

ARCO Oil and Gas Company ◆

Central District
Post Office Box 1610
Midland, Texas 79702
Telephone 915 683 5200

BEFORE EXAMINER CATANACH
Oil Conservation Division
Exhibit No. <u>2</u>
Case No. <u>9994</u>

June 21, 1990

Doyle Hartman
500 N. Main
P.O. Box 10426
Midland, Texas 79702

Attention: Mr. Bryan E. Jones

Re: ARCO - State "G" Com
Cross-assignment of Interest
S/2 SE/4 Sec. 5, T-21-S, R-36-E,
Lea County, New Mexico
NM-31, NM-53, NM-58

Gentlemen:

Atlantic Richfield Company (ARCO) has evaluated the proposals Doyle Hartman has made in your letters dated April 17, and June 11, 1990, as well as the options outlined in your Application for Approval of Rededication of Acreage, Non-Standard Proration Units, Simultaneous Dedication and Compulsory Pooling which has been set for hearing on June 27, 1990.


ARCO agrees to Proposal No. 1, as set out in your letter of April 17, 1990, wherein ARCO will assign its 50% leasehold interest within the Eumont Gas Pool in the SE/4 SE/4 of Section 5 in exchange for an assignment of Hartman's 50% leasehold interest within the same interval in the SW/4 SE/4 Section 5. Concurrent with this action, ARCO and Hartman shall terminate that certain Operating Agreement dated January 25, 1957, covering the SW/4, S/2 SE/4 Section 5, and ARCO shall reduce the size of the proration unit for the State "G" Com No. 1 well to 200 acres consisting of the SW/4, SW/4 SE/4 Section 5.

Doyle Hartman agrees to voluntarily amend the above-described Application in accordance with this agreement, and shall not seek an order approving creation of any proration unit which includes the SW/4, SW/4 SE/4 Section 5, or any part thereof.

Doyle Hartman
June 21, 1990

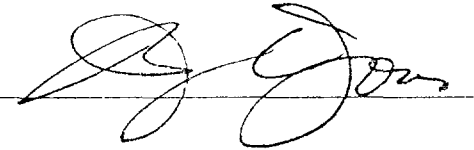
The effective date for the assignments and termination of the existing contract shall be July 1, 1990. Execution of these instruments is contingent on verification of title. If these terms and conditions are acceptable to you, please execute and return one copy of this letter.

Very truly yours,


Douglas W. Johnson
Area Landman

AGREED TO AND ACCEPTED THIS 22nd DAY OF JUNE, 1990.

DOYLE HARTMAN, OIL OPERATOR

BY: 

DWJ/dj

DOYLE HARTMAN

Oil Operator

500 N. MAIN

P.O. BOX 10426

MIDLAND, TEXAS 79702

(915) 684-4011

April 17, 1990

HAND DELIVERED

ARCO Oil and Gas Company
Post Office Box 1610
Midland, Texas 79702

Attention: Mr. Eric Seigmund

Re: ARCO - State "G" Com
S/3 W/2 and S/2 S/3 E/2
Section 5, T-21-S, R-36-E
Lea County, New Mexico

Gentlemen:

Reference is made to ARCO's 240-acre State "G" Com non-standard Eumont gas proration unit consisting of the S/3 W/2 and S/2 S/3 E/2 of Section 5, T-21-S, R-36-E, Lea County, New Mexico in which we own a 16.67% working interest by virtue of our recent acquisition of Texaco's (formerly Tidewater's) 50% working interest in the 80-acre State "C" Eumont tract consisting of S/2 S/3 E/2 of Section 5 (State of New Mexico lease B-1673). In addition to our recent acquisition of Texaco's 50% ownership in the 80-acre State "C" lease, we are also in the process of finalizing the acquisition from Koch Exploration Company of its interest in its currently non-producing non-dedicated 80-acre State "A" Eumont tract consisting of the N/2 S/3 E/2 of Section 5, T-21-S, R-36-E (State of New Mexico lease B-2436) which is situated just north of the 80-acre State "C" lease.

As you will recall, the ARCO-operated State "G" Com Eumont gas proration unit is subject to both a Gas Pooling Agreement and an Operating Agreement dated January 25, 1957, both of which respectively unitize and govern the operations between ARCO and ourselves as to the 240-acre communitized proration unit. A review of the Gas Pooling Agreement will reveal that the agreement was entered into between ARCO and Tidewater in order to comply with the spacing regulations established for the Eumont gas pool and to provide, at the time the proration unit was formed, an allowable that was more in keeping with the deliverability of the ARCO-operated State "G" Com No. 1 well. As is clearly stated in paragraph 12 of the applicable Operating Agreement, it was the intent of ARCO and Tidewater to operate the 240-acre State "G" Com proration unit at a producing rate that would always result in the 240-acre proration unit being classified as a non-marginal Eumont gas proration unit, as paragraph 12 specifically states that the "Operator shall use reasonable diligence in operating and maintaining the unit well so as to produce

and develop a maximum quantity of gas subject to the limitations of the applicable gas purchase agreement, and the orders, rules and regulations of any governmental agencies (emphasis added)."

However, as is illustrated by the enclosed allowable and production data corresponding to the ARCO - State "G" Com No. 1 well, with the passage of time, the deliverability of the State "G" Com No. 1 well has declined to the point that the State "G" Com No. 1 well is currently producing at a rate that is substantially below the Eumont Gas Pool allowable being assigned to a 240-acre proration unit. Furthermore, inasmuch as all the other wellbores previously owned by ARCO in the S/3 W/2 and S/2 S/3 E/2 of Section 5 have already been assigned to Chevron's Eunice Monument South Unit waterflood project and being that there is no provision in the subject Operating Agreement to provide for the drilling of additional Eumont wells on the 240-acre proration unit, we hereby give notice to ARCO that we request that the size of the State "G" Com No. 1 proration unit be reduced, thereby bringing the current well deliverability and remaining reserves for the State "G" Com No. 1 well in line with future NMOCD allowables to be assigned to the State "G" Com No. 1 well.

