

INFILL DRILLING FINDINGS PURSUANT TO
SECTION 271.305(b) OF THE FEDERAL ENERGY REGULATORY
COMMISSION REGULATIONS, NATURAL GAS POLICY ACT OF 1978
AND OIL CONSERVATION DIVISION ORDER NO. R-6013-A

I.
Operator ARCO Oil & Gas Company Well Name and No. W.C. Roach Well No. 6
Location: Unit C Sec. 21 Twp. 20S Rng. 37E Cty. Lea

II.
THE DIVISION FINDS:

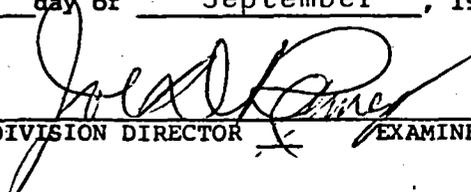
- (1) That Section 271.305(b) of the Federal Energy Regulatory Commission Regulations promulgated pursuant to the Natural Gas Policy Act of 1978 provides that, in order for an infill well to qualify as a new onshore production well under Section 103 of said Act, the Division must find that the infill well is necessary to effectively and efficiently drain a portion of the reservoir covered by the proration unit which cannot be so drained by any existing well within that unit.
- (2) That by Order No. R-6013-A, dated February 8, 1980, the Division established an administrative procedure whereby the Division Director and the Division Examiners are empowered to act for the Division and find that an infill well is necessary.
- (3) That the well for which a finding is sought is completed in the Eumont Gas Pool, and the standard spacing unit in said pool is 640 acres.
- (4) That a 160-acre proration unit comprising the NW/4 of Sec. 21, Twp. 20S, Rng. 37E, is currently dedicated to the W.C. Roach Well No. 1 located in Unit D of said section.
- (5) That this proration unit is () standard (X) nonstandard; if nonstandard, said unit was previously approved by Order No. NSP-1196.
- (6) That said proration unit is not being effectively and efficiently drained by the existing well(s) on the unit.
- (7) That the drilling and completion of the well for which a finding is sought should result in the production of an additional 1.22 B MCF of gas from the proration unit which would not otherwise be recovered.
- (8) That all the requirements of Order No. R-6013-A have been complied with, and that the well for which a finding is sought is necessary to effectively and efficiently drain a portion of the reservoir covered by said proration unit which cannot be so drained by any existing well within the unit.
- (9) That in order to permit effective and efficient drainage of said proration unit, the subject application should be approved.

IT IS THEREFORE ORDERED:

(1) That the applicant is hereby authorized to drill the well described in Section I above as an infill well on the existing proration unit described in Section II(4) above. The authorization for infill drilling granted by this order is necessary to permit the drainage of a portion of the reservoir covered by said proration unit which cannot be effectively and efficiently drained by any existing well thereon.

(2) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on this 16th day of September, 19 80.


DIVISION DIRECTOR EXAMINER

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

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

ADMINISTRATIVE ORDER
NFL 21

INFILL DRILLING FINDINGS PURSUANT TO
SECTION 271.305(b) OF THE FEDERAL ENERGY REGULATORY
COMMISSION REGULATIONS, NATURAL GAS POLICY ACT OF 1978
AND OIL CONSERVATION DIVISION ORDER NO. R-6013-A

I.
Operator PRCO Oil and Gas Company Well Name and No. W.C. Roach Well No 6
Location: Unit C Sec. 21 Twp. 20 S Rng. 37 E Cty. Lee

II.
THE DIVISION FINDS:

- (1) That Section 271.305(b) of the Federal Energy Regulatory Commission Regulations promulgated pursuant to the Natural Gas Policy Act of 1978 provides that, in order for an infill well to qualify as a new onshore production well under Section 103 of said Act, the Division must find that the infill well is necessary to effectively and efficiently drain a portion of the reservoir covered by the proration unit which cannot be so drained by any existing well within that unit.
- (2) That by Order No. R-6013-A, dated February 8, 1980, the Division established an administrative procedure whereby the Division Director and the Division Examiners are empowered to act for the Division and find that an infill well is necessary.
- (3) That the well for which a finding is sought is to be completed in the Eumont Gas Pool, and the standard spacing unit in said pool is 640 acres.
- (4) That a 160-acre proration unit comprising the NW1/4 of Sec. 21, Twp. 20 S, Rng. 37 E, is currently dedicated to the W.C. Roach Well No 1 located in Unit D of said section.
- (5) That this proration unit is () standard (X) nonstandard; if nonstandard, said unit was previously approved by Order No. N3P-1196.
- (6) That said proration unit is not being effectively and efficiently drained by the existing well(s) on the unit.
- (7) That the drilling and completion of the well for which a finding is sought should result in the production of an additional 1.22 BCF of gas from the proration unit which would not otherwise be recovered.
- (8) That all the requirements of Order No. R-6013-A have been complied with, and that the well for which a finding is sought is necessary to effectively and efficiently drain a portion of the reservoir covered by said proration unit which cannot be so drained by any existing well within the unit.
- (9) That in order to permit effective and efficient drainage of said proration unit, the subject application should be approved.

