



STATE OF NEW MEXICO

*file case # 6742*

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS  
GOVERNOR

January 21, 1988

POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87504  
(505) 827-5800

Arco Oil & Gas Company  
P. O. Box 1610  
Midland, Texas 79702

Attention: Jack Lowden

Re: Empire Abo Unit,  
Order No. R-4549-F  
Gas Bank Balance

Dear Mr. Lowden:

In response to your letter of October 14, 1987, it is satisfactory for you to accumulate gas underproduction in your gas bank. While accumulation since April, 1984 through July, 1987 is nearly 3 billion cubic feet and probably far more than you will ever need, it is our desire, and yours, that oil production not be curtailed so long as there is no question of waste or impairment of correlative rights.

Sincerely,

A handwritten signature in cursive script, appearing to read "William J. Lemay".

WILLIAM J. LEMAY,  
Director

VTL/WJL/dr

cc: Mike Williams, Artesia  
Harold Garcia, Santa Fe

ARCO Oil and Gas Company  
Central District  
Post Office Box 1610  
Midland, Texas 79702  
Telephone 915 688 5200



*Place in file  
Case # 6742*

*Vic  
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*What is purpose of gas  
bank*

*Letter and approving  
mth*

October 14, 1987

Mr. William J. LeMay  
New Mexico Oil Conservation Division  
P.O. Box 2088  
Santa Fe, New Mexico 87501

Dear Mr. LeMay:

Empire Abo Unit  
Order No. R-4549-F  
Gas Bank Balance

ARCO Oil and Gas Company revised the method used to calculate the Empire Abo Unit (EAU) gas bank balance after a verbal clarification of Rule 5, Paragraph 2 of NMOCD Order No. R-4549-F was obtained from Mr. Harold Garcia in March, 1987. The clarification allowed ARCO to include cumulative gas underproduction in the EAU gas bank balance. In order to complete our records, ARCO respectfully requests your written approval to continue including cumulative gas underproduction in the EAU gas bank balance. The clarification of the EAU gas allowable and its effect on the gas bank balance was previously documented in the attached letter from J. T. Lowder to Mr. William J. LeMay dated March 26, 1987.

The monthly EAU gas underproduction and overproduction since the effective date of Order No. R-4549-F is attached.

Yours very truly,

*688-5557*

*Jack T. Lowder*

Jack T. Lowder  
Senior Engineer

JTL:jee

*George Agnew - Harold Garcia  
688-5204*

Attachments

APPROVED BY:

DATE:

\_\_\_\_\_  
Director  
Energy and Minerals Department  
Oil Conservation Division  
State of New Mexico

EMPIRE ABO UNIT  
GAS BANK BALANCE

MONTH	GAS PRODUCED (MCF)	ALLOWABLE @ 65 MMCFD (MCF)	MONTHLY UNDER/(OVER) ALLOWABLE (MCF)	CUMULATIVE UNDER/(OVER) ALLOWABLE (MCF)	GAS BANK BALANCE (MCF)
4/84	1798318	1950000	151682	-	325000
5	1893118	2015000	121882	121882	446882
6	1744697	1950000	205303	327185	652185
7	1752642	2015000	262358	589543	914543
8	1712006	2015000	302994	892537	1217537
9	1686617	1950000	263383	1155920	1480920
10	1909558	2015000	105442	1261362	1586362
11	1850728	1950000	99272	1360634	1685634
12	1973394	2015000	41606	1402240	1727240
1/85	1915830	2015000	99170	1501410	1826410
2	1737635	1820000	82365	1583775	1908775
3	1907564	2015000	107436	1691211	2016211
4	1878389	1950000	71611	1762822	2087822
5	1989462	2015000	25538	1788360	2113360
6	1981217	1950000	-31217	1757143	2082143
7	2050138	2015000	-35138	1722005	2047005
8	1949042	2015000	65958	1787963	2112963
9	1876481	1950000	73519	1861482	2186482
10	2012658	2015000	2342	1863824	2188824
11	1826204	1950000	123796	1987620	2312620
12	2068120	2015000	-53120	1934500	2259500
1/86	2018243	2015000	-3243	1931257	2256257
2	1870624	1820000	-50624	1880633	2205633
3	2035629	2015000	-20629	1860004	2185004
4	1988752	1950000	-38752	1821252	2146252
5	1957124	2015000	57876	1879128	2204128
6	1893751	1950000	56249	1935377	2260377
7	2008252	2015000	6748	1942125	2267125
8	1902732	2015000	112268	2054393	2379393
9	1805272	1950000	144728	2199121	2524121
10	1963610	2015000	51390	2250511	2575511
11	1986705	1950000	-36705	2213806	2538806
12	2129837	2015000	-114837	2098969	2423969
1/87	2126796	2015000	-111796	1987173	2312173
2	1822464	1820000	-2464	1984709	2309709
3	1951847	2015000	63153	2047862	2372862
4	1953825	1950000	-3825	2044037	2369037
5	2029383	2015000	-14383	2029654	2354654
6	1779323	1950000	170677	2200331	2525331
7	1651924	2015000	363076	2563407	2888407