Proposal No. 1

To accomplish this request, we therefore propose that ARCO assign to us its net interest in the 40-acre parcel consisting of the SE/4 S/3 E/2 of Section 5 in exchange for us assigning to ARCO our net interest in the 40-acre parcel consisting of the SW/4 S/3 E/2 of Section 5. Such a cross-assignment will enable the size of the State "G" Com proration unit to be reduced to 200 acres by excluding from the present proration unit the 40-acre Eumont tract consisting of the SE/4 S/3 E/2 Section 5. A 40-acre reduction in the size of the State "G" Com proration unit will still leave ARCO with an AF of 1.25 for its State "G" Com No. 1 well and will provide ARCO with an allowable for its State "G" Com No. 1 well that is in excess of the well's deliverability. This proposal will also result in ARCO receiving, at no additional investment cost, Doyle Hartman's portion of the remaining reserves corresponding to the State "G" Com No. 1 well, which computes (on a rate-time basis) to be 128,000 MCF net to Hartman's 16.67% working interest.

Proposal No. 2

In the alternative, we propose that ARCO assign to us its 50% net working interest in the 80-acre State "C" Eumont tract consisting of the S/2 S/3 E/2 of Section 5, in which case we will assign to ARCO a 25% of 8/8th overriding royalty corresponding to ARCO's net 40-acre interest in the

subject 80-acre tract or a net 6.25% overriding royalty in a new 160-acre Eumont proration unit that we propose to form consisting of the S/3 E/2 of Section 5 and on which we immediately plan to drill a new infill Eumont well.

Both Proposal No. 1 and Proposal No. 2 will allow the entire S/3 Section 5, T-21-S, R-36-E to more fully participate in any remaining recoverable Eumont Gas Pool reserves and will give ARCO 100% ownership of the newly reformed State "G" Com proration unit. At the same time, either of the two proposals will enable us to more efficiently develop our currently non-producing non-dedicated 80-acre State "A" lease (N/2 S/3 E/2) thereby protecting the correlative rights of the State of New Mexico by preventing the further drainage of the 80-acre State "A" lease by nearby wells.

It is requested that you give your earliest possible attention to the foregoing proposal as it is imperative that we begin drilling our newly proposed infill well within two months in order to have it connected to an available pipeline facility prior to the peak gas marketing season. Inasmuch as time is of the essence, by copy of this letter, we are requesting that our title attorney start drafting the necessary instruments required to subdivide the presently existing 240-acre State "G" Com proration unit, so please let us know as soon as possible which of the two above outlined proposals ARCO favors (Proposal No. 1 or Proposal No. 2) so that we can have the necessary instruments completed in the shortest possible time. Please promptly call the undersigned if you have any questions relative to this matter.

Very truly yours,

DOYLE HARTMAN



Bryan E. Jones
Landman

BEJ/lr
Enclosures
490:ARCO0416

cc ARCO Oil and Gas Company
Post Office Box 1610
Midland, Texas 79702
Attention: Mr. James M. Perkins
Director, Acquisitions & Divestiture

ARCO Oil and Gas Company

April 17, 1990

Page 4

ARCO Oil and Gas Company
Post Office Box 1610
Midland, Texas 79702
Attention: E. A. Casbeer
Northwest Operations Analyst

ARCO Oil and Gas Company
Post Office Box 1610
Midland, Texas 79702
Attention: A. J. Best
Engineering Manager

ARCO Oil and Gas Company
Post Office Box 1610
Midland, Texas 79702
Attention: R. S. Prentice
Engineering

James A. Davidson
Post Office Box 494
Midland, Texas 79702

Mr. J. E. Gallegos
Gallegos Law Firm
141 East Palace Avenue
Santa Fe, New Mexico 87501

Mr. John Nelson
Atwood, Malone, Mann and Turner
Post Office Drawer 700
Roswell, New Mexico 88201

EXCERPT FROM OPERATING AGREEMENT
DATED JANUARY 25, 1957 BETWEEN
ATLANTIC REFINING COMPANY AND TIDEWATER OIL COMPANY

10.

Each party hereto will account to and pay to the owners thereof, rentals, royalty, overriding royalty or payments from production due under the terms of its lease or leases upon the production allocated to the respective tract or tracts of such party.

11.

Each of the parties hereto shall have access to the premises at all reasonable times to inspect and observe any operations thereon and shall have access at reasonable times to information pertaining to the development or operations thereof.

12.

Operator shall use reasonable diligence in operating and maintaining the unit well so as to produce and develop a maximum quantity of gas subject to the limitations of the applicable gas purchase agreement, and the orders, rules and regulations of any governmental agencies. The cessation in whole or in part of any such production for the purpose of operating, maintaining or reworking of a well deemed advisable by Operator, whether for the production of gas or for the production of other hydrocarbons produced or producible from the same well, shall not be considered as due to a lack of diligence. After a unit well is completed, Operator shall not be required to expend more than a reasonably prudent operator would expend to maintain such unit well as a producing well, and Operator may plug and abandon any unit well if a reasonably prudent operator would do so under similar circumstances; provided, however, that Operator may at its discretion upon the abandonment of any unit well utilize another well owned by it within the unit area as the unit well subject to the terms and conditions of this agreement.

13.

In the event Operator is rendered unable wholly or in part by force majeure applying to its operations to carry out its obligations under this contract, it is agreed that Operator's obligations so affected shall be suspended during the continuance of such inability and such cause shall, so far as possible, be remedied with all reasonable dispatch. The term "force majeure" as employed herein shall mean acts of God, strikes, lockouts or blockades, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, storms, floods, washouts, arrests and restraints of rules and peoples, including difficulty in obtaining pipe or other material or other difficulty in carrying out the drilling program herein set out because of government edict or regulation, civil disturbances, explosions, breakage or accident to machinery or lines of pipe and any other cause, whether of the kind herein enumerated or otherwise not within the control of the party claiming suspension, all of which by the exercise of due diligence such party is unable to foresee or overcome; provided, however, that the settlement of strikes or lockouts shall be entirely within

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State "Cutt" State State State State State

191 190 189 188
A.R.Co. Gulf B-244 "C"
192 193 247 194 195
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220 Shell 222 Gulf 223
249 A.R.Co. Gulf 246
230 Bell 250
251 Graham Bell 252
253
State