IT IS THEREFORE ORDERED:

- (1) That the applicant is hereby authorized to drill the well described in Section I above as an infill well on the existing proration unit described in Section II(4) above. The authorization for infill drilling granted by this order is necessary to permit the drainage of a portion of the reservoir covered by said proration unit which cannot be effectively and efficiently drained by any existing well thereon.
- (2) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on this _____ day of _____, 19____.

9-16-80

DIVISION DIRECTOR _____ EXAMINER _____

ARCO Oil and Gas Company
Permian District
Post Office Box 1610
Midland, Texas 79702
Telephone 915 684 0100



August 21, 1980

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

Attention: Mr. Richard Stamet

Re: W. C. Roach No. 6
Infill Finding Application
Eumont Gas Pool
Section 21, T-20-S, R-37-E,
Lea County, New Mexico

Dear Mr. Stamet:

Attached is the complete application with supplement information for infill finding on the W. C. Roach No. 6. Please disregard the application dated May 5, 1980 that was submitted earlier.

Very truly yours,

Huan Pham

HP:jaf

Attachment



ARCO Oil and Gas Company
Permian District
Post Office Box 1610
Midland, Texas 79702
Telephone 915 684 0100



August 20, 1980

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

Re: W. C. Roach No. 6
Application for Infill well finding on existing
gas proration unit
Eumont Yates Seven Rivers Queen Gas Pool
Section 21, T-20-S, R-37-E,
Lea County, New Mexico

Gentlemen:

ARCO Oil and Gas Company respectfully requests administrative approval of an infill well finding, the W. C. Roach No. 6, on an existing 160 acre non-standard proration unit. The proration unit comprises the NW/4 of Section 21, T-20-S, R-37-E. The W. C. Roach No. 1 is currently producing as a marginal gas well from the subject field on this proration unit. It is requested that the Division issue certification that there is a need for an infill finding on the non-standard proration unit. This certification is necessary to meet the requirements of the NGPA of 1978 and we request the certification be handled administratively under Division Order No. R-6013-A. The volume of increased ultimate recovery from the drilling of the W. C. Roach No. 6 is estimated to be 1.22 BCFG. The reserve calculations and supporting data are attached.

In accordance to special rules and regulations set forth under Order R-6013-A, the following data is submitted:

- 1) Copies of forms C-101 and C-102 are attached.
- 2) The W. C. Roach No. 6 has been drilled to the Eumont Gas Pool which has a standard proration unit size of 640 acres.
- 3) The W. C. Roach No. 1 is currently producing as a marginal well on a 160-acre non-standard proration unit established under Administrative Order NSP-1196.

- 4) The W. C. Roach No. 6 is located 660' FNL and 1980' FWL in Section 21, T-20-S, R-37-E, Lea County, New Mexico. The No. 6 well was spudded March 14, 1980 and completed April 25, 1980 as a gas well in the Eumont Yates Seven Rivers Queen gas zone. The initial rate of production was 912 MCFGPD.
- 5) The W. C. Roach No. 1 is the only other well on the subject proration unit that has been drilled and completed in the Eumont gas pool. The well is located 330' FNL and 330' FWL in Section 21, T-20-S, R-37-E, Lea County, New Mexico. The No. 1 well was spudded April 1, 1936 and completed May 25, 1936 as an oil well in the Grayburg zone. In November, 1954, a hole in the casing was discovered at 1350'. The well was successfully squeezed and then dually completed for Queen gas production on November 12, 1954.

In 1969 the well was included in the Eunice Monument Grayburg Waterflood operated by Texaco. ARCO Oil and Gas produced the Queen gas from the annulus of this well while Texaco is pumping the Grayburg oil beneath a packer.

Between April and July of 1976 the Queen gas production dropped from 1200 MCFD to 135 MCF and continued to decline at 38% per year until it was shut-in in August, 1977.

