

Case No.

1545

Application, Transcript,
Small Exhibits, Etc.

CASE 454: Hearing called by OGC at re-
quest of supervisor, J. V. [illegible] [illegible] [illegible]
re exception to daily [illegible].

**BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO**

**IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:**

**CASE NO. 1545
Order No. R-1285**

**THE APPLICATION OF THE OIL
CONSERVATION COMMISSION UPON
ITS OWN MOTION AT THE REQUEST
OF CERTAIN OPERATORS TO DETERMINE
WHETHER ALL WELLS IN THE VERDE-
GALLUP OIL POOL SHOULD BE GRANTED
AN EXCEPTION TO RULE 502 I (a) OF
THE COMMISSION RULES AND REGULATIONS.**

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on November 13, 1958, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 21st day of November, 1958, the Commission, a quorum being present, having considered the application and the evidence adduced, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That certain operators in the Verde-Gallup Oil Pool have requested that all wells in said pool be granted an exception to the daily tolerance provisions of Rule 502 I (a) of the Commission Rules and Regulations.
- (3) That the request is based upon the following grounds:
 - (a) That serious access problems are present in the area of said pool due to the extremely rough terrain.
 - (b) Excessive trips are required of the pumper in the routine operation of the wells due to the fact that electricity is not available as a power source for pumping oil wells in the Verde-Gallup Oil Pool.

-2-

Case No. 1545

Order No. R-1285

(c) That due to the slow rates of production required by Rule 502 I (a), paraffin problems are severe in said pool.

(4) That for the reasons listed above all wells presently drilled or hereafter completed in the Verde-Gallup Oil Pool should be granted an exception to Rule 502 I (a) of the Commission Rules and Regulations.

IT IS THEREFORE ORDERED:

That all wells presently drilled or hereafter completed in the Verde-Gallup Oil Pool are hereby granted an exception to the daily tolerance provisions of Rule 502 I (a) of the Commission Rules and Regulations and may be produced at a daily rate not to exceed 200 per cent of the daily top unit allowable or 100 barrels of oil per day whichever is greater.

PROVIDED HOWEVER, That in the event casinghead gas gathering facilities are established in the Verde-Gallup Oil Pool, a hearing will be called to determine whether the pool exception to Rule 502 I (a) granted by this order should be continued.

PROVIDED FURTHER, That nothing contained herein shall be construed as authorizing the production of wells in said pool in excess of the monthly tolerance set forth in Rule 502 II of the Commission Rules and Regulations.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

E. L. Mechem

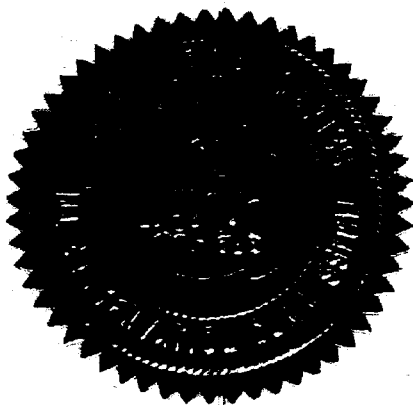
EDWIN L. MECHEM, Chairman

Murray E. Morgan

MURRAY E. MORGAN, Member

A. L. Porter, Jr.

A. L. PORTER, Jr., Member & Secretary



ir/

OIL CONSERVATION COMMISSION
P. O. BOX 871
SANTA FE, NEW MEXICO

November 25, 1958

Mr. Gordon Llewellyn
Aztec Oil & Gas Company
920 Mercantile Securities Bldg.
Dallas, Texas

Dear Mr. Llewellyn:

We enclose a copy of Order R-1285 issued November 21, 1958, by the Oil Conservation Commission in Case 1545, which was heard on November 13th.

Very truly yours,

A. L. Porter, Jr.
Secretary - Director

bp
Encl.

*Typed copy of
R-1285 sent to
Paul Clark, Se. Union,
Farmington. 11-25-58
BP*

CLASS OF SERVICE
This is a fast message
unless its deferred char-
acter is indicated by the
proper symbol.

WESTERN UNION TELEGRAM

W. P. MARSHALL, President

The filing time shown in the date line on domestic telegrams is STANDARD TIME at point of origin. Time of arrival is STANDARD TIME at point of destination.

SYMBOLS
DL=Day Letter
NL=Night Letter
LT=International
Letter Telegram

LA221 SSF305

1201

PA 4 361.

L FRA120 PD AR=FARMINGTON NMEX 22 4 45 PM=

A L PORTER, OIL CONSERVATION COMMISSION= 1958 DEC 22 PM 4 45

SANTA FE NMEX=

5-2841
5-7565

THE OPERATORS IN THE VERDE GALLUP POOL AND THE GALLEGOS
GALLUP POOL HAVE NOT RECEIVED ANY ORDERS CONCERNING
THE RESULTS OF CASE NUMBER 1545 AND CASE 1544 WILL YOU
PLEASE ADVISE THE OPERATORS AS TO THE DECISION MADE ON
THESE CASES=

EWELL N WALSH EL PASO NATURAL GAS PRODUCTS CO==

= 1545 1544=

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

DOCKET: REGULAR HEARING NOVEMBER 13, 1958

Oil Conservation Commission 9 a.m. Mabry Hall, State Capitol, Santa Fe, NM

- ALLOWABLE:**
- (1) Consideration of the oil allowable for December, 1958.
 - (2) Consideration of the allowable production of gas for December, 1958, for six prorated pools in Lea County, New Mexico, and also presentation of purchasers' nominations for the six-month period beginning January 1, 1959; consideration of the allowable production of gas for seven prorated pools in San Juan and Rio Arriba Counties, New Mexico, for December, 1958.

NEW CASES

CASE 728: Application of El Paso Natural Gas Company for an order extending the vertical limits of the Justis Gas Pool, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order extending the vertical limits of the Justis Gas Pool in Lea County, New Mexico, to a datum 270 feet below the top of the Glorieta formation. The vertical limits of the Justis Gas Pool, as presently designated, extend from the top of the Glorieta formation to a point 200 feet below the top of said formation.

CASES 1253 & 1254:

In the matter of the hearing ordered to be held by Order No. R-1011 to permit the operators in the Kemnitz-Wolfcamp Pool in Lea County, New Mexico, to appear and show cause why the Special Rules and Regulations set forth in said order should be continued in effect beyond December 31, 1958.

CASE 1544: In the matter of the hearing called on the motion of the Oil Conservation Commission at the request of certain operators in the Gallegos-Gallup Oil Pool in San Juan County, New Mexico, to permit any operator to appear and show cause why any well or wells in the Gallegos-Gallup Oil Pool should be granted an exception to the daily tolerance provisions of Rule 502 I (a) of the Commission Rules and Regulations.

CASE 1545: In the matter of the hearing called on the motion of the Oil Conservation Commission at the request of certain operators in the Verde-Gallup Oil Pool in San Juan County, New Mexico, to permit any operator to appear and show cause why any well or wells in the Verde-Gallup Oil Pool should be granted an exception to the daily tolerance provisions of Rule 502 I (a) of the Commission Rules and Regulations.

CASE 1499: Application of Sinclair Oil & Gas Company for a hearing de novo before the Oil Conservation Commission of New Mexico on its application for a non-standard gas proration unit. Applicant, in the above-styled cause, seeks an order authorizing a 240-acre non-standard gas proration unit in the Tubb Gas Pool comprising the SW/4 and the S/2 SE/4 Section 26, Township 21 South, Range 37 East, Lea County, New Mexico, said unit

CASE 1499 continued:

to be dedicated to applicant's J. R. Cone "A" Well No. 1 located 660 feet from the South and West lines of said Section 26.

CASE 1500: Application of Sinclair Oil & Gas Company for a hearing de novo before the Oil Conservation Commission of New Mexico on its application for a non-standard gas proration unit. Applicant, in the above-styled cause, seeks an order authorizing a 200-acre non-standard gas proration unit in the Blinebry Gas Pool comprising the SW/4 and SW/4 SE/4 Section 26, Township 21 South, Range 37 East, Lea County, New Mexico, said unit to be dedicated to applicant's J. R. Cone "A" Well No. 2 located 1980 feet from the South line and 660 feet from the West line of said Section 26.

