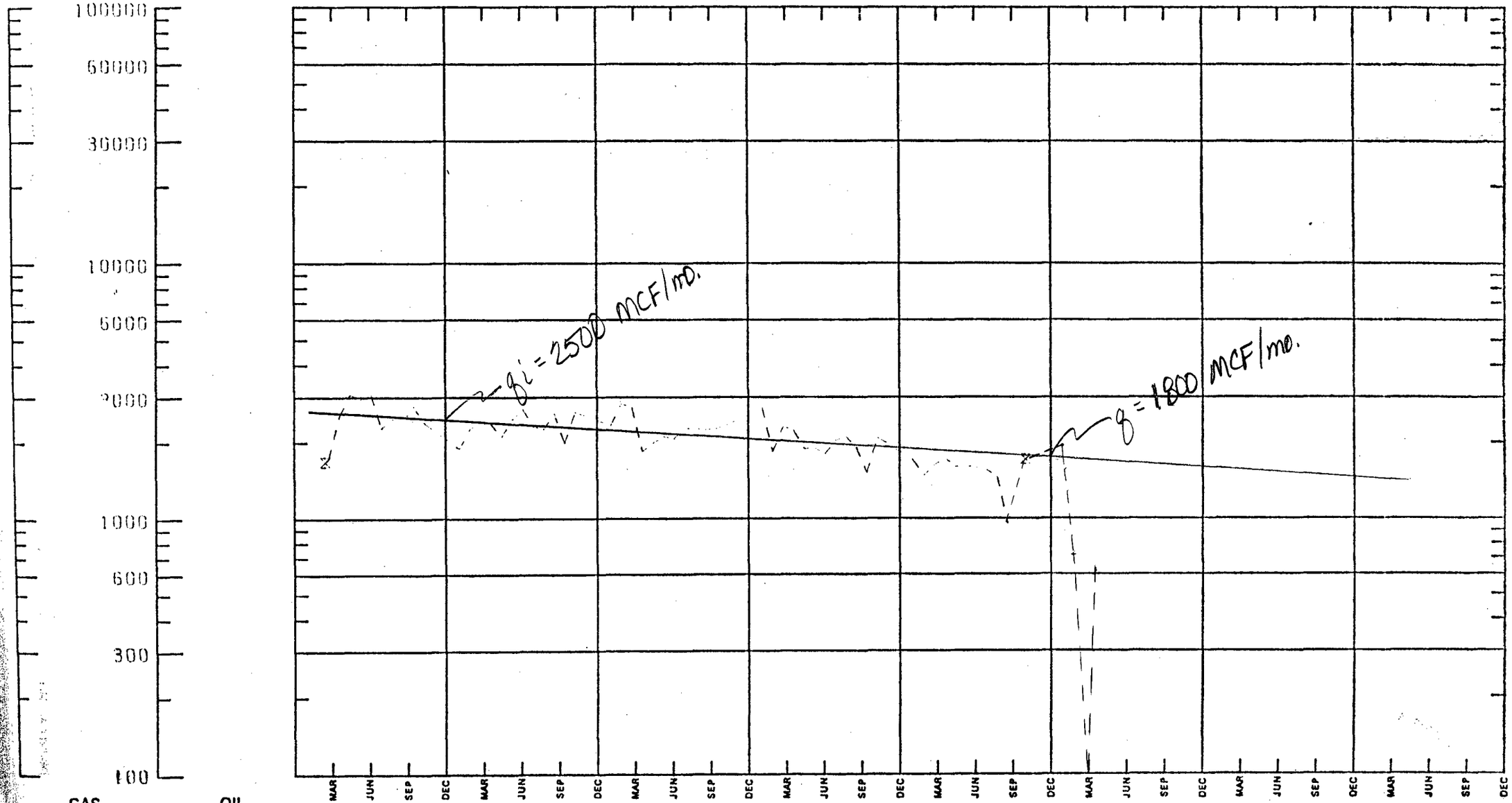
AHEP-5088-B

DATA CODES
OIL = ⓞ
GAS = ⊠
WTR = ✳

CUMULATIVES:
OIL MBBLS
GAS MMCF 574.4 602.2 629.9 654.4 671.7 675.2
WTR MBBLS 0.2 0.2 0.2 0.2 0.2 0.2

STATUS:
41 ON 1 /1 /83

755



WTR BBL/MO

