exception to Rule 506 (a) on gas-oil ratio limitation for wells in Maljamar-Paddock Pool, LEA COUNTY, N. M.

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STATEADED OF POSITION OF BROOMMANDER OIL COMPANY GALARIOS CATYON UNIT SPACING, NEW MERICO OIL CONSTRUMTION COMMISSION HEARING SEPTEMBER 17, 1953.

CASE NO. 377 OEDER PO. R-172

The West Kutz Canyon Pool is a common source of gas supply in the Pictured Cliffs formation and covers an area of approximately 42,000 acres, of which approximately the north half is operated in the Gallegos Canyon Unit by Benson-Montin, and the south half in smaller tracts by a number of individual operators. There are no known underground barriers which would question the common source of supply throughout the entire pool or which would stop drainage from one end of the pool to the other. We understand that the pipe line of El Paso Natural Gas Company is the outlet for the gas produced from the northern half wells (Gallegos Canyon Unit) and the pipe line of the Southern Union Gas Company is tho outlet for the gas produced from the southern half wells.

The conservation laws of this and other States recognize uniform spacing as the primary requisite for conservation and the protection of correlative rights. Uniform spacing promotes conservation because it results in the best drainage. Uniform spacing protects correlative rights of the individual owners because it gives each owner mutual and similar conditions for production. Additionally, State Conservation Commissions (including New Mexico), where there is an excess of supply over demand, add to the uniform spacing orders, an engineering formula so as to compensate for the varying capacities of the wells. Despite the necessity and requirement of uniform spacing, there are a few isolated cases where exceptions are made so that a lease owner may drill and produce on an odd size piece of land. Ordinarily a well is permitted to be drilled on an odd size piece of land but its capacity to produce is prorated in accordance with the size of that particular piece of land to the uniform pattern and the capacity to produce. In the case at hand, the Oil Jonservation Cormission of the State of New Mexico has <u>universally</u> ordered a pattern of one well to 160 acres when wells are drilled to the Pictured Cliffs formation, the only exceptions being in a very few cases as mentioned above on an odd sized lease less than 160 acres and in the north half of the West Kutz Canyon Pool where the Gallegos Canyon Unit, operated by Penson-Montin, has been allowed for the last year to drill on 320 acre spacing. The south half of this same Pictured Cliffs Pool and common source of supply is drilled and being produced, as in other places in the San Juan Basin - New Mexico, on 160 acre spacing.

As mentioned above, West Kutz Canvon Pool has a common source of supply in the Pictured Cliffs formation and consists of approximately 42,000 acres. The productive area in the north half of the pool is estimated to be approximately 23,000 acres. The south half of the pool, consisting of approximately 19,000 acres, is actually producing. Except for border wells between the Unit and the individual operators, your Commission has permitted 320 acre spacing on the north half of the pool and 160 acre well spacing on the south half without including in the order eny stipulation relative to prorating the production of wells drilled on 160 acre spacing.

We have made an informal study which is available to the Commission if they desire a copy. A summary of this informal study consists of the following:

EXHIBIT I - TABULATION SHOWING PRODUCTION

(a) To date the production from the South Half of the West Kutz Canyon Pool is more than three times the production from the North Half of the Pool (Gallegos Canyon Unit) from beginning through June 1953.

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EXHIBIT I - (Continued)

- (b) There are approximately four and a half times as many wells in the South Half of the West Kutz Canyon Pool as there are in the North Half (Gallegos Canyon Unit) June 30, 1953.
- (c) The number of acres per producing well is approximately 200 acres per well in the South Half of the Pool and 1100 acres in the North Half of the Pool (Gallegos Canyon Unit) June 30, 1953.
- EXHIBIT II CHART SHOWING THE UNCLINE IN PRESSURE OF IMPLVIDUAL WELLS FROM INITUAL FOTTOM HOLE PRESSURE TO SHUT-IN PRESSURE SEPTEMBER 1953.

This is a chart showing decline in pressures during period of production from beginning to September 1953. It will be noted that the average rate of decline in pressures (due to the greater length of time of production) is generally less for the wells outside the Unit than for the wells inside the Unit.

EXHIBIT III - TABULATION SHOWING THE DECLINE IN PRESSURE PER MILLION CUBIC FEET OF PRODUCTION FROM INITIAL BOTTOM HOLE PRESSURE TO SHUT-IN PRESSURE SEPTEMBER 1953

> This shows that generally speaking, the decline in pressures per million feet of gas produced is greater for the Unit than for the south half of the Pool. This means that gas is escaping to the south half of the Pool or that whe wells are being produced so hard that it is waste. I am inclined to believe that both escape of gas to the south end of the Peol and also waste is taking place.

### EXHIBIT IV - TWO MAPS SHOWING

- (a) Contours on the top of the Pictured Cliffs subsurface sca-level basis.
- (b) Contours of initial potentials. Please note the lack of Unit protection on the south border where the potentials are the highest.
- (c) Contours present day shut-in pressures, showing high pressure areas to be within the Unit and the extreme southeast end of the Pool.

You will see from these exhibits that the individual operations in the south half of the pool could not fail to drain gas from the north end and I believe the operators of the Unit, having drilled a line of wells on 160 acre spacing within the Unit on the south border, evidence this contention. We also note that adjoining the Unit on the south border, the operators on their own properties have drilled their wells on 160 acre spacing. In other words, 160 acre spacing is needed in the north half

-3-

of the Kutz Canyon Pictured Cliffs Fool to equalize the drainage from the south end. It is true that in the most recent wells so far the productivity per well in the Unit drilled on 320 acre spacing and in virgin territory is somewhat his her than the productivity of the older wells outside the Unit drilled on 160 acre spacing. Nevertheless, this productivity per well will equalize if all wells in the pool are produced to capacity.

As we understand it, the interference tests that have been made by Benson-Montin consist of blowing down a well and shutting it in over a period of time while the surrounding or nearby wells are producing. We fail to see what, if anything, this proves.

As to the engineering features of common sources of gas supply, we mention the following:

1. A common source of gas supply at the beginning of production has a certain volume of gas content and a certain bottom hole pressure. The decline of each, as gas is produced, is directly proportional to the other. In other words, if a certain pool starts with reserves of 1,000,000 MDF and a bottom hole pressure of 1000# per square inch, and 500,000 MDF, or one-half of the gas, is produced, the bottom hole pressure will also decline one-half to 500# per square inch. Therefore, if one portion of a pool has produced and/or is producing greater volumes of gas than another portion, the bottom hole pressure of the area of greater production declines more than the area of lesser production. Therefore, the bottom hole pressures in the south half of the West Kutz Pool are generally lower and have generally declined more than those in the north half (Gallagos Canyon Unit), thus drainage of gas is taking place from the north half to the south half. The pressures in the common source of gas supply must inevitably equalize. What the differential in pressures is may be determined at any time by the Commission or the Operators. The evidence of equalization of pressure is exemplifield in the East Kutz Canyon Fool and any other common source pool that might be chosen as an example. Until such time as there is equalization of pressure throughout the pool, there will be drainage from the higher pressure area to the lower pressure area.

The West Kutz Canyon Pool, and as a matter of fact all other Pictured Cliffs pools as far as we know in the San Juan Basin - New Mexico, have subnormal pressures. The Pictured Cliffs formation in the West Kutz Canyon Pool has low permeability, good porosity (approximately 20%) and excellent thickness from approximately 20 to 100 feet. As mentioned above, there is no known barrier to drainage within the common source of supply. It is a fact that gas as compared with oil, flows more easily through a formation, thus it drains more easily than oil from the high pressure area to the low pressure area.

As to the economics of the situation, the recovery or commercial reserves of gas from the West Kutz Canyon Pool is estimated by competent engineers and geologists from  $h_{1,000}$  to 7,000 MCF per acre. In the following example we have used the conservative figure of 5,000 MCF per acre net (7/8ths) to the operator:

Recovery 5,000 MCF per Acre x 320 Acres	1,600,000 MC	F
Gas sold @ 10¢ per MCF Cost First Well (320 acre spacing) Cost to produce @ 1/4¢ per MCF	19,000 § 141,000	
Net Dollar Recovery After All Charges Cost of Second Well (160 acre spacing)	\$ 137,000 20,000	
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From the computation you will see that if an additional well is drilled on a 320 acre lease to make 160 core spacing, the not income after all charges will be 117,000. The total charges to drill and produce the second location will be approximately \$20,000. Therefore, to pay for this \$20,000, additional recovery of the net 7/8ths gas to an amount of 200,000 MCF is necessary. In other words, an additional recovery of 12<sup>1</sup>/<sub>2</sub>% would pay for the second well. Certainly, two wells, if drilled on 160 acre spacing, will recover at least 12<sup>1</sup>/<sub>2</sub>% additional gas to one well drilled on 320 acre spacing. From our experience, it is our belief that the increase in recovery from two wells being drilled may be as high as 20 to 40%.

In other words, there is no doubt that there is an increase in as recoveries when the number of wells drilled is increased. The more wells that are drilled, the more will be the increase in recovery. Therefore, the restriction of the number of wells to be drilled is an economic factor only. It restricts the ultimate recovery. From the above you will see that the drilling of wells on 160 acre spacing allows the operator sufficient profit and therefore there is no economic restriction to such 160 acre spacing.

Brookhaven Oil Company owns 1.03% interest in the Gallegos Canyon Unit, that is, they own 240 acres of New Mexico State Leases within the producing area. As a matter of fact, Brookhaven's ownership is in the only State sections that produce from the Nest Kutz Canyon Pool. Basing the total recovery from this acreage at 5,000 MCF per acre, a loss by drainage to the south end of the pool of 10% means a loss of \$12,000. A loss by Grainage of 20% to the south end of the pool means a loss of \$24,000 over the life of the production.

It is recommended that Order No. R-172 of Case No. 377, dated June 1952, be rescinded, because

#### SUMARY

- 1. The West Kutz Canyon Pool is a common source of supply and initially had the same bottom hole pressure.
- 2. The decline in pressure per million of gas produced is directly proportioned.
- 3. A great many more wells and a great deal more of gas has been produced from the south end of the Pool than from the north end.
- 4. The present pressures in the south end of the Pool are less than in the north end of the Pool, therefore there is drainage of gas from the north end of the Pool to the south end of the Pool.
- 5. Drilling wells on 160 acre spacing is economical.
- 6. The gathering systems of the El Paso Natural taking gas, generally speaking, from the north end of the Pool and the Southern Union gathering system taking gas from the south end of the Pool are, as I understand it, in the future going to coordinate their takings. Whether or not this will be on a well basis or pressure basis remains to be seen.
- 7. The primary requisite of provation and conservation and the protection of correlative rights is that one common source of supply must be drilled on the same spacing pattern, <u>If in addition</u> to that the Commission sees fit to provate the wells by formula based on capacity, that is an additional matter but the spacing of wells must remain the same in a common source of supply.

### BECHE THE CIL CONSERVATION CORPLESION STOTE OF THE PLANCO

(Continuations) Under the torms of Order R-172, the CASE 3771: Oil Conservation Consistion requested that Benson & Montin appear to show cause why a 160-acre spacing mettern should not be instituted for Flatured Cliffs wells in the Gallegou Unit area, dan Juan County, Haw Mexico to supersede the 320-core spacing (temporary) granted for one year.

#### TRANSCRIPT OF HEARING

August 20, 1953

BEFORE :

Honorable Ed. L. Machan, Governor Honorable E. S. Walker, Land Commissioner Honorable R. R. Sporrier, Director, OCC

STATE OF NEW MEXICO 88. COUNTY OF LOS ALAMOS)

I hereby certify that the within transcript of proceedings before the Oil Conservation Commission is a true record of the same to the best of my knowledge, skill and ability.

TRANSCRIBED at Los Alamos, New Mexico this 21st day of August, 1953.

m. Hunishun

Audrey Mr terrickson Notery Public

mission Expires September 22, 1953.

NEW EXICO OIL CONSERVATION COMMISSION

Regular Searing

9:00 a.m., August 20, 1953

Mt. Lall: Justia Beed, appearing for the Respondents, Bonson and Montin. Bonson and Montin appear today with a motion to continue this bearing for thirty days to the regular Soptember hearing.

The Consistion may recall that when this case was originally set the months up, we asked for a sixty day extension at that time stating to the Commission that the reason that it was necessary was that certain coring tests which were then bring conducted in the area had not been finally completed and in addition, the approval of the United States Geodétical Survey and the Department of the Interior.

On the inclusion of certain wells and acreage to the south of the unit area within the unit, these had not been finally approved. Since that time, efforts have gone ahead to accomplish those two things but we are not in a position to present information to the Commission at this time; because of difficulties encountered in this coring program and because it has been impossible to get final action from Washington on the inclusion of this additional acreage, it is impossible now to present to the Commission the full picture which Benson end Mantin had hoped to presents.

In addition, there are other reasons at this time why we ask for the continuance. There have been a series of interference tests being conducted on certain wells within the area. Four of these interference tests are completed. A fifth one is now in process of being completed and will be completed before the September hearing. We feel that the information unich these tests will show is of vital importance to the Consission in determining this matter.

mother point for the postponement is that the state testing to determine deliverability will be conducted at the ord of this month and the information acquired from that testing would containly be relevant to this hearing and would be important to have before the Commission.

in addition, our client intends to file application for a permanent 320-acre spacing order as distinguished from this order to show cause and would like to have the hearing on that application consolidated with the hearing on this order to show cause, and this application will be filed in time to be published for the September hearing.

For these reasons, Benson and Montin feel that it is necessary that the hearing be postponed until September in order that the Commission can have full facts before it in determining the question.

MR. SPUERIER: Is there anyone else to be heard?

Company of Albuquerque who have acreage within the unit.

We wish to oppose the motion for continuance on the following grounds: In the first place, the order setting up the temporary 320 acre spacing was adopted in July, 1952. It was a temporary order and I think it is fair to assume that it was granted by the Commission with the view of allowing sufficient time to gather the information which counsel has just referred to as being available next month.

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There has been already a continuance of this case from the June hearing to the present and while he ways that the coring tests have not been completed, it seems to us that there has been ample time to have completed those during the past year and sixty days.

with reference to the land to be included to the south, it does not seem to us as material to the issue involved which is the merit of the 320-acre spacing in a portion of a poel.

The interformore tests again, it seems to us, could have been made sometime ago and the overator has apparently been derelict in completing those vests.

The application for a permanent order, referred to, in regard to 320-more spacing again 1 think it is fair to assume that that was the purpose of the temporary order in the first place to allow them to gather that information and they should be prepared at this time to present it.

MR. SMiTH: J. K. Smith, Stanolind Oil and Gas Company.

we would like to join with Benson and Montin's application for continuance for one month and I think that with just a month's time, it will probably afford the Commission an opportunity to acquire more information based upon the statem at made by Mr. Reed.

SR. SPURRIER: Bonson and Montin's motion in this case, 377,

will be granted and the case will be heard at the regular September hearing.

M. KELLAHIN: If the Commission please, I would like to suggest that Benson and Montin will by then have had sufficient time

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present bottom hole pressures on these wells, - - - or at least representative potton hole pressures.

MR. REED: If the Consistion please, the information that can be furnished is the regular shut-in pressure that will be obtained in this August test that the state will be making. Isn't that correct, Mr. Macay? don't that be furnished?

MR. MACEY: Yos.

3. WED: That information will be available at the Commission office, I understand.

22. SPURSIER: The next onus on the docket is Case 391.







EARL & BENSON WM V. MONTIN

Farmington, New Mexico Januery 2, 1954

New Mexico Oil Conservation Commission P.O. Box 871 Santa Fe, New Mexico

Attention: Mr. R. R. Spurrier

Subject: Case No. 377 Order No. R-172-B Gallegos Canyon Unit Area San Juan County, New Mexico

#### Gentlemen:

Referring to our letter of December 28th and your reply of December 30th, it appears that we should explain a little more fully why we interpreted your order to mean that a different spacing pattern is understood to apply to Gallegos Canyon Unit lands from lands in the rest of the West Kutz Field.

The largest part of the land in the Gallegos Canyon Unit is federal, and because of this we have had a number of informal discussions with members of the U.S.G.S. relative to spacing of Pictured Cliffs wells in this area. The wording of your Order reflects what we interpreted the desire of the U.S.G.S. to be in this matter, and we therefore assumed that it was based on the same reasoning as members of the U.S.G.S. have advanced in our informal discussions.

The unit operator, in the course of exploration and development of the Pictured Cliffs formation in the Gallegos Canyon Unit, has caused to be obtained a large amount of factual engineering and reservoir data. Most of these data have been filed with the U.S.G.S. and with the Conservation Commission. In informal discussions of this information with members of the U.S.G.S., they have indicated to us that they have no objection to 320 acre spacing for Pictured Cliffs wells in this unit. We understand, however, that the U.S.G.S. does not believe a formal order to be necessary in order to properly control spacing within the boundaries of the Gallegos Canyon Unit. This is the only point on which the unit operator differs with the U.S.G.S. In support of this position, the U.S.G.S. has informally advised us that spacing of non-committed federal lands within the unit is subject to U.S.G.S. jurisdiction, and relative to one specific tract which we pointed out, we were advised that although the land would be within an area spaced for 160 acres by the Conservation Commission, the U.S.G.S. would not permit the operator to drill closer than one well to 320 acres as long as 320 acres has been deemed by the U.S.G.S. to be the proper spacing for the Gallegos Canyon Unit.

As pointed out in Mr. Anderson's letter of September 30th, copy of which was sent to the Conservation Commission, the development of unitized lands (which includes spacing) must be prosecuted under Plans of Development approved by the Oil Conservation Commission, the State Land Commissioner, and the Supervisor of the Geological Survey. The U.S.G.S. believes this unit agreement to be all the authority necessary for proper control of

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Oil Conservation Commission

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spacing within the unit, and for a different spacing to apply to the unit than the rest of the field, it is only necessary for the spacing order covering the field as a whole to specify that (referring again to Mr. Anderson's letter) "lands subject to the Gallegos Canyon Unit Agreement are excepted from any provisions of the order that are contrary to the provisions of the unit agreement".

Because of this, and the wording of your Order R-172-B which states "That land embraced in said Order R-172, as extended, be developed on a 160-acre spacing pattern, provided, however, that development on lands committed to the Gallegos Canyon Unit Agreement shall be subject to the terms of the Unit Agreement", it seemed to us that the Conservation Commission, in accord with the U.S.G.S., contemplated a different spacing pattern inside the unit from that outside the unit.

We were therefore concerned over your order, inasmuch as it appeared that you were denying our 320-acre spacing application only to the extent that it covered lands outside the unit area, and were considering a different spacing pattern for the unit. This did not seem workable to us because the land involved is not all federal, and unlike the U.S.G.S. with respect to federal lands, neither the Conservation Commission nor the State Land Commissioner has the authority, without a formal order, to cause different spacings to apply in the same field.

If, however, the Conservation Commission feels that the proper spacing for the Gallegos Canyon Unit is 160 acres, it now becomes necessary for us to reach some agreement with the U.S.G.S. and the unit operator with respect to the 1954 Plan of Development for the unit. This Plan of Development must be approved by the U.S.G.S., the State Land Commissioner and the Oil Conservation Commission. It therefore appears that at this time only the U.S.G.S. and the unit operator are in accord with a plan of 320 acres per well.

We would like to meet with a member of the U.S.G.S., the State Land Commissioner and a member of the Conservation Commission early this month in order to discuss our Plan of Development before submitting the formal plan to these authorities. We would appreciate your advising us if this can be arranged with the Conservation Commission and the State Land Commissioner, and what date you would suggest, if it is possible to meet.

Yours very truly,

BENSON-MONTIN

last

Albert R. Greer Field Superintendent

cc: USGS, Roswell, New Mexico USGS, Farmington, New Mexico Mr. Jack London, Jr.

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# O'L CONSERVATION COMMISSION P. O. BOX 871 SANTA FE, NEW MEXICO

December 30, 1953

Mr. Albert R. Greer Field Superintendent Benson & Montin Farmington, New Mexico

Dear Al:

This is in reply to your letter of December 28th. Your interpretation of Order No. R-172-B is not exactly as the Commission interprets it and the Commission does not intend that the lands in the West Kutz Canyon Pool or the Gallegos Canyon Unit will be developed on a basis of 320 acres per well.

We, like you, are waiting to see what the USGS's attitude will be and, since it is a Unit Agreement it is, of course, subject to the terms of the Unit Agreement. Finding No. 8 of Order No. R-172-B - "that for the prevention of waste and the protection of correlative rights, a uniform spacing pattern should be established for the orderly development and production of the West Kuts-Pictured Cliffs Gas Pool and we do not agree with your statement that the protection of correlative rights has been destroyed.

If you will note, on the copy of Order No. R-172-B sent you a few days ago after "IT IS THEREFORE ORDERED:" No. (1) Order R-182 should read "Order R-172." It will be appreciated if you will make this correction on your copy and we will correct the original order here in the office.

Very truly yours,

R. R. SPURRIER Secretary and Director

RRS:vc cc: USGS, Reswell

Jason Kellshin, Atty., Santa Fe



GENERAL OFFICES 1501 REPUBLIC BUILDING OKLAHOHA CITY, OKLAHOHA PHONE FO 5-0546

OIL PRODUCERS AND OPERATORS

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EARL A BENEOF

December 28, 1953

New Mexico Oil Conservation Commission P.O. Box 871 Santa Fe, New Mexico

Subject: Case No. 377

Order No. R-172-B

Gallegos Canyon Unit Area San Juan County, New Mexico

DEC 2 0 1953

Attention: Mr. R. R. Spurrier

Gentlemen:

We have received a copy of the Order of the New Mexico Oil Conservation Commission No. R-172-B, which denies Benson-Montin's application for 320-acre spacing for the Pictured Cliffs formation in the Gallegos Canyon Area.

The second paragraph of your new Order No. R-172-B states:

"That the land embraced in said Order No. R-172, as extended, be developed on a 160-acre spacing pattern provided, however, that development on lands committed to the Gallegos Canyon Unit Agreement shall be subject to the terms of the Unit Agreement".

This implies the lands committed to the Gallegos Canyon Unit will be continued on a development basis of 320 acres per well. We would therefore like to know if the Commission intends to permit wells to be drilled within the Gallegos Canyon Unit on lands which are not committed to the unit on a spacing of 160 acres per well.

The unit operator believes that the unit has been adequately protected from drainage in the past, but is quite concerned over your present Order, and would like to know at your earliest convenience the Commission's attitude in regard to non-unit wells on 160 acre spacing. Your Order No. R-172-B has destroyed the protection of correlative rights in the Gallegos Canyon Unit which was provided by Order No. R-172, and we must know the Commission's further attitude in this matter in order to properly protect the rights of unit owners.

Yours very truly,

BENSON-MONTIN

BY :

Albert R. Greer Field Superintendent

cc: U.S.G.S., Roswell, New Mexico cc: U.S.G.S., Farmington, New Mexico cc: Mr. Jack London, Jr.

ARG: no j

GENERAL OFFICES 1501 REPUBLIC BUILDING OKLAHOMA CITY, OKLAHOMA PHONE FO 5-0546

### BENSON-MONTIN.

#### OIL PRODUCERS AND OPERATORS

EARL A. BENSON WH. V. MONTIN

December 28, 1953

U.S. Department of the Interior Geological Survey Roswell, New Mexico

Attentión: Mr. Anderson

Subject: Gallegos Canyon Unit San Juan County, New Mexico

Gentlemen:

Enclosed is copy of a letter from the unit operator of the Gallegos Canyon Unit to the New Mexico Oil Conservation Commission.

We would appreciate your sivising us the attitude of the U.S.G.S. relative to 160-acre spaced wells on noncommitted lands within the unit boundary.

Yours very truly,

BENSON-MONTIN

BYI

Albert R. Greer Field Superintendent

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## TO: OIL AND GAS CONSERVATION COMMISSION

## RE: CASE NO. 377 ORDER NO. R-172

The undersigned protestants, John E. Hall and Allen M. Tonkin, hereby protest to the Commission the proposal for 320acre spacing in the Gallegos Canyon Unit for the following reasons:

The protestant, John E. Hall, shows to the Commission that Sandia Corporation purchased a Tax Deed in 1939 to the SENWA and the NELSWA and the WESEA of Section 18, Township 29 North, Range 12 West, being in all 200 acres; that said lands had fc. sometime prior thereto been under common ownership and assessed for taxation on that basis, and that he executed a Producers Form 88 Lease on October 5, 1948, to Stanolind 011 and Gas Company, who in turn assigned said Lease to Benson and Montin, the present operators of the Gallegos Canyon Unit; that said Lease was for five years and expires on October 5, 1953; that thereafter on the 15th day of October, 1948, he sold by Warranty Deed the WaSEL of Section 18, Township 29 North, Range 12 West, being the easterly 80 acres, to Allen M. Tonkin and Nancy P. Tonkin, subject to said Oil and Gas Lease, and that it is by reason of said interest that the other protestant, Allen M. Tonkin, joins herein.