CASE 1546: Southeastern New Mexico nomenclature case calling for an order for the creation of new pools and extension of existing pools in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico.

(a) Create a new gas pool for Seven Rivers production, designated as the Laguna-Seven Rivers Gas Pool, and described as:

TOWNSHIP 20 SOUTH, RANGE 35 EAST, NMPM
Section 11: NE/4

(b) Create a new oil pool for Pennsylvanian production, designated as the North Shoe Bar-Pennsylvanian Pool, and described as:

TOWNSHIP 16 SOUTH, RANGE 35 EAST, NMPM
Section 15: SE/4

(c) Extend the Acme Pool to include:

TOWNSHIP 8 SOUTH, RANGE 27 EAST, NMPM
Section 5: N/2

(d) Extend the Artesia Pool to include:

TOWNSHIP 18 SOUTH, RANGE 28 EAST, NMPM
Section 23: SE/4

(e) Extend the Blinebry Gas Pool to include:

TOWNSHIP 21 SOUTH, RANGE 37 EAST, NMPM
Section 32: SE/4

(f) Extend the Hare Pool to include:

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM
Section 4: S/2

- (g) Extend the Hump-Queen Pool to include:

TOWNSHIP 16 SOUTH, RANGE 34 EAST, NMPM
Section 8: S/2 NW/4

- (h) Extend the Jalmat Gas Pool to include:

TOWNSHIP 22 SOUTH, RANGE 35 EAST, NMPM
Section 3: SE/4
Section 10: SE/4

- (i) Extend the Kennitz-Wolfcamp Pool to include:

TOWNSHIP 16 SOUTH, RANGE 34 EAST, NMPM
Section 22: NW/4

- (j) Extend the Milnesand-San Andres Pool to include therein:

TOWNSHIP 8 SOUTH, RANGE 34 EAST, NMPM
Section 23: NE/4

- (k) Extend the Tubb Gas Pool to include:

TOWNSHIP 22 SOUTH, RANGE 38 EAST, NMPM
Section 31: NE/4 & NE/4 SE/4

CASE 1547:

Northwestern New Mexico nomenclature case calling for an order for the extension of existing pools in Rio Arriba and San Juan Counties, New Mexico.

- (a) Extend the Aztec-Pictured Cliffs Pool to include:

TOWNSHIP 30 NORTH, RANGE 10 WEST, NMPM
Section 36: W/2

- (b) Extend the South Blanco-Pictured Cliffs Pool to include:

TOWNSHIP 25 NORTH, RANGE 3 WEST, NMPM
Section 20: S/2
Section 21: N/2

TOWNSHIP 25 NORTH, RANGE 4 WEST, NMPM
All of Sections 9, 10 and 11
Section 14: All
Section 15: N/2 and SE/4
Section 16: N/2

- (c) Extend the Tapacito-Pictured Cliffs Pool to include:

TOWNSHIP 25 NORTH, RANGE 3 WEST, NMPM
Section 14: W/2

- (d) Extend the West Kutz-Pictured Cliffs Pool to include:

TOWNSHIP 29 NORTH, RANGE 13 WEST, NMPM

Section 20: SE/4
Section 21: SW/4

- (e) Extend the Angels Peak-Dakota Pool to include:

TOWNSHIP 26 NORTH, RANGE 10 WEST, NMPM

Section 2: NW/4

TOWNSHIP 27 NORTH, RANGE 10 WEST, NMPM

Section 35: SW/4

TOWNSHIP 28 NORTH, RANGE 10 WEST, NMPM

Section 27: W/2
Section 28: E/2

- (f) Extend the North Los Pinos-Dakota Pool to include:

TOWNSHIP 32 NORTH, RANGE 7 WEST, NMPM

Section 12: SW/4

- (g) Extend the Horseshoe-Gallup Oil Pool to include:

TOWNSHIP 31 NORTH, RANGE 16 WEST, NMPM

Section 32: SE/4
Section 33: SW/4 SW/4

- (h) Extend the Otero-Gallup Oil Pool to include:

TOWNSHIP 25 NORTH, RANGE 5 WEST, NMPM

Section 32: NW/4 NE/4

- (i) Extend the Verde-Gallup Oil Pool to include:

TOWNSHIP 31 NORTH, RANGE 15 WEST, NMPM

Section 26: SW/4
Section 27: SE/4
Section 35: NW/4

CONTINUED CASES

CASE 1522: Application of Lea County Drip Company, Inc. for the revision of certain of the Commission Statewide Rules and Regulations and for the revision of certain of the Commission forms. Applicant, in the above-styled cause, seeks an order to revise Rules 311, 312, 1116 and 1117 of the Commission Rules and Regulations, to replace the present Commission Form C-117 with two forms to be designated as C-117-A and C-117-B, and to revise Commission Form C-118.

CASE 1526: Northwestern New Mexico nomenclature case calling for an order for the extension of an existing pool in San Juan County, New Mexico.

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Docket No. 31-58

(h) Extend the Angels Peak-Dakota Pool to include:

TOWNSHIP 26 NORTH, RANGE 10 WEST, NMPM

Section 2: NW/4

TOWNSHIP 27 NORTH, RANGE 10 WEST, NMPM

Section 35: SW/4

TOWNSHIP 28 NORTH, RANGE 10 WEST, NMPM

Section 27: W/2

Section 28: E/2

ir/

CARROLL DRILLING CO. INC.

DIAL DA 5-2201
DA 5-2488

P. O. BOX 337
FARMINGTON, NEW MEXICO
October 7, 1953

The Honorable Oil Conservation Commission of
The State of New Mexico

Gentlemen:

C. M. Carroll, being operator of a lease jointly owned with El Paso Natural Gas Products Company, located in the Verde Gallup field of San Juan County, New Mexico, respectfully requests that the Commission consider an exception to its rule 5021 (A) of its regulations in regard to limiting oil production to 125% of the daily top unit allowable. It is our understanding that this authority is vested in the Commission without formal hearing by rule 5021 (B) of the Commission's rules.

Carroll has drilled and completed six (6) wells producing from the Gallup formation in the above mentioned field and at this writing is completing a seventh (7th) well and drilling an eighth (8th) well on Ute Mountain Tribal Lease No. 14-20-151-44 composed of all of sections thirteen (13) and fourteen (14), Township 31N, Range 15W, San Juan County, New Mexico. These wells are more fully described in Exhibit "A" attached and made a part hereof.

This request is made because of the difficulty experienced in trying to comply with a daily allowable set forth by the Commission. No electricity is available at this time and the well pumps are being powered by multi-cylinder gas engines operating on propane. In an effort to comply with the Commission's regulation, the pump stroke has been reduced to a minimum travel and speed and in most cases daily production still exceeds that allowed. Efficiency of operation is reduced and paraffin trouble increased under the above operating procedure, and pumping and switching problems created for operating personnel.

In view of the existing difficulties, it is respectfully requested that the Commission grant an exception to Rule 5021 (A) as regards Ute Mountain Tribal Lease No. 14-20-151-44 of the Verde Gallup oil pool, and allow this lease to be produced on a monthly allowable per well, or grant a higher tolerance on daily production.

Very truly yours,

C. M. Carroll

By *R. Owen*
Roy Owen

*Docket Mailed
11-3-53
DP*

RO:dmr

CARROLL DRILLING CO. INC.

DIAL DA 5-2201
DA 5-2459

P. O. BOX 337
FARMINGTON, NEW MEXICO
October 7, 1958

EXHIBIT "A"

Description of well locations, C. M. Carroll, Ute Mountain
Tribal Lease No. 14-20-151-44, Township 31N, Range 15W,
San Juan County, New Mexico.