GAS MCF/MO

OIL BBL/MO

REGION: SOUTHWEST REGIO

FIELD: OTERO FIELD

POOL: /CHACRA/

LEASE: 00092 JICARILLA APACH

WELL: A 41

PRODUCTION PLOT

AHEP-5085-B

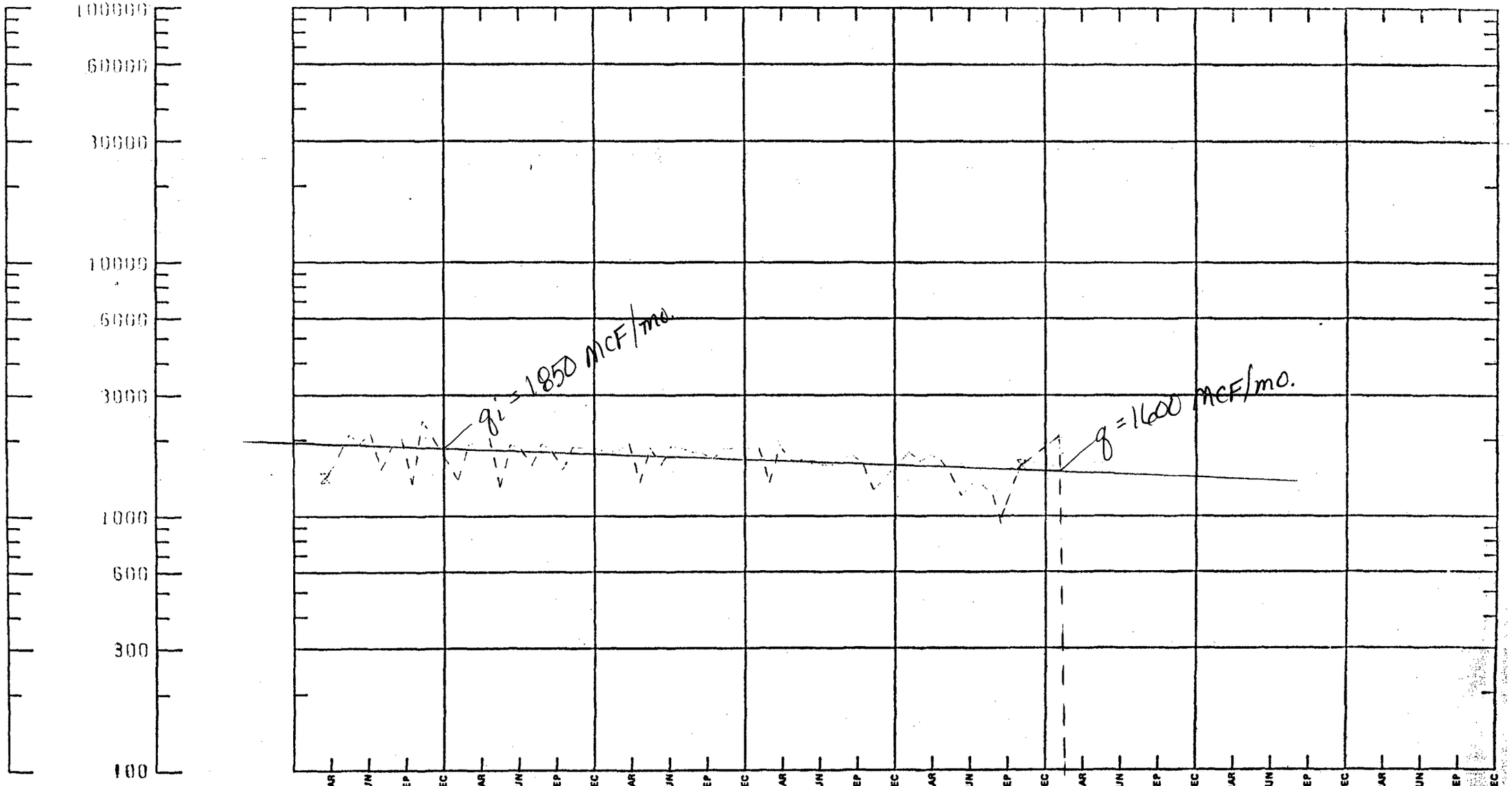
DATA CODES
OIL = ⊙
GAS = ⊠
WTR = ✳

CUMULATIVES:

OIL MBBLS						
GAS MMCF	592.0	613.5	634.6	654.5	669.8	672.9
WTR MBBLS	0.2	0.2	0.2	0.2	0.2	0.2

STATUS:
41 ON 1 /1 /83

764



WTR BBL/MO

GAS MCF/MO

OIL BBL/MO

REGION: SOUTHWEST REGIO

FIELD: OTERO FIELD

POOL: /PICTURED CLIFFS/

LEASE: 00092 JICARILLA APACH

WELL: A 42

PRODUCTION PLOT

AHEP-5065-B

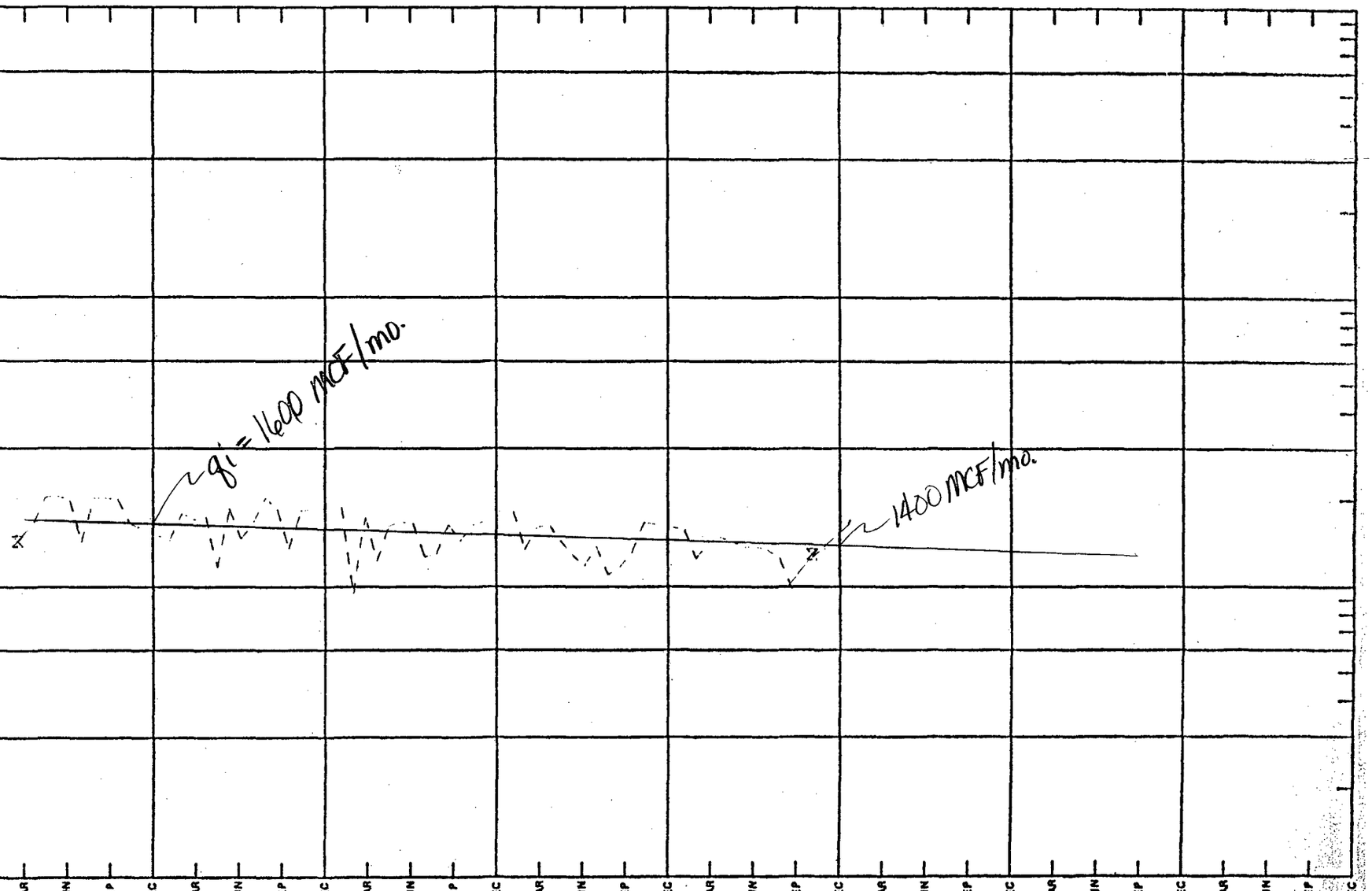
DATA CODES
OIL = ⏻
GAS = ⧖
WTR = ✳

CUMULATIVES:
OIL MBBLS