In January, 1978 Texaco entered the well and discovered a hole in the Grayburg tubing. The leak in the Grayburg tubing allowed the annulus to load up with fluid which was absorbed by the Queen gas zone. This resulted in apparent formation damage and caused gas production to drastically decrease.

After the tubing leak was repaired, the Queen perforations were acidized with 1500 gallons of acid and both zones were returned to production. The tubing leak apparently caused permanent damage to the Queen zone since production remained low. Average daily production after the workover during 1978 was 50 MCFD. In April, 1980 production averaged 60 MCFD.



Oil Conservation Division of the
New Mexico Department of Energy & Minerals
August 20, 1980
Page 3.

The apparent formation damage and low production rate indicate the W. C. Roach No. 1 cannot efficiently drain the portion of the reservoir covered by the proration unit.

- 6) The infill well, W. C. Roach No. 6, was completed on April 25, 1980 at an initial rate of 912 MCFD from the Eumont gas zone.
- 7) A structure map on the top of the lower Queen formation is attached.
- 8) The volume of increased ultimate recovery is anticipated to be 1.22 BCF. The reserve calculations and supporting data are attached.
- 9) A list of all offset operators is attached. These operators have been sent a copy of this application by certified mail.

ARCO Oil and Gas Company believes approval of these requests will be in the interest of conservation, protection of correlative rights, and allow for more complete recovery of Eumont gas reserves from the subject acreage.

Respectfully,



Huan Pham

HP:jaf

Attachments



LIST OF OFFSET OPERATORS

Amerada Hess Corporation
1209 S. Main
Lovington, New Mexico 88260

Amoco Production Company
P. O. Box 68
Hobbs, New Mexico 88240

B.W.P. Incorporated
1012 Alpine
Midland, Texas 79701

W. K. Byrom, Oil Operator
P. O. Box 147
Hobbs, New Mexico 88240

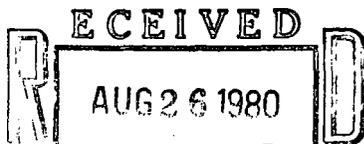
Conoco, Inc.
P. O. Box 460
Hobbs, New Mexico 88240

Getty Oil Company
P. O. Box 1231
Midland, Texas 79702

Gulf Oil Company
P. O. Box 1150
Midland, Texas 79702

Sun Production Company
P. O. Box 1861
Midland, Texas 79702

Texaco, Inc.
P. O. Box 3109
Midland, Texas 79701



OIL CONSERVATION DIVISION
SANTA FE

30-025-2668

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LAND OFFICE	
OPERATOR	

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-101
Revised 1-65

5A. Indicate Type of Lease
STATE FEE

5. State Oil & Gas Lease No.

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work
DRILL DEEPEN PLUG BACK

b. Type of Well
OIL WELL GAS WELL OTHER

SINGLE ZONE MULTIPLE ZONE

7. Unit Agreement Name

8. Form or Lease Name
W. C. Roach

9. Well No.
6

2. Name of Operator
ARCO Oil and Gas Company
Division of Atlantic Richfield Company

10. Field and Pool, or Wildcat
Eumont Yates 7R
Queen Gas

3. Address of Operator
Box 1710, Hobbs, New Mexico 88240

4. Location of Well
UNIT LETTER C LOCATED 660 FEET FROM THE North LINE
AND 1980 FEET FROM THE West LINE OF SEC. 21 TWP. 20S RCE. 37E NMPM

12. County
Lea



19. Proposed Depth 3595'
19A. Formation Yates 7R Qn Gas
20. Rotary or C.T. Rotary

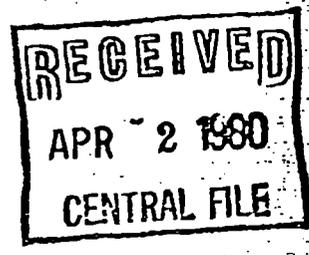
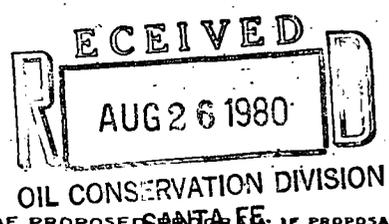
21. Elevations (Show whether DF, RT, etc.) 3509.7' GR
21A. Kind & Status Plug. Bond GCA #8
21B. Drilling Contractor Not selected
22. Approx. Date Work will start 2/15/80

23. PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
11"	8-5/8" OD	24# K-55	1200'	525	Circ to surf
7-7/8"	4 1/2" OD	9.5# K-55	3595'	875	Circ to surf

Propose to drill a development well and test the producing capabilities of the Eumont Queen Gas zone. This location will be subject to NMOCD approval of a non-standard location, simultaneous dedication of acreage with existing W. C. Roach No. 1 and infill finding (Section 103).