<u>Well Name</u>	<u>Unit Letter</u>	<u>Section</u>	<u>Initial Potential</u>
Ute #1	P	14	240
Ute #2	F	14	119
Ute #3	M	13	180
Ute #4	J	14	180
Ute #5	E	14	72
Ute #A-1	P	13	216
Ute #A-2	H	13	Being completed
Ute #A-3	N	14	Being drilled

EL PASO NATURAL GAS PRODUCTS COMPANY

EL PASO, TEXAS
October 9, 1958

ADDRESS REPLY TO
POST OFFICE BOX 1565
FARMINGTON, NEW MEXICO

Mr. A. L. Porter, Jr.
Secretary - Director
Oil Conservation Commission
Post Office Box 871
Santa Fe, New Mexico

Dear Mr. Porter:

We request administrative approval for exception to Rule 502, Section I, Sub-Section - A, of the New Mexico Oil Conservation Commission Rules and Regulations, in order that the following wells might be produced at more than the 125 percent of the daily top unit allowable set forth in the Verde-Gallup Pool. These wells are:

<u>LEASE</u>	<u>WELL NO.</u>	<u>U.</u>	<u>S. T. R.</u>
Malco Copple	1	N	7-30-15
Malco Copple	2	C	5-30-15
Malco Copple	3	E	5-30-15
Malco Copple	5	G	6-30-15
Malco Copple	6	G	5-30-15
Malco Copple	8	A	5-30-15
Malco Copple	10	O	6-30-15
Ute	6	M	11-31-15
Ute	7	K	11-31-15
Ute	8	E	11-31-15
Ute	9	I	11-31-15
Ute	10	M	12-31-15
Ute	11	O	12-31-15
Ute	12	K	12-31-15
Ute	13	C	12-31-15

The reasons for requesting this exception are as follows:

1. Surface and sub-surface equipment on the wells has been designed for maximum production. Due to the past and present unit allowable we are only able to stay within the daily tolerance by the addition of equipment which increases the cost of the wells.

2. In some cases the producing rate of the wells is low enough that the fluid level is not lowered enough to allow break through of gas to run the pumping unit. In

*Docketed, Mailed
11-3-58 BP*

Mr. A. L. Porter, Jr.

- 2 -

October 9, 1958

that case it is necessary to install some means for furnishing fuel for the pump engine.

3. The low production rates have seemed to increase the paraffin problems in the wells considerably. Therefore, it is necessary to take some means to eliminate this paraffin problem, thereby increasing the operating costs on the wells.

4. In some cases due to bad weather, the field personnel are unable to go to some of the wells because of road and terrain conditions. In this case wells that are only produced for a few hours a day to stay within the daily production tolerance, are unable to be produced every day and can have a loss in production.

5. The wells have a low gas-oil ratio, the ratio being in the range fifty (50) to one thousand (1,000) cubic feet of gas per barrel of oil. The small amount of gas that is not being used for fuel gas is being vented due to no gas gathering system in the pool.

It is our understanding that all operators in the Verde-Gallup Pool are making a similar application, therefore, a copy of this application will not be sent to them.

Thank you very much for your cooperation in this matter.

Very truly yours,



Ewell N. Walsh
Division Petroleum Engineer

ENW:EW

cc: Emery Arnold-1
W. T. Hollis-1
J. C. Vandiver-2

MAIN OFFICE ^{OCC} AZTEC OIL & GAS COMPANY

920 MERCANTILE SECURITIES BUILDING

DALLAS 1, TEXAS

QUILMAN B. DAVIS
SECRETARY AND GENERAL ATTORNEY

1958 OCT 9 AM 8:16

October 8, 1958

Mr. A. L. Porter, Secretary-Director
New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Dear Pete:

In accordance with our telephone conversation yesterday, I am enclosing Asten's application, in triplicate, for an exception to Rule 502 I (a).

You will note that this application is substantially in the same form as that filed by Pubco and, of course, if it is at all possible we would like to have the exception effective as of the same date as Pubco obtained theirs.

Should there be any further questions in connection with this matter, please do not hesitate to call me.

With best personal regards, I am

Yours very truly,
Quilman

QED:NL
Encs.

*Docket mailed
11-3-58
BR*

AZTEC OIL & GAS COMPANY
920 MERCANTILE SECURITIES BLDG.

DALLAS 1, TEXAS

OCT 8 1958 AM 2:15

October 8, 1958

AIR MAIL

Mr. A. L. Porter, Secretary-Director
New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Re: Application of Aztec Oil & Gas
Company for an Exception to
Rule 502 I (a) of the Commission's
Regulations, Verde Gallup Oil
Pool, San Juan County, New Mexico

Dear Mr. Porter:

Aztec Oil & Gas Company hereby submits its application for administrative approval of an exception to Rule 502 I (a) to permit Applicant to produce its wells in the Verde Gallup oil pool, San Juan County, New Mexico, at rates in excess of the one hundred twenty-five per cent (125%) of such wells' daily unit allowable, and in support thereof Applicant states and shows the following:

1.

Applicant has heretofore drilled and completed eleven (11) wells producing from the Gallup formation in the Verde Gallup oil pool, San Juan County, New Mexico. The wells which have been drilled to date by Applicant on its oil and gas leases within the boundary of the Verde Gallup oil pool are described in Exhibit "A" attached hereto and made a part of this application for all purposes. Most

Mr. A. L. Porter
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October 8, 1958

of these wells were completed and equipped at considerable expense to Applicant prior to regulation of the production from the Verde Gallup oil pool by the Oil Conservation Commission and at a time when the production from such pool fluctuated from ten (10) barrels of oil per day to fifty-two (52) barrels of oil per day as a result of purchaser or pipeline proration.

2.

Applicant has made every effort to obtain electricity as a well pump power source; however, this source of power is not available in the Verde Gallup pool at the present time, and of necessity Applicant is using casinghead gas and butane as fuel for its pumping unit engines. Applicant has endeavored to comply with the Commission's regulations by setting the pump travel on the minimum stroke setting and by running the pumping unit engines at as slow a rate at which they will operate, with the result that on a number of Applicant's wells which have one and one-half inch ($1\frac{1}{2}$ ") pump bores at sixteen (16) strokes per minute on a twenty-one inch (21") stroke, the wells still produce seventy-one (71) barrels of oil per day at approximately eighty per cent (80%) efficiency, which is in excess of the daily tolerance permitted by Rule 502 I (a). In order to comply with the tolerance rule as presently designated, the pumps would have to be reduced to eleven (11) strokes per minute, which would cause inefficient operation of the pumping unit engines. Applicant's equipment was designed and installed to give maximum efficiency at eighteen (18) strokes

Mr. A. L. Porter
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per minute, and variations from this speed cause excessive equipment wear and loss of efficiency, and it becomes increasingly difficult to balance such pumping units. Furthermore, due to the slow rates of production, paraffin problems have become quite severe in the Verde Gallup oil pool, and further reduced daily production rates tend to aggravate the paraffin situation. The difficulties created by these circumstances are compounded and it becomes extremely difficult to meet daily production quotas during the winter months because of extreme weather conditions.

3.

Although the above situation is applicable only to a portion of Applicant's wells in the Verde Gallup pool, the switching problem for Applicant's field personnel is the same as if such problem were applicable to all of Applicant's wells and, therefore, Applicant requests an exception to Rule 502 I (a) for all of its wells in the Verde Gallup pool.

4.

Applicant's wells have an extremely low gas-oil ratio, being in the range of two hundred (200) to four hundred (400) cubic feet of gas per barrel of oil. The minor amount of casinghead gas which is not used for wellhead fuel is being vented, and as a consequence there is no problem of maintaining steady production rates.

5.

Applicant submits that the granting of this application will

Mr. A. L. Porter
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October 8, 1958

prevent waste and will not be detrimental to the correlative rights of the offset owners, but will prevent further economic loss to Applicant.

6.

Applicant has today mailed to each of the parties listed on Exhibit "B" hereto, and who are all operators in the Verde Gallup pool to the best of Applicant's knowledge and belief, a copy of this application.

WHEREFORE, Applicant respectfully requests that the Secretary of the Commission approve the requested exception from Rule 502 I (a) of the Commission's Rules and Regulations as to all of Applicant's wells described in Exhibit "A" attached hereto.

Respectfully submitted,

AZTEC OIL & GAS COMPANY

By Quilman B. Davis
General Attorney

STATE OF TEXAS)
COUNTY OF DALLAS)

Quilman B. Davis, being first duly sworn, hereby states that he is General Attorney of Aztec Oil & Gas Company, the Applicant in the foregoing application; that he has executed said application on behalf of Aztec Oil & Gas Company; that he has read said application and, to the best of his knowledge, information and belief, all statements of fact therein contained are true and correct.