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



March 26, 1987

Mr. William J. LeMay  
New Mexico Oil Conservation Division  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Dear Mr. LeMay:

Empire Abo Unit  
Order No. R-4549-F  
Clarification of Gas Bank Allowance

ARCO Oil and Gas Company, the operator of the Empire Abo Pressure Maintenance Project, requested a clarification of Rule 5, Paragraph 2 of NMOCD Order No. R-4549-F regarding the gas bank allowance. Based on a telephone conversation with Mr. Harold Garcia on March 25, 1987, I was informed that ARCO has obtained administrative approval to include cumulative gas underproduction as well as gas overproduction in the Empire Abo Unit gas bank allowance.

NMOCD Order No. R-4549-F established a maximum daily project allowable for the Empire Abo Pressure Maintenance Project on April 20, 1984. The allowable is based on the amount of oil which will result in monthly average associated gas production of no more than 65 MMCF per day. Rule 5, Paragraph 2 of Order No. R-4549-F states "The allowable assigned shall result in production of casinghead gas averaging not more than 65 MMCF per day for the month, provided however, that on a cumulative basis, the unit operator may carry gas overproduction of 325 MMCF."

The monthly gas underproduction and overproduction for the Empire Abo Unit since the effective date of NMOCD Order No. R-4549-F is attached. Please notify me at (915) 688-5557 if there are any modifications in this decision.

Yours very truly,

*Jack T. Lowder*

Jack T. Lowder  
Senior Engineer

JTL:sc  
Attachments

cc: Mr. Harold Garcia  
NMOCD  
P. O. Box 2088  
Santa Fe, New Mexico 87501

cc: Mr. L. A. Clements  
NMOCD  
P. O. Drawer DD  
Artesia, New Mexico 88210

EMPIRE ABO UNIT  
GAS BANK BALANCE

MONTH	GAS PRODUCED (MCF)	ALLOWABLE @ 65 MMCFD (MCF)	MONTHLY UNDER/(OVER) ALLOWABLE (MCF)	CUMULATIVE UNDER/(OVER) ALLOWABLE (MCF)	GAS BANK BALANCE (MCF)
4/84	1798318	1950000	151682	-	325000
5	1893118	2015000	121882	121882	446882
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8	1949042	2015000	65958	1787963	2112963
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12	2068120	2015000	-53120	1934500	2259500
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3	2035629	2015000	-20629	1860004	2185004
4	1988752	1950000	-38752	1821252	2146252
5	1957124	2015000	57876	1879128	2204128
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8	1902732	2015000	112268	2054393	2379393
9	1805272	1950000	144728	2199121	2524121
10	1963610	2015000	51390	2250511	2575511
11	1986705	1950000	-36705	2213806	2538806
12	2129837	2015000	-114837	2098969	2423969
1/87	2126796	2015000	-111796	1987173	2312173
2	1822464	1820000	-2464	1984709	2309709

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
DIVISION FOR THE PURPOSE OF  
CONSIDERING:

CASE NO. 8060  
Order No. R-4549-F

APPLICATION OF ARCO OIL & GAS  
COMPANY FOR AMENDMENT OF ORDER  
NO. R-4549, AS AMENDED, EDDY  
COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:00 a.m. on February 1, 1984, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 20th day of April, 1984, the Division Director having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, Arco Oil & Gas Company, is the operator of the Empire-Abo Pressure Maintenance Project, Empire-Abo Pool, Eddy County, New Mexico, which project was authorized by Division Order No. R-4549 and is governed by operating rules contained in the Special Rules and Regulations for the Empire-Abo Pressure Maintenance Project included in said Order as amended by Orders Nos. R-4549-A through R-4549-E.
- (3) That said special rules and regulations provide for well allowables based upon reservoir voidage.
- (4) That the applicant seeks the rescission of such rules for setting allowables and the establishment of a maximum daily project allowable of 65 MMCFD.
- (5) That the evidence presented in this case established that this proposed method of setting allowables will result in the greater recovery of liquid hydrocarbons from such project.