Blowout Preventer Program attached.



Handwritten signature

IN ABOVE SPACE DESCRIBE PROPOSED CASING AND CEMENT PROGRAM. IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTION ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

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

Signed [Signature] Title Dist. Drlg. Supt. Date 2/11/80

(This space for State Use)

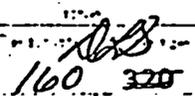
APPROVED BY [Signature] TITLE SUPERVISOR DISTRICT 11 DATE MAR 17 1980

CONDITIONS OF APPROVAL, IF ANY: Prior to producing this well, permission for the non-standard production unit must be obtained.

N. MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-1
Effective 1-1-55

All distances must be from the outer boundaries of the Section

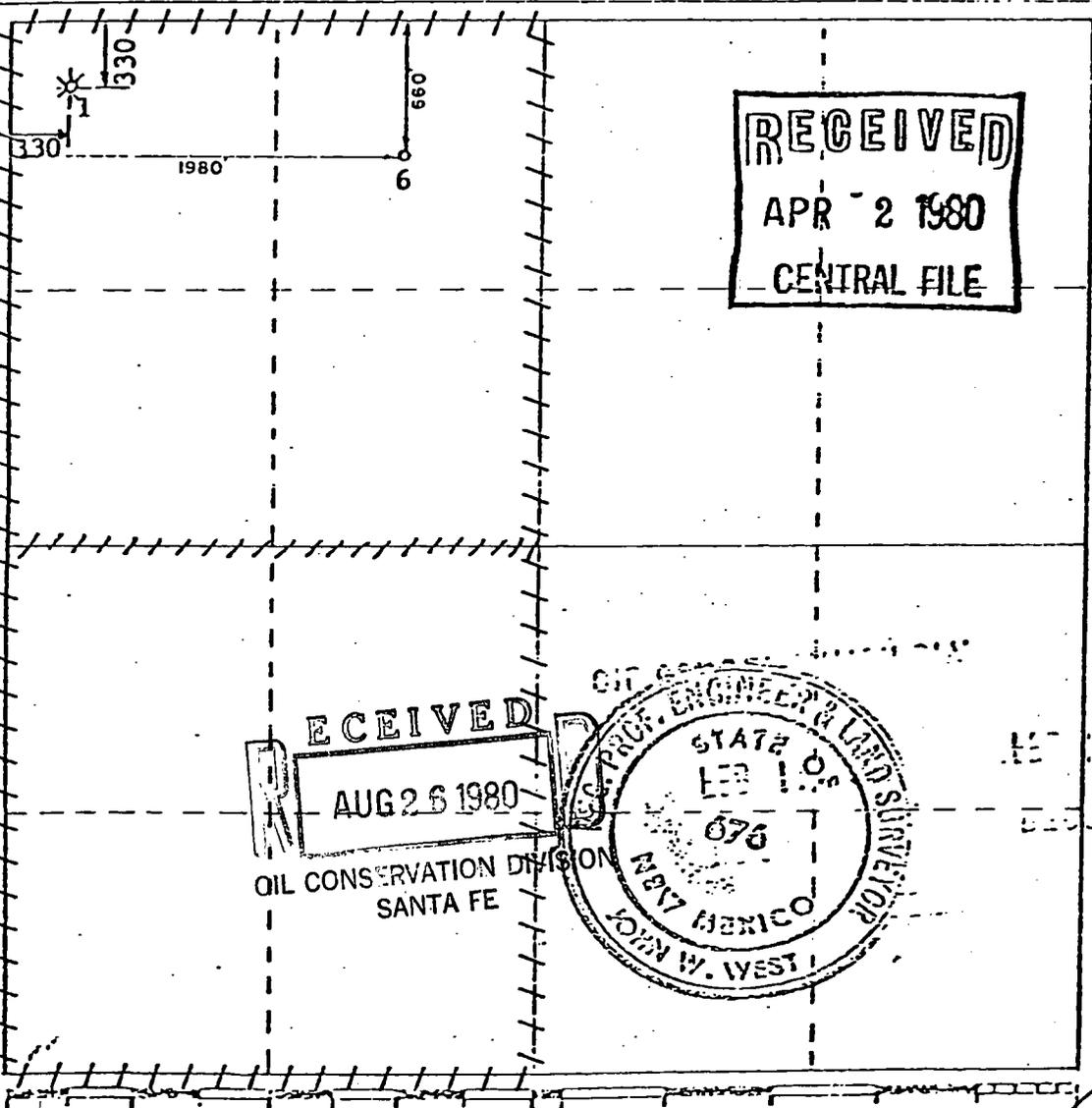
Operator Division of Atlantic Richfield Co. ARCO Oil & Gas Co.		Lease W.C. Rouch		Well No. 6
Tract Letter C	Section 21	Range 20 South	Meridian 37 East	County Lea
Actual Estate Location of Well: 660 feet from the North line and 1980 feet from the West line				
Ground Level Elev. 3509.7	Producing Formation Yates 7R Queen Gas	Prospect Eumont Gas		

- Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
- 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?
- 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 the information furnished herein is true and complete to the best of my knowledge and belief.

[Signature]

Dist Drlg Supt.
ARCO Oil and Gas Company
Division of Atlantic Richfield Company

Date:
2/11/80

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:
2-5-1980

Registered Professional Engineer and Land Surveyor

[Signature]
JOHN W. WEST
678
PATRICK A. JONHERD 6883

RESERVE CALCULATIONS
W. C. ROACH No. 1
160 Acre Proration Unit
(Eumont Gas)
MW/4 Section 21-T20S-R37E

1. Calculation of Gas in Place by Volumetric Method

$$G = 43560 \times V_b \times \emptyset \times (1 - S_w) \times B_{gi}$$

Where:

$$V_b = \text{Acre} \times \text{Ave. Net Pay, Ft} *$$

$$= 160 \times 165'$$

$$= 26400 \text{ ac-ft}$$

$$\emptyset = 11.5\% \text{ (Average from available logs)}$$

$$S_w = 17.1\% **$$

$$B_{gi} = 35.35 \frac{P}{ZT} \quad \frac{\text{SCF}}{\text{Cu Ft}}$$

$$= \frac{(35.35)(1450)}{(.773)(554)}$$

$$= 119.69 \frac{\text{SCF}}{\text{CU.FT.}}$$

Therefore,

$$G = (43560)(26400)(.115)(1 - .271)(119.69)$$

$$= 11.54 \text{ BCF}$$

* See attached isopach map and calculation.

** Published in Oil & Gas Fields of Southeast New Mexico, 1956,
by Roswell Geological Society

Abbreviation:

V_b: bulk Volume, ac-ft.

∅: Porosity, %.

S_w: Connate water saturation, %.

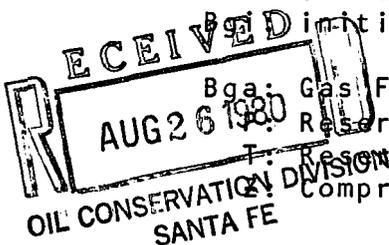
B_{gi}: Initial Gas Formation Volume Factor, $\frac{\text{SCF}}{\text{CF}}$

B_{ga}: Gas Formation Volume Factor at abandonment, $\frac{\text{SCF}}{\text{CF}}$

P: Reservoir Pressure, psia

T: Reservoir Temperature, °R

Z: Compressibility Factor



Reserve Calculations
W. C. Roach No. 1
160 Acre Proration Unit
NW/4 Section 21-T20S, R37E
Lea County, New Mexico
Page 2.

11. Calculation of Recoverable Gas on 160 acres

Assume Abandonment BHP = 150 psia

$$G = 43560 \times V_b \times \phi \times (1 - S_w) \times (B_{gi} - B_{ga})$$

Where,

$$B_{ga} = \frac{(35.35)(150)}{(.980)(554)}$$
$$= 9.77 \frac{\text{SCF}}{\text{Cu.Ft.}}$$

Therefore,

$$G = (43560)(26400)(.115)(1 - .271)(119.69 - 9.77)$$
$$= 10.60 \text{ BCF}$$

111. Calculation of Unrecoverable Reserves for 160 Acre Proration Unit:

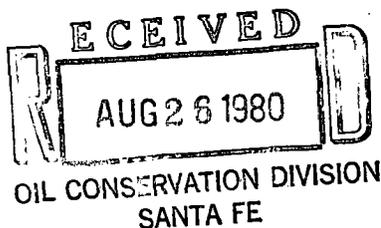
Unrecoverable Reserves = Recoverable Reserves to P/Z of 150 psia

- Economic Recovery from W. C. Roach No. 1 *

$$= 10.60 \text{ BCF} - 6.02 \text{ BCF}$$

$$= 4.58 \text{ BCF}$$

*See attached P/Z graph and supporting data.