Quilman B. Davis
Quilman B. Davis

Sworn to and subscribed before me, the undersigned authority, this 8th day of October, 1958.

My Commission Expires:
June 1, 1959

Donna D. Langan
Notary Public in and for
Dallas County, Texas

EXHIBIT "A"

to

AZTEC OIL & GAS COMPANY'S

APPLICATION FOR AN EXCEPTION TO RULE 502 I (a)

VERDE GALLUP OIL POOL

SAN JUAN COUNTY, NEW MEXICO

Wells to which captioned Application pertains:

<u>Well Name</u>	<u>Location</u> <u>Unit</u>	<u>Section</u>	<u>Township</u>	<u>Range</u>
Ute Indian #1-E	E	20	31 North	14 West
Ute Indian #2-E	K	20	31 North	14 West
Ute Indian #1-D	P	24	31 North	15 West
Ute Indian #2-D	N	23	31 North	15 West
Ute Indian #2	G	10	31 North	15 West
Ute Indian #3	J	10	31 North	15 West
Ute Indian #1	P	10	31 North	15 West
Ute Indian #3-AX	A	15	31 North	15 West
Ute Indian #5-A	C	15	31 North	15 West
Ute Indian #4-A	G	15	31 North	15 West
Ute Indian #1-A	I	15	31 North	15 West
Ute Indian #2-A	G	16	31 North	15 West

EXHIBIT "B"

to

AZTEC OIL & GAS COMPANY'S

APPLICATION FOR AN EXCEPTION TO RULE 502 I (a)

VERDE GALLUP OIL POOL

SAN JUAN COUNTY, NEW MEXICO

Skelly Oil Company
Post Office Box 426
Attention: Mr. Earl Cosper
Superintendent
Farmington, New Mexico

Humble Oil & Refining Company
Post Office Box 1268
Attention: Mr. E. G. Hays
District Petroleum Engineer
Farmington, New Mexico

El Paso Natural Gas Products Company
Post Office Box 1565
Attention: Mr. Ewell N. Walsh
Division Petroleum Engineer
Farmington, New Mexico

Pubco Petroleum Corporation
Post Office Box 1419
Attention Mr. Frank Gorham
Albuquerque, New Mexico

Carroll Production Company
Post Office Box 337
Attention: Mr. Claude M. Carroll
Farmington, New Mexico

Southern Union Gas Company
1104 Burt Building
Attention: Mr. A. M. Weiderkehr
Dallas 1, Texas

Tennessee Gas Transmission Company
Post Office Box 1772
Attention: Mr. Patterson Lay
District Superintendent
Casper, Wyoming

Gulf Oil Corporation
Post Office Box 3313
Attention: Mr. W. D. Mitchell
Area Production Superintendent
Durango, Colorado

Pan American Petroleum Corporation
Post Office Box 899
Attention: Mr. J. W. Brown
District Engineer
Roswell, New Mexico

Three States Natural Gas Company
Post Office Box 67
Attention: Mr. John Carothers
Assistant District Superintendent
Farmington, New Mexico

Standard Oil Company of Texas
Post Office Box 635
Attention: Mr. R. H. Dubitzky
District Geologist
Albuquerque, New Mexico

MAIN OFFICE 000
1958 OCT 14 AM 10:26
SOUTHERN UNION GAS COMPANY
COURT BUILDING
DALLAS 1, TEXAS

October 10, 1958

AIR MAIL

Mr. A. L. Porter, Secretary-Director
New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Re: Application of Southern Union Gas
Company for an Exception to Rule
502 I (a) of the Commission's
Regulations, Verde Gallup Oil
Pool, San Juan County, New Mexico

Dear Mr. Porter:

Southern Union Gas Company hereby submits its application for administrative approval of an exception to Rule 502 I (a) to permit it to produce its wells in the Verde Gallup oil pool, San Juan County, New Mexico, at rates in excess of the one hundred twenty-five per cent (125%) of such wells' daily unit allowable, and in support thereof Applicant represents the following:

1.

Applicant has to date drilled and completed eleven (11) wells producing from the Gallup formation in the Verde Gallup oil pool in San Juan County, New Mexico. These wells are described in the attached Exhibit "A". Most of these wells were completed and equipped at considerable expense to Applicant prior to regulation of the production from the Verde Gallup oil pool by the Commission and at a time when the production from such pool varied from ten (10) barrels of oil per day to fifty-two (52) barrels

Mr. A. L. Porter
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of oil per day as a result of purchaser or pipeline proration.

2.

Electricity is not available in the Verde Gallup pool at the present time as a well pump power source, and of necessity Applicant is using casinghead gas and butane as fuel for its pumping unit engines. Applicant has endeavored to comply with the Commission's regulations by setting the pump travel on the minimum stroke setting and by running the pumping unit engines at as slow a rate at which they will operate, with the result that on a number of Applicant's wells which have one and one-half inch ($1\frac{1}{2}$ ") pump bores at sixteen (16) strokes per minute on a twenty-one inch (21") stroke, the wells still produce seventy-one (71) barrels of oil per day at approximately eighty per cent (80%) efficiency, which is in excess of the daily tolerance permitted by Rule 502 I (a). In order to comply with the tolerance rule as presently designated, the pumps would have to be reduced to eleven (11) strokes per minute, which would cause inefficient operation of the pumping unit engines. Applicant's equipment was designed and installed to give maximum efficiency at eighteen (18) strokes per minute, and variations from this speed cause excessive equipment wear and loss of efficiency, and it becomes increasingly difficult to balance such pumping units. Furthermore, due to the slow rates of production, paraffin problems have become quite severe in the Verde Gallup oil pool, and further reduced daily production rates tend to aggravate the paraffin situation. The difficulties created by these circumstances

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are compounded and it becomes extremely difficult to meet daily production quotas during the winter months because of extreme weather conditions.

3.

The above situation is applicable to all but two of Applicant's wells in the Verde Gallup pool, but even for these two wells the switching problem for Applicant's field personnel is the same and, therefore, Applicant requests an exception to Rule 502 I (a) for all of its wells in the Verde Gallup pool.

4.

Applicant's wells have an extremely low gas-oil ratio, being in the range of two hundred (200) to six hundred (600) cubic feet of gas per barrel of oil. The minor amount of casinghead gas which is not used for wellhead fuel is being vented, and as a consequence there is no problem of maintaining steady production rates.

5.

Applicant submits that the granting of this application will prevent waste and will not be detrimental to the correlative rights of the offset owners, but will prevent further economic loss to Applicant.

6.

Applicant has this date mailed a copy of this application to each of the parties listed on Exhibit "B" hereto, and to the best of Applicant's knowledge and belief they are all the operators in the Verde Gallup pool.

WHEREFORE, Applicant respectfully requests that the Secretary of

Mr. A. L. Porter
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the Commission approve the requested exception from Rule 502 I (a) of the Commission's Rules and Regulations as to all of Applicant's wells described in Exhibit "A" attached hereto.

Respectfully submitted,

SOUTHERN UNION GAS COMPANY

By A. M. Wiederkehr
Manager, Exploration Department

STATE OF TEXAS)
COUNTY OF DALLAS)

A. M. Wiederkehr, being first duly sworn, hereby states that he is Manager of the Exploration Department of Southern Union Gas Company, the Applicant in the foregoing application; that he has executed said application on behalf of Southern Union Gas Company; that he has read said application and, to the best of his knowledge, information and belief, all statements of fact therein contained are true and correct.

A. M. Wiederkehr
A. M. Wiederkehr

Sworn to and subscribed before me, the undersigned authority, this 10th day of October, 1958.