D. Hartman
Koch-State "A" Lease
Eumont Gas Pool Interval
N/2 S/3 E/2 Section 5
T-21-S, R-36-E
80 Acres
Hepsley Orcutt
215 Gulf 214
B-244 B-2135
224 227
Orcutt
225 Koch Ind. "A"
B-2456
243 242
241
258 Meyer
259 U.S.
260
Bell Ramsey

182 181 180
Gulf B-230
260 Conoco
201 200
210 209 208
222
229 230 231
PROPOSED EUMONT PRORATION UNIT
Doyle Hartman
Koch-State "A" Lease
N/2 S/3 E/2 and SE/4 S/3 E/2
Section 5, T-21-S, R-36-E
(120 Acres)
Meyer
U.S.
Millard Deck

R36

289 288 287 286
A.R.Co. Amerada
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AMENDED EUMONT PRORATION UNIT
ARCO
State "G" Com No. 1
S/3 W/2 and SW/4 S/3 E/2
Section 5, T-21-S, R-36-E
(200 Acres)
ARCO W.L. = 100%
331 M. Campbell
332
333 H.L. Houston, Jr. et al
334

285 Conoco
284
294 295
HEVRON (OP) ARCO
State "G" Com No. 1
V-05-21S-36E
326
031740
Meyer
336
U.S.

283 Getty Oil
A-1350
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296 297
323
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Bell Ramsey
337 Gulf
B-230
"Bell"
State

281 Gulf
280 Conoco
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A.R.Co.
ARCO
State "C" Lease
Eumont Gas Pool Interval
S/2 S/3 E/2 Section 5
T-21-S, R-36-E
80 Acres
Hartman W.L. = 50%
ARCO W.L. = 50%
339
340
341
342
U.S.
Millard Deck

371 Conoco
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375 376
Meyer
377 Conoco
"A-1"
031740
378 379
O.L. Coleman
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Shell
PROPOSAL NO. 1
Meyer
U.S.
Coleman
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State "A" Lease
D. Hartman
Koch-State "A" Lease
Eumont Gas Pool Interval

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A.R.Co. Gulf B-244
N/2 S/3 E/2 Section 5
T-21-S, R-36-E
80 Acres
Gulf B-230
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Orcutt
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ALTERNATIVELY PROPOSED EUMONT PRORATION UNIT
Doyle-Hartman
Koch-State "A" Lease
S/3 E/2 Section 5
T-21-S, R-36-E
(160 Acres)
ARCO Net ORRI = 6.25%

ALTERNATIVELY AMENDED EUMONT PRORATION UNIT
ARCO
State "G" Com No. 1
S/3 W/2 Section 5
T-21-S, R-36-E
(160 Acres)
ARCO W.I. = 100%

MONUMENT SO. UT
ON (C)
ARCO
State "G" Com No. 1
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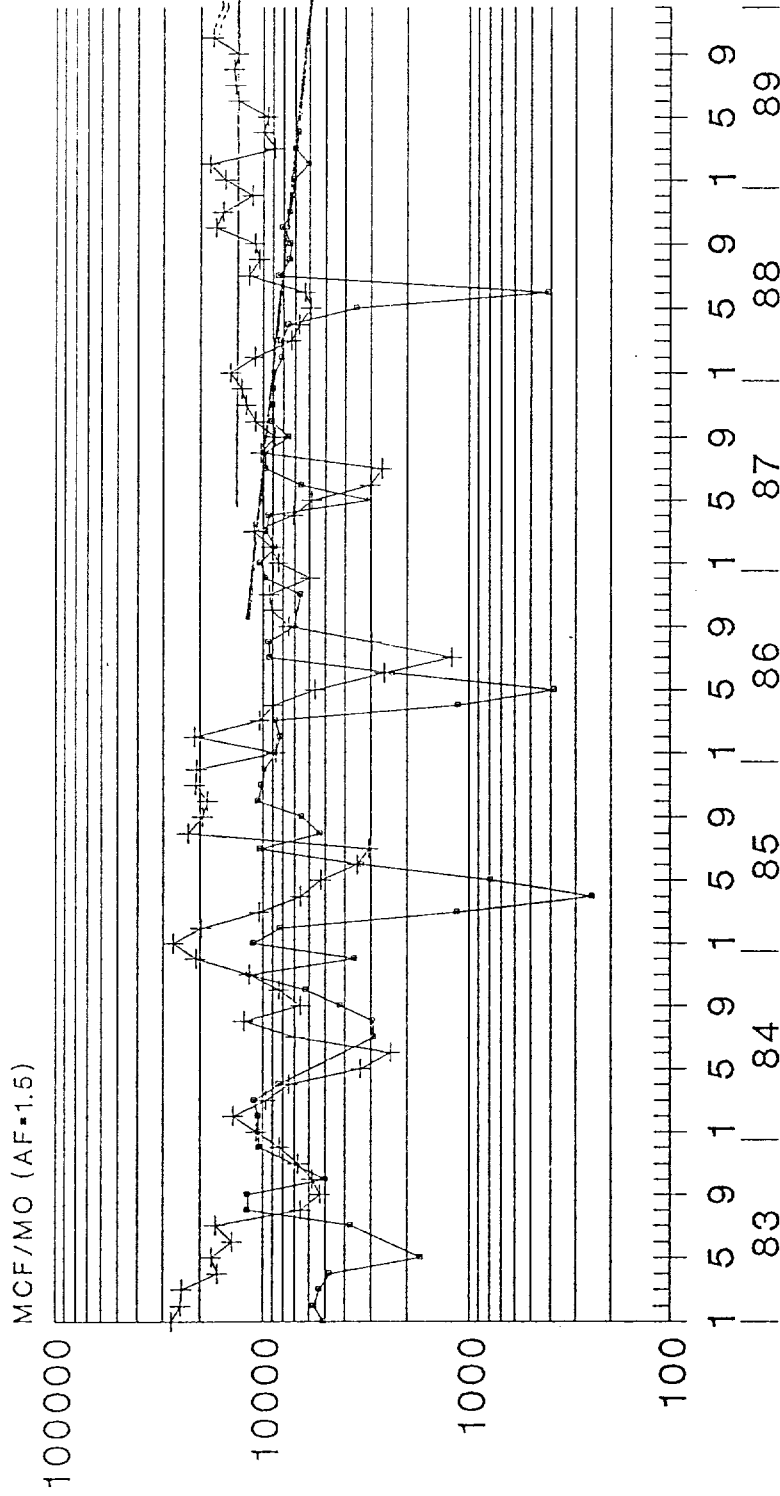
ARCO
State "C" Lease
Eumont Gas Pool Interval
S/2 S/3 E/2 Section 5
T-21-S, R-36-E
(80 Acres)
Hartman W.I. = 50%
ARCO W.I. = 50%