RESERVE CALCULATIONS
W.C. ROACH No. 6
160 Acre Proration Unit
NW/4 Section 21, T20S, R37E
Lea County, New Mexico

1. Calculation of Recoverable Gas on 160 Acres by Volumetric Method

Assume Abandonment BHP = 150 psia

Initial BHP from SITP = 330 psia

$$G = 43560 \times V_b \times \phi \times (1 - S_w) \times (B_{gi} - B_{ga})$$

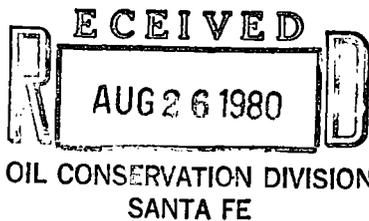
Where,

$$B_{gi} = \frac{(35.35)(330)}{(.94)(554)} = 22.4 \frac{\text{SCF}}{\text{Cu.Ft.}}$$

$$B_{ga} = \frac{(35.35)(150)}{(.98)(554)} = 9.77 \frac{\text{SCF}}{\text{Cu.Ft.}}$$

Therefore,

$$G = (43560)(26400)(.115)(1 - .271)(22.4 - 9.77) \\ = 1.22 \text{ BCF}$$



W. C. ROACH LEASE
EUMONT GAS ZONE
CALCULATION OF AVERAGE NET PAY

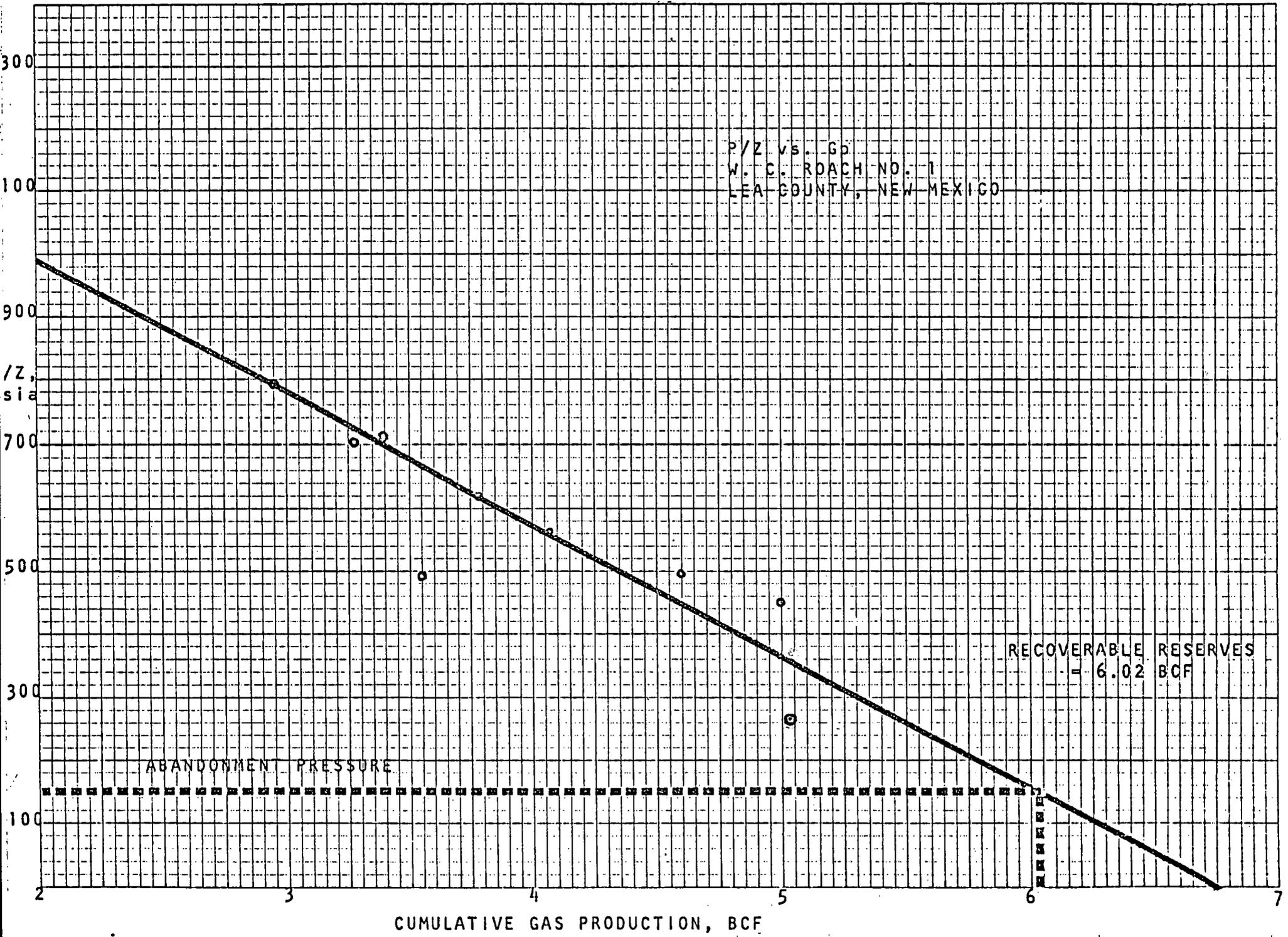
<u>Isopach</u>	<u>Planimeter Area</u>	<u>Area, Acres</u>
125 - 150	.010	38
150 - 175	.020	74
175 - 200	<u>.013</u>	<u>48</u>
	.043	160