Barlene Denton
Notary Public in and for
Dallas County, Texas

My Commission Expires:
June 1, 1959

EXHIBIT "A"

to

SOUTHERN UNION GAS COMPANY'S

APPLICATION FOR AN EXCEPTION TO RULE 502 I (a)

VERDE GALLUP OIL POOL

SAN JUAN COUNTY, NEW MEXICO

Wells to which captioned Application pertains:

<u>Well Name</u>	<u>Location</u>		<u>Township</u>	<u>Range</u>
	<u>Unit</u>	<u>Section</u>		
Ute Indian #1-17	E	17	31 North	14 West
Ute Indian #3-17	C	17	31 North	14 West
Ute Indian #1-23	B	23	31 North	15 West
Ute Indian #2-23	L	23	31 North	15 West
Ute Indian #3-23	C	23	31 North	15 West
Ute Indian #4-23	J	23	31 North	15 West
Ute Indian #5-23	H	23	31 North	15 West
Ute Indian #1-24	D	24	31 North	15 West
Ute Indian #2-24	A	24	31 North	15 West
Ute Indian #4-24	L	24	31 North	15 West
Ute Indian #5-24	F	24	31 North	15 West

EXHIBIT "B"

to

SOUTHERN UNION GAS COMPANY'S

APPLICATION FOR AN EXCEPTION TO RULE 502 I (a)

VERDE GALLUP OIL POOL

SAN JUAN COUNTY, NEW MEXICO

Skelly Oil Company
Post Office Box 426
Attention: Mr. Earl Cosper
Superintendent
Farmington, New Mexico

Humble Oil & Refining Company
Post Office Box 1268
Attention: Mr. E. G. Hays
District Petroleum Engineer
Farmington, New Mexico

El Paso Natural Gas Products Company
Post Office Box 1565
Attention: Mr. Ewell N. Walsh
Division Petroleum Engineer
Farmington, New Mexico

Pubco Petroleum Corporation
Post Office Box 1419
Attention: Mr. Frank Gorham
Albuquerque, New Mexico

Carroll Production Company
Post Office Box 337
Attention: Mr. Claude M. Carroll
Farmington, New Mexico

Artec Oil & Gas Company
920 Mercantile Securities Building
Attention: Mr. Quilman B. Davis
Dallas 1, Texas

Tennessee Gas Transmission Company
Post Office Box 1772
Attention: Mr. Patterson Lay
District Superintendent
Casper, Wyoming

Gulf Oil Corporation
Post Office Box 3313
Attention: Mr. W. D. Mitchell
Area Production Superintendent
Durango, Colorado

Pan American Petroleum Corporation
Post Office Box 899
Attention: Mr. J. W. Brown
District Engineer
Roswell, New Mexico

Three States Natural Gas Company
Post Office Box 67
Attention: Mr. John Carothers
Assistant District Superintendent
Farmington, New Mexico

Standard Oil Company of Texas
Post Office Box 635
Attention: Mr. R. H. Dubitzky
District Geologist
Albuquerque, New Mexico

NEW MEXICO OIL CONSERVATION COMMISSION CASE NO. 1545

AZTEC'S EXHIBIT "A"

- ✓ (1) 50% Interest wells operated by Aztec Oil & Gas Company for which it is requesting an exception to Rule 502(I)(a) in the Verde Gallup Oil Pool (Southern Union Gas Company has remaining 50% interest):

<u>Well</u>	<u>Unit Location</u>	<u>Section</u>	<u>Township</u>	<u>Range</u>
Ute Indian #1	P	10	31N	15W
Ute Indian #2	G	10	31N	15W
Ute Indian #3	J	10	31N	15W
Ute Indian #1-A	I	15	31N	15W
Ute Indian #2-A	G	16	31N	15W
Ute Indian #3-AX	A	15	31N	15W
Ute Indian #4-A	G	15	31N	15W
Ute Indian #5-A	G	15	31N	15W

- (2) 50% Interest Wells operated by Southern Union Gas Company for which they are requesting an exception to Rule 502(I)(a) in the Verde Gallup Oil Pool (Aztec has remaining 50% interest):

Ute Indian #1-17	E	17	31N	14W
Ute Indian #3-17	C	17	31N	14W
Ute Indian #1-23	B	23	31N	15W
Ute Indian #2-23	L	23	31N	15W
Ute Indian #1-24	D	24	31N	15W
Ute Indian #2-24	A	24	31N	15W

- ✓ (3) 100% Interest wells operated by Aztec Oil & Gas Company for which it is requesting an exception to Rule 502(I)(a) in the Verde Gallup Oil Pool:

Ute Indian #1-D	P	24	31N	15W
Ute Indian #2-D	N	24	31N	15W
Ute Indian #3-D	P	23	31N	15W
Ute Indian #1-E	E	20	31N	14W
Ute Indian #2-E	K	20	31N	14W
Ute Indian #3-E	K	17	31N	14W
*Ute Indian #4-E	G	20	31N	14W
*Ute Indian #5-E	G	17	31N	14W

- (4) 100% Interest Wells operated by Southern Union Gas Company for which they are requesting an exception to Rule 502(I)(a) in the Verde Gallup Oil Pool:

Ute Indian #3-23	C	23	31N	15W
Ute Indian #4-23	J	23	31N	15W
Ute Indian #5-23	H	23	31N	15W
Ute Indian #4-24	L	24	31N	15W
Ute Indian #5-24	F	24	31N	15W
*Ute Indian #2-17	M	17	31N	14W
*Ute Indian #1-20	M	20	31N	14W

*Well now drilling

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

IN THE MATTER OF:

CASE 1545

TRANSCRIPT OF HEARING

NOVEMBER 13, 1958

DEARNLEY - MEIER & ASSOCIATES
GENERAL LAW REPORTERS
ALBUQUERQUE NEW MEXICO
Phone Central 3-6691

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
NOVEMBER 13, 1958

IN THE MATTER OF: :
: :
: :

CASE 1545 In the matter of the hearing called on the :
motion of the Oil Conservation Commission at: :
the request of certain operators in the :
Verde-Gallup Oil Pool in San Juan County, :
New Mexico, to permit any operator to appear: :
and show cause why any well or wells in the :
Verde-Gallup Oil Pool should be granted an :
exception to the daily tolerance provisions :
of Rule 502 I (a) of the Commission Rules :
and Regulations. :
: :

BEFORE:

Mr. A. L. Porter,
Mr. Edwin L. Mechem
Mr. Murray Morgan

T R A N S C R I P T O F P R O C E E D I N G S

MR. PORTER: Take up Case 1545.

MR. PAYNE: Case 1545. In the matter of the hearing
called on the motion of the Oil Conservation Commission at the re-
quest of certain operators in the Verde-Gallup Oil Pool in San Juan
County, New Mexico, to permit any operator to appear and show cause
why any well or wells in the Verde-Gallup Oil Pool should be granted
an exception to the daily tolerance provisions of Rule 502 I (a) of
the Commission Rules and Regulations.

MR. PORTER: At this time I will ask for appearances in
this case.

MR. LLEWELLYN: Gordon Llewellyn, representing Aztec Oil & Gas Company and Southern Union Gas Company. We will have two witnesses.

MR. GRANTHAM: If the Commission please, Everett Grant-ham, Grantham, Spann & Sanchez, Albuquerque, New Mexico, represent-ing El Paso Natural Gas Products Company. Mr. John Woodward, at-torney for the Company, is associated with me in this matter.

MR. WHITE: If the Commission please, Charles White of Gilbert, White & Gilbert, representing Pan American.

MR. KELLAHIN: Jason Kellahin, Santa Fe, representing Gulf Oil Corporation.

MR. GORMAN: Frank Gorman, representing Pubco Corpora-tion.

(Witness sworn)

MR. LLEWELLYN: If the Commission please, Gordon Llewellyn, representing Aztec Oil & Gas Company and Southern Union Gas Company. In an effort to prevent duplicity of testimony, Aztec and Southern Union have co-ordinated their testimony and will present it at this time by Mr. Stevens and Mr. Clote..

Call as Aztec's first and only witness Mr. L. M. Stevens.

L. M. STEVENS,

called as a witness, having been first duly sworn on oath, testified as follows:

DIRECT EXAMINATION

BY MR. LLEWELLYN:

Q Mr. Stevens, will you state your full name, please?

A L. M. Stevens.

Q How do you spell that Stevens?

A S-t-e-v-e-n-s.

Q Will you state, please, by whom you are employed and in what capacity?

A I am employed by Aztec Oil & Gas Company in the capacity of district engineer.

Q And where do you reside?

A Reside in Farmington, New Mexico.

Q Mr. Stevens, have you ever qualified previously before this Commission as an expert witness in the field of petroleum engineer?

A No, sir, I have not.