(331) wi 332 (1) M. Campbell
(333) wi 334 (1) Houston, Jr. et al
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STATE G COM #1

PRODUCTION VS. ALLOWABLE

V-5-21-36



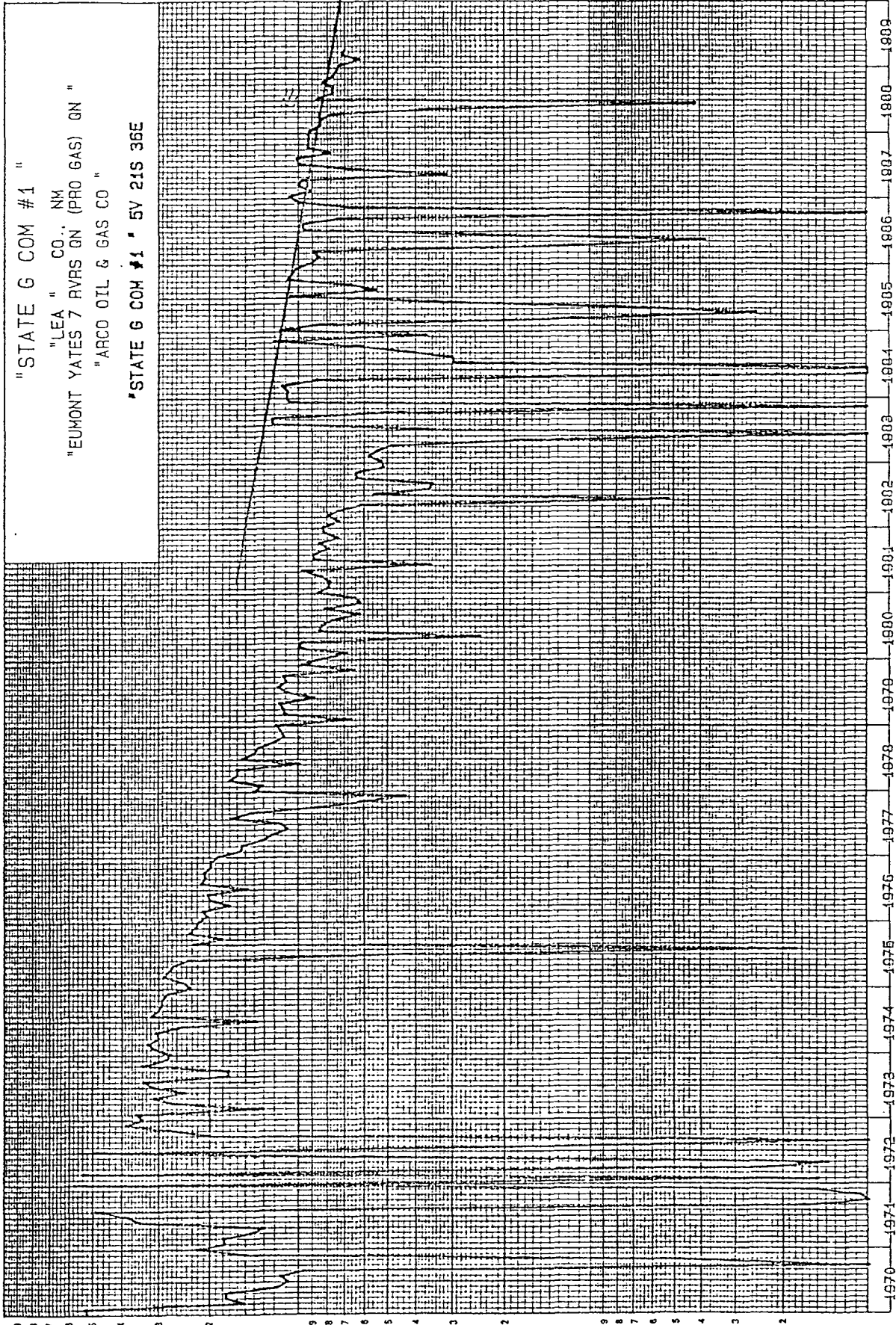
—●— PRODUCTION —×— ALLOWABLE

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PRODUCTION

Date: 11/03/89
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"STATE G COM #1"
"LEA" CO., NM
"EUMONT YATES 7 RVRS ON (PRO GAS) ON"
"ARCO OIL & GAS CO"
"STATE G COM #1" 5V 21S 36E