That thereafter Benson and Montin attempted to unitize the lands of these protestants into their unit, and these protestants refused to join said unit agreement for the reason that they did not feel that it was to their benefit to do so, as by unitizing the operator could perpetuate said Lease without prompt development of the lands of these protestants and without paying a bonus for a renewal of the Lease, so that the lands of these protestants are not involved in said unit operation. If the operators have not drilled said lands by October 5, 1953, those protestants will then own 8/8ths of all the oil and gas laying under the aforedescribed lands, which comprise a total of 200 acres, and that in the event the Lease expires these protestants desire to make joint use of their lands by drilling a well upon some portion of the same, and are of the opinion that as to them any order of this Commission which would deny them the right to drill their lands and produce the oil and gas thereunder, in view of the fact that title to the tract was acquired prior to the current boom in said area and prior to the time that this Commission sought to exercise any jurisdiction over said lands, would be unenforcible as tending to deprive these protestants of their property without due process of law.

That the West Kutz Field, a similar area has been developed on spacing of which we are entitled to 160 acres, and that the 320-acre spacing rule will only be of assistance to the unit operator and would tend to diminish the returns to the royalty owners in the Gallegos Canyon Unit. If the reservoir between Gallegos Canyon and West Kutz Area should be found to be inter-connected, much of the production that could be extracted in Gallegos Canyon would eventually be taken out of the West Kutz wells.

THEREFORE, these protestants protest against the request of the unit operator that Order R-172 of Case 377 made in June, 1952, be continued, and recommend that said order be rescinded by the Commission.

suball

## 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, 377 ORDER NO, R-172-B

THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION UNDER THE TERMS OF ORDER NO. R-172 D'RECTING BENSON & MONTIN TO APPEAR AND SHOW CAUSE WHY 160 ACRE SPACING PATTERN SHOULD NOT BE INSTITUTED FOR PICTURED CLIFFS GAS WELLS IN THE GALLEGOS CANYON UNIT AREA, SAN JUAN COUNTY, NEW MEXICO TO SUPERSEDE THE 320 ACRE SPACING GRANTED FOR ONE YEAR AFTER ORIGINAL HEARING.

## ORDER OF THE COMMISSION

#### BY THE COMMISSION:

This case came on regularly for hearing at 9 o'clock a. m., August 20, 1953, and on good cause shown by Benson and Montin was continued to September 17, 1953 at 9 o'clock a. m., at which time hearing was duly held on the above captioned matter before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission".

NOW, on this 17 day of December/, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, 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 by Order No. R-172, duly signed by the Commission on July 24, 1952, a well spacing pattern based upon 320 acres was established for the development of the Pictured Cliff Formation on the following described acreage for a temporary period of one year from date of said order, said described acreage being within the defined limits of the West Kutz-Pictured Cliffs Gas Pool, as heretofore classified, defined, described and extended by various Commission Orders.

> Township 28 North, Range 11 West, NMPM All of Partial Section 7, All of Sections 18 and 19.

> Township 28 North, Range 12 West, NMPM Partial Sections 7 through 12, and Sections 13 through 34, incl.

> Township 28 North, Range 13 West, NMPM Partial Sections 10, 11 and 12, Sections 13, 14 and 15, Sections 23 through 26, incl., and Sections 35 and 36.

-2-Order No. R-172-B

> Township 29 North, Range 12 West, NMPM SW/4 Section 16, Sections 17 through 21, W/2 and SE/4 of Section 22, W/2 and SE/4 of Section 25, and Sections 26 through 36, incl.

> Township 29 North, Range 13 West, NMPM Sections 9 through 16, Sections 21 through 28, and Sections 33 through 36, incl.

(3) That the remaining portion of the West Kutz-Pictured Cliffs Pool lying to the south has been developed on the basis of  $1\cancel{0}0$  acre well spacing and production units.

(4) That the Gallegos Canyon Unit Area established under the provisions of the Gallegos Canyon Unit Agreement, approved by the Commission, by Order R-68, comprises approximately the northwesterly one-half of the West Kutz-Pictured Cliffs Pool and that this area has been developed and produced on the basis of 320 acre spacing and production units.

(5) That the West Kutz-Pictured Cliffs gas pool embraces a con. mon source of gas supply and that there is no known underground barrier which would impede the flow of gas within the common source of supply.

(6) That the development of the West Kutz-Pictured Cliffs pool on two different spacing patterns is not in the best interest of conservation and will impair correlative rights.

(7) That the development of lands committed to the Gallegos Canyon Unit Agreement is subject to the terms of the Unit Agreement.

(8) That for the prevention of waste and protection of correlative rights, a uniform spacing pattern should be established for the orderly development and production of the West Kutz-Pictured Cliffs gas pool.

IT IS THEREFORE ORDERED:

(1) That Order R-172 is hereby terminated.

(2) That the land embraced in said Order No. R-172, as extended, be developed on a 160-acre spacing pattern provided, however, that development on lands committed to the Gallegos Canyon Unit Agreement shall be subject to the terms of the Unit Agreement.

DONE at Santa Fe, New Mexico on the day and year first above written.

STATE OF NEW MEXICO OIL CONSERVATION COMMISSION

ED MECHEM. Chairman

ussier

R. R. SPURRIER, Member and Secretary

#### 'T0:

### THE STATE OF NEW POLICO OIL CONSERVATION CORRESPOND

In the fatter of the Application of Bencen & Hontin for an order establishing uniform 320 acre spacing of gas wells drilled to the Pictured Cliff's formation of the Callegos Conyon Unit area and certain lands adjacent thereto in Township 28 and 29, North Renges 12 and 13 West, N.M.P.M., San Juan County, New Mexico

Re: Case 110. 377.

# PETITIOU.

We, the undersigned land owners of record within the above described area and adjacent lands thereto, strongly oppose the request for 320 acre spacing of Gas Wells drilled to the Pictured Cliffs fermation as requested by Benson and Montin.

We state that not enough drilling has been done to justify a specing of 320 acres for each gas well, and that many small land owners and Royalty ewners will be deprived of their just and fair share of gas and oil under such lands.

We strongly oppose the 320 acre spacing, and respectfully request the New Mexico Oil Conservation Cormission to retain not more than the present 160 acre spacing of gas wells to the Pictured Cliffs formation, and direct that this Petition be admitted as evidence at the hearing on June 19, 1952, as our valid protest against such proposed spacing regulations.

Address Tup. Date Sec. <u>Range</u> Name ACTE em 10 June // 1 11 11 ł 19 \$ 6 29 • ) 240 12 11 1-25-26

Date Addross Nano Soo. Typ. Ranke Aoron June 10 1852 Wilton Thomas, Farmington Dy 24-25-29-12 68 Zunde 1852 alegandro anche for Farmington non Burs 3 018-11 Sourt b. White Junior him him 30 29-11-76 June 10 1952 une 10-52 Noring Beiley - Tarmingon 3-24 25-29-12/1 Farington Minung 03 Bar 24 and. anthony 19 micht 24 29 13 75 ስመም ለመቻ የዚያ እና የውሃዊ ያስ መጣጫ መሆን መኖር በማሳ መርሻ መታ መርሃ በመም ነ በር የብዙ የስታ ነ ውስጥ መስታ አይ ነ ነ ውስጥ መስታ አይ ነ ነ ውስጥ መስታ አመ የ A. Mitchels 242913 Farmington M. 1429 123 ĠĊ. 5, 71 W 14, 29, 60 erter Lig 35-24-12 / 180 murleave 21 renomene. 180 acea 27-29-10811 28-29-12 29-13-40 mat 1 Dac 21+16,20,17-9N KIBW - 160A 00 148415 + 29N 13 20 2300000 13 20 -te Ceeb.

CASE 377: (As presented in hearing 9-17-53)

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R R SPURRTER=

DIRECTOR OF OIL CONSERVATION COMMISSION SANTA FE NMEX=

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CARE OTL CONSERVATION COMM SANTA FE NMEX\*

WAS CALLED BACK TO COURT TO GET ORDER STGNED THROWS ME TOO

APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING

G W R HOY=

THE COMPANY

## ACCEPTANCE OF LEASES IN ESCROW

We, THE FIRST NATIONAL BANK OF FARMINGTON, NEW MEXICO, appointed Escrow Agent under the foregoing escrow instructions (and agreement between Lessors and Lessee ) hereby accept possession of said leases, together with the instructions with which said leases are deposited; and agree to hold said leases in escrow, and make delivery thereof as in said instructions more particularly directed.

Dated this 19 day of February, 1952.

THE EIRST NATIONAL BANK OF FARMINGTON, N. M. By Chard Clerhamasa Cashier

Returned Mayd Traylor.



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LA59 KC068 K.TUBO98 DE PD=TULSA OKLA 17 1016A= NEW MEXICO OIL CONSERVATION COMMISSION= ATTN R R SPURRIER SANTA FE NMEX=

AVE ARE INTERESTED IN APPLICATION BENSON AND MONTIN CASE NUMBER 377 SET FOR HEARING JUNE 19 STOP WE CANNOT BE REPRESENTED AT HEARING BUT SUPPORT THE POSITION OF APPLICANT= A E PIERCE VICE PRESIDENT MID-CONTINENT PETROLEUM CORP=

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

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

June 17, 1952

Mr. A. E. Pierce, Vice President Mid-Continent Petroleum Corporation Tulsa, Oklahoma

Dear Sir:

C O

P

This is to acknowledge receipt of your telegram of this date with reference to Case 377, scheduled for hearing before the Commission on June 19; 1952.

Your wire will be entered and made a part of the permanent record in the case.

Very truly yours,

N. B. Macey Chief Engineer

WBMinr

## VIA AIR MAIL

1731114 FARE, 1. N. June 11 - 1952

State of New Mexico Oil Conservation Consission Bania Fe, D. M.

Sontlemen:

Me wish to protest the granting of an order cotablishing uniform 320 acre spacing of gas wells drilled to the Pictured Cliffs' formation of the Gallegos Canyon Unit Area, Sun Juan County, New Hexteo (Case 377). Granting this order would be very unfair to us and other holders of gas rights in the area. It would greatly reduce the revenue we might receive.

Our holdings are a half interest in the gas and oil rights of the NE/4 of the SE/4 of the S 12 rods of the SE/4 of the NE/4 of Sec. 21, and the MM/4 of the SM/4 and the S 12 rods of the SM/4 of the NM/4of Sec. 22, all Twp. 29 N, Range 13 W, NMPM.

Very truly yours,

Elmer S. Anderson Lain angle Laborly of Bertha E. Anderson

(Box 135, Mesilla Park, N. N.)

Received OCC June 16 1952 Via registered mail

Chase & J. L. Mesilla Park, n. m. June, 11, 1952 State of new Mexico Clif Coursewatin Commun Sonta Fe, N. M. gentlemen: We work to protect the granting of an arder establishing Uniform 320 acre spacing of gas weeks drilled to the Pictured Cliffs formation of the Gallegae Caryon mit area, san fuan County, new mesine (Case 377) Granting this ander would be deny unfair to us and other holders of gas nights in the area. It would greatly reduce the revenue we night receive Ohn holdings are a talf interest in the gas and vel rights of the NE y of the SE /4

of the \$ 12 rods of the SE/4 of the NE/4 of Sec. 21, and the NW/4 of the SW/4 and the S. 12 roels of the SW/4 of the N.W/4 of Sec. 22, all Tup. 29N, Runge 18 W. N. M.P. M. Very-truly yours Elmer & Anderson Berthe E. auderson
Elmer & anderson Box 135 Mesilea Park N. M.



State of new mexico did Conservation Commission Sourta Fe, n. M. 1961: 5D



# OIL CONSERVATION COMMISSION

P. O. BOX 871 SANTA FE, NEW MEXICO

June 17, 1952

Elmer E. Anderson and Bertha E. Anderson Box 135 Mesilla Park, N. M.

Dear Hr. and Pra. Anderson:

This will acknowledge your letter of June 11, 1952, with regard to Case 377, scheduled to be hoard June 19 in regular hearing before the Oil Conservation Commission.

Your letter will be entered and made a part of the permanent record in the case.

Very truly yours,

W. B. Macey Chief Engineer

WBHinr

C O P

1105-3. Quaker Tulsa, Okla. Juna 11 - 152

State of New Mexico Cil Conservation Occulation Santa Fe, New Mexico

Contlesen:

I have read your notice in the Farmington Daily Thees with reference to Case 377, in the matter of application by Benson and Montin, for an order to change well shacing from 160 acres to 320 acres in the Gallegos Canyon Unit Area.

As I own the SW NE and W/2 SE 19-29-12M, also NW SW 14-29-13W, in this unit, I wish to register a protest against this change.

I believe in the conservation of natural resources but not to the extent of depriving property owners of their rights. In other gas fields 160 spacing has been satisfactory, and no doubt it is in this area.

When these lands were leased a year ago we agreed on a 160 acres spacing. What has happened in the meantime to justify this change?

Thanks for your attention.

#### (3) MAMLE WHITENACK

(Sent registered mail..... Received OCC June 16 1952)

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M. Whitewack 1105 S. Luaker Liclea & Rea With Manues Strain Alexander Strain Alexander Strain Alexander Strain Alexander Strain State State of new Metres Oil Conservation Com; Santa FE, New Mefico N.H.H.C.F. HICHOGRAPHICS (28) 03.0 in directory and the second second second second 1.1.1.1.1.1



1105 S. Rucker Julsa Ha June 11- '52 State of New Metico Vil Conservation Commenter, Santa FE, Kem Mexico. Genetlemene! I have read your natice in The Farmington Daily Times with reference to case # 377, in The matter of efficition by Beiton & Montin, for an order to change well spacing from 160 accesto 320 acres, in The Gallegas Compon buil Gra. Ces I ann The Sto HEX W2 SE 19-29-126, also TIW SW 14-29-13W, in This unch, I wish to regester a feated against This change: I believe in The conservation of natural resources, but not to The extend of depriving property survers of Their rights. In other gasfields no doubt it is ever this area. we agreed on a 160 here spacing, What has happened in The meantime to justify This change? Thanks for your attention. Thanks for your attention.

June 17, 1952

Mrs. Mamie Whitenack 1105 S. Quaker Tulsa, Oklahona

Dear Madam:

C O

P

This is to acknowledge your letter of June 11, 1952, referring to Case 377, set to be heard at the regular hearing of the Commission on June 19.

Your letter will be made a part of the permanent record in the case.

Very truly yours,

W. B. Macey Chief Engineer

CONTRACTOR AND A CONTRACTOR OF A CONTRACTOR AND A

WBMinr

455 La Colonia Las Gruces, New Mexico June 12, 1952

State of New Mexico Oil Conservation Commission Santa Fe, New Mexico

Dear Sirs;

We read a legal notice - Case 377 - in the Farmington Daily Times, dated June 2, 1952, whereby there is to be a hearing June 19,1952, for the purpose of changing the spacing of gas wells, from 160 acres to 320 acres in certain lands adjacent thereto in Townships 28 and 29 North, Ranges 12 and 13 West, NMPM, San Juan County, New Mexico.

We are landowners in San Juan County, New Mexico, owning land --

The Southwest Quarter of the Northwest Quarter(SW4NW2) of Section 22, Township 29 North, Range 13 West, N.M.P.M., excepting therefrom the South Twelve rods thereof, and one rod therefrom on the North, said tract containing thirty-four acres more or less. We very vigorously protest the respacing of gas

HAR SALAR CARACTERISTICS CARACTERISTICS CARACTERISTICS

wells in the above mentioned lands, from 160 acres to 320 acres.

Thank you.

Very truly yours,

andrew D. Dinemore Ron P. Dinemore

June 17, 1952

Hr. Andrew D. Dinsmore and Rene P. Dinsmore 455 La Colonia Las Cruces, N. M.

Dear Mr. and Mrs. Dinsmore:

This will acknowledge receipt of your letter of June 12, 1952, with reference to ase 377, set to be heard before this Commission on June 19.

Your letter will be entered and made a part of the permanent record in the case.

Very truly yours,

W. B. Macey Chief Engineer

WBM:nr

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P

332 Lindon Street Santa Cruz, California

June 19, 39-52

State of New Mexico Oil Conservation Commission

Santa Fe, New Mexico

Gentlemen:

I am in receipt of a legal notice published in the Fermington Daily Times of June 2, 1952, in which you give notice of a hearing in Santa Fe, at mine o'clock a. m., on June 19, 1952, at Mabry Hell, Santa Fe, New Mexico.

We have lands situate in Section 14, Township 29 North, Range 13 West, more particularly described as follows:

The N. 23 scres of the E<sub>2</sub> of the E<sub>3</sub> of the MM<sub>4</sub>, Section 14.

We have signed a lease and have a definite drilling commitment on the 160 acres of which our land is a part, such lease and agreement being with the Locke-Taylor Drilling Co. of Farmington, New Mexico. They have agreed to drill this acreage on the basis of 160 acre spacings.

We protest the application of Benson & Montin in our lands of which they have no interest, whatsoever, and feel that in view of the large number of landowners involved in our 160 acres, that it is unfair and unjust to ask for a spacing of more than 160 acres. We direct that this letter be presented at the hearing as our valid protest, since we live out of the State and will be unable to be present at the said hearing.

Very truly yours,

Calori Z Bleason

Calvin L. Gleason, for himself and for Raymond A. Gleason, Kenneth G. Gleason and Nancy J. Gleason Leest.

1111 13 (452

June 13, 1952

Mr. Calvin L. Oleason 332 Linden Street Sante Cruz, California

Dear Sir:

This will acknowledge receipt of your letter of June 11, 1952, regarding Case 377, schedule to be heard by this Commission at the regular hearing on June 19, 1952.

Your letter will be entered and made a part of the permanent record in the case.

Very truly yours.

W. B. Haroy Chief Engineer

States and

WBrinn

Y

208 E. Washington St., Washington, Iowa June 10, 1952

State of New Mexico Oil Conservation Commission, Santa Fe, New Mexico

Dear Sirs,

I am writing to you about Case 377 to urge that you reject this application when it comes up for hearing June 19th.

My interest is that of a small land owner in the affected area. 1 have  $22\frac{1}{2}$  acres in Sections 13 and 14 Twp. 29 N Range 13 W., and own half the mineral rights to 143 acres in Section 21, and to 20 acres in Section 2, Twp. 29 N Range 13 W.

I believe that, under the guise of conservation, the applicant in this case is trying to squeeze out the small owners and operators. It would seem to be the duty of public commissioners to be particularly vigilant against such tactics. Small owners and operators need special protection, like widows and orphans, partly because of their minority position. I would like respectfully to call your attention to the place that private initiative has always occupied in the development of the United States.

To the best of my information, applicants are trying to hold 45,000 acres, unable to develop it themselves, but unwilling to admit other operators. This is a form of greed unworthy of the country's need for gas and oil.

I remember how recently the San Juan Basin became productive and how bright the future appeared to those who live there. Surely in this, the very early period of the area's development when its capacities are hardly known, it is unjustified to propose 320 acre spacing. I am hoping to hear that the application of Case 377 was rejected and that the interests of a small group have not been placed above the general good.

Yours very truly,

Mary Roberts Berry

111 Mar 18

# OIL CONSERVATION COMMISSION

P. O. BOX 871 SANTA FE, NEW MEXICO

June 13, 2952

Mrs. Mary Roberts Herry 208 East Washington Street Washington, Iowa

Dear Madam:

C O

P

This will acknowledge receipt of your letter of June 10, 1952, concerning Case 377, set to be heard by this Commission on June 19, 1952.

Your letter will be made part of the permanent record in the case.

Very truly yours,

W. B. Macey Chief Engineer

WBMinr

1507 2nd. Ave. Safford Arizona June 9, 1952

New Mexico 0 11 Conservation Commission Santa Fe, New Mexico.

Dear Sirs:

We the undersigned, having property in San Juan County, present this letter in protest to the proposel 320 acre spacing of gas wells in areas of San Juan County, known as case 377. We feel that such a proposal would be detremental to the best interest of all small land owners.

Enclosed are the legal descriptions of our properties.

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Vaughn Reay

Merrill Kempton

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Juno 13, 1952

Mr. Thurland Reay 1507 2nd Avenue Safford, Arisona

Dear Sir:

C O

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We have received your letter of June 9, 1952, written for your interest and that of Vaughn Reay, Merrill Kempton and Lucy Mae Kempton in Case 377, scheduled to be heard by this Commission on June 19, 1952.

The letter will be entered and made a part of the permanent record in the case.

Very truly yours,

W. B. Macey Chief Engineer

WBMinr

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stroation: Br. Jack London, Jr.

Car Proposed Expansion Gallages Conven Unit and Fictured Cliffs Participating Area, San Juan County, New Noxico

Gentlesion

is of March 18th we wrote to you concerning your proposed expansion of the above described unit by the in clusion of Sections 35 and 36-288-124, 32 Section 31-288-114, Section 4 and Not Section 5-278-124.

He request that you completely disregard that letter. He have since found that we were misinformed, and do not wish to support the objections of Sr. Themas 3. South, Jr., president of the Brockhaven Oil Company. He particularly object to his request that Order 8-172 of the New Mexico Oil Comservation Commission be cancelled, and we wish to do nothing whatweever that will in any way jeopardize the standing of that Order.

se regrot very such that we gave you the wrong inpression, and hope that this letter will give you the true picture of our stand on the matter.

fours your truly,

- MAD O N 国際、

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G.J.Simb

co: Stanolind Oil & Cas Jospany Tulss, Mahopa

> eld-Continent Fetroleum Corporation Atta: Sr. Albert Fierce, Production Dept. Tulua, Calahoma

The Yexas Company Ft. Horth, Texas oc: prochaves (11 Company) Attn: Fr. Mass. 7. Cost, Jr., President P. C. Fox 644, Altugaergue, Yew calco

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011 Conservation Consistin State Capitol Santa Pe, New Mexico

S. N. M. C. F. STCHOOL

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GENERAL OFFICES 1501 PETROLEUM BUILDING OKLAHOMA CITY, OKLAHOMA PHONE 3:0546 Benson - Montin -

EARL A. BENSON

Please address reply to:

Farmington, New Mexico

3155 West Kain

OIL PRODUCERS AND OPERATORS

March 19, 1953

Stanolind Oil & Cas Company Lubbock, Texas

Attention: Mr. C. J. Christenson

Subject: Your File Gallegos

Your File SHS-5279-400-T Gallegos Canyon Unit, San Juan County, New Mexico

Centlemon

This is in reply to your letter of March 6th addressed to Benson-Montin in Oklahoma City, relative to locations and the cost of wells proposed for the first half of 1953.

For your information, we are listing below most of the wells we propose to drill in the Gallegos Canyon Unit during the remainder of this year:

1737' FNL, 990' FEL, Section 20, Twp. 28N, Rge. 12W #19 660' FSL, 1980' FwL, Section 26, Twp. 29N, Rge. 13W 1650' FNL, 990' FEL, Section 25, Twp. 29N, Rge. 13W #25 #26 #27 1650' FSL, 1650' FWL, Section 30, Twp. 29N, Rge. 12W NE/4 of Section 30, Twp. 29N, Rge. 12W (not surveyed as of 3-19-53) #28 824' FSL, 1811' FWL, Section 32, Twp. 29N, Rge. 12W 1650' FSL, 990' FKL, Section 33, Twp. 28N, Rge. 12W #29 #30 #32 990' FSL, 1650' Ful, Section 7, Twp. 28N, Rge. 12H 970' FSL, 970' FWL, Section 21, Twp. 28N, Rge. 12W 1650' FSL, 1650' FWL, Section 28, Twp. 28N, Rge. 12W 1650' FSL, 1650' FWL, Section 20, Twp. 28N, Rge. 12W #33 #34 #35 1758' FNL, 1013' FEL, Section 19, Twp. 28N, Rge. 12W #36 1594' FSL, 1716' FWL, Section 19, Twp. 28N, Rge. 12W 1660' FNL, 735' FKL, Section 24, Twp. 28N, Rge. 13W #37 #38 SW/4 of Section 16, Twp. 28N, Rge. 12W (not surveyed as of 3-19-53) #39 #40 1770' FNL, 660' FEL, Section 29, Twp. 28N, Rgs. 12W 990' FNL, 990' FEL, Section 32, Twp. 28N, Rge. 12W. #41

Of the above 17 wells, we anticipate that five will be completed by June 30th, and possibly production casing will be set on two others. Our anticipated order of drilling at this time is as follows: #28, #25, #30, #27, #26, #29, #19.

Copy of an AFE covering cost of an average well is enclosed with this letter.