GAS MMCF 1224.8 1244.5 1262.7 1279.5 1294.5 1297.2
WTR MBBLS 0.2 0.2 0.2 0.2 0.2 0.2

STATUS:
41 ON 1 /1 /83

731

100000
60000
30000
10000
6000
3000
1000
600
300
100



WTR MBL/MO

GAS MCF/MO

OIL BBL/MO

REGION: SOUTHWEST REGIO

FIELD: OTERO FIELD

POOL: /CHACRA/

LEASE: 00095 JICARILLA APACH

WELL: F # 11

PRODUCTION PLOT

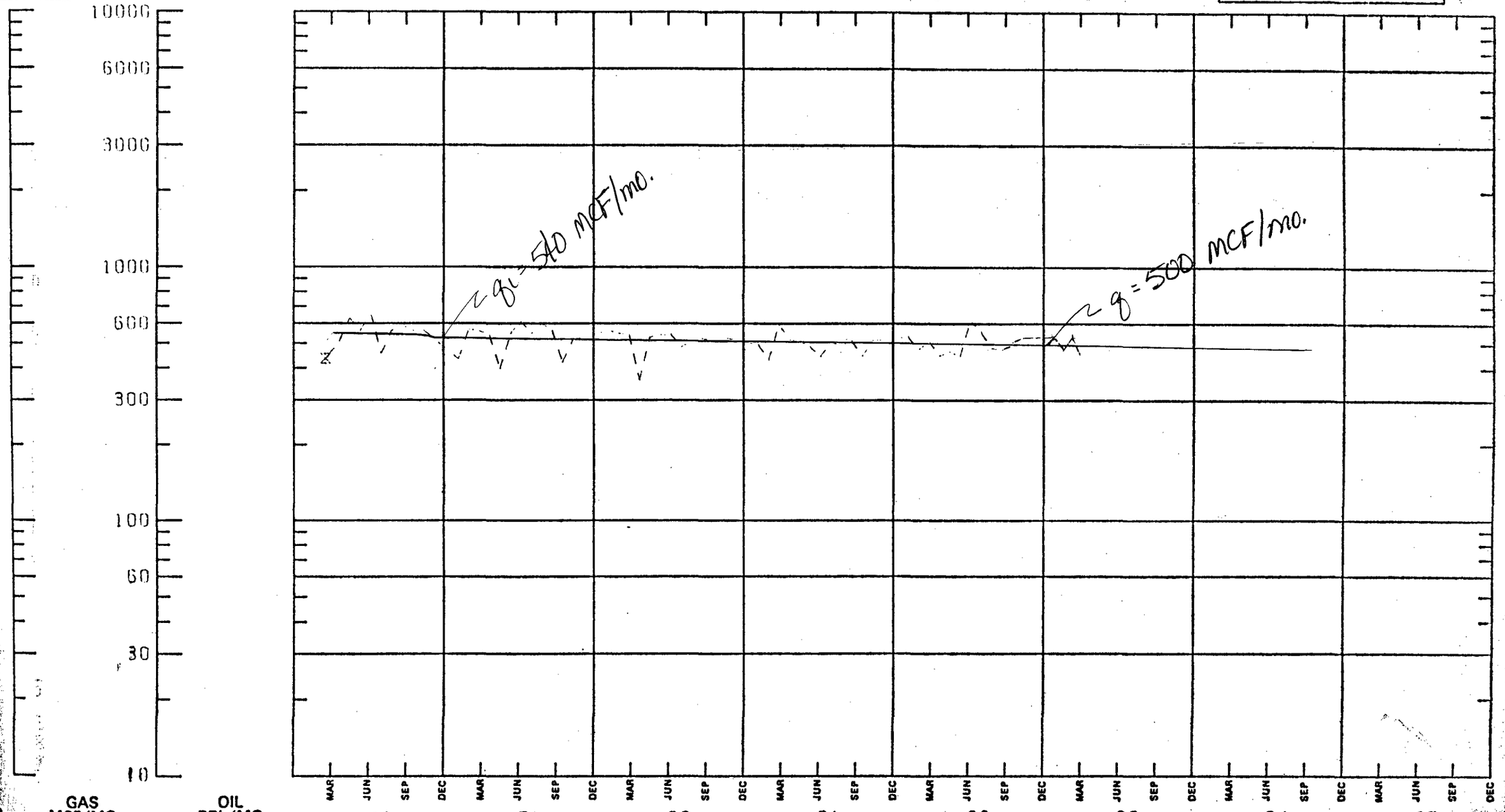
AHEP-5085-B

DATA CODES
OIL = ⊙
GAS = ⧖
WTR = ✳

CUMULATIVES:

OIL MBBLS						
GAS MMCF	223.5	229.8	235.9	241.8	247.7	248.8
WTR MBBLS	0.9	0.9	0.9	0.9	0.9	0.9

STATUS:
41 ON 6 /25/82



WTR BBL/MO

GAS MCF/MO

OIL BBL/MO

REGION: SOUTHWEST REGIO

FIELD: OTERO FIELD

POOL: /PICTURED CLIFFS/

LEASE: 00095 JICARILLA APACH

WELL: F# 12

PRODUCTION PLOT

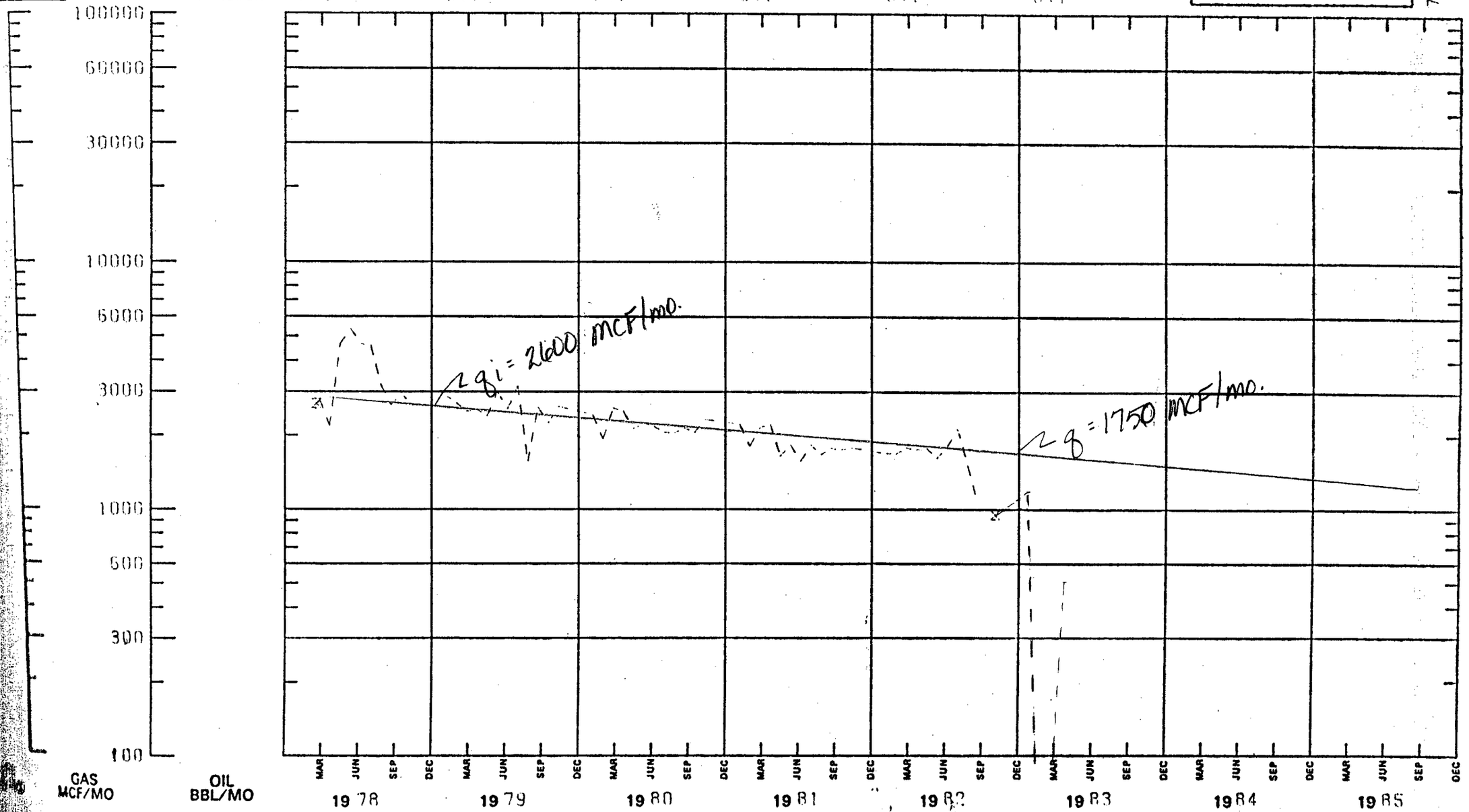
AHEP-5005-B

DATA CODES
OIL = ⏲
GAS = ⧖
WTR = ✳

CUMULATIVES:
OIL MBBLS 2818.2 2848.7 2875.3 2897.8 2916.2 2918.2
GAS MMCF 0.1 0.1 0.1 0.1 0.1 0.1
WTR MBBLS

STATUS:
41R ON 1 /18/83

727



REGION: SOUTHWEST REGIO FIELD: OTERO FIELD POOL: /CHACRA/

LEASE: 00095 JICARILLA APACH WELL: F # 31

PRODUCTION PLOT

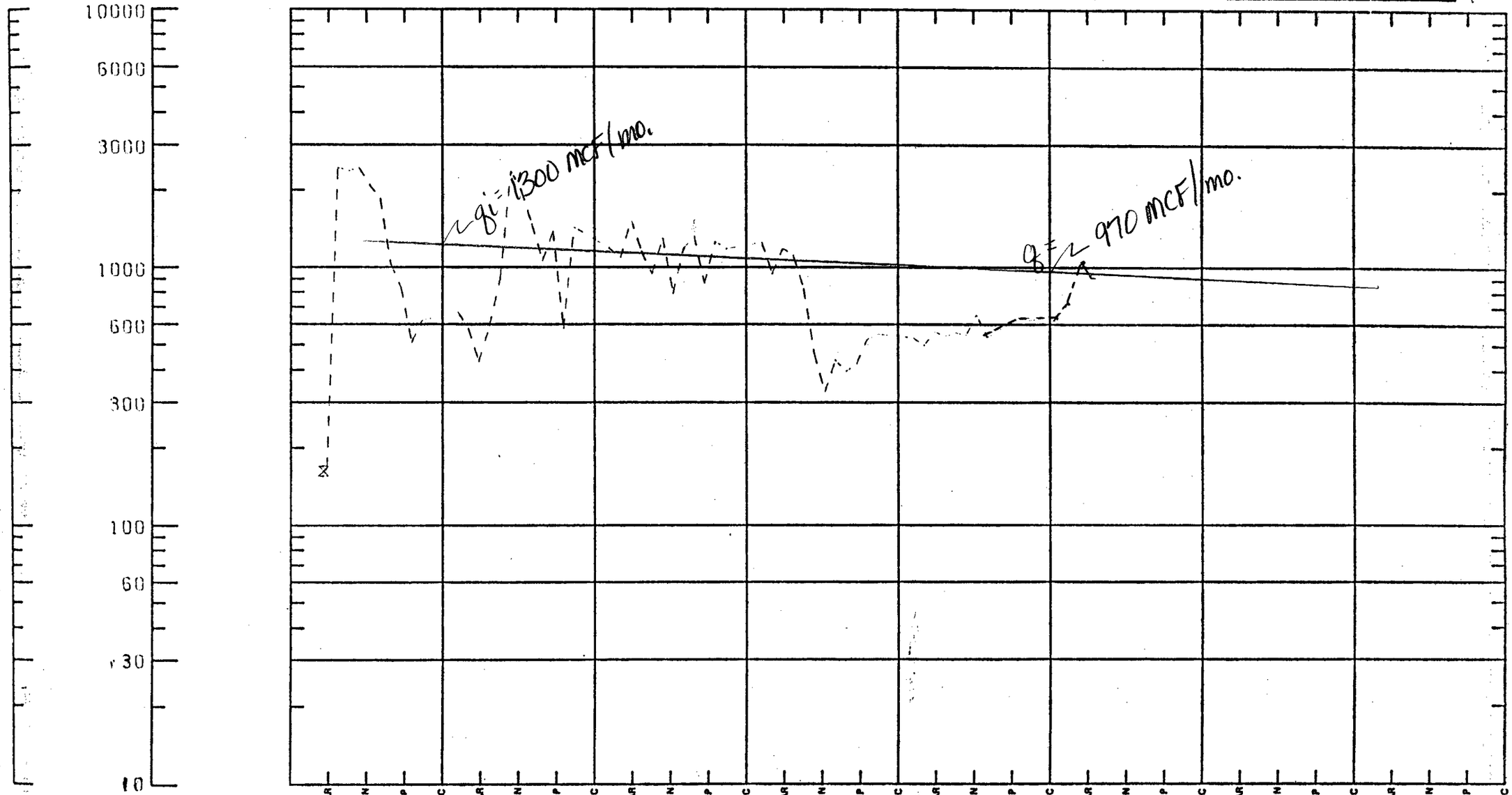
AHEP-5085-B

DATA CODES
OIL = ⏻
GAS = ⧖
WTR = ✳

CUMULATIVES:
OIL MBBLS
GAS MMCF 386.0 398.9 413.1 422.2 429.1 430.4
WTR MBBLS 0.1 0.1 0.1 0.1 0.1 0.1

STATUS:
41 ON 10/21/82

725



GAS MCF/MO

OIL BBL/MO

REGION: SOUTHWEST REGIO

FIELD: OTERO FIELD

POOL: /PICTURED CLIFFS/

LEASE: 00095 JICARILLA APACH

WELL: F #32

Getty Oil Company | Three Park Central, Suite 700, 1515 Arapahoe St., Denver, CO 80202 • 303/623-4200

T. L. Ditmore, District Production Manager
Denver Exploration and Production District

July 15, 1983

State of New Mexico
Energy and Minerals Dept.
P.O. Box 2088
Santa Fe, New Mexico 87501

RE: AMERADA HESS APPLICATION FOR
PC AND CHACRA COMMINGLING IN
JIC. APACHE #2 & #4