160 acres = .043

	<u>V, acre - ft</u>
137.5 (38)	5225
162.5 (75)	12186
187.5 (48)	<u>9000</u>
	26411

$\frac{26411 \text{ ac-ft}}{160 \text{ ac}} = 165 \text{ ft}$

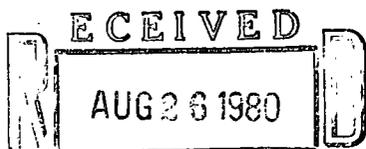
RECEIVED
AUG 26 1980
OIL CONSERVATION DIVISION
SANTA FE



PRODUCTION HISTORY*
W. C. ROACH No. 1
Sec. 21-T20S-R37E
Lea County, N.M.

<u>Date</u>	<u>BHP/z</u>	<u>Cumulative Gas Production, MMCF</u>
7-16-70	792	2947.4
7-12-71	706	3272.3
6-16-72	713	3395.2
10-15-72	491	3533.5
3-29-73	621	3783.8
3-1-74	564	4068.6
4-24-75	491	4592.6
5-17-76	451	4991.5
2-4-77	267	5031.9

*Published in Natural Gas Well Production Histories,
Gas Graph Report, by Dwight's, Dallas, Texas.



OIL CONSERVATION DIVISION
SANTA FE



em

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR
LARRY KEHOE
SECRETARY

May 8, 1980

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

ARCO Oil and Gas Company
P. O. Box 1610
Midland, Texas 79702

Attention: Ms. Carolyn Dawson

Administrative Order NSP-1196

Gentlemen:

Reference is made to your application for two non-standard proration units consisting of the following acreage in the Eumont Gas Pool:

LEA COUNTY, NEW MEXICO
TOWNSHIP 20 SOUTH, RANGE 37 EAST, NMPM
Section 21: NW/4
Section 21: SW/4

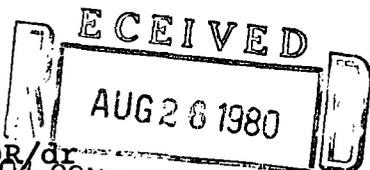
It is my understanding that the unit consisting of the SW/4 is to be dedicated to a well to be drilled at a standard location thereon, and the NW/4 is to be simultaneously dedicated to your W. C. Roach Well No. 6 located 660 feet from the North line and 1980 feet from the West line and your W. C. Roach Well No. 1 located 330 feet from the North line and 330 feet from the West line of said Section 21. Further, you are hereby permitted to produce the allowable from any of the wells on the proration unit in any proportion.

That Order No. R-612 is hereby put in abeyance.

By authority granted me under the provisions of Rule 5(C)3 of Order No. R-1670, the above non-standard proration units are hereby approved.

Sincerely,

Joe D. Ramey
JOE D. RAMEY,
Director



JDR/dr
cc: OIL CONSERVATION DIVISION - Hobbs
OIL CONSERVATION DIVISION
SANTA FE Engineering Committee - Hobbs

Eunice Monument Unit (EXP)
Est. #3543

9

1-16-78

7" @ 3701

RECOMMENDED REMEDIAL WORK:
Determine reason for decline
in production in Eumont
(Queen) gas zone.