Yours very truly,

BENSON-MONTIN

Albert R. Greer Field Superintendent

ec: Mr. Jack London

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### BROOKHAVEN OIL COMPANY

FIRST NATIONAL BANK BUILDING (MAIL) P. O. BOX 644

Albuquerque, New Mexico PHONE 7-8853 TELETY

телетура Адлет (1997) 952. (1997) - Салан (1997) (1997) - Салан (1997) (1997) - Салан (1997)

September 22, 1952.

Benson-Montin 1501 Petroleum Building Oklahoma City, Oklahoma

#### Att: Mr. Jack London, Jr.

Dear Mr. London:

While I was on a trip to the eastern seaboard and Canada last June, that is, June 1st to June 21st, you apparently wrote my firm under date of June 11th, that you, as operator of the Gallegos Canyon Unit, were applying to the New Mexico Oil Conservation Commission at a hearing June 19th, for 320 acre spacing in the Pictured Cliffs development. On the assumption that you mailed your letter fairly promptly, this office would have received it on June 16th, in other words, three days before the hearing on your application to the New Mexico Oil Conservation Commission. Please remember that you had not asked the advice of the other lease owners previous to your application, but merely went ahead and applied on your own, probably at the instigation of the Stanolind Oil and Gas Company. I call to your attention Article 15 - Drailage - of the Unit Agreement for Development and Operation of the Gallegos Canyon Unit Area, dated the first day of November, 1950, wherein it says the Unit Operator will take appropriate and adequate measures to prevent drainage by wells on land not subject to this agreement.

There has just come to my notice, Case #377 wherein the New Mexico Oil Conservation Commission finds that the area of the Gallegos Canyon Unit can be efficiently, effectively and economically drained by one gas well on 320 acres but that the other wells in the West Kutz Pictured Cliffs Pool be and remain in full effect and undisturbed hereby.

I call your attantion to the fact that lessees across the southern border of the Gallegos Canyon Unit have drilled wells on 160 acre spacing and, incidentally, to date you have failed to offset these wells, and that it is your intention to offset these 160 acre wells by 320 acre wells. As you and everybody else in the oil business knows, you can not prevent drainage by such a program unless each well in the West Kutz Area south and east of the Gallegos Canyon Unit drilled on 160 acre spacing is prorated to one-half the allowable of the wells in the Gallegos Canyon Unit drilled on 320 acre spacing.

I commend you for attempting to operate an economical drilling program, and I don't mind the 320 acre spacing if the whole Benson-Montin September 22, 1952. Page 2.

pool is on this spacing, but I condemn you for enlarging the spacing per well in the Calleges Canyon Unit without making comparable provision for drainage in the rest of the pool, either through spacing or proration. In this case, it would have to be provation. Possibly you and the New Mexico 011 Conservation Commission have done this but it has not come to my attention. Please advise.

I put you, as Operator, and the New Mexico Oil Conservation Commission on notice that unless comparable aituations, such as equal spacing or offsetting proration is instigated immediately in and outside the Callegos Unit Unit in the same send in the same pool, we will hold you responsible for drainage by the outside area. This case is so blatent, won't you please let me know what provision, if any, you and the Commission have made for the proration outside the Gallegos Conyon Unit in the West Kutz area so as to offset the wider spacing in the Gallegos Canyon Unit.

Very truly yours,

BROOKHAVER OIL COMPANY

Thos. B. Scott, Jr.

President

TES :ms

CC: Mr. R. R. Spurrier, Secretary Oil Conservation Commission of the State of New Mexico State Capitol Santa Pa, New Mexico

July 25, 1952

Mr. Al Greer, Jr. Benson & Montin Farmington, New Mexico

Dear Mr. Greer:

Order R-172 in Case 377, effective July 24, 1952, is enclosed for your files.

Very truly yours,

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Secretary and Director

### May 28, 1953

Benson - Montin Oil Producers and Operators 315 1/2 West Main Farmington, New Mexico

### Attention: Mr. Albert R. Greer, Field Superintendent

Gentlemen:

Reference is made to your letter of May 25, 1953 wherein you request that the Show Cause hearing on Case No. 377, Order No. R-172 scheduled for June be postponed for a period of sixty days.

It will be necessary for you to make an appearance at the hearing and request the said sixty day extension and if said request is granted, we will then issue an order.

Very truly yours,

R. R. Spurrier Secretary-Director

vc

GENERAL OFFICES IBOT PETROLEUM BUILDING OKLAHONA CITY, OKLAHOMA PHUNE 3-0546



OIL PRODUCERS AND OPERATORS

### May 25, 1953

3152 West Main Farmington, New Mexico

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MAL.

New Mexico Oil Conservation Commission Santa Fe, New Mexico

Attention: Mr. R. R. Spurrier

Gentlemen:

Subject: Case No. 377 Order No. R-172

In Order No. R-172 the Commission established 320-acre spacing for the Gallegos Canyon Area by a temporary order effective for a period of one year from July 24th, 1952. This order also required that the Gallegos Canyon Unit operator show cause in the regular Commission hearing for the month of June, 1953, why 320-acre spacing should be continued.

Part of the effectiveness of this change in spacing from 160 acres to 320 acres depends on adequate protection of the unitized lands from the more densely drilled area to the south. In this respect the Unit operator is preventing drainage by drilling wells to a density of four wells to a section on part of the south boundary of the unit. То continue this protective row of wells across the entire south boundary, the Unit operator has proposed that a number of wells already drilled on 160-acre spacing, and which now adjoin the unit boundary, be included in the Gallegos Canyon Unit by enlarging the Unit area. The Unit operator has proposed that the effective date of this enlargement be February 1st, 1953. This proposed enlargement was filed with the U.S.G.S. in February, and we are still awaiting U.S.G.S. action in this matter. We would like to have a decision from the U.S.G.S. before the Commission holds another hearing relative to 320-acre spacing in the Gallegos Canyon Area. We therefore request that the Show Cause Hearing originally scheduled for June of this year be postponed sixty days, until the regular hearing date in August. This additional time will also allow the Unit operator to complete its schedule of wells to be cored, and will provide additional core data which will have a bearing on this hearing.

Yours very truly,

BENSON-MONTIN

BY:

Albert R. Greer Field Superintendent

ARG: ne j

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

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMPLISSION OF NEW MEXICO FOR THE PURFOSE OF CONSIDERING:

CASE NO. 377 ORDER MO. R-172-A

THE CONMISSION'S ORDER DIRECTED TO DERISON-MONTIN TO SHOW CAUSE MHY 160-ACRE SFACING SHOULD NOT BE DISTI-TUTED FOR PICTURED CLIFFS PRODUCTION IN THE GALVEGOS CANYON UNIT AREA, SAN JUAN COUNTY, NEW MEXICO, TO SUPERSEDE TEMPORARY 320-ACRE SPACING AUTHORIZED BY ORDER NO. R-172.

### INTERLOCUTORY ORDER

MHEREAS on the 24th day of July, 1952, the Oil Conservation Commission of New Mexico issued Order No. R-172 authorizing among other things 320-acre spacing for a period of one year for the Gallegos Canyon Unit from and after the date aforesaid, and

WHEREAS Said authorization of 320-acre spacing will expire by its own terms unless extended, and

WHEREAS Due notice to show cause why the Gallegos Canyon Unit Area in San Juan County, New Mexico, should not be placed on 160-acre spacing was served upon all interested parties, returnable June 16, 1953, and such parties duly appeared and moved the Commission for continuance, and good cause being shown therefor,

#### IT IS THEREFORE ORDERED:

RA

First, That said cause be, and the same hereby is continued to the regular hearing date officially set for August 20, 1953, in Santa Fe, New Mexico, by the Oil Conservation Commission.

Second, That all the rights, obligations and duties in the matter of spacing in the Gallegos Canyon Unit Area included and imposed by Order E-172, dated July 24, 1952, be and the same hereby are extended and remain in full force and effect until said hearing date of August 20, 1953, as aforesaid, and the regular issuance thereafter of the Commission order in the premises, but in no event later than September 17, 1953.

DONE at Santa Fe, New Mexico, this 23 day of June, 1953.

STATE OF NEW MEXICO OIL CONSERVATION COMMISSION

11 Mechem, Chairman

unier Secretary

Case 311

#### June 8, 1953

Mr. Thomas B. Scott, Jr., President Brookhaven Oil Company P. O. Box 644 Albuquerque, New Mexico

Dear Mr. Scott:

This acknowledges receipt of your letter of June 5, 1953 inquiring as to the Order to Show Cause directed by the Commission to Benson-Montin, operators of the Gallegos Canyon Unitization project.

By reference to Order No. R-172 in Case 377 you will note that Finding No. 4 therein cites that the area should be developed on a 320 acre spacing pattern for a period of one year from the date of the order. This matter is called up at this time in order that the operators and interested parties in the Gallegos Canyon Unit may show why the 320 acre spacing, temporarily authorized last year, should be retained. As you know, the ordinary statewide gas spacing regulations are for 160 acres; if the interested parties have any reasons why 320 acre spacing should be retained in the aforementioned area then, they should appear and defend by proper testimony their position otherwise at the expiration of the one year period the statewide spacing of 160 acres would automatically go into effect.

Under date of May 28th of this year, Benson-Montin, Who had previously requested a sixty day continuance of the case, were advised that it was necessary to make an appearance at the regular June 16, 1953 bearing and by motion request the 60 day extension which would be considered together with any reasons that company might offer to sustain the request. It is the understanding of this office that the problem is centered around the proposition of adequate protection of unitized lands and a possible attempt to modify the boundaries to include additional acreage to the south.

Very truly yours,

R. R. Spurrier Secretary-Director

Shirah Hili Angel and Alighter and Alighter

# BROOKHAVEN OIL COMPANY

FIRGT NATIONAL BANK DUILDING (MAIL) P. O. BOX 644 Albuquerque, New Mexico

TELETYPE AQ-96

### PHONE 7-8853

# June 5, 1953.

New Mexico Oil Conservation Commission State Capitol Fuilding Santa Fe, New Mexico

#### Att: Mr. R. R. Spurrier, Sechetary

Dear Mr. Spurrier:

We have just received the docket for the regular hearing before the New Mexico Oil Conservation Conmission to be held at 9 A.M. June 16, 1953, and note under the heading of "Continuations" that Menson & Montin are receested to appear at this hearing to show cause why a 160-acre spacing pattern should not be instituted for Pictured Cliffs wells in the Gallegos Unit Area, San Juan County, New Mexico, to supersede the 320-acre spacing granted for a one-year period after original hearing.

Inasmuch as our company has a working interest in the Callegos Unit, we would appreciate it very much if you would advise us whether this action is being taken to meduce the spacing to 160 acres to compensate for the 320 acre spacing originally allowed or whether this is just a routine matter inasmuch as the one-year period allowed on the 320 acre spacing has expired. We are very much interested in this matter and would appreciate your prompt reply.

Thanking you, I remain,

Very truly yours,

BROOKHAVEN OTL COMPANY

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Thomas Scott for

Thos. B. Scott, Jr. President

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60 day Octament

TES:ms

J. O. SETH A. K.MONTGOMERY OLIVER GETH WW.FEDERICI JUSTIN T. REID SETH AND MONTGOMERY ATTORNEYS AND COUNSELORS AT LAW IN SAN FRANCISCO ST. SANTA FE, NEW MEXICO

June 17, 1953

ON CONSCRIPTION COMMISSION WATLA FE THEW MEXICO. merene man? JUN 1 9 1953 Lo and soon I V is

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Mr. R. R. Spurrier OIL CONSERVATION COMMISSION Capitol Building Santa Fe, New Mexico

Dear Dick:

Re: Case No% 377 continuation order

I have drafted and enclose two copies of a proposed Order of the Commission formally continuing the Benson & Montin hearing in the above case, and providing that the existing spacing order (R-172) remain in effect until the hearing is disposed of.

Please let me know when the order is entered so I can advise my client. Order No. R-172 was entered on July  $2k_s$  1952, as you mentioned.

Let me know if I can do anything else in connection with this continuance.

Thanks.

Very truly yours.

istu

JTR:f Enc.

## BEFORE THE OIL CONSERVATION COMMISSION OF

### THE STATE OF NEW MEXICO

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

GASE NO. 377 ORDER NO.

THE COMMISSION'S ORDER DIRECTED TO BENSON & MONTIN TO SHOW CAUSE WHY A 160-ACRE SPACING PATTERN SHOULD NOT BE INSTITUTED FOR PICTURED CLIFFS WELLS IN THE GALLEGOS CANYON UNIT AREA, SAN JUAN COUNTY, NEW MEXICO, TO SUPER-SEDE THE 320-ACRE SPACING PATTERN ESTABLISHED FOR A ONE-YEAR PERIOD AFTER ORIGINAL HEARING.

### ORDER OF THE COMMISSION

This cause came on regularly for hearing at 9:00 a.m., June 16, 1953, at Santa Fe, New Mexico, before the Cil Conservation Commission of New Mexico, hereinafter referred to as the "Commission".

NOW, on this \_\_\_\_\_ day of \_\_\_\_\_, 1953, the Commission, a quorum being present, having heard respondent's Motion for Continuance of this hearing, and there being no objection thereto, and good cause being shown therefor, and the Commission being fully advised,

IT IS THEREFORE ORDERED that this hearing be continued until the regular August, 1953, hearing before the Commission; and that Order No. R-172, heretofore entered herein, remain in full force and effect until the disposition of such hearing.

ENTERED this \_\_\_\_\_ day of \_\_\_\_\_, 1953.

District Judge

#### BFFORE THE OIL CONSERVATION COMMISSION OF

### THE STATE OF MER. MEXICO

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

CASE NO. 377 ORDER NO.

THE COMMISSION'S ORDER DIRECTED TO BENSON & MONTIN TO SHOW CAUSE WHY A 160-ACKE SPACING PATTERN SHOULD NOT BE INSTITUTED FOR PICTURED CLIFTS WELLS IN THE GALLEGOS CANYON UNIT AREA, SAN JUAN COUNTY, NEW MEXICO, TO SUPER-SEDE THE 320-ACRE SPACING PATTERN ESTABLISHED FOR A ONE-YEAR PERIOD AFTER ORIGINAL HEARING.

# ORDER OF THE COMMISSION

This cause came on regularly for hearing at 9:00 a.m., June 16, 1953, at Santa re, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission". NOW, on this \_\_\_\_\_\_ day of \_\_\_\_\_\_, 1953, the Commission, a quorum being present, having heard respondent's Notion for Continuance of this hearing, and there being no objection thereto, and good cause being shown therefor, and the Commission being fully advised,

IT IS THEREFORE ORDERED that this hearing be continued until the regular August, 1953, hearing before the Commission; and that Order No. R-172, heretofore entered herein, remain in full force and effect until the disposition of such hearing.

ENTERED this \_\_\_\_\_ day of \_\_\_\_\_, 1953.

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

December 21, 1953

Mr. A. R. Greer BENSON & MONTIN 315-1/2 West Main Street FARMINGTON N M

Dear Sir:

RE1 000 0800 377

Enclosed is asigned copy of Order R-172-B antered by the Commission on December 17, 1953, in Case 377.

t

Vory truly yours,

THE REPORT OF A PROPERTY OF A

W. B. Macey Chief Engineer

WBMINT

V. H.H.C.T. HECHOGRAPHICS

## BEFORE THE OIL CONDREVATION COMMISSION OF THE STATE OF NEW MEXICO

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

> CASE NO. 377 ORDER NO. R-172

THE APPLICATION OF BENSON & MONTIN-FOR AN ONDER ESTABLISHING UNIFORM SPACING OF WELLS FOR THE PICTURED CLIFFS FORMATION OF THE GALLEGOS CANYON UNIT AREA AND CERTAIN LAUDS ADJACENT THERETO, SAN JUAN COUNTY, NEW SEXICO.

#### ORDER OF THE COMMISSION

## BY THE COMMISSION:

This cause came on regularly for hearing at 9 o'clock a.m. June 19, 1952, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission".

NOW, on this 24 day of July, 1952, the Commission, a quorum being present, having considered the testimony adduced and the exhibits received at said hearings, 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 the following described lands in San Juan County, New Kexico, in all probability, embrace a common source of supply of gas in the Pictured Cliffs formation, and include the approximate northwesterly one-half of the West Kutz-Pictured Cliffs Pool as presently defined by Commission Order R-42 in Case No. 244, Commission Order R-156 in Case No. 363, and Commission Order R-156-A in Case No. 363, to-wit:

> Township 28 North, Eange 11 West, NAPM All of Partial Section 7, All of Sections 18 and 19.

> Township 28 North, Range 12 West, NMPM Partial Sections 7 through 12, and Sections 13 through 34, incl.

Township 28 North, Range 13 West, NMPM Partial Sections 10, 11, and 12, Sections 13, 14 and 15, Sections 23 through 26, incl., and Sections 35 and 36. . Page 2. Sabe No. 377 - Gragi No. 2-172

> ownship 29 North, dange 12 Nest, NMFN SM/X Section 16, Sections 17 through 21, W/2 and SP/A of Section 22, W/2 and SA/A of Section 25, and Sections 26 through 36, incl.

<u>Fownship 29 North, Bange 13 Nest, NNFM</u> Sections 9 through 16, Sections 21 through 28, and Sections 33 through 36, incl.

3. That apparently one gas well to the Fictured Cliffs formation of the above lands will efficiently, effectively and economically drain an area of 320 acres, and that testimony indicated that drilling wells in a pattern of greater density is unnecessary, and not to the best interests of conservation, and could result in wasteful use of critical materials.

4. That in an effort to determine whether such measures will insure orderly development, protect correlative rights and prevent possible waste, the above lands should be developed on a 320-acre spacing pattern for a period of one year from date of this order, and at the end of one year applicant shall present testimony to show why 320-acre spacing should be retained.

5. That to insure the proper and uniform spacing of all wells drilled to the common source of supply under the above lands and to protect the correlative rights of all the parties interested therein, all wells drilled therein should be located in the southwest and northeast quarters of each governmental section conforming with Rule 104 of the Commission's Rules and Regulations, with only such exceptions as are necessary for existing nonconforming wells, future wells on good cause shown, and such off-set wells as may be necessary and that approval for such non-conforming locations may be given by the Secretary of the Commission upon proper application therefor.

5. That the existing Commission Order No. R-46 in Case No. 237, relating to the former West Kutz-Pictured Cliffs Pool, and the former South Kutz-Pictured Cliffs Fool, now consolidated into the West Kutz-Pictured Cliffs Pool, should be and remain in full effect and undisturbed hereby. Page 3. Case No. 377 - Obser No. N-172

M.C.Y. SCOOCRAFIESS

# IT IS THEREFORD ORDERED:

1. That the following described lands is San Juan County, New Mexico, embrace a corner source of supply of gas in the Pietured Oliffs formation, and include the approximate northwesterly one-half of the Mest Kutz-Fictured Oliffs Fool as presently defined by Commission Order B-42 in Case No. 244, Oceanission Order N-156 in Case No. 363, and Commission Order R-156-A in Case No. 363, to-wit:

> Township 28 North, Range 11 West, MFM All of Partial Section 7, All of Sections 1.8 and 19.

> Township 28 North, Fange 12 West, MMFM Partial Sections 7 through 12, and Sections 13 through 34, incl.

> Township 28 North, Range 13 West, NMPM Partial Sections 10, 11 and 12, Sections 13, 14 and 15, Sections 23 through 26, incl., and Sections 35 and 36.

> Township 29 North, Range 12 Mest, HMPM SM/2 Section 16, Sections 17 through 21, W/2 and SE/4 of Section 22, W/2 and SE/4 of Section 25, and Sections 26 through 36, incl.

Township 29 North, Range 13 West, NMPM Sections 9 through 16, Sections 21 through 28, and Sections 33 through 36, incl.

2. That the above lands be developed on a 320-acre spacing pattern for a period of one year from the date of this order; That at the regular Commission hearing for the month of June, 1953, the operators shall show cause why the above described area should not be developed on a 160-acre pattern.

3. That all wells drilled therein to the Fictured Sliffe formation be located in the southwest and northeast quarters of each governmental section, conforming to Rule 104, of the Commission's Rules and Regulations with only such exceptions as are necessary for existing non-conforming wells, future wells on good cause shown, and such off-set wells as may be necessary, and that approval for such non-conforming locations may be given by the Secretary of the Commission upon proper application therefor.

- ye in an

Page 4. Case No. 377 - Order No. 8-173

4. That the existing Goundsaion Order No. 8-45 in Case No. 237 relating to the former West Kutz-Pietured Cliffs Pool, and the former South Kutz-Pictured Cliffs Pool, now consolidated into the Mest Kutz-Pictured Cliffs Pool, be and remain in full affect and undisturbed hereby.

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

STATE OF NEWNEXICO OIL CONSERVATION COMMISSION 01 GUY SHEPAR Mem R. SPIRR etary

## BEFORE THE OIL CONSERVATION COMMISSION

#### OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF BENSON & MONTIN FOR AN ORDER ESTABLISH-ING UNIFORM SPACING OF WELLS FOR THE PICTURED CLIFFS FORMATION OF THE GALLEGOS CANYON UNIT AREA AND CERTAIN LANDS ADJACENT THERETO, SAN JUAN COUNTY, NEW MEXICO

CASE NO. 27/

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# APFLICATION

Comes now Benson & Montin and states:

That this application affects lands in San Juan County, New Mexico, embraced within the Gallegos Canyon Unit and certain lands adjacent thereto on the Northwest, described as follows:

I.

Township 28 North, Range 12 West, N.M.P.M.

Partial Sections 7 through 12, and Sections 13 through 34.

Township 28 North, Range 13 West, N.M.P.M.

Partial Sections 10, 11 and 12, and Sections 13, 14 and 15.

Township 29 North, Range 12 West, N.M.P.M.

 $SW_{\overline{4}}^{1}$  of Section 16, Sections 17 through 21,  $W_{\overline{2}}^{1}$  and  $SE_{\overline{4}}^{1}$  of Section 22,  $W_{\overline{2}}^{1}$  and  $SE_{\overline{4}}^{1}$  of Section 25, and Sections 26 through 36.

Township 29 North, Range 13 West, N.M.P.M.

Sections 9 through 16, Sections 21 through 28, and Sections 33 through 36.

and that the above lands embrace a common source of supply of natural gas in the Pictured Cliffs formation.

II.

That applicant has drilled and completed six gas wells producing from the Pictured Cliffs formation of the lands in the

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Gallegos Canyon Unit Area, the description and location of said wells being as follows:

- A. G. C. U. #1, located in the SW4 of Section 19, Township 29 North, Range 12 West.
- B. G. C. U. #3, located in the SW<sup>1</sup>/<sub>4</sub>, Section 24, Township
  28 North, Range 12 West.
- C. G. C. U. #4, located in the NE<sup>1</sup>/<sub>4</sub> of Section 34, Township 28 North, Range 12 West.
- D. G. C. U. #5, located in the NE<sup>2</sup>, Section 13, Township 28 North, Range 13 West.
- E. G. C. U. #6, located in the SW1, Section 22, Township 28 North, Range 12 West.
- F. G. C. U. #7, located in the NE<sub>4</sub>, Section 30, Township 28 North, Range 12 West.

III.

That the Bay Petroleum Corporation has drilled and completed one gas well producing from the said formation, the demoniption and location of said well being as follows:

A. Federal No. 1, located in the SE $\frac{1}{4}$  of Section 27,

Township 29 North, Range 13 West.

IV.

That Locke-Taylor have laid surface pipe for the drilling of a well, their Graham No. 1, in the  $SE_{4}^{\perp}$  of Section 22, Township 29 North, Range 13 West.

V.

That one well to the Pictured Cliffs formation of the above lands will efficiently, effectively and economically drain an area of 320 acres, and that drilling to a greater density is

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unnecessary and would not be in the best interests of conservation and would result in wasteful utilization of critical materials to the detriment of the oil and gas industry.

VI.

That to insure the proper and uniform spacing of all wells drilled to the common source of supply under the above lands and to protect the correlative rights of all of the parties interested therein, all wells drilled into said common source of supply within the above lands should be located in the center of the Southwest and Northeast quarters of each Governmental <del>quarter</del> section, with only such exceptions as are necessary for existing non-conforming wells, future wells on good cause being shown, and such offset wells as may be necessary.

WHEREFORE, applicant respectfully requests that the Commission set this application for hearing and that due and proper notice be given as required by law, and that at the conclusion of said hearing the Commission then enter its order establishing uniform 320-acre spacing of wells for the Pictured Cliffs formation of the above described lands in accordance with the allegations and proposals hereinabove set forth, and that applicant have such further relief to which it may be entitled.

DATED this 23" day of May, 1952.

SETH AND MONTGOMERY

Attorneys for Benson & Montin Santa Fe, New Mexico

## BUFCRE THE OIL CONSTRUCTION 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. 377 ORDER NO. R-172

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THE APPLICATION OF BENSON & MONTIN FOR AN ORDER ESTABLISHING UNIFORM SPACING OF WELLS FOR THE PICTURED CLIFFS FORMATION OF THE GALLEGOS CANYON UNIT AREA AND CERTAIN LANDS ADJACENT THERETO, SAN JUAN COUNTY, NEW MEXICO.