Q Will you please give the Commission a brief resume of your educational and professional background, please?

A I received a Bachelor of Science degree in petroleum engineering from Texas A & I College in Kingsville, Texas in 1949. Then after completing two additional semesters of additional college work at Texas A & M, I went to work on the Gulf Coast as an engineer in 1950. And since that time I have been engaged in engineering work in the drilling and producing phases of the oil industry.

Q Are you familiar with the nature of this hearing?

A Yes, sir.

Q Are you familiar with the problems of Aztec Oil & Gas

Company, in particular, in the Verde-Gallup Oil Pool?

A Yes, sir.

MR. LLEWELLYN: Is the Commission willing to accept Mr. Stevens as an expert witness?

MR. PORTER: Yes, sir.

Q Mr. Stevens, as you know, this hearing has been called by the Commission to consider the granting of an exception to Rule 502 I (a), in that we be granted a larger tolerance than the present 125 percent. Will you please state -- let me ask you this. I believe you have before you Aztec's Exhibit A.

A Yes.

Q Was this Exhibit prepared under your supervision?

A Yes, it was.

Q Insofar as Aztec's testimony is concerned, will you please explain the Exhibit briefly to the Commission?

A The Exhibit consists of four parts, and Aztec's testimony will be primarily concerned with parts 1 and 3. Part 1 is a list of about eight wells which are jointly owned by Aztec Oil & Gas Company and Southern Union Gas Company, and which are operated by Aztec Oil & Gas Company. Part 3 is a list of about eight wells which are 100 percent owned and operated by Aztec Oil & Gas Company.

Q Mr. Stevens, you also have on the board behind you Aztec's Exhibit B. Was this Exhibit prepared under your supervision?

A Yes, sir.

Q Would you please briefly explain this Exhibit to the

Commission?

A Exhibit B is a plat which shows the location of the wells listed on Exhibit A. This acreage which is colored green is jointly owned by Aztec and Southern Union Gas Company, and is operated by Aztec. The acreage colored yellow is also jointly owned by Aztec and Southern Union Gas Company, and is operated by Southern Union Gas Company. The acreage colored blue is owned 100 percent and operated as such by Aztec Oil & Gas Company, and that colored red is owned 100 percent by Southern Union Gas Company, and they operate that acreage.

Q And your testimony will pertain only to the acreage in blue and green, is that correct?

A Yes, sir, that's correct.

Q Mr. Stevens, do you know when proration commenced for the Verde-Gallup Oil Pool?

A Yes, sir. By order that came out in January of '58, proration was established to commence December the 1st, 1957.

Q How many of Aztec's wells in which we have an interest, not only those which we might be presently operating, but those which we have an interest, were completed prior to the establishment of proration?

A There were eleven of them.

Q What was the spacing prescribed by the Commission for the wells that were drilled prior to proration?

A The spacing was governed by statewide Rules, which was

40 acres. However, most of the operators voluntarily drilled on 30 acres with the anticipation that the Commission would later establish an 80-acre normal drilling unit.

Q Did the Commission ever establish such an 80-acre spacing?

A No, it wasn't established. In fact, Pubco Petroleum Corporation requested an 80-acre spacing, but that request was denied.

Q Well, since the establishment of proration in December of '57, have you had to comply with the daily tolerance provisions every month since that time?

A Well, no, we haven't, because the tolerance provision was suspended in April, May and June of 1958, but was -- in July it was put back into effect.

Q What about the period between December '57 and April of 1958, when the order was not suspended? Were you hindered by the daily tolerance provisions during that time?

A Not especially because the pipeline in that area wasn't operating until April, 1958. Our oil was trucked out, and they actually, the allowables were so low that we really didn't feel the full impact of this tolerance provision until July of '58.

Q What is the present daily allowable for wells in the Verde-Gallup Oil Pool?

A The November allowable is 50 barrels of oil per day per well.

Q Under the present 125 percent, daily tolerance, what

would be your maximum daily allowable in November then?

A Would be 62½ barrels per day per well.

Q What steps has Aztec taken in order to comply with these tolerance provisions?

A We have found by experience that it is best to restrict the number of hours each day that these wells are pumped in order to be within the tolerance provision, and that is the step that we have taken to restrict our production in all cases except one.

Q In other words, merely by cutting back the number of hours, that's the method that you have used to restrict production?

A That's right.

Q Of course, this could prove satisfactory in that you could just produce up to the tolerance. Do you run any problems because of terrain or any other difficulties which would prevent your shutting these wells off?

A Yes, we do. The terrain is extremely rough and we have bad weather conditions, bad roads, which sometimes prevent the pumper from going out to the wells to turn them off or put them back on. That problem will be further compounded this winter when conditions will probably be severe.

Q Would it not be possible for you to put an automatic shutoff on these pumps and thus eliminate the necessity of sending a pumper out every day?

A Well, we use gas engines on our units, and the only type of automatic control available for that type engine is one which

turns a unit off. Therefore, it would still require the services of a pumper to go back out to the unit and turn it back on.

Q You stated you use gas as your power source for your engines. Have you attempted to use electricity?

A We haven't attempted to use it because it isn't available in that area. When the Field was first being developed, we made an attempt to obtain electric power in the Field, but it wasn't available at that time, and it probably won't be available in the foreseeable future, mainly because the Field is pretty well developed by this time, and everyone is using gas engines. So the market for electricity in that area has actually diminished.

Q When you say gas engines, would you be a little more specific as to the type of gas that you are using on Aztec's wells at this particular time?

A Most of your wells use separator gas as a fuel for the engines. We have a few of them that use casing head gas, and some of them that use butane.

Q Let me ask you, why are you not -- I know that some of the producers are using casing head almost exclusively -- why are you not using casing head gas in this northwestern area?

A Well, we -- those wells which we have separators on, we use separator gas, and three of the wells in that northwestern area we use casing head gas on those, and we have a couple that we use butane, but merely as a matter of convenience we use separator gas when possible.

Q Do you have enough casing head gas to where you could use on these wells, or is your production sporadic to the point where you couldn't use them?

A On some of our wells, particularly those in the south, we do not have enough casing head gas to operate the engines satisfactorily.

Q What size pump bores do you have on these wells?

A We have inch and a half pump bores in our wells.

Q How are they being operated at the present time on the strokes per minute?

A We operate them at sixteen strokes per minute, on a twenty-eight inch stroke.

Q Have you made any effort to reduce your number of strokes per minute in order to comply with the present daily tolerance and possibly alleviate this problem of having to send your pumper out to cut your wells off and on?

A We tried this method on one well, but had such a sad experience with that well that we decided to operate the others on an hourly basis.

Q What was your sad experience?

A Well, we -- we were able to reduce this production on this particular well to within the daily tolerance, and we found that when it is produced at the daily, to be within the daily tolerance, that paraffin problems are quite severe. We had -- we got the well down to 57 barrels a day, our separator paraffined up and

also the tubing and rods paraffined up and the pump, the perforations, and part of the casing, and apparently part of the formation developed a paraffin block in it.

Q Do you feel that this paraffin situation is more severe in the northwestern portion where you are presently operating than possibly in the southern portion?

A We feel it is, yes.

Q Why did Aztec put in these large pumps on these wells where they could possibly foresee that they might have to cut back the number of strokes and thus reduce their production?

A Well, when we drilled our first wells, the Field, of course, wasn't on prorationing, and we put these inch and a half pumps in there to be sure that we could produce all the oil for which we had a market. However, we knew that some day, we were pretty sure that the Field would be prorated, but since we were voluntarily drilling on 80 acres, and anticipating an 80-acre drilling unit with an allowable based on 80 acres, we kept using inch and a half pump bores, to be sure that we could produce our allowable and in case that we did get this 80-acre spacing and, too, we felt that it is prudent operations to standardize in a certain size pump to alleviate some of the problems that occur as far as replacement parts, or switching one pump to another well, usually those problems occur.

Q When you say standardize, I take it that is where you have continued to use inch and a half pump bores subsequent to the

advent of proration?

A That's correct.

Q If you cut back, by what would you feel that you would have to cut your pumps back in order to come to within the daily tolerance provision in order to produce on a daily basis?

A We would have to cut it back to eleven strokes per minute.