RIO ARRIBA COUNTY, NEW MEXICO

Gentlemen:

Getty Oil Company has no objection to the application by Amerada Hess for downhole commingling of the Pictured Cliffs and Chacra formations in their Jicarilla Apache "F" No. 2, Sec. 17, T25N, R5W and Jicarilla Apache "F" No. 4, Sec. 18, T25N, R5W, both in Rio Arriba County, New Mexico.

Very truly yours,

T. L. Ditmore
District Production Manager

AWL:sat

cc: Amerada Hess Corp.
P.O. Drawer "D"
Monument, New Mexico 88265

Getty

Getty Oil Company | Three Park Central, Suite 700, 1515 Arapahoe St., Denver, CO 80202 • 303/623-4200

T. L. Ditmore, District Production Manager
Denver Exploration and Production District

June 7, 1983

State of New Mexico
Energy and Minerals Dept.
Oil Conservation Division
P.O. Box 2008
Santa Fe, New Mexico 87501

RE: AMERADA HESS APPLICATION TO COMMINGLE PC ANC CHACRA IN JICARILLA "A" NO. 4, "F" NO. 1 AND "F" NO. 3

Gentlemen:

Getty Oil Company has no objection to the Pictured Cliffs-Chacra commingling application by Amerada Hess for their Jicarilla Apache No. 4, Sec. 26, T25N, R5W, Jicarilla Apache "F" No. 1, Sec. 17, T25N, R5W and Jicarilla Apache "F" No. 3, Sec. 18, T25N, R5W, all in Rio Arriba County, New Mexico.

Very truly yours,

T. L. Ditmore
District Production Manager

AWL:sat

cc: Amerada Hess Corp.
P.O. Drawer "D"
Monument, New Mexico 88265