## ORDER OF THE COMMISSION

## BY THE COMMISSION:

Sec. 1

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This cause came on regularly for hearing at 9 o'clock a.m. June 19, 1952, at Santa Fe, New <sup>M</sup>exico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this day of July, 1952, the Commission, having considered the matter fully,

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 the following described lands in San Juan County, New Mexico, Membrace a common source of supply of gas in the Pictured Cliffs formation, and include the approximate northwesterly one-half of the West Kutz-Pictured Cliffs Pool as presently defined by Commission Order R-42 in Case No. 244, Commission Order R-156 in Case No. 363, and Commission Order R-156-A in Case No. 363, to-wit: Township 28 North Range 11 West NMFM

Township 28 North, Range 12 West, NMPM Partial Sections 7 through 12, and Sections 13 through 34, med.

Township 28 North, Range 13 West, NMPM Partial sections 10, 11 and 12, and Sections 13, 14 and 15, 26 Thru 26, mell and SociTions 35 and 36

Township 29 North, Range 12 West, NMPM SW/4 Section 16, Sections 17 through 21, W/2 and SE/4 of Section 22, W/2 and SE/4 of Section 25, and Sections 26 and 36

Township 29 North, Range 13 West, NMFM Sections 9 through 16, Sections 21 through 28, and Sections 33 **The**-36, Jack

Memo From WILLIAM B. MACEY Chief Engineer  $\mathcal{T}_{o}$ # 2: from The DATE of this Order; That at the regular commission heaving for the month of June J1953 the openatous shall share The app Cause why the development ofra - 320 acre program should be rattern ontinued The above described anea should not be developed on a 160 acre pattern.

3. That apparently one gas well to the Pictured Cliffs formation of the above lands will efficiently, effectively and economically drain an area of 320 acres, and that testimony indicates that drilling wells in a pattern of greater density is unnecessary, might not be the best interests of conservation, and night result in wasteful use of critical materials.

4. That in an effort to determine whether such measures will insure orderly development, protect correlative rights, and prevent possible waste, the above lands should be developed on a 320-acre spacing pattern for a period of one year from the date of this order, and at the end of one year applicant shall present testimony to show why 320-acre spacing should be retained.

5. That to insure the proper and uniform spacing of all wells drilled to the common source of supply under the above lands and to protect the correlative rights of all the parties interested therein, all wells drilled therein should be located in the southwest and northeast quarters of each governmental section, conforming with "ule 104 of the Commission's Rules and Regulations, with only such exceptions as are necessary for existing nonconforming wells, future wells on good cause shown, and such off-set wells as may be necessary; and that approval for such nonconforming locations may be given by the Secretary of the Commission upon proper application therefor.

6. That the existing Commission Order No. R-46 in Case No. 237, relating to the former West-Kutz-Pictured Cliffs Pool, and the former South Kutz-Pictured Cliffs Pool, now consolidated into the West Kutz\*Pictured Cliffs Pool, should be and remain in full effect and undisturbed hereby.

### IT IS THEREFORE ORDERED:

1. That the following described lands in San Juan County, New <sup>4</sup>exico, embrace a common source of supply of gas in the Pictured Cliffs formation, and include the approximate northwesterly one-half of the West Kutz-Pictured Cliffs Pool as presently defined by Commission Order R-42 in Case No. ...44, Commission Order R-156 in Case No. 363, and Commission Order R-156-A in Case No. 363, to-wit:

# (Use description above)

2. That the above lands be developed on a 320-acre spacing pattern for a period of one-year from the date of this order. (See Finding No. 4).

3. That all wells drilled therein/be located in the southwest and, northeast quarters of each governmental section, conforming to Rule 104, with for the formation only such exceptions as are cacessary for existing non-conforming wells, future wells on good cause shown, and such off-set wells is may be necessary; and that approval for such non-conforming locations may be given by the Secretary of the Commission upon proper application therefor.

4. That the existing Commission Order No. R-46 in Case No. 237 relating to the former West Kutz-Pictured Cliffs Pool, and the former South Kutz-Pictured Cliffs Pool, now consolidated into the West Kutz-Pictured Cliffs Pool, be and remain in full effect and undisturbed hereby.

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

STATE OF NEW MEXICO OIL CONSERVATION COMMISSION

Edwin L. Mechem, Chairman

Guy Shepard, Member

R. R. Spurrier, Secretary

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To the First Hetbourd Benk of Foundation Survington, New Herdes

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We have you, issualth, All and the Lasses signed, consuled, and automitedged by the convert wedersigned Lessers and by Llayd D. Looks and Llayd D. Taylor, the Looks-Inglor Drilling Caspage, Leases, which lesses are to be hald in Essens by you and handles as hereisedfor instructed.

TON ADE LISTSDOTED AS FOLLOWS3

I.

1. That the undersigned Lloyd De Looks and Lloyd De Taylor, copariments, don Looks-Taylor Drilling Gespany, hereby agree to commons the estand drilling of a wall on some part of the Looks covered by one or more of the heredunbore mentioned oil and gas leases which are headed you herewith, on or before sixty (60) days from and after the date of the deposit of said leases herewith. Said wall to be commoned with drilling zig, tools, addinery, equipassit and casing sufficient and adequate in gravy respect to drill this and to test the Pictured OLIFF function for the production of oil or gas. The mild Leasess shall diligently and continuously conduct drilling operations on and well until the same shall have been drilled into the Pictured Cliff formation, or a formation which produces oil or gas in commercial quantities at a leaser depth (it being estimated by the parties hereto that sold formation carries gas only and does not produce oil.). In the event the Holared Cliff formation, we a formation which produces oil or gas in commercial quantities at a leaser depth (it being estimated by the parties hereto that sold formation carries gas only and does not produce oil.). In the event the Holared Cliff formation, we a formation which produces oil or gas in commercial quantities, and mail formation tested for the particulation of is drilled into the Pickared Cliff formation tested for the particules of and is drilled into the Pickared Cliff formation tested for the particulation of gas, and such will does produce oil or gas in conversial quantities, in much formation, them and in much event you are to deliver the lease or leases covering the quarter section (160 acros more or leas), in which sold wall is drilled, to the partice, be the parties of the sold will be been accurately be and Leasers.

2. In the event sold first wall does not produce oil or gas in connerval quantities in the Pictured Cliff formation, or a formation at a lesser depth, then and in such event you shall continue to hold sold lease in escrew to be delivered as hereinefter wore specifically provided.

3. In the event the sold Lessees neglect, fail, or refuse to commonse sold first well within the aforesaid sixty-day period, or neglect, fail, or refuse to drill sold well to the Pictured (liff formation, or a formation which produces oil or gas in commercial quantities at a lesser depth, and test the same for production, as hereinabove provided, then and in such event you shall re-deliver all of the lesses of the several respective Lessers, handed you herewith, where mands are signed hereto below, to each respective Lesser sho accounted any particular lesse, or to the egent or successor in interact of each respective Lessor, who is in writing designated by such Lesser.

# 11.

1. That on or before thirty (30) days from and after said first well has been drilled, tested, and placed in condition ready for delivery of production to the pipe line, if commercial production be obtained, or within thirty (30) days after it is determined that such first well is a dry hole, said Lessees shall commence the drilling of a second well on another location on land covered by one of the said lesses, and shall continuously and diligently drill the same until such well shall have been drilled into the Pictured Uliff formation, or a formation which produces oil or gas at a lesse? dayth, and such formation tested for the production of oil and gas. If said second well produces oil or gas in commercial quantities, the lesses to the lands embraced in the quarter section (160 serves more or less) on which said well is drilled shall be delivered to said Lessees when said second well is placed in condition to connect to the pipe line for the sale of gas.

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2. In the event sold escent will does not produce oil or gas in constant quertition, in the Richard CLAR formation, or connecded production in a formation of Lemar depth, then are in such event you shall continue to haid and leave in Exercise to be delivered on horsinetter nors gandifically provided.

3. In the oraci the cald Lesses neglect, fail, or refuse to convence sold meand will within the Afarenald thirty (30) day period, or period, fail, or refuse to draid sold will to the Pictured Chirt Formution and tost the same for production, no horoinchore provided, then and in much event you shall re-deliver all of the Lenses of the several respective because, having you herought, whose measure algoed heroto halos, to each respective because, having you herought, whose measure algoed heroto halos, to each respective because, hereich may particular lease, or to the agent or measurer in interest of each respective Leases, who is in writing designated by much Leason.

#### III.

1. Said Lessons agree to drill a board of fifteen (15) wills on lunds exbraved in the above mentioned lesses, and in the several sections harehalter described, in the numbers herein neued for each perticular isotica, subject to the secretions hereinafter specifically contained relative to surreader or abundances of the self lesses, towith

Township 29 Horth, Eingu 13 Reath, No No No.

Section 22 - four (4) walls to be drilled Soutien 21 - four (4) walls to be drilled Section 14 - four (4) wells to be drilled Section 15 - two (2) walls to be drilled Section 23 - one (1) wall to be drilled.

2. Sold Losseen shall have the right to abardee the atoresaid delling progress in the origin none of the first three wills drilled by the Lassens are producers of oil or gas in concercial quantities and of concercial quality. Such abandonesat to be in writing, signed by said Leesses or alther of thes.

3. In the event said Lessees or either of their neglect, Sail, or refuse to drill the sold 15 wells in consecutive order within the time hereinafter specified, then such neglect, failure, or refusel shall be dessed ions facto to be an abandoment of the said drilling program, and upon demand or request of the sold Lessors, or either of them, in writing, made and signed by such Lessor or Lessors, and copy thereof deliverad to said Lesses, or either of them, and original or copy thereof delivered to the said bank forthwish, as Secret Agent of the parties hereto, the oxid bank forthwith shall deliver to the respective Lessors the Lesser or lesses of said Lessers deposited in cases herewith.

4. It is specifically understood and agreed by and between sold lessens and said Lessens, and the sold bank hereby is so instructed, that in event standarment, either on the part of sold lessens at abundanment b declaration of Lessens, or either of ther, as provided in purgraphs 2 or 3 of this section, the sold bank shall re-deliver to the respective Lessens the lesse executed by respective Lessens; provided, however, that in the event a well producing all or gas in conservable quantities shall have been drilled by sold Lessens, the lesse ar lesses under which such conservable well or wells abalt have been defined abalt be delivered to and Lessens; or either of them. It is instituted by sold Lessens, the lesse ar lesses parties have been drilled by sold lessens of and agreed by and between parties have been defined and agreed by and between parties have to or nore 'rests of land entraced in the or nore of and respective lesses shall have been unitized or pooled into a 160 ways drilling block or unit, then all of the lesses entraced in such drilling well or all the lands entraced there is between the land on with such well is drilled by the Lessen is covered by one of the lesses dependent to have a producing well on all the lands entraced therein (the lesses dependent), and the lasses of lesses covered by one of the lesses dependent to have a producing well on all the lands entraced there is all of the lesses bareed is drilled by the lesses from the owner of said land to the Lessen harden), and the lasses or lesses covering lends entraced in such unit or drilling block shall be delivered to and lessens, or either of them.

5. Sold Lornows opron that they will associatively drill the 15 wells hereinsboye mentioned to the Pictured Cliff formation, or other formation which produces oil or gas in connected, quantities at a lesser depth, and test the same for production in said formation; that each of said wells shall be successively drilled, the drilling on each of said wells shall be commenced on or before thirty (30) days from and after

#### Auge threads

The last preventing will shall have been dellied, tested, and planed in condition to deliver gas in the pipe lies for sule. Buch approaches while to be conversed and deliver gas in the pipe lies for sule. Buch approaches with sciencels tools and exclude with good and adequate dellike rig or equipsent, with sciencels tools and easing, and operations thereon diligentity and continuously proceeded with addit such will shall have been dellied into the Pistured CLAS formation, or a formation which produces off or gas in operated all quantities, at a leaser depth, and said formation tested for production of oil or gas.

## 13.

It is further agreed by the sold Lessons and sold Lessons that in the event may of the sold 15 walls provided to be dritted to the Plotured Cliff formation are non-conserved, the leaves to the lands on which much non-conservated, wills shall have been drilled shall be hald in escret by sold back for the period of twalve (12) marks, from and after the completion of the last of sold 15 walls. Within the period of traine (12) months and lossons shall have the right and option to commence one or none walls to be drilled to the Mast Varde formation. Such wall or walls to the Masa Varde formation shall be continuously and diligently drilled by sold Lesness until sold Mass Varde formation shall have been drilled into and fully tested for the production of slater odd or gas. If sold Lessons ungloot, fail, or reduce to commence the drilling of such well to the Mess Varde formation and fully tested for the production of slater odd or gas. If sold Lessons ungloot, fail, or reduce to commence the drilling of such well to the Mess Varde formation within sold period of 12 months, then and in mode event the sold back shall re-deliver to the sold respective Lessors the leaves oovering the lands of such respective Lessors. In the event commercial production of either off or gas is obtained in a wall drilled to the Mess Verde formation then all of the leaves the maining in the have of sold bank chall be delivered to acid Lessons, or either of them.

T.

It is understood and agrood by and between sold Lessors and sold Lessons, that the value hareinabove regained to be drilled shall be drilled in such drilling units, or pooling of agreege as may be required to samply with the regulations pressing ted by the oil conservation coordisator of the State of New Maxico, and that there it becomes necessary to group the lends in two or more leases into one drilling unit in order to comply with sold regulations, then all of the leases into one drilling unit in order to samply with sold regulations, then all of the leases even to be delivered to said Leases, or either of these to be validated and such leases are to be delivered to saveral leases, or either of these in each respective until shall have been validated by drilling on the leads in each respective until shall have been validated by drilling on the leads in each respective until shall have been validated by drilling on the leads of y such of such respective leases.

## VI.,

It is natually understood and agreed by and between sold Leasons and said Leasons, that time is of the essence of these instructions and of the agreement between said Lessons and said Leasons, and of such and every part and paragraph thereof, and that this agreement shall extend to and be blading upon the beirs, excentors, administrators and assigns of all of the partices hereto.

#### VII.

It is further understood and agreed by and betwaen said Lessors and anid Lessees, and said energy bank hereby is so instructed, that in the event there is any disagreement or dispute between said Lessors, or either of these and said Lessees, or either of these, as to whether any term or condition of these instructions and the agreement embraced herein has been complied with by said Lessess relative to the date of normonoment of drilling operations, the prosecution thereof, the tools and equipment used by said Lessees, the said energy bank or either or any of said Lessers or said Lessees may call upon the Odl and Gas Inspector appointed by the Odl Conservation Consistion of the State of New Mentico, for the territory or area embracing said San Juan County, to deliver to said eccnow bank in writing, signed by such Odl, and Gas Inspector, the certificate of such inspector as to the compliance or non-compliance of anid Lessees with the particular question about which such disagreement or dispute arises, and such certificate of oil and Gas inspector shall be final and compliance of such Lessers and ball of the about such the zene shall be binding upon all of the Lessers and Lessers, who are parties here'to.

#### Page Leake

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V.V.H.C.F. HICROGRAPHICS

## VIII. .

It is sposifically writerstood by and behaves and become test sold become, and cach and all of blow, and wild become back buryly is as instructed, that in the event furfailure is declared by sold become, or either as any of them, for the noglect or influes of cald because to couply with the requirements becaus, the because or because doclaring each forfaiture shall source a notices in uniting, signed by the person of such notice upon and because or althous of blow, by registered with a copy of such notices of which because or althous of blow, by registered wall, period with a copy of such notice upon and because or althous of blow, by registered wall, period period, and addressed to sold because or althous of blow, by registered wall, period period, and addressed to sold because or because of beautypin, her facility and by the source of addressed to sold because or because of beautypin, her facility and beautypin with beautypin and beautypin and beautyping and to make a start of the sole which and beautyping and the second of blows and beautyping and the weater of factories about and period of there (30) days, the sole beauty back and it much actes is not resourd within and period of there (30) days, the sole beauty back shall modeling the beauty back of there is the back and beautyping and if and a period within and period of there (30) days, the sole beauty back shall modeling the beauty back and here the back areas in accompany back shall modeling the beauty to the neglest or failures upon which and beautyping at a period where the back areas there are also beauty back and beautyping the back and beautyping and the main and and back and there are the back areas and beautyping and the sole and are also beautyping to the neglest or failing the the back and beautyping of the back areas and beautyping to the neglest or failing the sole back areas and beautyping at the sole areas.

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These escreen instructions may be delivered to the bank on a particular date, and any leans or lesses delivered to the sold bank by the issues of the leads unknown in the hereinabore menticeed sections of land shall be governed by these instructions regardless of the date of delivery of the lease to the bank. The algesture of the leasers delivering or emains to be delivered any lease to sold eserve back, and the signing of these instructions to said back by such lesser or Leasers, enterationally shall make such lessers parties to the agreement regardless of date of delivery of the leases.

#### X,

It is farther understood and agreed by and between sold hossers and each and all of these, and said heavess, that all addigations invate required of said heavess shall be compended while, but only so long as because are prevented from oxedlying with the requirements hereof, in while or in parts, by stathes, heavests, note of God, unavoidable accidentie, uncontrollable delays in transportation, fundility to obtain necessary extensions in the open market by reason of state or foderal have or regulations, any state or federal law, regulations or other matter (expressly axialing financial matters) beyond the reasonable control of said hereory, that performance shall be reasonable and provided, however, that performance shall be reasonable as fically experienced, or note provided, however, that performance shall be reasonable as soon as is personable after such cause or press of interruption or interruptions about her secondary possible after such cause or press of interruption or interruptions about her shour will to adjust any labor dispute or to question the validity of or to refrain from or judicially test the validity of any state or federal law or regulation.

#### ЖI.

It is understood and agreed by and between the parties, hereto, and said Escrew bank is so instructed, that is the event loss than the owners of three-fourths (3/4ths) of all of the lands schreed in the above pentioned five soutions of land, neglect, fail, or refuse to execute leases to said Lassess covering said proportions to smant of land in stab soution, then said Lessess shall have the right and option to refuse to common the drilling obligations beremdes; which refusal shall be delivered to said Escrew beak in writing, signed by said Lesses, or either of them, and thereapon said bank forthwith any re-deliver all of the leases deposited herein to the personales.

IN WITTERS MERROF, the ustersigned parties have beremits set their hands on the dates written opposite their respective names.

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#### LOSKE-TAXLOR DRILLING COMPANY



# UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY

P. O. Smr 6721 Roswell, New Mexico

#### September 30, 1953

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Mr. A. R. Greer Benson & Montin 3153 W. Main St. Farmington, New Mexico

Dear Mr. Greer:

We refer to your informal request of September 21 for an expression of our position regarding Benson & Montin's showing before the Oil Conservation Consission on September 17, 1953, (Case 377 -Order R-172), that a permanent order for 320-acre spacing should be issued for the Pictured Cliffs formation in the Callegos Canyon Unit Area and certain adjoining lands.

The area for which Benson & Hontin seeks a permanent order for 320-acre spacing in the Pictured Cliffs formation covers 50,362 acres, more or less, of which 41,722 acres are within the Gallegos Canyon Unit Area. Only 1,275 acres in the unit area are not subject to the terms of the agreement of which 857 acres are in the nonparticipating area. The remainder of the acreage comprises 3,640 acres outside the unit area and adjoining the northwest boundary thereof. The spacing requested is a departure from the 160-acre spacing new effective for the Pictured Cliffs formation elsewhere in the San Juan field.

The Gallegos Canyon Unit Agreement has been approved by the Geological Survey, the Bureau of Indian Affairs, the Oil Conservation Commission, and the Commissioner of Public Lands. Section 9 of said agreement provides that no wells shall be drilled on lands subject to the agreement emcept under a plan of development approved by the Commission, the State Commissioner, and the Supervisor. Development to date on lands committed to the agreement has been carried on by the unit operator under plans of development so approved which include well spacing.

As the unit agreement provides a means of establishing well spacing within the control of the Commission, the Commissioner, and the Supervisor, it appears that the requested order of the Commission establishing 320-acre well spacing is unnecessary for lands subject to the agreement. The net effect of the requested order, therefore, would be to control (1) well spacing on 417 acres of non-committed land within the participating area of the unit, 160 acres of which is unleased Federal land which will be committed when leased, and (2) well spacing on 357 acres of non-committed land in the nonparticipating area of the unit and on 3,640 acres adjoining the northwest boundary of the unit area, most of which land appears to be of questionable value for commercial production in the Fictured Cliffs formation on the basis of present development.

If the Commission should find that the requested order is necessary, it is our opinion that such order should provide that lands subject to the Gallegos Canyon Unit Agreement are excepted from any provisions of the order that are contrary to the provisions of the unit agreement.

Very truly yours,

JOHN A. ANDERSON Regional OIL and Cas Supervisor

Copy to: 011 Conservation Commission Santa Fe NAME , States Stational Mdg. Malaa, Malas

#### arsh 3.5, 1955

- Justin - John Building 1501 Potrolow Building Bilahoma Sity, Mlahoma

attention: fr. Jook lender, dr.

#### Cor Proposed expansion Calleges Canyon Latt and Fictured Chiffs Participating Area

Contlement

is have received your latter of Tebroary 20th concerning the proposed expansion of the above described unit by the inclusion of Sections 35 and 36-238-128, 5% Section 31-288-114, Section 4 and NER Section 5-278-128. Se also received the notice of the proposed expansion dated Earch 5, 1953.

the have also received copy of a lotter from Mr. Themas M Scott, Jr., president of Brookhaven Oil Company, addressed to your company, in which he expressed his disapproval of the expansion, and gave his reasons for the disapproval. No wish to take this opportunity to say that we also oppose the separsion, and that Mr. Scott's views on the matter very clearly express the reasons for our opposition. We do not fast that this expansion will protect drainage of the unit in the scot occoncateal sensor, and we do not feel we should be required to yay our projects to take into the unit.

Sourd very truly,

distab.

co: Statolind (11 % Gas Company Tulsa, Relations

> Mid-Continant Petroleum Corporation Attn: Fr. Albert Flores, Production Dept. Tulsa, Alahoma

The Jexas Company Thiss, Chishess

Broachavan Oil Surpany Attn: Mr. Tuos. 3. Scott, Mr., Presidant P. G. Sox 644, Albumarqua, Now Moxico

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#### March 13, 193.

Renson-Sontin 1501 Setroleum Aufläng Sklaboma Sty, Sklaboma Rer Botice of Proposed Expansion of the Callegos Cenyon Onit and the Mictured Cliffs Participating Area, San Juan County, New Fexico

### Atts Fr. Jeck London, Sr.

car Sirs:

Referring to the shore notice dated Mard 5, 1953, and map of unit development attached thereto, our firm wishes to oppose said expansion of the Gallegos Canyon Unit and I will bereinafter comment on the statements made in such notice.

As expressed by Senson-Montin, unit operator of the Callegos Canyon Unit, in their letter to the working interest owners, dated February 20, 1953, they state that the proposed expansion is for the following reasons:

> "At the hearing of the New Pexico Oil Conservation Consistion Case No. 377 relative to 320-acre spacing in the Gallegos Camyon Area, it was pointed out that some means would have to be provided to protect the unitized land from drainage to the more densely drilled area to the south and east of the Unit, and we represented at this hearing that drainage from the unitized lands would be effectively provented by drilling the south row of sections within the Unit on the 160-acre specing."

(It sust be remembered that in the above case, Henora-Montin, as operators, originally proposed and obtained this 320 acre spacing within the Gallegos Canyon Unit area even though the balance of the West Kutz Pictured Cliffs Feel was without provation and drilled on 160 acre spacing.)

COMMANDS ON NUMERICED ANTICLES - NUTLICE OF PROPOSED EXPANSION

1. Penson-Kontin proposes to expand the Unit by bringing into the Unit certain properties belonging to Bonson-Kontin only. No one else's properties, such as those in Section 3 and the NW/4 of Section 5-27N-12%, are included as part of the expansion.

Fenson-Montin must be supported by 60% of the working interest of the Balleges Canyon Unit, net a more majority. We would like to point

Henson-Contin Merch 13, 1953 Fage 2.

> out that the interest of Lenson-Contin (approximately 31.13%) plus the interest of Stanolind Gil and has Contany (approximately 32.31%) would make the majority. Federa-Montin obtained their interest on a farmout from Stanolind Gil and Sas Company. The other large interests in the Unit are Texas Company (approximately 9.63%), BLO-Continent Fetroleus Corporation (approximately 16.77%) and Attor (i) - as Company (approximately 6.17%), with the result that three unit working interests out of a total of approximately sighteen can affect this expansion unless the authority of the United States Contanent, or of Indian Affeirs, or of the State of kew Fexico intervene and deny the proposal

 Penson-Montin's statement in Motica of Proposed Expansion of March 5, 1953, 1.0.

