

BEFORE THE OIL CONSERVATION  
COMMISSION OF THE STATE  
OF NEW MEXICO

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IN THE MATTER OF THE APPLICATION OF BASSETT &  
BIRNEY ET AL, A MINING PARTNERSHIP, FOR A CLOSER  
SPACING PERMIT THAN IS AT PRESENT PERMITTED BY  
THE RULES OF THE COMMISSION.

P E T I T I O N

TO THE HONORABLE OIL CONSERVATION COMMISSION, STATE OF NEW  
MEXICO:

Comes now C. N. Bassett, the duly authorized and act-  
ing manager of Bassett & Birney et al, a mining partnership,  
appearing herein by his attorney, Keith F. Quail, and states  
to the Commission:

That Bassett & Birney et al, a mining partnership, is  
the record owner of that certain oil and gas lease, number  
B-6058, issued by the Commissioner of Public Lands of the  
State of New Mexico, under date of March 10th, A. D., 1936,  
and the leasehold estate created thereby insofar as the  
same embrace the Northeast Quarter of the Southeast Quarter  
(NE $\frac{1}{4}$ SE $\frac{1}{4}$ ) of Section 11, Township 18 South, Range 29 East,  
N. M. P. M., Eddy County, New Mexico; that petitioner de-  
sires to drill a well for oil and gas in the northwest  
(NW) corner of said tract of land above described, at a  
point fifty (50) feet east of the west line and three hun-  
dred and thirty (330) feet south of the north line, said  
location being closer to the boundary line of said forty  
acre tract than is permitted by the present rules and regu-  
lations of the Oil Conservation Commission, and said

petitioner, in support of this Petition, respectfully states:

1.

That Dixon & Yates have heretofore drilled a commercial oil well located in the northeast (NE) corner of the Northeast Quarter of the Northeast Quarter ( $NE\frac{1}{4}NE\frac{1}{4}$ ) of Section 12, Township 18 South, Range 29 East, N. M. P. M., Eddy County, New Mexico, known as the Saunders No. 1, at an elevation of 3543 feet, in which well the top of the producing horizon was encountered at 2803 feet and the bottom of said horizon was encountered at 2823 feet.

2.

That Dixon & Yates have heretofore drilled a commercial oil well located in the northwest corner of the Northwest Quarter of the Northeast Quarter ( $NW\frac{1}{4}NE\frac{1}{4}$ ) of Section 12, Township 18 South, Range 29 East, N. M. P. M., Eddy County, New Mexico, known as the Saunders No. 2, in which well the top of the producing horizon was encountered at 2714 feet and the bottom of said horizon was encountered at 2738 feet.

3.

That Frank Montgomery has heretofore drilled a commercial oil well located in the northwest corner of the Northeast Quarter of the Northwest Quarter ( $NE\frac{1}{4}NW\frac{1}{4}$ ) of Section 12, Township 18 South, Range 29 East, N. M. P. M., Eddy County, New Mexico, known as the Saunders No. 1, in which well the top of the producing horizon was encountered at 2656 feet and the bottom of said horizon was encountered at 2686 feet.

4.

That Frank Montgomery has heretofore drilled a commercial oil well located in the northwest corner of the Northwest Quarter of the Northwest Quarter ( $NW\frac{1}{4}NW\frac{1}{4}$ ) of Section

12, Township 18 South, Range 29 East, N. M. P. M., Eddy County, New Mexico, known as the Saunders No. 2, in which well the top of the producing horizon was encountered at 2645 feet and the bottom of said horizon was encountered at 2675 feet.

5.

Allen, Fair and Pope have heretofore drilled a commercial oil well located in the northwest corner of the Northeast Quarter of the Northeast Quarter ( $NE\frac{1}{4}NE\frac{1}{4}$ ) of Section 11, Township 18 South, Range 29 East, N. M. P. M., Eddy County, New Mexico, known as the State B. No. 2, at an elevation of 3517 feet, in which well the top of the producing horizon was encountered at 2651 feet and the bottom of said horizon was encountered at 2672 feet.

6.

Allen, Fair and Pope have heretofore drilled a commercial oil well located in the northwest corner of the Northwest Quarter of the Northeast Quarter ( $NW\frac{1}{4}NE\frac{1}{4}$ ) of Section 11, Township 18 South, Range 29 East, N. M. P. M., Eddy County, New Mexico, known as the State B. No. 1, at an elevation of 3523 feet, in which well the top of the producing horizon was encountered at 2645 feet and the bottom of said horizon was encountered at 2669 feet.

7.

That Continental Oil Company and Martin Yates have heretofore drilled a commercial oil well located in the northeast corner of the Northeast Quarter of the Northwest Quarter ( $NE\frac{1}{4}NW\frac{1}{4}$ ) of Section 11, Township 18 South, Range 29 East, N. M. P. M., Eddy County, New Mexico, known as the Continental

Yates, Brainard No. 1, at an elevation of 3531 feet, in which well the top of the producing horizon was encountered at 2642 feet and the bottom of said producing horizon was encountered at 2670.

8.