Amoco Production Company

Petroleum Center Building
501 Airport Drive
Farmington, New Mexico 87401
505-325-8841

S. D. Blossom
District Superintendent

June 2, 1983

State of New Mexico
Energy and Minerals Department
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

File: DHS-273-986.510.1

Gentlemen:

Amerada Hess Corporation's Commingling Application for
Jicarilla Apache "A" No. 4,
Jicarilla Apache "F" No. 1, and
Jicarilla Apache "F" No. 3.

Amoco Production Company hereby waives any objections to Amerada Hess Corporation's application for commingling production from the Pictured Cliffs and Chacra gas zones in the three subject wells.

Very truly yours,

S.D. Blossom
ONR

AMM/mp

cc: J. C. Burnside, Denver

Union Texas Petroleum

14001 E Iliff Avenue
Suite 500
Aurora, Colorado 80014
(303) 695-8778

June 14, 1983

State of New Mexico
Energy and Minerals Department
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

RE: Jicarilla Apache "A" #4, Sec 26, T25N-R5W
Jicarilla Apache "F" #1, Sec 17, T25N-R5W
Jicarilla Apache "F" #3, Sec 18, T25N-R5W

Request to downhole commingle the South Blanco Pictured Cliffs and Otero Chacra Gas Zones

Gentlemen:

Please be advised that Union Texas Petroleum Corporation waives objection to the proposed downhole commingling of the Pictured Cliffs and Chacra gas zones as requested in Amerada's letter of May 25, 1983.