(6) That the proposed amendment of said special rules will not result in violation of correlative rights.

(7) That the application for amendment of said special rules should be approved.

IT IS THEREFORE ORDERED:

(1) That Rules 3, 4, 4(A), 5, 6, 7, 8, 9, 10, 11, 12, and 13 of the Special Rules and Regulations for the Empire-Abo Pressure Maintenance Project contained in Division Order No. R-4549, as amended, are hereby rescinded.

(2) That said special rules are hereby amended by the adoption of new Rules 3, 4, 5, and 6 which read in their entirety as follows:

"RULE 3: That the maximum daily project allowable shall be an amount of oil which will result in monthly average associated gas production of no more than 65 MMCF per day.

For the purpose of these rules, "Available Residue Gas" shall be defined as being all gas produced from the unitized formation less plant shrinkage, plant fuel, and lease fuel required for operation of the lease.

"RULE 4: That all available unit residue gas shall be reinjected. No raw gas nor plant residue gas attributable to the project shall be sold or otherwise disposed of by any other means. That in addition to the injection of available residue gas, the project operator may inject up to and including 35 million cubic feet of extraneous gas per day into the Abo formation underlying the project area; further, that withdrawals of said extraneous gas may be made, but pending reservoir blow-down, during not more than 30 days in any one 180-day period; provided however, that pending blow-down, the daily rate of withdrawal shall not exceed the average daily rate of injection of such extraneous gas during the preceding 180-day period; provided further, that the project operator shall establish and maintain an "Extraneous Gas Bank Statement" which shall be filed with the Division each month concurrently with the project operator's "Empire-Abo Pressure Maintenance Project Monthly Report", and which shall show thereon each month the volume of extraneous gas injected, the cumulative volume of such gas injected, the volume of gas

delivered back to the supplier of extraneous gas, the cumulative volume of gas delivered back to the supplier, and the net cumulative extraneous gas bank.

"RULE 5. Allowables shall be assigned to unit wells in accordance with nominations submitted by the unit operator during the months of March, July, and November of each year. That such nominations shall accompany the Pressure Maintenance Project Operator's Report filed for that month.

The allowables assigned shall result in production of casinghead gas averaging not more than 65 MMCF per day for the month, provided however, that on a cumulative basis, the unit operator may carry gas overproduction of 325 MMCF.

That no producing well in the project area which directly or diagonally offsets a well not committed to the unit, and producing from the same common source of supply, shall receive an allowable or produce in excess of two times the top unit allowable for the pool.

"RULE 6. Each month the project operator shall submit to the Division a Pressure Maintenance Project Operator's Report on a form prescribed by the Division. The report shall show all project wells, production of oil, gas, and water; volumes of water, residue gas, and extraneous gas injected; total production of oil, gas, and water, and such other data as the Division may require"

(3) That Rule 14A, 14B, 14C, and 14D of said Special Rules are hereby redesignated Rule 7A, 7B, 7C and 7D, respectively.

(4) That Rule 15 of said Special Rules is hereby redesignated Rule 8 and is amended to read in its entirety as follows:

"RULE 8. Expansion or contraction of the project area may be approved by the Director of the Division administratively when good cause is shown therefor."

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



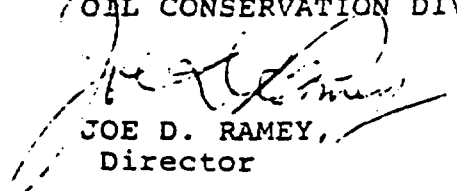
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Case No. 8060

Order No. P-4549-F

DONE at Santa Fe, New Mexico, on the day and year  
hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

  
JOE D. RAMEY,  
Director

S E A L