> "This expansion is proposed primarily as the most economical, quickest and most effective manner in which to protect the unit free drainage to the more demealy drilled area to the south and east of the unit."

- (a) Benner-Montin have failed to place on the enclosed map to their notice of proposal a dry hole drilled by them through the Pictured Cliffs sand in the NV/h of Section 31-208-110.
- (b) Benson-Montin propose to drill two wells in the 5/2 of Section 36-20N-12M (after they are included in the Unit.)
- (c) The potential of the wells in the S/2 of Section 31-26K-LDN and in the whole of Section 36-20K-L2N are of such low potential as to indicate no or little drainage from the Unit. Ferson-Sontin drilled a dry hole in the NW/R of the above mentioned Section 31. Within the Unit, the well drilled in the SM/R of Section 25 is of extremely low potential, namely 150 MMF. Mather than expand the Unit into this unfavorable area, we recommend the immediate drilling within the Unit, as now constituted, of a well in the SE/R of Section 26, and in the SE/R of Section 27, and in the SE/R of Section 33, and in the SE/R of Section 32. Should the Unit be expended, two wells, namely in the S/2 of Section 36, would have to be drilled, that is, on the present property now owned by Benson-Montin.

As to expanding the Unit insofar as it includes the NE/4 of Section 5-27N-128, this well on the map shows a rated potential of 600 MDF, which again would indicate no or little present drainage from the Unit. It would be much better for the unit operators that they drill the necessary well mentioned above in the SE/4 of Section 32 offsetting the NE/4; of Section 5. This proposed well has to be drilled in any case and it should have a greater potential than the well in the NE/4 of Section 5. Panaon-Nontin Saroh 13, 1953. Fage 3.

(c) Continued

To our stat, that proposals to unlerge the Unit are meither the most convaical, at least to the unit participants, nor the quickest nor the most effective manner in which to protect the Unit from drainage.

3. Lenson-Montin's request for 320 sore spacing in the allegoe Camyon Unit as against 160 ears spating outside the Unit and without provation of the wells on the 160 acro spacing, is untirely contrary to all principles of conservation, proper recovery, etc. by theuing Under R-172 (Case 377), the her Kexico Cil Vonservation Gerussion disregarded all the principles of engineering, conservation and equity for the lest Kutz Fictured Cliffs Pool. Benson-Montin, having requested and having obtained app. oval for the 320 zero specing, now recommends that the Unit purchase their property by excending the Unit in order to protect the Unit frea drainage. In other volvie, the protection from drainage is caused by the 320 core spacing that they requested and had approved. I understand lignson-dontin have offered their properties for sale, that is, their interest is the Unit and their interests outside the Unit. If the expansion of the Unit is approved, the participaths of the Unit sotually pay bonson-Nontin for the investment Penson-Nontin have in the properties and take a lesser share in the whole expended Unit. Except for Section 35, benson-Sontin's properties are of low potential.

4, Benson-Montin's statement in Notice of Proposed Expansion of March 5, 1953, 1.0.

> "The acreage to be included in the proposed expansion is exact by the unit operator and has b on drilled on 160 acre spacing pattern."

What Fenson-Montin advocated for the Unit, they feiled to advocate for their our proporties. Now, having found that the two wells in the S/2 of Section 31-26N-11M are of low potential and are offset by a dry hole; and the two wells to be drilled in Section 36-20N-12M will probably be of low potential and the present well in the NE/4 of Section 5-27N-12M is of low potential and the spacing being 160 acres, they wish to put them in the Unit and get some of their somey back. This is contrary to all the principles of equity, particularly since it will not effect the drainage problem to any material extent. Approximately, Senson-Montin having a 21% interest in the Unit, they will have refunded to them by the unit operators approximately 79% of their costs on these low potential wells.

It must be remembered that the Unit us a whole is only developed to a small degree and over a comparatively small area.

It should also be remembered that expanding the Unit to bring in low potential wells may start a very had practice along all the borders of the Unit. Banach-Moatin March 13, 1953. Pars h.

5. Lenson-Montin's statement in Matise of Proposed Appansion of March 5, 1953, 1.0.

"The proposed effective date of this expansion is February 1, 1953. The expansion will serve to conserve critical saterials ... etc."

I know of no abortage of orlitical materials at the present time nor for the immediate future. Hevertheless, even if such is the case, Benson-Montin drilled their other wells on 160 spacing when materials were much more critical and withheld their properties from the Unit.

6. Relative to suffering depletion of reserves, here benson-Montin soknowledges that the 320 acre spacing pattern in the Unit causes the Unit to suffer depletion of reserves. Not they say the acresse which they now propose putting in the Unit is suffering less than the acreage in the Unit. The obvious sense to this statement is that there are more wells of low potential per Unit area on Fenson-Montin's properties than there are within the Unit.

As egainst onlarging the Unit, it is proposed that

- (a) The unit area of production be not obsaid until more wells are drilled within the unit and until such time as the producing area has been better defined. There may be a number of adjustments along the borders.
- (b) Velle be drilled inacdiately within the Unit in the SE/4 of Section 32; WE/4 of Section 32; SE/4 of Section 33 and the NW/4 of Section 33; and the SE/4 of Section 26.
- (s) Unit to be then developed by drilling wells in the higher potential areas within the Unit.
- (d) Order R-172 of the New Mexico Oil Conservation Consission be cancelled or that proration outside of the Unit where wells are drilled on 160 acre spacing be effected.

Very truly yours,

BROOKHAVEN OIL COMPANY

Thas B Scott

Thos. B. Scott, Jr. President

TESIMS

00: The Supervisor United States Geological Survey Southwestern Megion Roswell, New Mexico Pendon-Sontin Marsh 13, 1953. Page 5.

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EXHIBIT IV - TWO MAPS SHOWING

(a) Contours on the top of the Pictured Cliffs subsurface sea-level basis.

- (b) Contours of initial potentials. Please note the lack of Unit protection on the south border where the potentials are the highest.
- (c) Contours present day shut-in pressures, showing high pressure areas to be within the Unit and the extreme southeast end of the Pool.
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| 1.15 · 3   | SE 35                  | 26-27-11                           |          |         |                     | •                        | 17,785 | 10,957 |
|  | HE SE                  | 12-27-12                           | 83,778   | 19,918  | 18,023              | 16,568                   | 14,455 | 10,554 |
| 8  | HE SH                  | 12-87-18                           | 17,583   | 15,751  | 10,889              | 10,495                   | 9,756  | 7,298  |
|  | ns sw<br>ns ns         | 1-17-12                            | 5,800    | 13 GAS  | 19,010              | 15,799                   | 18,753 | 9,044  |
|  | NY NY                  | 1-\$7-12                           | 4,444    |         | 24.929              | 20, 238                  | 9, 533 | 8,87   |
| 5  | NN NN                  | 11-87-12                           |          |         | 13,058              | 17,671                   | 11.987 | 10.870 |
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| index 1  | NE SW                  | 7-97-11                            | 14.432   | 14,163  | 14.452              | 13,134                   | 11.303 | 9,413  |
|  | NE SW                  | 18-37-11                           | 7,787    | - 7,643 | 7,464               | 6, 135                   | 5,461  | 3, 366 |
| San Anton San San San San San San San San San Sa | NE SE                  | 7-27-11                            | 15,349   | 15,455  | 14,613              | 13,549                   | 12,653 | 9,339  |
|  | NE NE                  | 18-27-11                           | 1,497    | 1,756   | 1,671               | 1,014                    | 1,006  | 985    |
| 421/3 🗰 C G                                      | ne se<br>nv nv         | 6- <b>37-11</b><br>7- <b>37-11</b> |          | 893     | 1,018               | 1,446                    | 2, 497 | 1,616  |
| 1. 4.3c/2-0                                      | NU PU                  | 6-87-11                            |          |         |                     |                          |        |        |
| 440/3  | NY NY                  | 6-87-11                            | <i>x</i> |         |                     |                          |        |        |
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16,778	15,137	10,265	15,035	12,780	11,538	87, 379	14,563
15,025	17,698	16,452	16,030	18,508	8,705	88,406	14,401
1,580	1,738	1,715	1,568	1,454	1,847	9,303	1,550
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7,910	7,535	6,398	3,193	1,666	6,235	33,988	5,488
4,593	3,377	3,839	3,795	3,209	8,976	83, 288	3,714
9,276	8,788	2,539	8,615	2, 205	1,942	15,293	8,548
8,849	7,394	6,737	7,591	6,083	5,753	41,727	6, 954
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4.545	8,599	1,902	81.9	1,105	4, 278	48,671	6,083
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8,181	6,541	7,851	3,907	6, 592	3,832	35,904	6,159
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8, 258	5,873	3,879	758		3,185	99,159	8,363
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998	1,158	1,154 1,036	1,025	1,621	1,113	13,713	1,826
1,156	6,165	7,825	256	5,585	6,348	14,840	6,430
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FULL RATE SERIAL TELEGRAM SERIAL DAY NIGHT LETTER LETTER			W. P. MARSHALL, PRESIDENT		FULL RATE	DEFERRED NIGHT LETTER
NO. WOSCL. OF SVC.	PD. OR COLL.	Cash Ko.	CHARGE TO THE ACCOUNT OF		Тіме	FILED
			Oil Commission	• .8		

Send the following message, subject to the terms on back hereof, which are hereby agreed to

Santa Fe, N. M. July 25, 1952

Mr. Al Greer Benson & Montin Farmington, New Mexico

Order R-172 in Case 377 signed effective July 24.

Oil Conservation Commission

#### ALL MESSAGES TAKEN BY THIS COMPANY ARE SUBJECT TO THE FOLLOWING TERMS:

To guard against mistakes or delays, the scolor of a message should order it repeated, that is, telegraphed back to the originating office for contections. For this, one-half the unrepeated message rate is charged in addition. For this, one-half the related of its face, that is an unrepeated message and paid for as shown in consistential warred it is ascent tetwern the related of the message and paid for as shown in consistential warred it is ascent tetwern the related of the related as the domain warred it is ascent tetwern the related of the message and paid for as shown in consistential warred it is ascent tetwern the related of the related as the domain warred it is ascent tetwern the related of the message and paid for as shown in consistential warred in the related of t

). The Company shall not be liable for relatates or delays in the transmission or drivery, or for non-delivery, of any ine-sage relatively for transmission of the unrepeated-message rate beyond the sum of five bundled delays for mittakes or delays in the transmission or drivery, or for non-delivery, of any ine-sage relatively of any ine-sage relatively of the thousand delivery will be repeated-message rate beyond the sum of five thousand delivery unless specially valued; nor in any case for delays arising from unavoidable interruption in the protocol delivery of its lines.

2. In any event the Company shall not be lightle for damage for initiality is dely so in the section of delivery, or for the spatiality of any message whether or so the be neglicence of its services or otherwise, beyond the actual loss, not exceeding to any event the sum of fix thousand dollars, at which around the sonie of some neglicity that the the message is valued, unless a greater value is start if a writing by the source barred or the time the actual dollars, at which around the sonie of some neglicity and any event the time the arreage is tradewised, and an additional which replated one-scient rescars that agreed to be paid, and an additional concentration of one precent of the mean by which such value to solid every and dollars.

3. The Company is hereby made the agent of the sender, without liability, to forward this message over the lines of any other company when accountry to reach its destination. 4. Except as vitue wise indicated in connection with the lists, or the high ratifs of the Company, the ansatz and for the transmission of a none the televran or an incoming cable or radio reassage over its delivery within the following limits in either or toward 5,000 or mate introduces the Company, the ansatz and for the transmission of the following limits in either or toward of 5,000 or mate introduces the Company, the ansatz and the company, within the limits of any open main or the Company, the Company, in either or toward of a value of the Company. In either or toward of a value of the Company, the limit is the limit of the Company, the destination of the Company, the limit of the Company, within the under of any open main or the company, within one of the Company, the sector of a material company, within the company, the limit of the Company, the company, within the anometer of the Company, within one of the Company, the sector of a material company is bounded, within one-half mile of the theoremany, within one of the Company is located, within one-half mile of the theoremany, within one of the Company is located, within one-half mile of the televraph offer, is than 3000 labeling in the accure of the Company is located, within one-half mile of the theoremany. Record the induce of the Company does not underske to to ack defivery but indeave to arrange for different if it is but collected from the addressee. There will be no additional charge for different into a difference with the addressee. There will be no additional charge for difference within the addressee. There will be no additional charge for difference within the add

5. No respondibility pitches to this Company concerning message well the same are accepted at one of its transmitting offices; and if a message is such office by one of the Company's messages, he acts for fast purpose as the agent of the second.

6. The Company will not be liable for damons or statutory consults when the chine is not presented in writing to the Company. Go within shity dava site the message lettled with the Company for transmission in the case of a message between points within the United States leveent in the case of an intrastate message in Tevas, and the the the the linked states leveent in the case of an intrastate message in Tevas, and the the the state of the tevas of a linked within the United States leveent in the case of an intrastate message in Tevas, and (c) within 185 days after the message in the the text of a message between points within the United States and a stippat set of the tevas of a link states on the company for transmission in the case of a message between points within the United States and a stippat set of the tease of a link states on the company for transmission in the case of a message between points within the United States and a stippat set of the company for transmission in the case of a link states on the tease of an intrastate message in Tevas, and (c) within 180 days after the message is filed with the United States and a state transmission in the case of a message between a robust in the United States and a forder no coverset point of the than the pointed states the tease of an intrastate message in Tevas, and (c) within 181 days after the message is filed with the Company for transmission in the case of a message between a robust in the United States and a la forder no coverset point of the than the topoint above in this paragraph; provided, however, that this condition shall not apply to claims for demages or overcharges within the purview of Section 410 of the Communications Act of 1931.

7. It is agreed that in any action by the Company to recover the tolls for any message or messages the prompt and correct transmission such delivery thereof shull be presumed, subject to rebutial by competent evidence.

8. Special terms governing the transmission of messages according to their classes, as enumerated below, shall apply to messages in each of such respective classes in addition to all the forecopy terms.

9. No employee of the Company is authorized to vary the foregoing.

#### CLASSES OF SERVICE

#### DOMESTIC SERVICES

#### FULL RATE TELEGRAM

A full rate expedited service.

DAY LETTER (DL)

A deferred service at lower than the full rate,

#### SERIAL (SER)

1-19

Messages sent in sections during the same day.

#### NIGHT LETTER (NL)

Accepted up to 2 A. M, for delivery not earlier than the following morning at rates substantially lower than the full rate telegram or day letter rates.

#### INTERNATIONAL SERVICES

#### FULL RATE (FR)

The standard fast service at full rates. May be written in any language that can be expressed in Roman letters, or in cipher.

#### CODE (CDE)

A fast message service consisting of code words not exceeding 5 letters each. Minimum charge for 5 words applies.

#### DEFERRED (LC)

Plain language messages, subordinated to full rate and cole messages. Minimum charge for 5 words applies.

#### NIGHT LETTER (NLT)

Overnight plain language messages. Minimum charge for 25 words applies.

IN REPLY REFER TO:



# UNITED STATES DEPARTMENT OF THE INTERIOR Care + 19

GEOLOGICAL SURVEY

P. O. Pox 997 Roswell, New Vexico

July 2, 1952

rf / Jan Cas Mr. R.R. Spurrier, Director New Mexico 011 Conservation Commission Santa Fe. New Mexico

Dear Mr. Spurrier:

Please refer to Case 377 relating to the application of Benson and Montin for an order establishing uniform 320-acre spacing of gas wells drilled to the Pictured Cliffs formation in the Gallegos Canyon unit area and adjacent lands in Ts. 28 and 29 N., Rs. 12 and 13 W., N.M.P.M., San Juan County, New Mexico.

In regard to the spacing of gas wells in the area covered by the application, this office prefers the wider spacing in order that the limits of production may be defined more quickly particularly within the unit area so that the interests committed thereto may participate in the benefits accruing therefrom at the earliest possible date. Consequently, this office offers no objection to the order requested by the applicant, at least until such time as the area is more fully developed. However, in order to avoid any conflicts that may arise between the order and the provisions of the Gallegos Canyon unit agreement, it is suggested that if such an order is issued it be made subject to the provisions of the unit agreement insofar as it concerns the lands committed thereto.

Mr. A. R. Greer, Jr. requested that this office inform you of its position in the matter.

Very truly yours,

R. E. CANFAELD

Acting Regional Cil and Cas Supervisor

#### ESCROW INSTRUCTIONS.

Ι.

The First National Bank of Farmington Farmington, New Mexico

### Gentlemen:

We hand you herewith oil and gas leases signed, executed and acknowledged by the several undersigned Lessers and by Lloyd D. Locke and Lloyd B. Taylor, dba Locke-Taylor Drilling Company, Lessees, which leases are to be held in escrew by you and handled as hereinafter instructed.

YOU ARE INSTRUCTED AS FOLLOWS:

1. That the undersigned Lloyd D. Locke and Lloyd B. Taylor, copartners, dba Locke-Taylor Drilling Company, Hereby agree to commence the actual drilling of a well on some part of the lands covered by one or more of the hereinabove mentioned oil and gas leases which are handed you herewith, on or before sixty (60) days from and after the date of the deposit of said leases herewith. Said well to be commenced with drilling rig, tools, machinery, equipment and casing sufficient and adequate in every respect to drill into and to test the Pictured Cliff formation for the production of oil or gas. The said Lessees shall diligently and continuously conduct drilling operations on said well until the same shall have been drilled into the Pictured Cliff formation, or a formation which produces oil or gas in commercial quantities at a lesser depth (it being estimated by the parties hereto that said formation Carries gas only and does not produce oil). In the event the said well is commenced within the aforesaid sixty-day period, and is drilled into the Pictured Cliff formation, or a formation which produces oil or gas in commercial quantities, and said formation tested for the production of gas, and such well does produce oil or gas in commercial quantities in such formation, then and in such event you are to deliver the lease or leases covering the quarter section (160) (acres more or less) in which said well is drilled, to the said Lessees.

2. In the event said first well does not produce oil or gas in commercial quantities in the Pictured Cliff formation, or a formation at a lesser depth, then and in such event you shall continue to hold said lease in escrew to be delivered as hereinafter more specifically previded.

3. In the event the said Lessees neglect, fail, or refuse to commence said first well within the aforesaid sixty-day period, or neglect, fail, or refuse to drill said well to the Pictured Cliff formation, or a formation which produces oil or gas in commercial quantities at a lesser depth, and test the same for production, as hereinabove provided, then and in such event you shall re-deliver all of the leases of the several respective Lessors, handed you herewith, whose names are signed hereto below, to each respective Lessor who executed any particular lease, or to the agent or successor in interest of each respective Lessor, who is in writing designated by such Lessor.

II.

1. That on or before thirty (30) days from and after said first well has been drilled, tested, and placed in condition ready for delivery of production to the pipe line, if commercial production

Page 2.

be obtained, or within thirty (30) days after it is determined that such first well is a dry hole, said Lessees shall commence the drilling of a second well on another location on land covered by one of the said leases, and shall continuously and diligently drill the same until such well shall have been drilled into the Pictured Cliff formation, or a formation which produces oil or gas at a lesser depth, and such formation tested for the production of oil and gas. If said second well produces oil or gas in commercial quantities, the leases to the lands embraced in the quarter section (160 acres more or less) on which said well is drilled shall be delivered to said Lessees when said second well is placed in condition to connect to the pipe line for the sale of gas.

2. In the event said second well does not produce oil or gas in commercial quantities in the Pictured Cliff formation, or commercial production in a formation of lesser depth, then and in such event you shall continue to hold said lease in escrow to be delivered as hereinafter more specifically provided.

3. In the event the said Lessees neglect, fal, or refuse to commence said second well within the aforesaid thirty (30) day period, or neglect, fail, or refuse to drill said well to the Pictured Cliff formation and test the same for production, as hereinabove provided, then and in such event you shall re-deliver all of the leases of the several respective Lessors, handed you herewith, whose names are signed hereto below, to each respective Lessor who executed any particular lease, or to the agent or successor in interest of each respective Lessor, who is in writing designated by such Lessor.

III.

1. Said Lessors agree to drill a total of fifteen (15) wells on lands embraced in the above mentioned leases, and in the several sections hereinafter described, in the numbers herein named for each particular section, subject to the exceptions hereinafter specifically contained relative to surrender or abandonment of the said leases, to-wit:

Township 29 North, Range 13 West, N. M. P. M.

Section 22 - four (4) wells to be drilled; Section 21 - four (4) wells to be drilled; Section 14 - four (4) wells to be drilled; Section 15 - two (2) wells to be drilled; Section 23 - one (1) well to be drilled.

2. Said Lessees shall have the right to abandon the aforesaid drilling program in the event none of the first three wells drilled by the Lessees are producers of oil or gas in commercial quantities and of commercial quality. Such abandonment to be in writing, signed by said Lessees or either of them.

3. In the event said Lessees or either of them neglect, fail, or refuse to drill the said 15 wells in consecutive order within the time hereinafter specified, then such neglect, failure, or refusal shall be deemed ipse facto to be an abandonment of the said drilling program, and upon demand or request of the said Lessors, or either or any of, them, in writing, made and signed by such Lessor or Lessors, and copy thereof delivered to said Lessees, or either of them, and original or copy thereof delivered to the said bank as Escrow Agent of the parties herete, the said bank forthwith shall deliver to the respective Lessers the lease or leases of said Lessors deposited in escrow herewith.

## Page 3.

4. It is specifically understood and agreed by and between said Lessors and said Lessees, and the said bank hereby is so instructed, that in event abandonment, either on the part of said Lessees or abandonment by declaration of Lessors, or either or any of them, as provided in paragraphs 2 and 3 of this section, the said bank shall redeliver to the respective Lessors the lease executed by respective Lessors; provided, however, that in the event a well producing oil or gas in commercial quantities shall have been drilled by said Lessees, the lease or leases under which such commercial well or wells shall have been drilled shall be delivered to said Lessees, or either of them. It is further understood and agreed by and between parties hereto that where two or more tracts of land embraced in two or more of said respective leases shall have been unitized or pooled into a 160 acre drilling block or unit, then all of the leases embraced in such drilling unit or block on which a well is obtained shall be deemed to have a producing well on all of the leases is covered by one of the leases deposited in Escrew herein, or under separate lease from the owner of said land to the Lessees herein) and the lease from the owner of said lessees, or either of them.

5. Said Lessees agree that they will successively drill the 15 wells hereinabove mentioned to the Pictured Cliff formation, or other formation which produces oil or gas in commercial quantities at a lesser depth, and test the same for production in said formation; that each of said wells shall be successively drilled, the drilling on each successive well to be commenced on or before thirty (30) days from and after the last preceding well shall have been drilled, tested, and placed in condition to deliver gas in the pipe line for sale. Such successive wells to be commenced and drilled with good and adequate drilling rig or equipment, with adequate tools and casing, and operations thereon diligently and continuously prosecuted until such well shall have been drilled into the Pictured Cliff formation, or a formation which produces oil or gas in commercial quantities, at a lesser depth, and said formation tested for production of oil or gas.

IV.

V.

It is further agreed by the said Lessors and said Lessees that in the event any of the said 15 wells provided to be drilled to the Pictured Cliff formation are non-commercial, the leases to the lands on which such non-commercial wells shall have been drilled shall be held in escrow by said bank for the period of twelve (12) months, from and after the completion of the last of said 15 wells. With none period of twelve (12) months said Lessees shall have the right and option to commence one or more wells to be drilled to the Mesa Verde formation. Such well or wells to the Mesa Verde formation shall be continuously and diligently drilled by said Lessees until said Mesa Verde formation shall have been drilled into and fully tested for the production of either oil or gas. If said Lessees neglect, fail, or refuse to commence the drilling of such well to the Mesa Verde formation within said period of 12 months, then and in such event the said bank shall re-deliver to the said respective Lessors the leases covering the lands of such respective Lessors. In the event commercial production of either oil or gas is obtained in a well drilled to the Mesa Verde formation then all of the leases then remaining in the hands of said bank shall be delivered to said Lessees, or either of them.

It is understood and agreed by and between said Lessors and said Lessees, that the wells hereinabove required to be drilled shall be drill-

## Page 4.

ed in such drilling units, or pooling of acreage as may be required to comply with the regulations promulgated by the oil conservation commission of the State of New Mexico, and that where it becomes necessary to group the lands in two or more leases into one drilling unit in order to comply with said regulations, then all of the leases covering the lands embraced in such drilling unit shall be deemed to be validated and such leases are to be delivered to said Lessees, or either of them, to the same extent as if the lands embraced in the several leases covering lands in each respective unit shall have been validated by drilling on the lands covered by each of such respective leases.

VI.