Yours truly,

UNION TEXAS PETROLEUM CORPORATION

Gerald M. Walston

Gerald M. Walston
General Manager

GMW:dkc

P23 0611003

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO
Union Texas Petroleum Corp.
STREET AND NO.
P.O. Box 808
P.O., STATE AND ZIP CODE
Farmington, New Mexico 87499

POSTAGE	$ .88
CERTIFIED FEE	.75 ¢
SPECIAL DELIVERY	¢
RESTRICTED DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED	¢
SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES	$ 1.63
POSTMARK OR DATE	MONUMENT, NM MAY 27 1983 USPO

CONSULT POSTMASTER FOR FEES
OPTIONAL SERVICES
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PS Form 3800, Apr. 1976

P23 0611005

RECEIPT FOR CERTIFIED MAIL

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(See Reverse)

SENT TO
Western Oil & Minerals LTD
STREET AND NO.
3001 Northridge Drive
P.O., STATE AND ZIP CODE
Farmington, NM 87401

POSTAGE	$ .88
CERTIFIED FEE	.75 ¢
SPECIAL DELIVERY	¢
RESTRICTED DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED	¢
SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES	$ 1.63
POSTMARK OR DATE	MONUMENT, NM MAY 27 1983 USPO

CONSULT POSTMASTER FOR FEES
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PS Form 3800, Apr. 1976

P23 0611004

RECEIPT FOR CERTIFIED MAIL

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(See Reverse)

SENT TO
Getty Oil Compant
STREET AND NO.
P.O. Box 501
P.O., STATE AND ZIP CODE
Farmington, New Mex. 87499

POSTAGE	$ .88
CERTIFIED FEE	.75 ¢
SPECIAL DELIVERY	¢
RESTRICTED DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED	¢
SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES	$ 1.63
POSTMARK OR DATE	MONUMENT, NM MAY 27 1983 USPO

CONSULT POSTMASTER FOR FEES
OPTIONAL SERVICES
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PS Form 3800, Apr. 1976

P23 0611300

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO
Energy Reserves Group, Inc.
STREET AND NO.
P.O. Box 977
P.O., STATE AND ZIP CODE
Farmington, NM 87499

POSTAGE	$ .88
CERTIFIED FEE	.75 ¢
SPECIAL DELIVERY	¢
RESTRICTED DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED	¢
SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES	$ 1.63
POSTMARK OR DATE	MONUMENT, NM MAY 27 1983 USPO

CONSULT POSTMASTER FOR FEES
OPTIONAL SERVICES
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P23 0611302

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO
El Paso Natural Gas CO.
STREET AND NO.
P.O. Box 990
P.O., STATE AND ZIP CODE
Farmington, NM 87499

POSTAGE	$ .88
CERTIFIED FEE	.75 ¢
SPECIAL DELIVERY	¢
RESTRICTED DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED	¢
SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES	$ 1.63
POSTMARK OR DATE	MONUMENT, NM MAY 27 1983 USPO

CONSULT POSTMASTER FOR FEES
OPTIONAL SERVICES
RETURN RECEIPT SERVICE

PS Form 3800, Apr. 1976

P23 0611001

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO
Conoco, Inc.
STREET AND NO.
501 Airport Drive
P.O., STATE AND ZIP CODE
Farmington, New Mex. 87401

POSTAGE	$ .88
CERTIFIED FEE	.75 ¢
SPECIAL DELIVERY	¢
RESTRICTED DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED	¢
SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES	1.63
POSTMARK OR DATE	MONUMENT, NM MAY 27 198 USPO

CONSULT POSTMASTER FOR FEES
OPTIONAL SERVICES
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P23 0611299

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO
AMOCO Production Com.
STREET AND NO.
501 Airport Drive
P.O., STATE AND ZIP CODE
Farmington, NM 87401

POSTAGE	$ .88
CERTIFIED FEE	.75 ¢
SPECIAL DELIVERY	¢
RESTRICTED DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED	¢
SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES	$ 1.63
POSTMARK OR DATE	MONUMENT, NM MAY 27 1983 USPO

CONSULT POSTMASTER FOR FEES
OPTIONAL SERVICES
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