DOYLE HARTMAN
Oil Operator

YEARS

10000.0
1000.0
100.0
BAS (MCF)
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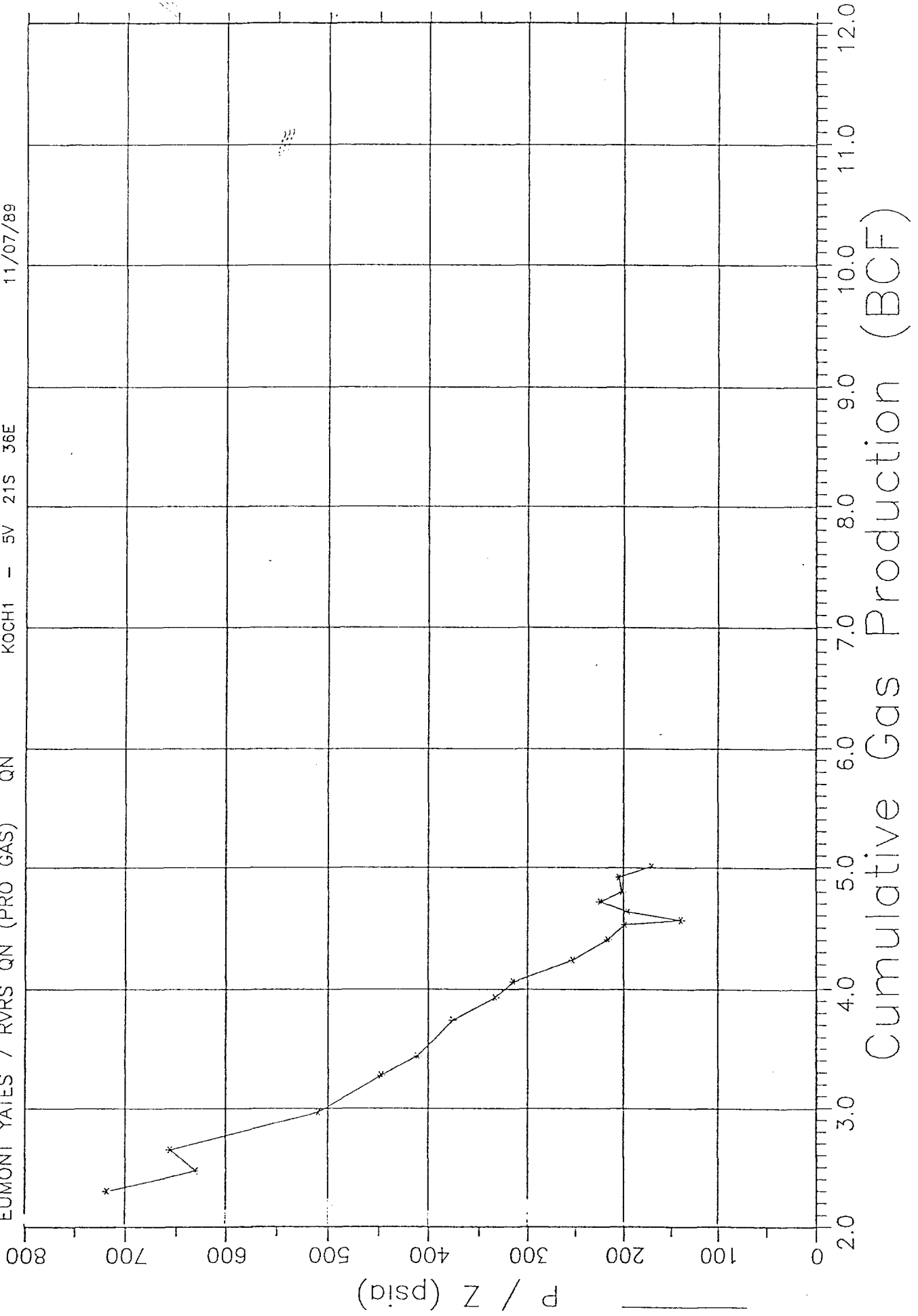
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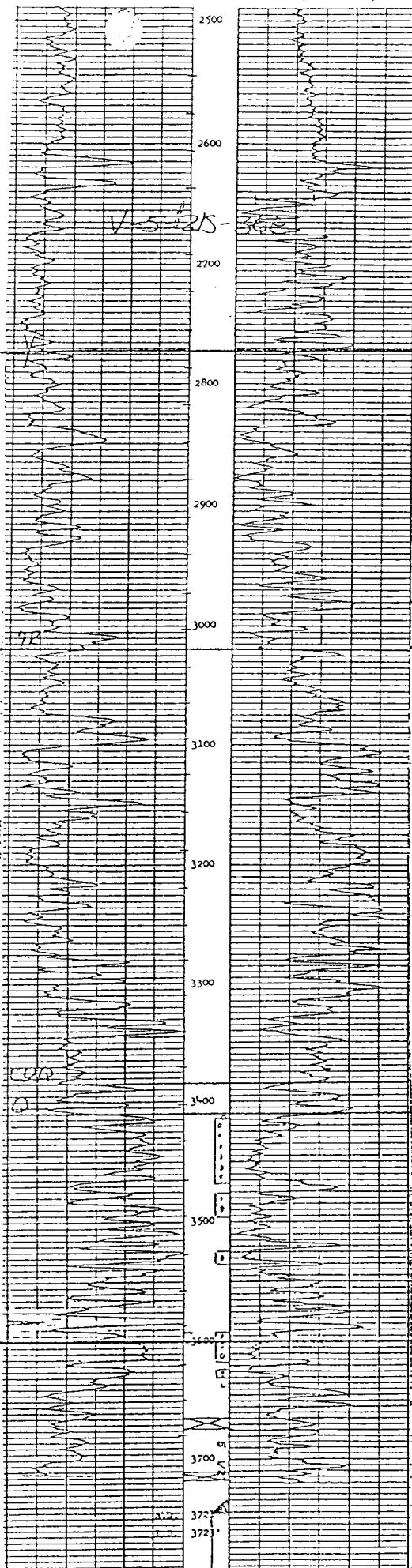
ARCO OIL & GAS CO
EUMONT YATES 7 RVR

Q (PRO GAS) QN

KOCH1 - 5V 21S 36E

FIRST DATA POINT = 07/16/70
LAST DATA POINT = 09/29/88
CUM GAS = 5.058 BCF THROUGH 89/ 4
11/07/89





V-5-DIC-DIC

COMPANY ARCO

WELL State G Com No. 1

FIELD Eumont (Queen Gas)

LOCATION 660' FSL & 1980' FWL (V)
Section 5, T-21-S, R-36-E

COUNTY Lea

STATE New Mexico

ELEVATIONS: KB _____
DF _____
GL 3577

COMPLETION RECORD

SPUD DATE 6-5-35 COMP. DATE 7-17-35

TD 3890 PBTB _____

CASING RECORD 12 1/2 @ 81' w/75
8 5/8 @ 1363' w/800
5 1/2 @ 3746' w/800

PERFORATING RECORD OH: 3746 - 3860

STIMULATION Natural

IP IPF = 277 BOPD

GOR _____ GR _____

TP _____ CP _____

CHOKE _____ TUBING _____ @ _____

REMARKS 10-26-40: A/3000 (3836-60). 6' of
jelly seal 3860-3866. PBTB @ 3866.
F/110 BOPD.
3-22-54: SDF/500 + 10,000.
11-1-54: Perf 3414-3630. Pfr @ 3710.
DF = 2828 MCFPD. Dual Comp.
3-20-57: A/500. F/11 BOPD.
1962: Eunice Oil T.A.d
3-8-73: Eunice Oil Zone (OH: 3746-3890
PA'd. Set 5 1/2" 17# CTBPC 3706. Capped
w/5 sx cm. PBTB @ 3665.