Q And you feel this would definitely cause some of your wells to paraffin up in that particular area?

A Yes, sir, I do.

Q Would this problem be increased with the coming winter months?

A Yes. Cold weather would just tend to aggravate the paraffin problem.

Q Has it been your experience to have paraffin problems on every well in this area?

A No. Those in the south part of the Field we don't have too much trouble with paraffin. However, the problem is also apparent and could occur at any time.

Q In other words, you don't know just where it would occur, but as far as your findings personally are concerned, it is evident throughout the entire area?

A That is correct.

Q Do you feel that if you were allowed to produce in excess of the present 125 percent tolerance, that it would greatly

solve the paraffin problem and the difficulty of having to cut your wells back to fewer hours per day?

A Yes, I do.

Q What would you recommend as an exception to the present 125 percent provision?

A I would recommend that the 125 percent provision be increased to 200 percent.

Q Do you know whether or not any other operators in the Verde-Gallup Oil Pool have been granted such an exception?

A Yes, sir. Pubco Petroleum Corporation has been granted such an exception by administrative approval.

Q Could you give us an estimate of the economic loss, or shall we say economic savings that would occur to Aztec if you were granted this 200 percent provision as compared with the cost you are now experiencing under the present 125 percent provision?

A I would estimate about four thousand dollars a year.

Q For all of your wells in this area?

A All of them combined, yes, sir.

Q And is this figure based upon the hot oil treatments that you have had to use in addition to the excessive cost of having to send your pumpers out?

A Yes, sir.

MR. LLEWELLYN: I have no further questions of Mr. Stevens at this time and would like to introduce into evidence as Aztec's Exhibits A and B as have been marked.

MR. PORTER: Without objection, they will be admitted.

Any questions of Mr. Stevens?

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Stevens, can you explain why your paraffin problem is worse as you lower the number of strokes per minute than it is at a higher rate?

A I feel that the scrapers that we have in them -- we have installed paraffin scrapers in all of our wells, and I feel that they don't operate efficiently at the lower number of strokes per minute mainly because there is a washing effect of the oil which passes by those scrapers to remove paraffin from the well bore at this lower velocity, lower rates of production. I don't feel that the velocity is sufficient to carry the paraffin on out of the well bore.

MR. UTZ: That's all I have.

MR. LLEWELLYN: I have one more question.

REDIRECT EXAMINATION

BY MR. LLEWELLYN:

Q Mr. Stevens, in addition to your scrapers operating inefficiently at the slower rate, has it been your experience that you have also had paraffin problems beneath the scrapers?

A Yes, we have had paraffin problems clear to the bottom of the tube even to the pump.

MR. LLEWELLYN: No further questions.

QUESTIONS BY MR. PORTER:

Q Do you feel that any damage could be done to the reservoir by the 200 percent rate?

A No, sir, I don't feel it would damage the reservoir because it is generally agreed that the producing mechanism in the Verde-Gallup Pool is by gravity drainage, which is one of the most efficient natural producing mechanisms that there is, and I don't feel that it would be damaged in any way by the granting of 200 percent.

Q Approximately what are the GOR's in the Pool?

A Our GOR's run from too small to measure up to a maximum of 600 cubic feet per barrel.

Q Do you have difficulty having enough gas to run the pump?

A In some instances we do, yes, sir.

QUESTIONS BY MR. COOLEY:

Q Mr. Stevens, is one of the distinguishing factors of the Verde-Gallup Pool, which would warrant an exception to this tolerance provision, the extremely rough terrain in the area, making it difficult for the pumper to get to the wells?

A Yes, sir, I believe it is because we feel it is necessary to restrict this production, oh, by pumping the wells less than twenty-four hours each day, and, of course, if your roads wash out or something like that, the difficult terrain, it would be impossible to get to all of the wells in any one day.

Q Under this method of restriction, is it necessary for a pumper to visit each well at least twice each day to turn it on and turn it off?

A In some cases it is, yes, sir.

Q Is that the usual number of visits? How many times -- how are they operated ordinarily?

A About twice a day is the number of visits that are made to each well.

Q How would this exception affect that, the times that the pumper has to visit these wells?

A He would have to visit them just once a day, and we could make our allowable in approximately fifteen days, the first part of the month, and then the rest of the month he could spend his time entirely with the wells which we have trouble making our allowable.

Q Reduce the visits by about one half?

A Yes, sir.

MR. COOLEY: That's all the questions I have.

MR. PORTER: Mr. Nutter.

QUESTIONS BY MR. NUTTER:

Q Is there any possibility by reducing the visits of the pumpers by one half, as far as each well is concerned, that you might run into problems of not having sufficient storage capacity in the lease and run over tanks or any such problems as that?

A No, sir, we wouldn't. I don't think we would have that problem. Even though it might exist in some isolated instances, we

would make every effort we could to get to maybe one well that we felt that the tank might run over, we would make every effort to get to that well.

Q And in no event would it be more than one day in between visits by the pumper to each well, is that correct?

A There has been one instance where a pumper couldn't get to the lease in two days.

Q Well, under your proposal, however, to have a 20 percent tolerance, he would still plan to visit each well at least once a day?

A Yes, sir, that's correct.

MR. NUTTER: I see. That's all. Thank you.

MR. PORTER: Any further questions? The witness may be excused.

(Witness excused)

MR. LLEWELLYN: Call at this time Mr. Paul Clote, Southern Union Gas Company.

PAUL J. CLOTE,

called as a witness, having been first duly sworn on oath, testified as follows:

DIRECT EXAMINATION

BY MR. LLEWELLYN:

Q Mr. Clote, will you state your full name, please?

A Paul J. Clote, C-l-o-t-e.

Q Will you please tell the Commission by whom you are em-

ployed and in what capacity?

A I am presently employed by Southern Gas Company in the capacity of district drilling superintendent.

Q And where do you reside?

A Reside in Farmington, New Mexico.

Q Are you familiar with the nature of this hearing and the operations of Southern Union Gas Company in the Verde-Gallup Oil Pool?

A Yes, I am.

MR. LLEWELLYN: Is the Commission willing to accept Mr. Clote as an expert witness?

MR. PORTER: Yes, sir.

Q Mr. Clote, you have heard the testimony of Mr. Stevens on behalf of Aztec, and you have before you Aztec's Exhibit A. Would you please point out to the Commission in what respect this Exhibit pertains to Southern Union Gas Company's wells in this area?

A No. 2 and No. 4 on Exhibit A pertain to the Southern Union Gas Company. No. 2 includes wells that are 50 percent Southern Union and 50 percent Aztec Oil & Gas. These wells are presently being operated by Southern Union Gas Company. No. 4 lists all the wells which are 100 percent Southern Union and operated by Southern Union.

Q Mr. Stevens previously pointed out on Exhibit B that the acreage in yellow was joined and operated by Southern Union. However, I notice that Southern Union holds quite a bit of 100 percent

acreage in the northwestern area. Do you generally concur with Mr. Stevens' statements as to the conditions existing in the northwestern area insofar as the paraffin problem and the terrain situation are concerned?

A That is correct. We have a great deal of acreage in the northwest portion, and we anticipate the same conditions as experienced by Aztec Oil & Gas.

Q Would you also concur with Mr. Stevens as to the reasons for your installing larger pumps on this unit and the continuation of using the larger pumps after the advent of proration?

A We have standardized on an inch and a quarter pump. At the time, we believed this would handle any production from minimum to a maximum based on 80-acre spacing, and we concur with Aztec as far as standardization goes. I mean, it saves quite a bit of money in field operations.

Q Mr. Stevens pointed out that Aztec wells were presently being operated by separator gas. Is this the case of Southern Union Gas Company in the southeastern portion?

A A good portion of your wells are being operated off casing head gas. There are quite a few which are presently being operated on butane only. A great deal of the wells we need butane to kick the wells off, and after they have been producing, we have enough gas to run the units.

Q And I assume you have likewise not used electricity for the same reasons that Mr. Stevens stated?

A That is correct.

Q Will you point out to the Commission in what way the 125 percent provision presently in existence affects your gas production and consequently is causing you difficulty in operating your pumping engines?