It is mutually understood and agreed by and between said Lessors and said Lessees, that time is of the essence of these instructions and of the agreement between said Lessors and said Lessees and of each and every part and paragraph thereof; and that this agreement shall extend to and be binding upon the heirs, executors, administrators and assigns of all of the parties hereto.

## VII.

It is further understood and agreed by and between said Lessers and said Lessees, and said escrow bank hereby is so instructed, that in the event there is any disagreement or dispute between said Lessors, or either of them, and said Lessees, or either of them, as to whether any term or condition of these instructions and the agreement embraced herein has been complied with by said Lessees relative to the date of commencement of drilling operations, the prosecution thereof, the tools and equipment used by said Lessees, the said escrow bank or either or any of said Lessors or said Lessees may Gall upon the Oil and Gas Inspector appointed between the territory or area embracing said San Juan County, to deliver to said escrow bank in writing, signed by such Oil and Gas Inspector, the certificate of such inspector as to the compliance or non-compliance of said Lessees with the particular question about which such disagreement or dispute arises, and such certificate from said Oil and Gas Inspector shall be final and conclusive as to such matters as he shall certify to said escrow bank, and the same shall be binding upon all of the Lessors and Lessees, who are parties hereto.

#### VIII.

It is specifically understood by and between said Lessors and said Lessees, and each and all of them, and said Escrow bank hereby is so instructed, that in the event forfeiture is declared by said Lessors, or either or any of them, for the neglect or failure of said Lessees to comply with the requirements herein, the Lessor or Lessors declaring such forfeiture shall serve a notice in writing, signed by the person or persons making such dedaration upon the said Escrew bank, together with a copy of such notice upon said Lessees, or either of them, by registered mail, postage prepaid, and addressed to said Lessee or Lessees at Farmington, New Mexico; and thereupon said Lessee or Lessees shall have the right to remove the cause for which such declaration of forfeiture is made within said period of thirty (30) days, and if such cause is not removed within said period of thirty (30) days, the said Escrew bank shall redeliver the leases delivered herewith to the Lessors in accordance with the provisions hereof relating to the neglect or failure upon which such declaration of forfeiture is made.

## Page 5.

These escrow instructions may be delivered to the bank on a particular date, and any lease or leases delivered to the said bank by the Lessors of the lands embraced in the hereinabove mentioned sections of land shall be governed by these instructions regardless of the date of delivery of the lease to the bank. The signature of the Lessors delivering or causing to be delivered any lease to said escrow bank, and the signing of these instructions to said bank by such Lessor or Lessors automatically shall make such Lessors parties to the agreement regardless of date of delivery of the leases.

It is further understood and agreed by and between said Lessers and each and all of them and said Lessees that all obligations herein required of said Lessees shall be suspended while, but only so long as, Lessees are prevented from complying with the requirements hereof, in whole or in part, by strikes, lockouts, acts of God, unavoidable accidents, uncontrollable delays in transportation, inability to obtain necessary materials in the open market by reason of state or federal laws or regulations, any state or federal law, regulations or other matter (expressly excluding financial matters) beyond the reasonable control of said Lessee, whether similar to the matters herein specifically enumerated or not; provided, however, that performance shall be resumed as soon as is reasonably possible after such cause or causes of interruption or interruptions shall have been removed, and provided further that said Lessees shall not be required against their will to adjust any labor dispute or to question the validity of or to refrain from or judicially test the validity of any state or federal law or regulation.

XI.

It is understood and agreed by and between the parties, hereto, and said Escrow bank is so instructed, that in the event less than the owners of three-fourths (3/4ths) of all of the lands embraced in the above mentioned five sections of land, neglect, fail, or refuse to execute leases to said Lessees covering said proportionate amount of land in each section, then said Lessees shall have the right and option to refuse to commence the drilling obligations hereunder, which refusal shall be delivered to said Escrow bank in writing signed by said Lessees, or either of them, and thereupon said bank forthwith may redeliver all of the leases deposited herein to the respective lessors.

IN WITNESS WHEREOF, the undersigned parties hereto have hereunto set their hands on the dates written opposite their respective names.

DATE

1100.13 1951

LOCKE-TAYLOR DRILLING COMPANY

DATE

LESSORS

LESSEES

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DATE LESSORS Thema W. nelson Nov. 15, 1957 nov. 17, 1951 I to be france in the Nov. 17, 1951 Burnie E Dustin Nov: 19, 1951 Reill Bustin nov. 19, 1951 John & Graham Mas. 21, 1.951. . Inham Nov 21, 1951 J.J. Smith Mor. 21, 1851 anna Evereto Smith Nov. 21, 1851 Hov. 26, 195' D. W. Brown Nor 16, 1951 Emma Bell. Brawa New. 26, 1951 William & m & Sec. h. nov. 26, 1951 William MC Cecos The 26 1951 Mollie Bramblette The 26, 1951 Richard H. Brendlette mono R. Autor Suit a thank Mos. 26. 7951 Nov. 26, 1951 Benard P Serand nov. 27, 1951 Stella Easley Nov. 27. 1951 Ulin W. Harris Nov: 27, 1951 Lete & Harris nov. 28, 1951 Edward Psingilley nov. 28, 1951 Seleta Hilla Pengilley

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LESSONG Mary B. Alford Drene C. Christensen Jardickey J. P. Junell Edna Raberta 2. R. Roberto Vac dan & Christensen @ C. Chisteiran Mary & Mistenson alda Henderson Robert Henderson Hattil B. purcell Louil G. Neenon Madeline S. Keenaw Dorothy E. Bunham C.J. Burnham Seo De Bratechi Emma R Bratechi Cornest. Q. Johnson Myrille Mal Johnson Diegil R. Surledge 2 hilms Bulledge

DATE LESSORS Junes M. Timin 2/9/52-I helma D. Dinnin Martha J. Head By Darathy bead attassey in face 2/9/52 2/12/52 Town of Farmington Bill atta Cilpon May 3/25/52 \*

STATE OF Naw Mexico COUNTY OF San tion Before me, the undersigned, a Notary Public in and for the said County and State, on the 14th day of <u>November</u>, 1951, per-sonally "appeared <u>Lloyd D. Locke and Lloyd B. Taylor</u> to me known to be the identical perto me known to be the identical per-son, who executed the within and foregoing instrument, and acknowledged to me that they executed the same as their free and voluntary act and deed. for the uses and purposes therein set forth. ay commission Expires: Notary Public Mafemii12, 1955. STATE OF NEW MEXICO COUNTY OF SAN JUAN Before me, the undersigned, a Notary Public in and for the said County and State, on the <u>14</u> day of <u>November</u>, <u>19</u>51, per-sonally appeared <u>Vergie Roberts and Ray R. Roberts, husband and wife</u>, <u>13</u>44 to me known to be the identical per-son s who executed the within and foregoing instrument, and acknowledged to me phat they executed the same as <u>their</u> free and voluntary act and Need. for the uses and purposes therein set forth. My Commission Expires: Marte Mr Commission Expires Feb. 24, 1952 STATE OF NEW MEXICO COUNTY OF SAN JUAN Before me, the undersigned, a Notary Public in and for the said County and State, on the <u>15</u> day of <u>November</u>, 19<u>51</u>, per-semally appeared <u>Richard T. Nelson and Thema W. Nelson, husband and wife</u>, to me known to be the identical person's who executed the within and foregoing instrument, and acknowledged to me that they executed the same as their free and voluntary act and deed, for the uses and purposes therein set forth. Public Public My Ucommission Expires: Notary sour Fe Oruary 24, 1952 STATE OF NEW MEXICO COUNTY OF SAN JUAN Before me, the undersigned, a Notary Public in and for the said County and State, on the <u>17</u> day of <u>November</u>, 1951, per-sonally appeared <u>Arthur Coy and Ruth Coy, husband and wife</u>, to me known to be the identical person who executed the within and foregoing instrument, and acknowledged to that the executed the same as their free and voluntary act and dear for the fises and purposes therein set forth. Public Martin My Commigsion Saptres: Notary February 24 1952 0 MI SAN JUNT C. I. Marin

STATE OF NEW MEXICO.

COUNTY OF SAN JUAN

Before me, the undersigned, County and State. on the 19	, a Notary Public in and for the said day of <u>November</u> , 19 <u>51</u> , per-
sonally appeared Bernie E. Dus	tin and Ruth Dustin, husband and wife,
<b>1 ALSO Khown</b> as Burnie E. Dustin	to me known to be the identical per-
son swho executed the within and	foregoing instrument, and acknowledged
and deed for the uses and purpo	ne as their free and voluntary act
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February 24, 1952.	
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COUNTY OF <u>SAN JUAN</u>	
Before me, the undersigned.	a Notary Public in and for the said
	day of <u>November</u> , 1951, per-
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MICEL MARKEN	to me known to be the identical per-
to ma that they executed the sam	foregoing instrument, and acknowledged as theirfree and voluntary act and
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COUNTY OF SAN JUAN .	
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to he' that, they executed the sam deed, for the uses and purposes My Commission Expires: <u>Fabluary 24: 1952</u> . STATE OF <u>NEW MEXICO</u> COUNTY OF <u>SAN JUAN</u> Before me, the undersigned, County and State, on the <u>26th</u> sonally appeared <u>D. W. Brown</u> son swhere executed the within and to me that the y executed the same dadd for the uses and purposes the My/ Commission Expires:	a Notary Public in and for the said day of <u>November</u> , 19_51, per- and Emma Belle Brown, husband and wife, to me known to be the identical per- foregoing instrument, and acknowledged as their free and voluntary act and therein set forth.
to he' that, they executed the sam deed, for the uses and purposes My Commission Expires: <u>Fabluary 24: 1952</u> . STATE OF <u>NEW MEXICO</u> COUNTY OF <u>SAN JUAN</u> Before me, the undersigned, County and State, on the <u>26th</u> sonally appeared <u>D. W. Brown</u> son swhere executed the within and to me that the y executed the same dadd for the uses and purposes the My/ Commission Expires:	a Notary Public in and for the said day of <u>November</u> , 19_51, per- and Emma Belle Brown, husband and wife, to me known to be the identical per- foregoing instrument, and acknowledged as their free and voluntary act and therein set forth.

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j.

STATE OF NEW MEXICO COUNTY OF SAN JUAN Before me, the undersigned, a Notary Public in and for the Seld-County and State, on the <u>26th</u> day of <u>November</u>, 19<u>51</u>, per-sonally appeared <u>William L. McGee, a widower, and William L. McGee, Jr.</u>, <u>Single person</u>, to me known to be the identical per-song who executed the within and foregoing instrument, and acknowledged to me that they executed the same as <u>their</u> free and voluntary act and dead, for the uses and purposes therein set forth. a [ = ] = Winstin My Commission Expires: aFobruary 24, 1952 Notary Publig STATE OF NEW MEXICO COUNTY OF SAN JUAN Before me, the undersigned, a Notary Public in and for the said Sounty and State, on the <u>26th</u> day of <u>November</u>, 19<u>51</u>, per-sonally appeared <u>Richard H. Bramblette and Mollie Bramblette</u>, <u>husband</u> wire to me known to be the identical perto me known to be the identical per-sons who executed the within and foregoing instrument, and acknowledged to me that they executed the same as their free and voluntary act and deed, for the uses and purposes therein set forth. My, Commission Expires: Notáry A Fabruary 24, 1952. 12111121 STATE OF NEW MEXICO COUNTY OF SAN JUAN Before me, the undersigned, a Notary Public in and for the said County and State, on the <u>26th</u> day of <u>November</u>, 19<u>51</u>, per-sonally appeared <u>Bernard R. Gerard and Susie A. Gerard, husband and wife</u>, to me known to be the identical person swho executed the within and foregoing instrument, and acknowledged to me that the y executed the same as their free and voluntary act and deed, for the uses and purposes therein set forth. My Commission Expires: Mart Notary Public February 24, 1952 NEW MEXICO STATE OF COUNTY OF SAN JUAN Before me, the undersigned, a Notary Public in and for the said County and State, on the <u>27th</u> day of <u>November</u>, 19<u>51</u>, per-sonally appeared <u>Stella Easley</u>, a widow. 1 to me known to be the identical perto me known to be the luchtered the within and foregoing instrument, and acknowledged the same as her free and voluntary act and to ne that she executed the same as her free and tor the uses and purposes therein set forth. y Commission Expires: Hastn <u>IIIA</u> Public Notary Andmuary 24, 1952

STATE OF NEW MEXICO COUNTY OF SAN JUAN Before me, the undersigned, a Notary Public in and for the said County and State, on the 27 day of <u>Rovember</u>, 1971, per-Bonally appeared <u>Oliver W. Harris and Leva C. Harris, husband and wife</u> to me known to be the identical perto me known to be the identical per-son s who executed the within and foregoing instrument, and acknowledged to me that they executed the same as theirfree and voluntary act and deed, for the uses and purposes therein set forth. Public Provin My Bommission Expires: Notary chepquary 24, 1952 STATE OF NEW MEXICO COUNTY OF SAN JUAN Before me, the undersigned, a Notary Public in and for the said County and State, on the <u>28th</u> day of <u>November</u>, 19<u>51</u>, per-\_\_\_\_, 19<u>51</u>, personally appeared <u>Edward Pengilley and Teleta Hilda Pengilley</u>, husband and wife, son swho executed the within and foregoing instrument, and acknowledged to me known to be the identical per-son swho executed the same as their free and voluntary act and dead, for the uses and purposes therein set forth. y Commission Expires: Tebruary 24, 1952 Notary STATE OF NEW MEXICO COUNTY OF SAN JULAN Before me, the undersigned, a Notary Public in and for the said County and State, on the 29th day of <u>November</u>, 1951, per-sonally appeared <u>G. K. Hazen and Gladys D. Hazen</u>, husband and wife to me known to be the identical perto me known to be the identical per-son's who executed the within and foregoing instrument, and acknowledged to he that they executed the same as their free and voluntary act and ideed, for the uses and purposes therein set forth. y Commission Expires: Cullebruary 21+, 1952 Notary Public STATE OF NEW MEXICO at the set COUNTY OF SAN JUAN Before me, the undersigned, a Notary Public in and for the said County and State, on the 29th day of <u>November</u>, 1951., per-sonally appeared <u>R. C. Schnorr and Anna Irene Schnorr, husband and wif</u> to me known to be the identical perhusband and wife, ons they executed the within and foregoing instrument, and acknowledged one that they executed the same as their free and voluntary act and and for the uses and purposes therein set forth. Commission Expires: Notary Public 1952

. . . . . STATE OF NEW MEXICO COUNTY OF SAN JUAN Before me, the undersigned, a Notary Public in and for the said County and State, on the <u>30</u> day of <u>November</u>, 19<u>51</u>, per-Sonally appeared <u>B. C. Harber and Vesta Lee Harber, husband and wife</u>, to me known to be the identical perto me known to be the identical per-sons who executed the within and foregoing instrument, and acknowledged to me that they executed the same as their free and voluntary act and deed, for the uses and purposes therein set forth. elis Martin Public My Commission Expires: Febluary 24, 1952 STATE OF NEW MEXICO COUNTY OF SAN JUAN Before me, the undersigned, a Notary Public in and for the said County and State, on the <u>5th</u> day of <u>December</u> <u>1951</u>, per-sonally appeared <u>C. R. Volgamore and Bertha Volgamore</u>, his wife. to me known to be the identical person swho executed the within and foregoing instrument, and acknowledged to me that the y executed the same as their free and voluntary act and deed for the uses and purposes therein set forth. a Martin y pomnission Expires: Notary Public 1. Jebruary 24, 1952 A COUNTY. STATE OF NEW MIXICO COUNTY OF SAN JUAN Before me, the undersigned, a Notary Public in and for the said County and State, on the <u>4</u> day of <u>December</u>, 19<u>7</u>, per-conally appeared <u>R. D. WICKOFF and BESSIE V. WICKOFF</u>, hushand and wife to me known to be the identical per-to me known to be the identical per-to me that hey executed the same as <u>their</u>free and voluntary act and deed, for the uses and purposes therein set forth. wife, My Commission Expires: last Netary Co....February 24, 1952 સ્ટેક STATE OF NEW MEXICO COUNTY OF SAN JUAN Before me, the undersigned, a Notary Public in and for the said County and State, on the <u>6th</u> day of <u>December</u>, 1951, per-sonally appeared <u>Herschell Hatton and May E. Hatton, his wife</u>, to me known to be the identical pern's the verse of the within and foregoing instrument, and acknowledged the tree yexecuted the same as their free and voluntary act and so the same in set forth. uses and purposes there in set forth, Novary Public to Expires: 24. 1952

STATE OF NEW MEXICO COUNTY OF SAN JUAN Before me, the undersigned, a Notary Fublic in and for the said County and State, on the <u>6</u> day of <u>December</u>, 19 51, per-\_, 19<u>51</u>, personally appeared Francis Owen Busch and Altha M. Busch, his pice, to me known to be the identical perto me that they executed the within and foregoing instrument, and acknowledged to me that they executed the same as their free and voluntary act and deed, for the uses and purposes therein set forth. Ny Connission Expires: Bebrusher 24, 1952 last Notary 1 STATE OF NEW MEXICO COUNTY OF SAN JUAN Before me, the undersigned, a Notary Public in and for the said County and State, on the 7 day of <u>December</u>, 1951, per-sonally appeared J. W. <u>Basley and Annie Easley</u>, his wife to me known to be the identical persons who executed the within and foregoing instrument, and acknowledged to me that they executed the same as their free and voluntary act and ged for the uses and purposes therein set forth, My Compission Expires: Mast \$ o "Eepriery 1952 C. . COURTY, NO STATE OF F MM MEXICO SAN JUAN COUNTY OF \_ . Before me, the undersigned, a Notary Public in and for the said County and State, on the <u>8th</u> day of <u>December</u>, 1951, per-sonally appeared <u>Frank Poulson and Velma C. Poulson</u>, his wife to me known to be the identical perto me known to be the identical per-son swho executed the within and foregoing instrument, and acknowledged to me that they executed the same as their free and voluntary act and deed, for the uses and purposes therein set forth. Arec. Ny Commission Expires: Prebruary 224, 1952 Public Notary SPUNTY . YE <u>, 1</u>2 STATE OF NEW MEXICO COUNTY OF SAN JUAN Before me, the undersigned, a Notary Public in and for the said County and State, on the 13th day of December , 1951, per sonally appeared William S. Allen and Melba J. Allen, 18 wile, and to me known to be the identical per-son sing executed the within and foregoing instrument, and acknowledged to me they executed the same as their free and voluntary act and deed, for the uses and purposes therein set forth. mission Expires: CON an Netary -24 1952

SHORE SHORE

Lizzh indez

STATE OF Haw Preyer's COUNTY OF Demanllo son 5 who executed the within and foregoing instrument, and acknowledged to me that They executed the same as there in set forth. and deed, for the uses and purposes therein set forth. Notary Public MANI - 1953 Dinner Star STATE OF <u>Men metico</u> COUNTY OF Jan Guan Before me, the undersigned, a Notary Public in and for the said County and State, on the 3nd day of Junii 1952, per-sonally appeared \_\_\_\_\_\_\_. I. Successful appeared \_\_\_\_\_\_\_. to me known to be the identical per-son who executed the within and foregoing instrument, and acknowledged to me that the executed the same as <u>his</u> free and voluntary act and get for the uses and purposes therein set forth. My°Commission Expires: UBL Betty 7 Brown Notary Public 30, 1955 0040 STATE OF new mexico COUNTY OF San Juan Before me, the undersigned, a Notary Public in and for the said County and State, on the State day of <u>Anuary</u>, 1952, per-sonally appeared <u>Edice Counter + M. M. R. Marson</u> to me known to be the identical per-sonal who executed the within and foregoing instrument, and acknowledged to de that they executed the same as <u>their</u> free and voluntary act and **deed**, for the dises and purposes therein set forth. We Complision Expires: Notary Public 13 28 19 E 6 (95 " COUNT STATE OF Mew Metics COUNTY OF San Juan Before me, the undersigned, a Notary Public in and for the said County and State, on the <u>16 th</u> day of <u>January</u>, 19-2, per-sonally appeared <u>J.D. Purcell + Mattie B. Purcell</u> to me known to be the identical person who executed the within and foregoing instrument, and acknowledged to me that they executed the same as them free and voluntary act and deed, for the dises and purposes therein set forth. Commission Expires: Notary Public

STATE OF Men metico COUNTY OF Sanguar Before me, the undersigned, a Notary Fublic in and for the said County and State, on the 7 th day of January, 1952, per-sonally appeared <u>20 Aquisting to many 6</u> <u>The identical per-</u> son who executed the within and foregoing instrument, and acknowledged to me that hey executed the same as there in set for the uses and purposes therein set forth. Notary Public Mx Commission Expires: NOMARO 1.30, 1955 Bay C PUBLIS GTATIENOF Press Medice COUNTI OF San Juan Before me, the undersigned, a Notary Public in and for the said County and State, on the 7th day of <u>January</u>, 1952, per-sonally appeared <u>Stene C. Christensen + Ulugunif</u>. to me known to be the identical perto me known to be the identical per-term who executed the within and foregoing instrument, and acknowledged to me that they executed the same as their free and voluntary act and desd, for the uses and purposes therein set forth. Betty J. Brown Notary Public 10 0186430, 1955 COURTAL STATE OF Men metico COUNTY OF San Juan Before me, the undersigned, a Notary Public in and for the said Courty and State, on the 12 th day of January, 1952, per-sonally appeared <u>General Menderships</u> actually to me known to be the identical per-son who executed the within and foregoing instrument, and acknowledged to me, they they executed the same as <u>There</u> free and voluntary act and deed, for the uses and purposes therein set forth. S ... PIQ ..... Betty J. Brown Notary Public STATE OF Men Merico COUNTY OF San quan Before me, the undersigned, a Notary Public in and for the said County and State, on the <u>19th</u> day of <u>January</u>, 1952, per-sonally appeared <u>Jouis & Keenen and Mateline</u> J. <u>Kenan</u> to me known to be the identical per-Kunan sone who executed the within and foregoing instrument, and acknowledged to he that they executed the same as their free and voluntary act and the lises and purposes therein set forth. Commission Expires: Notary Public UBLICE CCURT

STATE OF Mere martino COUNTY OF fan guan Before me, the undersigned, a Notary Public in and for the said County and State, on the day of <u>Finner</u>, 1952, personally appeared C. J. Burnham and Dorothy & Burnham to me known to be the identical person who executed the within and foregoing instrument, and acknowledged output that fire executed the same as therein set forth. Betty J. Brown Notary Public My Odministric Expires: Se \$ 10 100 Myg 7 ( Nt 9, 14, 5 ONE COUNT STATE OF Men metics COUNTY OF San Juan Before me, the undersigned, a Notary Public in and for the said County and State, on the <u>set</u> day of <u>Federatery</u>, 1952, per-sonally appeared <u>Statechic orthonics kalure as Bes</u>. <u>Trease R. Bratechic</u> to me known to be the identical per-son who executed the within and foregoing instrument, and acknowledged to mer that the generated the same as their free and voluntary act and deed, for the uses and purposes therein set forth. Notary Aublic My Gomminsion Expires: 16 300 195.5 " coul STATE I Chew mehic COUNTY OF Sandquar Before me, the undersigned, a Notary Public in and for the said County and State, on the <u>2nd</u> day of <u>2ebruary</u>, 1952, per-sonally appeared <u>Murtle M. Johnson (otherwise remaining) muste</u> <u>Must remain to me known to be the identical per-</u> **son** who executed the within and foregoing instrument, and acknowledged to me that they executed the same as <u>Their</u> free and voluntary act and **deed**, for the uses and purposes therein set forth. My Commission Expires: Bitty 7- Brown Notary Public 17.00; 1955 03116 STATE OF Mere metico Fullidge. COUNTY OF Sam Juan Before me, the undersigned, a Notary Public in and for the said County and State, on the \_\_\_\_\_\_ day of <u>-</u> <u>February</u>, 19<u>52</u>, per sonally appeared <u>Virgil C. Bulledge</u> and <u>Allelma</u> , 19<u>52</u>, pergit to se known to be the identical persont who executed the within and foregoing instrument, and acknowledged to be that they executed the same as <u>Thus</u> free and voluntary act and deed for the ases and purposes therein set forth. Commission Expires: Dro ittu Notary/Publ'ic 14:30 1455 1 1 PCB UAN CO 

STATE OF New Mexico 89 COUNTY OF San Juan \$14

Jos R. Garcie and Romalda Garciao no perconelly known to be the person (s) 

the dot above in this contificate first above written.

Ruhard 11 h arten. Notary Public

My Commission Expires:

October 25, 1954

STATE OF Mul Medice } SO

In this Ith day of I through 1952/ bafore me personally appeared by and the excented the foregoing instrument, and acknowledged that he (they) executed the same as his (their) free act and deed.

In Hitres thereofy-I have hereinto-set my hand and affixed my official seal the day and wear in this certificate first above written. LDI

Volacy Public

Hy Commission Expires:

600% A Contensional States

non. 30 1955.