DOYLE HARTMAN

Oil Operator

500 N. MAIN

P.O. BOX 10426

MIDLAND, TEXAS 79702

(915) 684-4011

June 11, 1990

ARCo Oil and Gas Company
Post Office Box 1610
Midland, Texas 79702

Attention: Mr. Doug Johnson

Re: ARCo-State "G" Com
SW/4 & S/2 SE/4 Sec. 5
T-21-S, R-36-E
Lea County, New Mexico

Gentlemen:

Pursuant to our telephone conversation of this date relative to our letter of June 6, 1990 to ARCo, enclosed please find our Authorization for Expenditure and Detailed Well Estimate for the drilling, completion and equipping of our proposed State "A" Com No. 5 Eumont infill well to be located in the NE/4 SE/4 Section 5, T-21-S, R-36-E, Lea County, New Mexico. Also enclosed is our AFE for the estimated costs to connect the well to an available pipeline facility.

In the event ARCo elects to join in the drilling of our proposed State "A" Com No. 5 well, it will still be necessary to reform the existing Eumont Gas Pool proration unit for ARCo's State "G" Com No. 1 well.

It will also be necessary to file of record an amended Gas Pooling Agreement for the reformed Eumont Gas Pool proration unit dedicated to ARCo's State "G" Com No. 1 well. We continue to believe that the trade proposed in our letter to ARCo of April 17, 1990 will still provide the best means for both ARCo and Hartman to more efficiently and economically recover any remaining Eumont Gas Pool reserves from the S/2 of Section 5. Please also remember that Proposal No. 1 of our letter of April 17, 1990, will allow ARCo to increase its net recoverable Eumont reserves by 128,000 MCF without any risk or investment and will also facilitate the streamlining of ARCo's internal accounting for the State "G" Com No. 1 well by eliminating Hartman as the only other (non-operating) working interest owner.

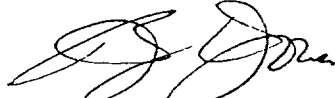
Please review the enclosed AFE's and advise the undersigned at your earliest convenience of ARCo's decision regarding the reconfiguration of the State "G" Com Eumont proration unit and the drilling of Hartman's

ARCO Oil and Gas Company
June 11, 1990
Page 2

proposed State "A" Com No. 5 well. Again your early response is requested as our compulsory pooling application regarding the SE/4 Section 5 and NE/4 Section 8 is scheduled for hearing on June 21, 1990.

Very truly yours,

DOYLE HARTMAN



Bryan E. Jones
Landman

BEJ/ps
530:Arco611
Enclosures

cc: ARCO Oil and Gas Company
Post Office Box 1610
Midland, Texas 79702
Attention: E. A. Casbeer
Northwest Operations Analyst

ARCO Oil and Gas Company
Post Office Box 1610
Midland, Texas 79702
Attention: A. J. Best
Engineering Manager

ARCO Oil and Gas Company
Post Office Box 1610
Midland, Texas 79702
Attention: R. S. Prentice
Engineering

ARCO Oil and Gas Company
Post Office Box 1610
Midland, Texas 79702
Attention: Penny Judge

James A. Davidson
Post Office Box 494
Midland, Texas 79702

Dr. Craig Van Kirk
15080 West 77th Drive
Golden, Colorado 80403

ARCo Oil and Gas Company
June 11, 1990
Page 3

William P. Aycock
1207 West Wall
Midland, Texas 79701

Gallegos Law Firm
141 East Palace Avenue
Santa Fe, New Mexico 87501
Attention: Mr. J. E. Gallegos

Gallegos Law Firm
141 East Palace Avenue
Santa Fe, New Mexico 87501
Attention: Mr. Harry Nutter

New Mexico State Land Office
Post Office Box 1148
Santa Fe, New Mexico 87504
Attention: Mr Gary Carlson

New Mexico State Land Office
Post Office Box 1148
Santa Fe, New Mexico 87504
Attention: Mr. Floyd Prando

DOYLE HARTMAN
OIL OPERATOR
500 N. MAIN STREET
MIDLAND, TEXAS

Revised 5-15-82

AUTHORIZATION FOR EXPENDITURE AND DETAIL WELL ESTIMATE

LEASE NAME State "A" Com WELL NO. 5 W.I. 100%
COUNTY Lea STATE New Mexico FIELD Eumont (Gas)
LOCATION: NE/4 SE/4 Section 5, T-21-S, R-36-E