383
379
PB

(All costs to be paid by Arco)

Ralph Johnson MI & RU 1-16-78. Pld rods & pmp. Instld BOP. Pld pkr. Ran 7" pkr & RBP. Tstd in 2-3/8" tbg to 4000#. Set RBP @ 3602, pkr @ 3436'. Filled tbg w/2% KCl wtr. Press tstd csg 3435-3602 to 1000# - OK. Set pkr @ 3850'. Loaded annulus w/60 bbls KCL wtr. Press tstd csg surf-3350' to 1000# - OK. Rel pkr. Rel RBP & reset @ 3350'. POH. Ran tbg. Rel RBP. POH. FL 1800 FS. RU Dresser Atlas. Ran GR-cmt bond log 3516-2300'. RD. Prep to run prod tbg & swb Eumont zone.

No. of Days: Comm: 3
1-20/1-26-78

Cash: Comm: \$5450

Ran seal assembly & prod string. Rem BOP. Seal into Model "D" pkr @ 3622'. S/Eumont zone thru sliding sleeve 5 hrs, 5 BO, 56 BLW. No gas on tbg. Annulus press 150#. FL 700' FIH. Bled off tbg. RU Otis. Set tbg plug @ 3510'. S/thru sliding sleeve @ 3590 9-1/2 hrs, 40 BO, 5 BLW. No gas. FL 700' FIH. CP 475-200# during swbg. SI 60 hrs. TP -0-, CP 300#. FL 900' FIH. S/1 hrs, 3 BO, no wtr. Started flowing thru tbg. F/1/2 hr & died. Rec 1 BO, no wtr. CP 300-280# while flowing. Bled dn in 25 min. Very slight constant gas flow from csg. S/7 hrs, 5 BO, 1 BLW. FL 100' FIH. Instld BOP. POH. Ran 7" pkr in RBP. Set RBP @ 3535 & pkr @ 3296'. Halli A/7" csg perfs 3330-3422 w/1500 gal 60-40 Xylene acid, w/1000 SCF nitrogen/bbl. Flushed w/500 gal 4% KCl wtr w/1000 SCF nitrogen/bbl. Job comp 1:15 p.m. 1-24-78. Max press 2500#, min press 2400#, ISIP 1600#, 20-min SIP 560#. AIR 2.8 BPM. Open to tst task after 20-min SI. FI back nitrogen 30 min, no fluid. S/ 2-1/2 hrs, no oil, 20 BLW. Poor gas show. FL 50' FIH. S/4 hrs, no oil, 17 BLW. Poor gas show. FL 50' FIH. Rel pkr & RBP. POH. Ran prod tbg. Rem BOP. Flanged up WH. S/2 hrs, no oil, 14 BLW. Poor gas show. FL 125' BIH. TP -0-, CP 200#. FL 175' FIH this am.

No. of Days: Comm: 8
1-27/2-1-78

Cash: Comm: \$11,500

Eumont Zone: S/10 hrs, 8 BO, 5 BLW. Poor gas show 125' BIH, SI 13-1/2 hrs TP 80# CP 300#. FL 100' FIH (-94 BLW) Closed sliding sl @ 3590'. Pld tbg plug. Instld tbg plug @ 3500'. Press tested tbg to 1000# 15 min- OK Pld tbg plug. SI.

Grayburg San Andres P/48 hrs, no oil, 10 BSW. Prep to run pkr leakage test.
No. of Days: Comm: 10
2-2-78

Cash: Comm: \$17,800

Eumont-Grayburg San Andres : On pkr leakage test.
No. of Days: Comm: 10

Cash: Comm: \$17,800

2-3/9-78

Arco's Eumont zone: Flowing to sales line.
TX's Grayburg San Andres zone: P/72 hrs, no oil, 8 BSW. Ran pkr leakage test - OK. Placed back on production 3 p.m. 2-8-78. FINAL REPORT.

No. of Days: Comm: 10

Cash: Comm: \$18,200

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AUG 26 1980
CONSERVATION DIVISION
SANTA FE

SUBSEQUENT OPERATION REPORT
HCBS DISTRICT _____ AREA _____
WORKOVER COST _____ PAYOUT _____

For [unclear]
Only Arco paid all
cost! Was Arco carry
over our [unclear]