STATE OF <u>Men Medics</u>

., 1952/ before we personally appeared Double Alt day of Life , 1952/ before we personally appeared described in and who executed the foregoing instrument and acknowledged that he (they) executed the same as his (their) free act and deed.

In Witness Whereof, I have hersanto set by hand and affixed my official seal the day and year in this cartificate first above written.

Setty 7. Br.

Commission Expires:

non 30 1955

STATE OF	*******	Strategic -	- and states
COMPT OF			

On this \_\_\_\_\_ day of \_\_\_\_\_, 1951, before as percently speared described in and who excented the foregoing instrument, and coloudlodged that he (they) excented the same as his (their) free set and deed.

In Mitness Whereof, I have hereway of and and affind my official seel the day and year in blue certificate first above written.

-

Notary Public

Hy Commission Expires:

STATE OF

On this \_\_\_\_\_\_ day of \_\_\_\_\_\_, 1951, before us personally appearsa , to as personally known to be the person (s) described in and who executed the foregoing instrument, and acknowledged that he (they) executed the same as his (their) free act and deed.

In Mitness Whereof, I-have mersion of the bay Asiar Charter and official seal the day and year in this contificate first above written.

Notary Puplic

Hy Commission Expired:

STATE OF \_\_\_\_\_\_ ) 65

On this \_\_\_\_\_ day of \_\_\_\_\_, 1951, hefore so personally appeared , to be personally known to be the person (s) described in and who executed the foregoing instrument and coknowledged that he (they) executed the same as his (their) free act and deed.

In Nitness Whereof, I have heremnto set my hand and affixed my official seal the day and year in this cartificate first above written.

## Notary Public

My Commission Expires:

STATE W 68 COUNTY OF

On this \_\_\_\_\_ day of \_\_\_\_\_, to se personally known to be the person (s) described in and who executed the foregoing instrument, and scherifolged that he (they) executed the same as his (their) free act and deed.

In Witness Whereof, I have harowto set by hand and sflixed by official seal the day and year in this contificate first above written.

	Not	ery Fuillo	•	
My Commission	Explayer		•	
&AMERICAN LINE AND CONTRACT				
STATE OF				
COUNTY OF	a annuar anna anna anna anna anna anna a	68	<b>*</b>	

"Of this \_\_\_\_\_ day of \_\_\_\_\_, to me personally known to be the personally appeared ed in and who excented the foregoing instrument, and acknowledged that he (they) excented the same as his-(thair) free act and deed.

In Vitness Whereof, I have hereunto cot my hand and effixed my official seal the day and year in this certificate first above written.

Botary Public

Ny Commission Expires

STATE OF 86 COUNTY OF

On this \_\_\_\_\_ day of \_\_\_\_\_, 1951, before we personally appeared , to se personally known to be the person (s) described in and who executed the foregoing instrument and acknowledged that he (they) executed the same as his (their) free act and deed.

In Witness Whereof, I have heremate set by hand and uffixed by official seal the day and year in this certificate first above written.

Notary Public

My Considerion Expires:

On this day of ....., 1951, before as personally appeared described in and the encoded the foregoing instrument, and acknowledged that he (they) executed the same as his (their) free act and deed.

In Vitness Whereof, I have hereupto set my hand and affined my official seel the day and your in this certificate first above written.

Notary Public

My Consission Expires:

STATE OF \_\_\_\_\_\_ 59

On this \_\_\_\_\_\_ day of \_\_\_\_\_\_, 1951, before no personally appeared \_\_\_\_\_\_, to me personally known to be the person (s) described in and who executed the foregoing instrument, and acknowledged that he (they) executed the same as his (their) free act and deed.

In Witness Mercof, I have becaute set my hand and affined my official seal the day and year in this cartificate first above written.

## Fotary Public

My Commission Expires:

STATE OF \_\_\_\_\_\_ ) SE

On this \_\_\_\_\_ day of \_\_\_\_\_, 1951, before no personally appeared , to se personally known to be the person (s) described in and who executed the foregoing instrument and soknewledged that he (they) executed the same as his (their) free cot and deed.

In Witness Whereof, I have bereanto set my hand and affixed my official seal the day and year in this cartificate first above written.

Movery Public

My Commission Expires:

STATE OF 88 COUNTY OF

In this \_\_\_\_\_ day of \_\_\_\_\_, 1951, before no personally appeared described in and who ensented the foregoing instroment, and pelacelledged that he (they) executed the same as his (their) free ast and deed.

In litness libersof, I have bereunto set my hand and affined my official seal the day and year in this certificate first above written.

Notary Public

My Convission Explanate

On this \_\_\_\_\_ day of \_\_\_\_\_, 1951, before no personally appeared od in and the executed the foregoing instrucent, and asknowledged that he (they) executed the same as his (thair) free sot and deed.

In Witness Marcof, I have heremite set my hand and affined my official seal the day and year in this cortificate first above written.

## Notary Fublic

My Commission Expires:

STATE OF \_\_\_\_\_\_ ) SE

On this \_\_\_\_\_ day of \_\_\_\_\_, 1951, before no personally appeared , to me personally known to be the person (s) described in and who excouted the foregoing instrument and acknowledged that he (they) executed the same as his (their) free act and docd.

In Nitness Whereof, I have heremate set my hand and affixed my official seal the day and year in this certificate first above written.

Notary Public

My Commission Expires:

STATE	0₽	1000 m-100 4 C)	1996 <b>1</b> 996 4965 17	al destrike warde date i	Aliat I	)	
						λ.	C I
COUNTY	OF	******	баж адын-та 1	ag die Saturd offense waarde Speed	1.2.40 ·	)	

On this \_\_\_\_\_ day of \_\_\_\_\_, to he personally known to be the person (s) described in and who accounted the foregoing instrument, and schwalledged that he (they) excounted the same as his (thit) ires not and deed.

In Witness Whercof, I have heremote set my hand and affined by official seel the day and your in this certificate first shows written.

#### Notary Fublic

Ny Commission Expluses

STATE	OF	⋬⋑⋈⋈⋹⋐⋳⋽⋎⋽⋹⋎⋹⋳∊∊∊∊⋳⋶⋳⋳∊⋴∊⋳∊∊∊∊∊∊∊∊	}	68
COUNT	0		5	640

On this \_\_\_\_\_ day of \_\_\_\_\_, 1951, before us personally appeared ed in and who executed the foregoing instrument, and acknowledged that he (they) executed the same as his (their) free set and deed.

In Witness Whereof, I have heven to set my hand and affined my official scal the day and year in this cortificate first above written.

## Hotary Public

My Commission Expires:

COUNTY OF \_\_\_\_

STATE OF )

On this \_\_\_\_\_ day of \_\_\_\_\_, 1951, before no personally appeared described in and who arcouted the foregoing instrument and acknowledged that he (they) executed the same as his (their) free not and deed.

In Witness Whercof, I have beremuto set my hand and affixed my official seal the day and year in this certificate first above written.

Motary Public

Hy Commission Repires:

#### THE STATE OF NEW MELICO OIL COMPREVATION CONTISSION

In the Matter of the Application of Lenson & Montin for an order establishing uniform 320 sere spacing of gas wells drilled to the Pictured Cliffs formation of the Gallegos Conyon Unit area and cortain lends adjacent therate in Township 28 and 29, North Ranges 12 and 13 West, N.M. P.M., San Juan County, New Maxico

Re: Case No. 277.

#### рыйтит<u>ли</u> 2 8 4 5 5 4 4 4 4 4

We, the undersigned land owners of record within the above described area and adjacent lands thereto, strongly oppose the request for 320 acre spacing of Gas Wells drilled to the Pictured Cliffs formation as requested by Benson and Montin.

We state that not enough drilling has been done to justify a spacing of 320 acres for each gas well, and that many small land owners and Royalty owners will be deprived of their just and fair share of gas and oil under such lands.

We strongly oppose the 320 acre spacing, and respectfully request the New Mexico Oil Conservation Commission to retain not more than the present 160 acre strong of gas valls to the Pictured Cliffs formation, and direct that this string of gas valls as evidence at the hearing on June 19, 1952, acrowr valle protest against such proposed spacing regulations.

Date Address he. Name Sec. Range 32 - 3 16 1 Ø 29 ノジ los - 13 214 13 2123-211 1300 1 5 \$ 04 } ١

Date Name Address Sec. Twp. Hanne Acros 1.-11-52 R. D. Michelf, Bor 101 ... Marmington M. Dr. 14- 24 - 13-2-18-52 B. E. Dustin 14 29-13 187 

## THE STATE OF MAN LIKING OIL CONDERVATION CONTRACTOR

IV8

In the Watter of the Application of Beason & Montin for an order establishing uniform 320 sere spacing of gas wells drilled to the Platured Cliff's formation of the Gellegos Canyon Unit area and cartain lands adjacent therate in Township 28 and 29, North Ranges 12 and 13 Mest, N.M.P.N., Can Juan County, New Mexico

Ros Case No. 271.

## RATITION.

We, the undersigned land owners of record within the above described area and adjacent lands thereto, strongly oppose the request for 320 are spacing of Gas Wells drilled to the Pictured Oliffs formation as requested by Benson and Montin.

We state that not enough drilling has been done to justify a spacing of 320 acres for each gas well, and that many small land consers and Royalty owners will be deprived of their just and fair share of gas and oil under such lends.

We strongly oppose the 320 acre spacing, and respectfully request the New Maxico Oil Conservation Commission to retain not more than the present 160 acre spacing of gas wells to the Pictured Cliffs formation, and direct that this Petition be admitted as evidence at the hearing on June 19, 1952, as our valid protest against such proposed spacing regulations.

Addrosa Sec. Two. Renge Long Ante NED AS 6-11-52 15- 297. 13 W.S, Farmington 29N A 150 - 52 60 Al and SE<sup>1</sup> వ్**చ** sale mille 29N 13w 160 29 N 93, వ le. المتعالية
Altron Jernington NA2-29 N-13N-20 The Tanington NA2-29- 29N Bw 20 The Tanington N Met - 29- 29N Bw 20 The Tanington N Met - 29- 29N Bw 20 Pate Nama June 18, 52 une 18,5277 2-9N BW 200A ence 18 12 W- 8 dans **ful**tanti i Asca a shakatalishtarike cartela

## 70;

## THE STACE OF HER REVICE OL DEDUCTVALLER CONCERNED

In the lattor of the Application of Bonson & Montin for an order ostablishing unifons 320 cerv spaceing of gas wells drilled to the Pictured Cliffs formation of the Gallegos Conyon Unit area and certain lands adjacent thereto in Tourwhip 28 and 29, North Ranges 12 and 13 Wort, N.M.P.M., Can Juan County, New Maxico

Res Cras No. 377.

# REIIIQN.

He, the undersigned Land consers of record within the slove described area and adjacent lands thereto, strongly oppose the request for 320 sere specing of Gas Walls drilled to the Pictured Cliff's formation as requested by Benson and Montin.

We state that not enough drilling has been done to justify a specing of 320 acres for each gas well, and that many shall land owners and Noyalty owners will be deprived of their just and fair share of gas and oil under such lands.

We strongly oppose the 320 acre spacing, and respectfully request the New Mexico Oil Conservation Consission to ratain not more than the present 160 acre spacing of gas wells to the Pictured Oliffs formation, and direct that this Petition he admitted as evidence at the hearing on June 19, 1952, as our valid protect egainst such proposed spacing regulations.

Date itere Addrogg Soa. Two. Sence Nor C ( 60 arlohn 29NA Mr

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

## <u>**CASE 372**</u>:

Under terms of Order R-172 the Commission requested that Benson & Montin appaar at this hearing to show cause why a 160-acre spacing pattern should not be instituted for Pictured Cliff wells in the Gallegos Unit Area, San Juan County, New Mexico, to supersede the 320-acre spaging granted for a one-year period after original hearing.

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# TRANSCRIPT OF HEARING

# Juna 16, 1953

BEFORE: Honorable Ed. L. Mechem, Governor Honorable E. S. Walker, Land Commissioner Honorable R. R. Spurrier, Director, OCC

STATE OF NEW MEXICO ) SS COUNTY OF BERNALILLO

I HEREBY CERTIFY That the within transcript of proceedings before the Oil Conservation Commission is a true record of the same to the best of my knowledge, skill, and ability.



COM, SPURHIER: We will move on to Case 377, (Mr. Graham reads the advertisement.)

MR. REID: Justin Reid, appearing for Benson & Montin.

Benson & Montin would like to report to the Commission at this time that their development program as to this area is going ahead according to schedule; that the offset drilling on the southern edge of the area affected by this Order has been completed, with the exception of a small portion in the southeast corner. As to that Benson & Montin have arranged for including additional acreage in their unit, which has been drilled to 160 acres. And that on extension of the unit is now awaiting approval by the federal authorities. It should be forthcoming very shortly, if it has not been already approved.

In addition, their coring program for the area is not complete.

For these reasons they would like to request this case be continued until the August hearing.

COM. SPURRIER: Is there objection to counsel's motion? If not, we will continue the Case 377 to the regular August hearing.

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The next case on the docket is Case 497.

-2-

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

#### <u>CASE 377</u>:

Under terms of Order R-1/2 the Commission requested that Benson & Montin appear at this hearing to show cause why a 160-acre spacing pattern should not be instituted for Pictured Cliff wells in the Gallegos Unit Area, San Juan County, New Mexico, to supersede the 320-acre spacing granted for a one-year period after original hearing.

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# TRANSCRIPT OF HEARING

## June 16, 1953 Date

BEFORE: Honorable Ed. L. Mechem, Governor Honorable E. S. Walker, Land Commissioner Honorable R. R. Spurrier, Director, OCC

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STATE OF NEW MEXICO )

COUNTY OF BERNALILLO)

I HEREBY CERTIFY That the within transcript of proceedings before the Oil Conservation Commission is a true record of the same to the best of my knowledge, skill, and ability.

DONE at Albuquerque, N. M., this 20th day of June 1953

E. E. Gréeson Notary - Reporter COM. SPURMIER: We will move on to Case 377. (Mr. Graham reads the advertisement.)

MR. REID: Justin Leid, appearing for Benson & Montin.

Benson & Montin would like to report to the Commission at this time that their development program as to this area is going ahead according to schedule; that the offset drilling on the southern edge of the area affected by this Order has been completed, with the exception of a small portion in the southeast corner. As to that Benson & Montin have arranged for including additional acreage in their unit, which has been drilled to 160 acres. And that an extension of the unit is now awaiting approval by the federal authorities. It should be forthcoming very shortly, if it has not been already approved.

In addition, their coring program for the area is not complete.

For these reasons they would like to request this case be continued until the August hearing.

COM. SPURRIER: Is there objection to counsel's motion? If not, we will continue the Case 377 to the regular August hearing.

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The next case on the docket is Case 497.

-2-

#### BEFORE THE OJL CONSERVATION COMPLESION STATE OF NEW MEXICO

CASE 377: (Continuation.) Under the terms of Order R-172, the Oil Conservation Commission requested that Benson & Montin appear to show cause why a 160-acre spacing pattern should not be instituted for Pictured Cliffs wells in the Callegos Unit Area, San Juan County, New Mexico to supersede the 320-acre spacing (temporary) granted for one year.

#### TRANSCRIPT OF HEARING

August 20, 1953

BEFORE: Honorable Ed. L. Mechem, Governor Honorable E. S. Walker, Land Commissioner Honorable R. R. Spurrier, Director, OCC

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STATE OF NEW MEXICO )

COLORED SAME

I hereby certify that the within transcript of proceedings before the Oil Conservation Commission is a true record of the same to the best of my knowledge, skill and ability.

TRANSCRIBED at Los Alamos, New Mexico this 21st day of August, 1953.

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Audrey M. Benrickson Notery Public

sign Expires September 22, 1953.

#### NEW MEXICO OIL CONSERVATION COMMISSION

Regular Hearing

9100 a.m., August 20, 1953.

MR. REED: Justin Read, appearing for the Respondents, Benson and Montin. Benson and Montin appear today with a motion to continue this hearing for thirty days to the regular September hearing.

The Commission may recall that when this case was originally set two months ago, we asked for a sixty day extension at that time stating to the Commission that the reason that it was necessary was that certain coring tests which were then being conducted in the area had not been finally completed and in addition, the approval of the United States Geodetical Survey and the Department of the Interior.

On the inclusion of certain wells and acreage to the south of the unit area within the unit, these had not been finally approved. Since that time, efforts have gone ahead to accomplish those two things but we are not in a position to present information to the Commission at this time; because of difficulties encountered in this coring program and because it has been impossible to get final action from Washington on the inclusion of this additional acreage, it is impossible now to present to the Commission the full picture which Benson and Montin had hoped to present.

In addition, there are other reasons at this time why we ask for the continuance. There have been a series of interference tests being conducted on certain wells within the area. Four of these interference tests are completed. A fifth one is now in process of being completed and will be completed before the September hearing. We feel that the information which these tests will show is of vital importance to the Commission in determining this matter.

Another point for the postponement is that the state testing to determine deliverability will be conducted at the end of this month and the information acquired from that testing would certainly be relevant to this hearing and would be important to have before the Commission.

In addition, our client intends to file application for a permanent 320-acre spacing order as distinguished from this order to show cause and would like to have the hearing on what application consolidated with the hearing on this order to show cause, and this application will be filed in time to be published for the September hearing.

For these reasons, Benson and Montin feel that it is necessary that the hearing be postponed until September in order that the Commission can have full fasts before it in determining the question.

MR. SPURRIER: Is there anyone else to be heard?

MR. KELLAHIN: Jason Kellahin speaking for the Brookhaven Oil Company of Albuquerque who have acreage within the unit.

We wish to oppose the motion for continuance on the following grounds: In the first place, the order setting up the temporary 320 acre spacing was adopted in July, 1952. It was a temporary order and I think it is fair to assume that it was granted by the Commission with the view of allowing sufficient time to gather the information which counsel has just referred to as being available next month.

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There has been already a continuance of this case from the June hearing to the present and while he says that the coring tests have not toon completed, it seems to us that there has been ample time to have completed these during the past year and sixty days.

With reference to the land to be included to the south, it does not seem to us as material to the issue involved which is the merit of the 320-acre spacing in a portion of a pool.

The interference tests egain, it seems to us, could have been made sometime ago and the operator has apparently been derelict in completing those tests.

The application for a permanent order, referred to, in regard to 320-acre spacing again I think it is fair to assume that that was the purpose of the temporary order in the first place to allow them to gather that information and they should be prepared at this time to present it.

MR. SMITH: J. K. Smith, Stanolind Oil and Gas Company.

We would like to join with Benson and Montin's application for continuance for one month and I think that with just a month's time, it will probably afford the Commission an opportunity to acquire more information based upon the stateme at made by Mr. Reed.

MR. SPURRIER: Benson and Montin's motion in this case, 377,

will be granted and the case will be heard at the regular September hearing.

MR. KELLAHIN: If the Commission please, I would like to suggest that Benson and Montin will by then have had sufficient time present bottom hole pressures on these wells, - - - or at least representative bottom hole pressures.

MR. REED: If the Commission please, the information that can be furnished is the regular shut-in pressure that will be obtained in this August test that the state will be making. Isn't that correct, Mr. Macey? Won't that be furnished?

MR. MACEY: Yes.

MR. REED: That information will be available at the Commission office, I understand.

MR. SPURRIER: The next case on the docket is Case 391.

#### BEFORE THE

OIL CONDERVATION COLORISSICS

STATE OF NEW LENGIC

TRANSCRIPT OF PROCEEDINGS

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CASES NO. 363 & 377

June 19, 1952

E, E, GREESÚN ADA DEARNLEY Court Reporters Box 1303 Phones 5:9492 And 5:7546 Albuquerque, New Mexico

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> Sanua Pe, New Newfloo. June 39, 3062.

#### III THE MATCHE OF:

Case 363: (IN Lomenclature) Consideration : of Sub-section (c) of this case was possponed to : June 19 upon request of Benson 5 Hontin in order : that additional case wight be compiled regarding : the West Hutz-Fictured Oliff's Pool.

Case 337: Benson & Mortin's application for an order establishing uniform 320-acre spacing of gas wells drilled to the Pictured Cliffs formation of the Gallegos Unit Area and adjacent lands in Twps. 28 and 29 H, Age. 12 and 13 M, San Juan County, New Mexico.

#### \* \* \* \* \* \* \* \* \* \* \* \*

#### TRANSCRIPT OF HEARING

MR. SPURRIER: Cases 363 and 377.

MR. REED: If the Commission please, Seth and Montgomery, Mr. Oliver Seth and Mr. Justin Reed appearing on behalf of Benson and Montin, the Applicant in Case 377.

I wanted to make a brief statement of the case to the Commission, since it does involve some possibility of misconception. First, the applicant is here concerned only with the lands embraced within the Gallegos Canyon Unit Area and lands adjacent

> ADA DEARNLEY & ASSOCIATES COURT REPORTENS ROOM 12, CROMWELL BLDG PHONES 7-9645 AND 5-9846 ALBUQUERQUE, NEW MEXICO

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Cases No. 363 % 377 Consolidated to the on the Cortinget, which have seen included in the appliention. The applicant deserts intend, by this hearing, so allows or be effected by any other spacing determination in any other pool. Although contain references may be made to the Fulcherhutz fool, these will be only for purposes of illustration and comparison. These he is in intention to draw any support from, or to detract from, any determination that has been made for these other pools.

We feel that our case is one that is sufficiently strong to stand on its own feet and support 320-acre spacing for this portion of the common source of supply of gas wells in the Picture Cliffs Formation. First of all, we expect to be able to show that the lands covered by the application, together with the present West Kutz Pool which has recently been established, embrace a common source of supply of gas in the Pictured Cliffs formation and that this source of supply is a separate pool from the Fulcher-Kutz Pool. This actually removes any conflict between Case 377 and Case 363 C. However, in order to avoid any difficulty and any misconception, we have protested 363 C up to this point, because we felt it would be wisest, from the Commissions standpoint, to consider the cases together.

Second, we expect to show that there are compelling reasons for having 320-acre spacing in the portion of this common source of supply covered by the application. First, because one well will effectively and economicelly drain 320 acres, and second,

> ADA DEARNLEY & ASSOCIATES COURT REPORTERS ROOM 12, CROMWELL, BLDG. PHONES 7-9845 AND 5-9546 ALBUQUERQUE, NEW MEXICO

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because any densar defilient model of access facility of families and would result in warse. Third, we hope so alow that dit of the the Southern portion of this common source of supply, and that if the present West Futs Pool, has been developed on 160-more spaceing that it is convenient and practical to break the operating by this common source of supply along the Southern line of the dallegos Canyon Unit, and to have 320-acre spacing in the Northwestern portion of the Pool. We will show that in order to insure uniform spacing and to protect correlative rights, that the well should be located on the Southwest and Northeast quarters of the governmental sections, with only such exemptions as are necessary for existing wells and future wells on good cause shown and whatever offsets may be necessary.

I would like to call Mr. Greer now as a witness.

## ALBERT R. CREER,

having been first duly sworn, testified as follows:

#### DIRECT EXAMINATION

By MR. REED:

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Q State your name, please.

A Albert R. Greer.

Q Mr. Greer, would you state briefly your qualifications as an expert in this case?

A I was graduated from New Mexico School of Mines in 1943. MR. SPURRIER: Mr. Greer, weren't you qualified before this Commission before?

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A 1 have tostified before.

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BR. SPURNIES His qualifications are accepted.

Q liave you had considerable experience in making reservvoir engineering scudies?

A Tes, I have. Part of my experience was spont with Anderson Prichard CLL Corporation, a period of about three years, two years of which I did almost exclusively reservoir engineering work.

Q - What is your present position?

A At present, I am employed by Benson and Montin as Fild Superintendent for their operations in the San Juan Basin.

Q Does Benson and Montin own acreage within the Gallogos Canyon Unit Area?

A Benson and Montin owns a substantial part of the acreage within the unit and a few thousand acres outside the unit.

Q That is covered by this application?

A Which is covered by this application.

Q They are the operators for the Callegos Canyon Unit?

A Benson and Montin are the operators for the Gallegos Canyon unit.

Q Have you made a reservoir engineering study of this reservoir lying under the lands covered by the application?

A I have made a very careful and detailed study of this particular reservoir. In fact when we initially set up our program of exploration in this area, we went to great pains to

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Lake it possiols to obtain thit reservative information that with '

Q - What wis the purpose for doke; that?

A Our initial purpose in wanting this unusually targeamount of reservoir information was in order to support a pipe line into our area, which at that time we were quite concerned with, because the present demand for gas in the San Juan Basin did not exist and we were, or we felt that it would be necessary to support a rather large reserve in order to bring the pipe line into the unit.

Q Over what period of time has this study been made?