That Continental Oil Company and Martin Yates have heretofore drilled a commercial oil well located in the southeast corner of the Northwest Quarter of the Northwest Quarter ( $NW\frac{1}{4}NW\frac{1}{4}$ ) of Section 11, Township 18 South, Range 29 East, N. M. P. M., Eddy County, New Mexico, known as the Continental Yates, Brainard No. 2, at an elevation of 3518 feet, in which well the top of the producing horizon was encountered at 2626 feet and the bottom of said producing horizon was encountered at 2641 feet.

9.

That Continental Oil Company and Martin Yates have heretofore drilled a commercial oil well located in the southwest corner of the Southwest Quarter of the Northwest Quarter ( $SW\frac{1}{4}NW\frac{1}{4}$ ) of Section 11, Township 18 South, Range 29 East, N. M. P. M., Eddy County, New Mexico, known as the Continental Yates, Brainard No. 3, at an elevation of 3518 feet, in which well the top of the producing horizon was encountered at 2644 feet and the bottom of said producing horizon was encountered at 2656 feet.

10.

Continental Oil Company and Martin Yates have heretofore drilled a commercial oil well located in the northeast corner of the Southeast Quarter of the Northwest Quarter ( $SE\frac{1}{4}NW\frac{1}{4}$ ) of Section 11, Township 18 South, Range 29 East, N. M. P. M., Eddy County, New Mexico, known as the Continental

Yates, Brainard No. 4, at an elevation of 3513 feet, in which well the top of the producing horizon was encountered at 2629 feet and the bottom of said producing horizon was encountered at 2651 feet.

11.

That Continental Oil Company and Martin Yates have heretofore drilled a well located in the northeast corner of the Northwest Quarter of the Southwest Quarter ( $NW\frac{1}{4}SW\frac{1}{4}$ ) of Section 11, Township 18 South, Range 29 East, N. M. P. M.; Eddy County, New Mexico, known as the Continental Yates, Brainard No. 5, in which well the top of the first oil horizon was encountered at 2645 feet and the bottom of said oil horizon was encountered at 2683 feet, and the top of the second oil horizon was encountered at 2797 feet and the bottom of said oil horizon was encountered at 2832 feet, which said well having failed to produce, the same was plugged and abandoned.

12.

That Aston & Fair have heretofore drilled a commercial oil well located in the northwest corner of the Southwest Quarter of the Northeast Quarter ( $SW\frac{1}{4}NE\frac{1}{4}$ ) of Section 11, Township 18 South, Range 29 East, N. M. P. M., Eddy County, New Mexico, known as the State No. 1, at an elevation of 3511 feet, in which well the top of the producing horizon was encountered at 2631 feet and the bottom of said horizon was encountered at 2653 feet.

13.

That Aston & Fair have heretofore drilled a commercial oil well located in the northwest corner of the Southeast Quarter of the Northeast Quarter ( $SE\frac{1}{4}NE\frac{1}{4}$ ) of Section 11,

Township 18 South, Range 29 East, N. M. P. M., Eddy County, New Mexico, known as the State No. 2, at an elevation of 3517 feet, in which well the top of the producing horizon was encountered at 2658 feet and the bottom of said horizon was encountered at 2668 feet.

14.

That Dixon & Yates have heretofore drilled a well located in the northwest corner of the Southwest Quarter of the Northwest Quarter ( $SW\frac{1}{4}NW\frac{1}{4}$ ) of Section 12, Township 18 South, Range 29 East, N. M. P. M., Eddy County, New Mexico, known as the Saunders No. 3, said well having been drilled to a depth of 2738 feet and water having been encountered in the oil zone which was encountered from 2673 feet to 2705 feet.

15.

That T. B. Knox has heretofore drilled a well located in the northwest corner of the Northwest Quarter of the Northeast Quarter ( $NW\frac{1}{4}NE\frac{1}{4}$ ) of Section 14, Township 18 South, Range 29 East, N. M. P. M., Eddy County, New Mexico, known as the Branscum State No. 1, said well having failed to produce commercially, the oil zone having been encountered from 2634 feet to 2651 feet.

16.

That petitioner has heretofore drilled a well located in the northwest corner of the Northwest Quarter of the Southeast Quarter ( $NW\frac{1}{4}SE\frac{1}{4}$ ) of Section 11, Township 18 South, Range 29 East, N. M. P. M., Eddy County, New Mexico, known as the State No. 6, which well failed to produce oil, but did produce approximately seven million feet of gas from a zone located from 2610 feet to 2650 feet.

17.

That the information which has been obtained from the locations of the wells heretofore mentioned which failed to produce from the Loco Hills horizon, together with the information obtained from the Geochemical Report, hereafter referred to, convinces Petitioner that a location at a point permitted by the rules and regulations of the Commission would result in the discovery of water in the Loco Hills horizon; that a well located at the regular location would fail to produce oil in commercial quantities; and that unless a location is made at the point described heretofore in this Petition, said location being closer to the boundary lines of said tract than the present rules and regulations of the Commission permit, commercial production would not be discovered.

18.