DRILLING INTANGIBLES:		PRODUCER	DRY HOLE
1. Drilling Cost	3850 Feet @ \$11.00 Per Foot	42350	42350
2. Day Work	2 days @ \$3500/day	7000	7000
3. Coring Service	Well Surveys OH Logs	10200	10200
4. Bits and Reamers			
5. Testing			
6. Directional Drilling			
7. Fuel	Water	8000	5500
8. Mud	4700 Mud Logging 1800	6500	6500
9. Cementing Service	Cement Floats 12000	12000	3200
10. Company Labor	Contract Labor	1500	1500
11. Surface Damages and Right-of-Way		2500	2500
12. Digging Pits	Filling Pits	500	500
13. Pit Lining		800	800
14. Roads & Bridges	1500 Dredging & Grading 7500	9000	
15. Acidizing	6500 Fracturing 145000 Perforating 2000	153500	
16. Plugging			4500
17. Trucking Cost		3000	1500
18. Development Superintendence	12/7 days @ \$ 500 /day	6000	3500
19. Rental Equipment	BOP, frac tanks	5300	1300
20. Swabbing and Testing		6500	
21. Legal and Professional Expenses:			
	Product Price Determination NGPA file	750	
	Regulatory Hearings: State filings Other Location Stake	1200	1200
22. Abstracts and Title Opinions		7500	7500
23. Geological, Geophysical and Land Support		2200	2200
24. Other Costs			
25. Contingency @ 10 %		28630	10175
	Total Intangibles	314930	111925
WELL EQUIPMENT:			
26. Casing	450 Ft. of 9-5/8" @ 12.00 Per Ft. (Used)		
	3850 Ft. of 7" @ 8.50 Per Ft. (LS)		
		38125	5400
27. Tubing	3800 Ft. of 2-3/8" @ 2.30 Per Ft.	8740	
28. Casing Head		1350	1350
29. Xmas Tree or Pumping Connections		5600	
30. Pumping Unit		15000	
31. Engine/Motor Controller and Power System		7800	
32. Sucker Rods		4000	
33. Pump		1800	
34. Tank Battery		3500	
35. Separator or Dehydration Equip.		3300	
36. Metering Equipment			
37. Flow Lines		2100	
38. Guards and Fences		800	
39. Other Costs	Anchors	600	
40. Contingency @ 10 %		9272	675
	Total Tangibles	101987	7425
	TOTAL COST OF WELL	416917	119350
	Share at %		

REMARKS:

RETAIN THIS COPY
FOR YOUR FILE

Originated by Mike Stewart Title Engineer Date 5-22-90
Approved _____ Title _____ Date _____

DOYLE HARTMAN
OIL OPERATOR
500 N. MAIN STREET
MIDLAND, TEXAS

Revised 5-15-82

SYSTEM State "A" Gathering	WELL State "A" Com No. 5	AFE NUMBER
LOCATION Section 5, T-21-S, R-36-E, Lea County, New Mexico		
WORK REQUIRED Ditch, lay and bury 6" SDR poly gas gathering line to NNG 10" Line No. 107		

WELL CONNECTION EVALUATION

WELL OPERATOR	WELL NAME State "A" Com No. 5		
	LOCATION NE/4 SE/4 Section 5, T-21-S, R-36-E		
	COUNTY Lea, New Mexico		
SYSTEM	CONNECTION LENGTH 3000'	SIZE LINE REQUIRED 6" SDR polyethylene	ESTIMATED COST OF CONNECTION \$46,305
	ESTIMATED RESERVES	ESTIMATED INITIAL PROD. RATE	PRICE DIFFERENTIAL (CURRENT)
WELL	FUTURE NET REVENUE	R.O.I. AT AVERAGE DIFF.	PAYOUT

INTANGIBLES		QUANTITY	PRICE	CASH COST	MONTH
ROW & DAMAGES		3000'	\$25/rod	4545	MATERIAL ON HAND
SURVEY & STAKE ROW					
INSTALLATION COST - PIPE		3000'	\$2.75/ft	8250	
INSTALLATION COST - OTHER	Meters			2300	
LINE INSPECTION SERVICE					
LEGAL SERVICES				150	
CONSULTANT SERVICES					
X-RAY SERVICES					
CATHODIC PROTECTION SERVICE					
MISC. SERVICES & CONTINGENCIES	10%			1525	
SUB-TOTAL INTANGIBLES				16770	
TANGIBLES		QUANTITY	PRICE	CASH COST	MATERIAL ON HAND
LINE PIPE - UNDER 4"					
LINE PIPE - 4" AND OVER		3000'	4.00	12000	
TANKS					
SEPARATION EQUIPMENT					
DRIPS					
METER RUNS & METERS 1-NNG, 1-Check			6500/3650	10150	
PIG LAUNCHER & RECEIVER FAC.					
VALVES - 4" & OVER				2500	
VALVES - UNDER 4"				1000	
FITTINGS - ELLS, TEES, ETC.				1200	
RIVER WEIGHTS					
ROAD CROSSINGS					
CATHODIC EQUIPMENT					
FENCES					
RIVER CROSSINGS					
BUILDINGS & STRUCTURES					
MISC. EQUIPMENT & CONTINGENCIES	10%			2685	
GAS COMPRESSORS					
GAS DEHYDRATION					
SUB-TOTAL TANGIBLES				29535	
TOTALS				46305	

Share at _____ %

REMARKS: Connect proposed infill Eumont well to NNG sales facilities on 10" Line No. 107 in NW/4 NE/4 Section 8, T-21-S, R-36-E, Lea County, New Mexico

RETAIN THIS COPY
FOR YOUR FILE

Originated by Michael Stewart Title Engineer Date 6-4-90

Approved _____ Title _____ Date _____

DOYLE HARTMAN
OIL OPERATOR
500 N. MAIN STREET
MIDLAND, TEXAS

AUTHORIZATION FOR EXPENDITURE AND DETAIL WELL ESTIMATE

LEASE NAME State "A" Com WELL NO. 5 W.I. 100%

COUNTY Lea STATE New Mexico FIELD Eumont (Gas)

LOCATION: NE/4 SE/4 Section 5, T-21-S, R-36-E

DRILLING INTANGIBLES:

	PRODUCER	DRY HOLE
1. Drilling Cost <u>3850</u> Feet @ <u>\$11.00</u> Per Foot	<u>42350</u>	<u>42350</u>
2. Day Work <u>2 days @ \$3500/day</u>		
3. Coring Service _____ Well Surveys <u>OH Logs</u>	<u>7000</u>	<u>7000</u>
4. Bits and Reamers _____	<u>10200</u>	<u>10200</u>
5. Testing _____		
6. Directional Drilling _____		
7. Fuel _____ Water _____	<u>8000</u>	<u>5500</u>
8. Mud <u>4700</u> Mud Logging <u>1800</u>	<u>6500</u>	<u>6500</u>
9. Cementing Service _____ Cement _____ Floats <u>12000</u>	<u>12000</u>	<u>3200</u>
10. Company Labor _____ Contract Labor _____	<u>1500</u>	<u>1500</u>
11. Surface Damages and Right-of-Way _____	<u>2500</u>	<u>2500</u>
12. Digging Pits _____ Filling Pits _____	<u>500</u>	<u>500</u>
13. Pit Lining _____	<u>800</u>	<u>800</u>
14. Roads & Bridges <u>1500</u> Dredging & Grading <u>7500</u>	<u>9000</u>	
15. Acidizing <u>6500</u> Fracturing <u>145000</u> Perforating <u>2000</u>	<u>153500</u>	
16. Plugging _____		<u>4500</u>
17. Trucking Cost _____	<u>3000</u>	<u>1500</u>
18. Development Superintendence <u>12/7 days @ \$ 500 /day</u>	<u>6000</u>	<u>3500</u>
19. Rental Equipment <u>BOP, frac tanks</u>	<u>5300</u>	<u>1300</u>
20. Swabbing and Testing _____	<u>6500</u>	
21. Legal and Professional Expenses:		
Product Price Determination <u>NGPA file</u>	<u>750</u>	
Regulatory Hearings <u>State filings</u> other <u>Location Stake</u>	<u>1200</u>	<u>1200</u>
22. Abstracts and Title Opinions _____	<u>7500</u>	<u>7500</u>
23. Geological, Geophysical and Land Support _____	<u>2200</u>	<u>2200</u>
24. Other Costs _____		
25. Contingency @ <u>10</u> % _____	<u>28630</u>	<u>10175</u>
Total Intangibles	<u>314930</u>	<u>111925</u>

WELL EQUIPMENT:

26. Casing <u>450</u> Ft. of <u>9-5/8"</u> @ <u>12.00</u> Per Ft. (Used)		
<u>3850</u> Ft. of <u>7"</u> @ <u>8.50</u> Per Ft. (LS)		
_____ Ft. of _____ @ _____ Per Ft.	<u>38125</u>	<u>5400</u>
27. Tubing <u>3800</u> Ft. of <u>2-3/8"</u> @ <u>2.30</u> Per Ft.	<u>8740</u>	
28. Casing Head _____	<u>1350</u>	<u>1350</u>
29. Xmas Tree or Pumping Connections _____	<u>5600</u>	
30. Pumping Unit _____	<u>15000</u>	
31. Engine/Motor Controller and Power System _____	<u>7800</u>	
32. Sucker Rods _____	<u>4000</u>	
33. Pump _____	<u>1800</u>	
34. Tank Battery _____	<u>3500</u>	
35. Separator or Dehydration Equip. _____	<u>3300</u>	
36. Metering Equipment _____		
37. Flow Lines _____	<u>2100</u>	
38. Guards and Fences _____	<u>800</u>	
39. Other Costs <u>Anchors</u>	<u>600</u>	
40. Contingency @ <u>10</u> % _____	<u>9272</u>	<u>675</u>
Total Tangibles	<u>101987</u>	<u>7425</u>
TOTAL COST OF WELL	<u>416917</u>	<u>119350</u>

Share at _____ %

REMARKS: _____

RETURN THIS COPY
TO: DOYLE HARTMAN
BOX 10426
MIDLAND, TX 79702

Originated by Mike Stewart Title Engineer Date 5-22-90

Approved _____ Title _____ Date _____

DOYLE HARTMAN
OIL OPERATOR
500 N. MAIN STREET
MIDLAND, TEXAS

Revised 5-15-82

SYSTEM State "A" Gathering	WELL State "A" Com No. 5	WELL NUMBER
LOCATION Section 5, T-21-S, R-36-E, Lea County, New Mexico		
WORK REQUIRED Ditch, lay and bury 6" SDR poly gas gathering line to NNG 10" Line No. 107		

WELL CONNECTION EVALUATION			
I OPERATOR	WELL NAME State "A" Com No. 5		
	LOCATION NE/4 SE/4 Section 5, T-21-S, R-36-E		
	COUNTY Lea, New Mexico		
II SYSTEM	CONNECTION LENGTH 3000'	SIZE LINE REQUIRED 6" SDR polyethylene	ESTIMATED COST OF CONNECTION \$46,305
	ESTIMATED RESERVES	ESTIMATED INITIAL PROD. RATE	PRICE DIFFERENTIAL (CURRENT)
III ECON.	FUTURE NET REVENUE	R.O.I. AT AVERAGE DIFF.	PAYOUT MONTH

INTANGIBLES		QUANTITY	PRICE	CASH COST	MATERIAL ON HAND
ROW & DAMAGES		3000'	\$25/rod	4545	
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INSTALLATION COST - PIPE		3000'	\$2.75/Ft	8250	
INSTALLATION COST - OTHER	Meters			2300	
LINE INSPECTION SERVICE					
LEGAL SERVICES				150	
CONSULTANT SERVICES					
X-RAY SERVICES					
CATHODIC PROTECTION SERVICE					
MISC. SERVICES & CONTINGENCIES	10%			1525	
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LINE PIPE - 4" AND OVER		3000'	4.00	12000	
TANKS					
SEPARATION EQUIPMENT					
DRIP					
METER RUNS & METERS I-NNG, I-Check			6500/3650	10150	
PIG LAUNCHER & RECEIVER FAC.					
VALVES - 4" & OVER				2500	
VALVES - UNDER 4"				1000	
FITTINGS - ELLS, TEES, ETC.				1200	
RIVER WEIGHTS					
ROAD CROSSINGS					
CATHODIC EQUIPMENT					
FENCES					
RIVER CROSSINGS					
BUILDINGS & STRUCTURES					
MISC. EQUIPMENT & CONTINGENCIES	10%			2685	
GAS COMPRESSORS					
GAS DEHYDRATION					
SUB-TOTAL TANGIBLES				29535	
TOTALS				46305	

Share at _____ %

REMARKS: Connect proposed infill Eumont well to NNG sales facilities on 10" Line No. 107 in NW/4 NE/4 Section 8, T-21-S, R-36-E, Lea County, New Mexico

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Originated by Michael Stewart Title Engineer Date 6-4-90

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