A The study itself commenced when we began drilling wells, in August of 1951.

Q Mr. Greer, have you prepared a paper showing the lands covered by the application and the present West Kutz Pool and the Fulcher Kutz Pool?

A I have.

(Exhibit No. 1 marked; for

identification.)

A CHARLES TO A CONTRACT

Q I hand you Exhibit 1 in the Case and ask you if that is the map that you prepared?

A This is a map that I prepared covering the Gallegos Canyon Area and the adjoining fields.

Q Would you explain to the Commission what this map covers and what the colored designations are, Mr. Greer?

> ADA DEARNLEY & ASSOCIAT COURT REFORTERS ROOM 12, CROMWELL BLDG. PHONES 7-9845 AND 5-9846 ALBUQUERQUE, NEW MEXICO

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A I see out on this cap the Lutz Schron-Fulcher Scain Field approximately as defined by the Commissions present orders, also the Werd Kutz Field.

Q The Fulcher Lutz is colored in brown?

A the Fulcher huts is colored in brown. The West 1948 Field we have colored in green and is about as the Contissions orders now have it defined, plus two additional sections we have colored in to bring this area up to join the unit boundary. Then we have colored the Gallegos Canyon Unit Area in yellow and an area to the Northwest of the Gallegos Canyon Unit which is covered by this application is colored in blue.

Q The lands covered by the application are the lands designated in yellow and blue on the map?

A That is correct.

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> Q In your opinion, Mr. Greer, do the lands covered by is application embrace a common source of supply of gas in the Pictured Cliffs Formation with the lands in the West Kutz Field designated green?

A From my study of the area, I have determined that the area colored in green and in yellow and probably in blue cover one common source of supply.

Q In your opinion, is this common source of supply separate from that of the Fulcher Kutz Pool which is colored in brown?

A It is definitely a separate source of supply from the old original Kutz Canyon Basin Field.

ADA DEARNLEY & ASSOCIATES COURT REPORTERS ROOM 12, CROMWELL BLDG. PHONES 7-9645 AND 5-9846 ALBUQUERQUE, NEW MEXICO

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) that is the value for that opinion?

A the are found, in the drilling of wells between the definition topol from an the herm deriver-file or the area, the balance of and a pole of for perpetitient, metals and electric deriver of an productivity of the solls welled with the bala which we have dross backed, we can definitely say that belo zone on mains and that carries a bigh contabe suber content, a considerably honor permeability that in either buts danged on Fully and and that such has effectively prevented the equalization of pressures between the two pools over these millions of years in which there has been adequate time for pressures to equalize.

Q If there had been communication, you mean?

A If the communication had been adequate it certainly, the two pools certainly would have had an equalized pressure when they were initially discovered.

Q There is no reason to expect that pressures will equalize in the next few years, then?

A We feel that if the pressure, - let me change that We feel that if the communication has been so poor that pressures did not equalize within one hundred pounds over a period of millions of years, that the communication will still be so poor over the next 20 or 30 years that there will not be drainage between , or from, one pool to the other.

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In Yes, three we are arreaded by achae back and see Weikle's which confirm our thinking is, this respect. These weikles we recase to: 2 Maphie in Section 13, 20 (1990), the set. A other well is providen to: 10 Johann in Section 420 North, the secarother is conson-kontin to: 2 wells of the function in Section 35, in 29 North, 12 West. Another is Marfros for 1 Nattist in Section 24, 30 North and 13 West. Another is Western Natural No. 1 Bolack in Section 2 in 27 North and 11 West. Another is Wichingsr No. 1 Grawford in Section 31 in 29 North and 13 West.

Bach of these wells in which production and attorpted by setting casing and ordinary completion methods, found very little, if any, gas, and if the wells were shot, they produced a substantial amount of water. The water, of course, being the high almost immobile interstitial water which we normally find in sands of extremely low permeability.

NR. REED: I would like to introduce Applicant's Exhibit No. 1 in evidence at this time.

MR. SPURRIER: Without objection it will be received.

(Applicant's Exhibit No. 1 received in evidence.)

Q Did you have something further on that? A Yes, I have a little more information. In regard to the pressure data to which I referred, which establishes definitely that we have two different sources of supply, the initial

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presente in the http://www.Fubcher and richards on the order of the to fit potent. That produce existence over & theorem of the day when it unled the presence were equiliber within just a dee potent. We have found the subscriptingtic in bulletos durposedest http://www.inuties.com/or approximately one can durposedest about if silves, pressures have equalized within just a few potents or 40% to 40% poinds. The only variation from this pressure, which we have found in each of the wells, is that an we approach these belts of low permeability there appears to exist a sort of transition in which the pressure connectes its increase across the impermeable barrier from one source of supply to the other. We feel that the same will probably be found true in the Southeast part of hutz Canyor Field.

Q So there has been pressure equalization in the two pools from Northwest to Southeast, but no pressure equalization between the two pools from Southeast to Northwest, which is the shorter distance than the overall length?

A A pressure equalization of a few pounds, say, over a distance of 15 miles and yet a difference in pressure of 100 pounds or closer to 120 pounds over a distance of only one or two riles across this impermeable barrier.

Q Mr. Greer, to your knowledge, has there ever been any testimony presented to the Commission in any other case relating to the spacing of gas wells in the Pictured Cliff's formation in the lands covered by the application, either the West Kutz or

> ADA DEARNLEY & ASSOCIATES COURT REPORTANS ROOM 12, CROMWELL BLDG, PHONES 7-9645 AND 5-9846 ALBUQUERQUE, NEW MEXICO

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A We have drilled V wells within the Gallegor Canyon Unit.

Q (interrupting) I as referring only to the land covered by the application. Have there been any other companies that have drilled wells in that area?

A Bay Petroleum Company, Corporation has drilled a well in Section 20 in 19 North and 15 West.

Q Are those wells located as indicated in the application, which we have filed a copy of, which I show you?

A Yes, and there is one other well, Lot No. 1 Graham, one mile North of the Bay well, which I believe has been completed this last week.

Q What is the status of these wells as to their production?

A Three of the wells within the Gallegos Canyon Unit are producing. Two of the wells completed in the Pictured Cliffs are shut in, waiting on pipeline. Bay's well is shut in, wait-Locks - M/rek ing on pipeline, and Lot Ho. 1 Granam is either abandoned or temporarily abandoned in the Pictured Cliffs, I believe they are attempting to complete it in the Fruitland.

> ADA DEARNLEY & ASSOCIATES COURT REPORTAND ROOM 12, CROHWELL BLDG. PHONES 7-9848 AND 5-9848 ALBIQUERQUE, NEW MEXICC

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 A tip the seven wells which beneon an ionain (whiled, in two balleges Janyon unit(ob the Fisture) Diffie data, five or the mare cored. We have encollent recoveries on the whole she us a result withare an unusually large amount of torve information covering the saliegos larger. Unit.

Q Could you stave to the Courission which of the wells histed in the application were the cuts that were cored?

A senson and Londin Lubber 2, Gallegos Janyon Unit, Number 3, Number 4, Number 5, and Number 7.

Q bo you have shy information as to whether the Bay or the Lockeswell have been cored?

A Bay's well was cored. Locke's well was not cored.

Q What type of core analysis was hade on the Benson and Montin wells?

A We had two types of core analyses made, both by Core Laboratories of Dallas. The analyses were run in their Farmington Laboratory and in their Worland, Wyoming Laboratory. In Well we took several samples, and had what we commonly term, conventional core analyses prepared, and then from all the rest of the core we had special analyses run. I might explain the difference in the conventional analyses and special analyses.

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A In conventional analysis, a small sample is taken from the core and run, which small sample is on the order of two or

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tures incles, whereas, is quotial analysis the entire consection is analyzed, and of contast, gaves a better avorage figure for the characteristics of the core. We have found, and hubble conflicted with Core Laboratories, they are make which have a high char content, and as we have found in this area, that the conventional analyses tends to give an efficiently large perceity. In order to obtain an accurate figure for this perceity we have, therefore, had the special analyses run, which eliminates the error.

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In our area the error approximates 4 to 5% of porosity difference. In other words, if the conventional analysis shows 25% porosity the true effective porosity is on the order of 20%.

(Harked Applicant's Exhibit No. 2, for identification.)

Q I hand you Applicant's Exhibit 2 and ask you to state to the Commission what that is?

A Exhibit 2 contains copies of all of the core analyses by the conventional and special analysis method, which were run by Core Laboratories, and which covers Gallegos Canyon Unit wells Nos. 2, 3, 4, 5 and 7.

MR. REED: I offer Exhibit 2 in evidence.

MR. SPURRIER: Without objection it will be received.

(Applicant's Exhibit No. 2 received in evidence.)

Q Has any other production research been run on the wells drilled by Benson and Hontin?

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Q - Chat is these tasts consist of?

A One of the tests which we were especially interested in was capallary pressure measurements. In order to give us a separate method of estimating the formation of water content in addition to the information shown by the cores, in the last few years work done with capillary pressure measurements of core samples have indicated that on the whole, excellent results can be obtained and that connate water content can be estimated rather closely from these capillary pressure tests.

In addition, we desired to have still another method of estimating the connate water content, so we had dore Laboratories run resistivities of the cores and analyses of the formation water. From the electrical resistivity of the core samples, the resistivity of the connate water and the characteristics shown by the electric logs, we have then a third method, whereby we can estimate the connate water content.

Core Laboratories determined these core resistivities and

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wanter resistivities in order that we sight the ordeniation.

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11. SPULAILS: Without objection it will be received.

(Applicant's builder do. 3 received in evidence.)

Q . The superstance and formation water analysis been the second for any temperature and formation water and the wells?

A For most of the wells we were able to obtain samples of formation water, which we had analyzed and also temperature surveys.

# (Larked Applicant's Exhibit No. 4, for identification.)

Q I hand you Applicant's Exhibit 4 and ask you if that shows the results of those analyses?

A Exhibit 4 shows reserveir temperature in each of the wells and sodium chloride content of the formation water as determined by fore Laboratories, and also the chloride content of the formation water as determined by fore Laboratories.

MR. REED: I offer Applicant's Exhibit 4 in Evidence.

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(Marked Applicant's Unhible No. 3, for identification.)

Q I hand you Annielt f, and ask you if that is a copy of those logs?

A Subidit 5 is a copy of electrical logs run through the Fictured Cliffs formation on Gallegos Canyon Unit Wells Ho. 3, 4, 5 and 7.

Q Would you explain to the Consission what the attached paper is on each of those logs?

A We have taken the information determined in the laboratory as to formation, resistivity of the core samples and the resistivity of the formation water and then from the electrical log we can determine the resistivity of the formation as measured in the well, and from these factors, we can estimate the connate water content.

This method of calculation was initially developed by Mr. Archie of the Shell Qil Company, and has received increasing acceptance over the last few years as an excellent method of estimating the connate water content where it is possible to obtain information as to the resistivity of the formation water

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(Interrupting) I would like to point out in particular. Å Gallegos Canyon Unit Lo. ), in which it is evidenced that where is a marked change in the resistivity characteristics between the upper and lower parts of the sand. In this particular well we found about 10 or 90 Jest of Pietured Chiffs sand. All of this sand showed porosity and hight have been interpreted to be productive. However, from this electrical log we can determine then the consume water contents in the upper part of the sand is only about 50%. We calculate 49.5%, whereas in the bottom of the sand the formation water content from our electrical log calculations would be approximately Sly, which is too high connate water content to allow connercial production. That section, if it produced anything, would probably produce just water, (In the completion of this well, we plugged off this lower section, which is interpreted to be water production. A similar calculation was made for No. 7, showing the difference in connate water content of 34% in the upper part of the sand and 78.8 percent in the bottom part. Incidentally, on No. 7 it is guite apparent from this electrical log and the connate water content information that, although we had about 100 feet of Pictured Chiffs sand, only about 30 feet of it is gas productive.

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I should point out one hore thing, and that is, in remained the shocknic logs to but micro-hous tot which continue the core unalyses and configue our other selected of het pay thickness, as distinguished by the micro-log.

Jun. 1999): I would like to offer shotbit ( in evidence.

(Applicant's Arhibit 10. 9 received in evidence.)

Let. SFUdabel: Let's take a five minute break. (decess)

LR. SPURIAR: You may proceed, Mr. Green.

(Harked Applicant's Exhibit Ho. 6, for identification.)

Q I hand you Applicant's Exhibit 6. Would you state what that is, please?

A Exhibit No. 6 shows a comparison of electrical log data with a gas increase log of two wells which were drilled quite close together. This information gave us a method of confirming our calculations made by electrical log data.

Q How were these tests made?

A The well on the left hand side of the exhibit is Senson Montin No. 8, which was drilled through the Pictured Cliffs sand, and completed in the pakato formation. We then drilled a well to the Fictured Cliffs Sand about 300 feet from No. 8. Those wells then are quite close together and we feel that the sand Characteristics are probably nearly identical in one well as

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colleman to the other. We have brown by the root entering are could brickness of one richters dilled has in a la particulation will, which is approximately the foot. The part of the surf that we calculated to be productive is colored in yellow. This we would determine from our electrical bey analysis and gast is general, I would like to point out that this will was welled with clear water, and this water was on the Fictured Uliffs formation for several weeks, while the well was arithed all the way to the Sakato sand. For that reason, there has been some invasion of fresh water into the same and same, therefore, influenced the exact amount of the resistivity of the formation. In But/general the characteristics of the resistivity are quite different from the upper part of the same, as compared with the lower part.

In confirming this calculation, when we drilled well No. 6, which is shown on the right hand side of this exhibit, we measured the increase in gas production as we drilled the sand. In order to do this we set pipe on top of the Pictured Cliffs sand, I say on top, it was about 5 feet into the sand, moved the rotary off and drilled a well in with cable tools. Every few feet we would shut down and measure the amount of gas. By the amount of increase as we penetrated the formation, we were able to tell how long we encountered productive sand. This distance is shown by the red coloring and it can be seen after about 30 feet of penetration below the pipe the gas quit increasing.

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It happened at this particular point that one of the, because as difficultion with the rig, it was not down for his bours. Show we represed iniliar we hade a walking that to determine how much water and filled up in the hold at the end of the 40 hours, and we found the sailer perfacely and. Thus was not a drop of mater being produced then one total depth sus about 1450. We drilled a few more feet and found to increase in gas production, and then, as about a meth of approximately 1470 to 40 we shut down for another 12 hour building test to be sure that we had not picked up any water, but at this point we found that the well had commenced to make water and we made a test at that they, in order to determine the amount, which as I recall was approximately 2 gallons an hour.

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This we consider to be positive evidence that we had passed through the productive part of the sand. Just the fact that the gas failed to increase, of course, we might consider negative evidence, but the fact that we picked up water definitely confirms the fact that we had drilled through the gas pay and went into non-productive formation. Therefore, although there is 115 feet of Pictured Cliffs sand which is porous in this particular area, we are convinced that there is only about 40 feet of productive sand.

MR. REED: I offer Applicant's Exhibit No. 6 in evidence. MR. SPURATER: Without objection it will be received.

> (Applicant's Exhibit No. 6 received in evidence.)

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Q What does that show in comparison to the other well that was drilled with cable tools?

4 This shows that in this particulat well we had approximately 15 feet of productive sand below the casing and there was possibly four or five feet of sand above the shoe, which gives us about 20 feet of sand in this particular well. This was our first well in the area. It has been customary practice througnout both Hutz Canyon-Fulcher Basin and the Mest Mutz area, as it had been developed at that time to drill the entire section of Pictured Cliffs formation and shoot it in, completing the well. We followed this standard practice on this particular well, although we felt that the section which we could shoot, which would be from around ten feet below the pipe, would probably be the section that was not productive. We, therefore,

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G I hand you Appiliaant's Exhibit I and ask you to stave what that is?

A Exhibit 6 is a summary of our calculation of connate water content. As I indicated before, we estimated the connate water content from three separate and distinct methods. One of them was from a special core analysis, another was from electrical log data plus resistivity measurement of the sand and formation water, and the third method was by capillary pressure measurements.

We would like to point out that in estimating the connate water by special core analysis, that the total waters neasured by Core Laboratories showed a content in excess of 60 percent. We felt that there was a possibility that in coring this particular

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They have pointed dut, however, that with scaley saids, that their action hight not be as accurate of is primarily found for sands that are relatively chear. We have leviated a hittle from a pripermative standpoint, which we think, supineers should be conservative in estimating the considerably lower commate water content that is indicated by the core analyses themselves.

We have estimates that by calculating how much the formation water in the fores was diluted as a result of the muifiltrate entering the core while the well was cored. As an example of how we calculated that, we know the formation water to have a chloride content on the order of 34,000 parts per million. This we determined by actually measuring some of the water produced from the wells. In analyzing the core, Core haboratory ran chlorides for us throughout the section cored, from individual samples of the cores. The chloride content shown by their calculations was approximately 20,000 parts per

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aillion in two of the wells, and around is, 200 parts per willion on another of the wells. We, therefore, weined the total water shown by the fore lab. analysis of the ruth of 19,000 to 30,000 or, 20,000 to 30,000, a longest she case ingot be, in order to arrive at total water content within the core sample corrected for this dilaration of water from our way. We feel that gives a minimum water content that we can possibly estimate from the core analyses. The semary of that is about 50.3% as an average from four of the wells.

Cur electric log data showed an average connate water content of 40.0%. The separate capillary pressure showed connate of 53.5. The average of these three is 50.1% connate water content. The overall averages all agree within a few percent. We feel that we have a very reasonable figure for connate water from these particular wells, as a result of this rather extensive research work we have dong.

HR. 2330: -I offer Exhibit S in evidence.

IR. SPURRIER: Mithout objection it will be received.

M.R.RED: Our next item is a general summary and conclusion of some of the reservoir characteristics. It would probably take sometime to present it completely. I wonder if it would be helpful to break now and meet earlier this afternoon.

MR. SPURRIER: We will recess until 1:30.

(NOCH RECESS.)

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Q 13. meet, as a result of the study that has been cade in the data that has been coupiled, concerning the reservoir under the lands involved in the application, what are your conchusions as to she porosity, permeability, connate water and thickness of the pay, and other reservoir characteristics?

A We have summarized most of the reservoir characteris-

(Marked Applicant's Exhibit No. 9, for identification.)

I hand you Exhibit No. 9 and ask you to identify that, and just tell what it shows.

A Exhibit No. 9 shows certain reservoir characteristics which we found from our study of the pay thickness, the porosity, the permeability and the connate water content for the Fictured Cliffs formation in each of these wells that we cored.

Q What are your conclusions as to those characteristics? A Four of the wells, on four of the wells we have what

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Proc dis information we can determine the total volume of pas in place, per noce foot and also, the recoverable gas to an anadomnant pressure we explorite to be 150 pounds. He have also estimated the recoverable to an operating line pressure of 250 pounds. These figures are total gas in place, 137,000 orbit feet per abre foot. Recoverable to 150 pounds, 95.5000 cubic feet per abre foot, and recoverable to 250 pound line pressure, 65,000 cubic feet per abre foot.

Q What is the basis for your estimate of the abandonment pressure?

A We have two ways of making estimates of abandonment pressure. One is that as the reservoir pressure declines the wells productivity decline, and at some point, which we estimate to be around 150 pounds, the productivity of the wells will be so low as to be uneconomic to produce them.

The other factor determining abandonment pressure is that line pressure at which we can lift the water which accumulates in the bottom of the hole, through the tubing and so unload the well as to allow the gas to produce. Now, just what pressure it will take to lift the water through the tubing will vary a

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hittels from one well to another. Not it's point to be on an order of 50 to 100 younds. Therefore, when we operate with a line pressure of, say, 50 pounds or 200 pounds, we may have to shut the well in, let the pressure build up before we can unload the water out of the well. When we reach a point as the pressure seclines, that we can't lift the water out of the well, that will define our obandonment pressure.

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n (interrapting) Which we estimate to be on the order of 150 wounds.

Q What is the basis for your figure of 250 points line pressure?

A That is approximately the line pressure at which the wells are now being operated. On our particular wells it has varied from around 225 pounds to about 250 pounds.

In the old Fulchor Basin Field, the area farther east from the compressor station, the line pressure has been on the order of 250 to 300 pounds for a period of approximately ten years. We presume at sometime the gas company will lower the line pressure, but we don't know when. In our area we also hope that the operating line pressure will be lowered in time, but we have no definite means of knowing when it will be lowered and, of course, the gas contracts that are written do not set out a definite time at which this pressure will be lowered. So, all that we can do is estimate our recoverable reserves at this time

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on the basis of ten years, on the cashs of 250 pounds operating line pressure. For that reason we consider 65,000 endle figst per acre foot a reasonable figure at which to supp the 347 end of the well.

I would like to go. a little further with our reserve figuring that the line pressure will eventually be however to 150 pounds. We will ultimately recover about 10% more ger acre foot, which for 40% feet of pay is about 3,850,000 cubic feet per acre. That is a, we feel, a quite reliable figure. We have behind it all of our reservoir work, our net pay thickness, percently and connate water and reservoir pressure, which we can measure quite accurately, and we feel that that figure is more accurate than can ordinarily be obtained in gas fields.

Now, the productivity of the wells that we have now completed indicate a capacity to produce into the line of about 550,000 cubic feet per day, which is on the order of 16,000,000 cubic feet per month. Now, with the reserve of 3,850,000 cubic foot per acre and a productivity into the line of 16,600,000 cubic feet per month, our wells will produce into the line at a rate which will deplete about 4 3/10 acres per month of ultimately recoverable reserves, or about 52 acres per year. That is a, that indicates a relatively high capacity to produce as compared to reserves. That is a figure that we think is important. 52 acres a year initial deliverability into the line, when we talk about 160-acre spacing is almost ridiculous.

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(. As the area is drilled up that rate of production will,of course, drop off it, will it not?

A That is true. The closer the specing, the faster the pressure will drop off, and the faster the rate of production will accordingly drop off.

FR. SPURIER: Mr. Greer; do you mean 52 acres per well?

A Tes, 52 acres per well, per year.

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Exhibit No. 9.

MR. SPURRIER: Without objection it will be received.

# (Applicant's Exhibit Ho. 9 received in evidence.)

Q From the study you have made, in your opinion, Mr. Greer, will one well on the acreage covered by the application efficiently and economically drain 320 acres of land over the gas supply in the Pictured Cliffs formation?

A From the work we have done in regard to drainage, we feel that one well will efficiently drain even more than 320 acres. We have work that evidences at least 640 acres efficient drainage per well.

Q Are there any examples in your production history that tend to support this conclusion?

A We have an example in regard to drainage which reflects a decline in pressure for a well drilled in an area after production had been started on offsetting wells.

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In the Nest huts rich and colored in yellow on this exhibit is an area on which we have excellent reservoir pressure information, and in which four wells were drilled and completed last year and sout in pressure tests taken on those wells, and when they were tied into the line and commonced producing in January. Then in the nonth of May, the well indicated by the red circle, which is Hancock Ho. 11, Hancock in Section 3 and 27 Horth, 12 West was completed, this well shows a pressure which is approximately 20 pounds less than the initial pressures of the other wells, which were drilled cefore production was started in this area.

I would like to give you those exact figures. In Section 2, Danube No. 1, Harmon was completed in August of 1951 at initial shut in pressure of 466 pounds. Harmon No. 2 had an initial pressure of 461 pounds. Then in Section 3, Danube Thompson No. 3 had a shut in pressure of 463 pounds. Then in Section 34, in 26 North, 12 West, Benson and Tontin No. 4, Gallegos Canyon Unit had initial pressure of 464 pounds. These four wells were drilled on three sides of the Hancock No. 11, and definitely established the initial reservoir pressure in that area.

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Her are all within one or two percess of 450 poards, which are exception of threes to. 2, which is old four pound from what. Those dist is pressured were values by representative of all fund Harwal Gaz Corpany with a text weight vector, were whicheased by a representative of the Conservation formission and uppelf. The pressure of sencost to. 31, i toos is perconally with a feed weight resource of and, are at fullows:

on Lay 20th, efter this in the cays, the sold chowed of pressure of 444 pounds. This was a spring gauge 444 pounds.

On June Brd, after shut in 17 days, it showed 445 pounds on my spring gauge. I assumed from that that the well had provably built up to a maximum and from that point on continued taking pressure tests with a dead weight tester.

On June 7th, after shut in 27 days, the pressure was 4462 pounds.

On June Sth, shut in 22 days, 4462 pounds.

June 11th, shut in 25 days, it was 4462 pounds.

That is a pressure decrease from virgin pressure of about 18 or 20 pounds. This definitely indicates that in the brief period of 4 or 5 months production from offset wells, that the gas under this particular tract had been efficiently drained, and in fact, something on the order of 6 or 7 percent of the reserves have already been produced out from under that tract before the woll was completed. We feel that these are representetive pressures for that particular well for two measons. One is the well had a good initial productivity, over a million cubic

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