A Well, we feel that a good portion of these wells being operated entirely of butane, if we were allowed the 200 percent tolerance, that we would be able to lower the fluid level in such wells in order to have sufficient gas to run the engines, and then dispense with the butane entirely.

Q What would be your recommendation for the present exception to the 125 percent provision?

A I would like to recommend 200 percent tolerance.

Q Per well per day?

A Per well per day.

Q Do you feel that the instigation of a 200 percent provision would in any way endanger the reservoir here as previously asked Mr. Stevens?

A Absolutely not. It is general opinion and agreed by, I would say, the majority of the operators that the Field is under the influence of the gravity drainage, and at the present time the paraffin condition in the northwest portion of the Field, I feel that we can anticipate paraffin conditions further below down in the southeast end as withdrawals become great.

Q Do you agree with Mr. Stevens that this exception should

not be on a well basis, but should be applied to the entire Verde-Gallup Oil Pool?

A That is correct.

MR. LLEWELLYN: By reference to Astec's Exhibits A and B, I would like to include them as a portion of Mr. Clote's testimony. I have no further questions.

MR. PORTER: Without objection, they will be admitted. Anyone have any questions of Mr. Clote?

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Clote, what has been the general trend as far as GOR's is concerned in the Verde-Gallup Pool?

A I believe the maximum has been up to 1200, or thereabouts.

Q Has there been any indication that the GOR's will ever become excessive in this Pool?

A No, sir, there have not. The wells in the northwest portion of the Field, which is higher structurally, you could normally expect, if there was a gas cap forming, that it would tend to go to the northwest corner, and so far there has been no indication of any increase in gas, the ratios more or less stand the same. And, therefore, it's almost entirely under a gravity drainage mechanism.

Q Is there any indication that there may be a gas gathering facility installed in this Pool in the foreseeable future?

A It is my opinion that gas will never amount to such as to warrant a gathering system.

Q So you don't anticipate casing head gas will ever be gathered and transported?

A No, sir.

MR. NUTTER: Thank you.

MR. PORTER: Mr. Fischer.

QUESTIONS BY MR. FISCHER:

Q Would it be economically feasible to change the size of your pumps in these wells to a smaller pump and increase your strokes per minute?

A Well, the strokes per minute can be governed by your sheaves size on the engine, so pump size, really up to a certain point, doesn't have much concern with them.

Q What I am trying to get at, if you could increase or decrease the size of your pump to get a smaller volume and possibly let those pumps run for twenty-four hours to stay within the 125 percent tolerance, do you think that could be done?

A It could be done, but the inch and a quarter pump is more or less the most practical pump in the industry. Therefore, we've standardized on that, and it gives a wide range of limitation also, and due to standardization of material in the Field, we think we could save considerable money.

Q Do you mean possibly if you did get a smaller size pump, that the range on your one and a quarter size is so wide that you

couldn't do much good with your smaller one, is that correct?

A I believe that with the one inch pump it could be worked --
I mean, it could be practical in the Field.

Q Do you have to get in sheaves for that if you have
to increase your strokes?

A It would affect your counter balance on the well itself.

MR. FISCHER: That's all I have.

MR. LLEWELLYN: I have a question.

REDIRECT EXAMINATION

BY MR. LLEWELLYN:

Q In order to possibly clarify Mr. Fischer on this business
of pumps, it is my understanding that Southern Union has not had the
problem of reducing the strokes that Aztec had in the northwestern
portion, and we didn't leave -- mean to leave that impression, is
that correct, Mr. Clote?

A That is correct. We are producing our wells twenty-four
hours a day at the present time.

Q And your primary problem is getting enough gas from pro-
duction at that 125 percent provision to allow operation of the en-
gines?

A That is correct, because the majority -- well, all of
our wells lay in the southeast portion of the Field, and we aren't
bothered strictly with the paraffin condition which exists in the
northwest, and we feel that on south of the best wells with high
fluid levels that we would be able to lower that high fluid level

and then operate the engine off natural gas.

MR. LLEWELLYN: No further questions.

MR. PORTER: Any further questions?

MR. KELLAHIN: Jason Kellahin for Gulf Oil Corporation.

QUESTIONS BY MR. KELLAHIN:

Q Mr. Clote, in referring to this paraffin provision as I judge your testimony, it is more in the northwest. Is that condition present throughout the whole Field?

A Yes, it is. We have experienced paraffin accumulation in this southeast area, mainly in the flow lines at the present time. However, we did have one well which was -- is not a top allowable well, that has a severe paraffin condition within the well itself.

Q Do you anticipate that will become more severe in the southeastern portion?

A That is correct. That is what I pointed out. As the withdrawals in production from the Field continue, that the problems will be increasing towards the southeast more and more.

Q Then, in your opinion, the paraffin condition is, in fact, an all over Field problem?

A That is correct.

MR. KELLAHIN: That's all.

MR. PORTER: Anyone else have a question? The witness may be excused.

(Witness excused)

MR. PORTER: Anyone else have testimony to present in

this case? Any statements?

MR. WHITE: Charles White, on behalf of Pan American.

Pan American is also one of the operators in this Field, and we concur in the testimony that has been presented, and in addition to the production problems and drainage difficulties we want to emphasize that the drive mechanism is of gravity drainage and that no harm will result to the reservoir by the granting of this exception.

MR. GRANTHAM: In behalf of El Paso Natural Gas Products Company, I desire to concur in the testimony which has been given, and point out to the Commission that the Products Company has fifteen wells producing in this area in which the paraffin situation is substantially the same, possibly not as bad as it is in the northwest part of the Pool, but substantially the same. Also, that the terrain difficulties are the same. Further, the difficulties are being experienced because some of the wells are producing at such a low rate that the fluid level is not lowered enough to allow a breakthrough for gas in the engines. They have experienced a great deal of difficulty along that line. The El Paso Natural Gas Products Company joins in the request for exception to the Rule.

MR. GORMAN: Frank Gorman with Pubco Petroleum Corporation. Pubco Petroleum Corporation own and operate eighteen producing oil wells in the Verde-Gallup Field, and concur in the testimony of Aztec Oil & Gas Company, and believe that in the interest of preventing economic waste, all wells in the Verde-Gallup Field should be granted a 200 percent tolerance exception to the

daily tolerance provision of Rule 502 I (a) of the Commission's Rules and Regulations.

MR. KELLAHIN: Gulf Oil Corporation concurs in the case which has been presented by Aztec and Southern Union in the Verde-Gallup Oil Pool and urges the adoption of an exception from the daily tolerance provisions. On the basis of the testimony, we feel that it has been clearly shown that such an exception will greatly relieve production problems in the area and result in a more efficient operation of the Pool.

MR. PORTER: Anyone else have anything further to offer? Take the case under advisement and take a short recess.

(Recess)

MR. PORTER: The hearing will come to order please.

MR. DEEWELLYN: I would like to ask permission for Case 1545 to be reopened for one clarifying statement, please, and that is that on behalf of Aztec and Southern Union Gas Company, I would like to clarify the point that we asked for a 200 percent provision, having in mind the present 50 barrels a day allowable which, of course, if the allowables were reduced, we would need more than 200 percent provision in order to continue to alleviate these problems. For that reason I would like to make it clear that we would be asking for the same type of exception that was granted to Pubco Development Corporation, that we would be granted a 200 percent daily tolerance provision, or one hundred barrels per day, whichever is the greater.

MR. PORTER: Any discussion of Mr. Llewellyn's motion?

Let the statement be made part of the record in Case 1546.

C E R T I F I C A T E

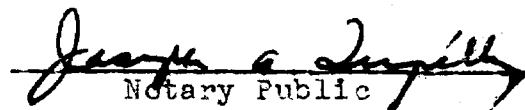
STATE OF NEW MEXICO)

: ss

COUNTY OF BERNALILLO)

I, J. A. TRUJILLO, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Proceedings before the New Mexico Oil Conservation Commission was reported by me in stenotype and reduced to typewritten transcript by me and/or under my personal supervision, and that the same is a true and correct record to the best of my knowledge, skill and ability.

WITNESS my Hand and Seal, this, the 21st day of November 1958, in the City of Albuquerque, County of Bernalillo, State of New Mexico.


Notary Public

My Commission Expires:

October 5, 1960.