That Petitioner has had a geochemical survey made and a Geochemical Report made on the area under consideration by the Geochemical Service Corporation of Tulsa, Oklahoma; that in connection with said survey twelve soil samples covering the area were sent to the said Geochemical Service Corporation in order to determine what location should be made in order to encounter local sand production in the North One-half of the Southeast Quarter ( $N\frac{1}{2}SE\frac{1}{4}$ ) of Section 11, Township 18 South, Range 29 East, N. M. P. M., Eddy County, New Mexico; that the report made on the basis of said survey, is in part, as follows:

\*\*\*In geochemical (soil analysis) mapping, it has been observed that hydrocarbon values are found high at the margin of production in such a way as to form a band of high values

sometimes called a halo surrounding the producing area. Sometimes production will reach into this band and sometimes it will stop just short of it. The halo band may be wide or it may be narrow, depending upon the nature of the production. Sometimes the band may be less than 500 feet wide; at other times it may reach one-fourth, one-half mile or more in width. In order to obtain a clear picture of a producing area, obviously the work should be carried on in detail until the entire area is surrounded and mapped.

The values over production as well as the values in a dry spot are lower than those within the halo band so that without the halo pattern it is difficult to distinguish between dry and producing areas unless other information is available to tell which side of a fractional halo band is the productive side. Fortunately, in this case the record of wells gives us that information.

The attached chemomap shows the hydrocarbon values in PPB (parts per billion) together with the location of each of the analyses. It will be observed that the dry hole has a value of one and the samples taken at the oil and gas wells range in value from one to seven. Two high value points were found. In the northeast corner of the  $SE\frac{1}{4}$  of Section 11 a value of 150 PPB occurs and northwest of it a value of 22 PPB is found. These two points would appear to be on a halo band which must separate production to the west from the dry hole in Section 12. This halo band is sketched in between the wells in Section 11 and the dry hole in Section 12, but no sample was taken at that point to substantiate that interpretation.

It would appear from the present work that the northeast corner location of the  $N\frac{1}{2}$  of the  $SE\frac{1}{4}$  of Section 11 would lie in the halo band and should be an unfavorable location for an oil or gas well. The location west of that would be marginal but probably should produce. The location west of the latter should be a productive location. The location with the value of seven in the southwest corner of the  $NE\frac{1}{4}$  of the  $SE\frac{1}{4}$  of Section 11 should produce though it is not certain which direction the halo band takes from the point at which we register 150 PPB."

The attached chemomap, marked Exhibit "A" indicates the hydrocarbon value in parts per billion together with the location of each of the analyses.

19.

That in order to avoid the hazard of drilling a dry hole and to make the production of oil as certain as possible, Petitioner desires to drill a well located at the proposed location stated in this Petition.

20.

That Bert Aston and R. W. Fair are the record owners of the oil and gas leasehold estates embracing the South One-Half of the Northeast Quarter ( $S\frac{1}{2}NE\frac{1}{4}$ ) and the South One-Half of the Southeast Quarter ( $S\frac{1}{2}SE\frac{1}{4}$ ) of Section 11, Township 18 South, Range 29 East, N. M. P. M., Eddy County, New Mexico, which said tracts offset the tract under consideration, and that they have consented to the drilling of a well at the proposed location; and that Dixon & Yates Oil Company is the owner of the oil and gas leasehold estates embracing the Southwest Quarter of the Northwest Quarter ( $SW\frac{1}{4}NW\frac{1}{4}$ ) and the West One-Half of the Southwest Quarter ( $W\frac{1}{2}SW\frac{1}{4}$ ) of Section 12, Township 18 South, Range 29 East, N. M. P. M., Eddy County, New Mexico, which said tracts offset the tract under consideration, and that it has given its consent to the drilling of a well at the proposed location.

21.

That it will be to the interest of Petitioner and to the interest of the particular institution of the State of New Mexico, which is the fee owner of the land under consideration, to have said well located at a point which will as nearly as possible assure the production of oil in commercial quantities.

That in consideration of the foregoing statements, the Petitioner has attached hereto a plat which is marked Exhibit "B", showing the locations of the present producing wells, the depth at which they are producing, the locations of the dry holes and the proposed location; and said Petitioner respectfully requests the Commission to give notice as provided by the rules and regulations of the Commission; that a hearing on this matter be held at the earliest possible date; that said Petitioner be permitted to submit proof in support of this Petition; and that the Commission make and execute all necessary and proper orders in consideration of the premises.

*Keith F. Quail*  
Keith F. Quail - Attorney for  
Petitioner

STATE OF NEW MEXICO    ↓  
                              : ss  
COUNTY OF EDDY        ↓

Comes now Keith F. Quail, attorney for the foregoing Petitioner, C. N. Bassett, who being first duly sworn, states that he has read the foregoing Petition; that the matters and things therein stated are true and correct to the best of his information and belief; and that he makes this verification for and on behalf of said Petitioner for the reason that said Petitioner is not in the County for said purposes.

*Keith F. Quail*

Subscribed and sworn to before me this 23rd day of August, A. D., 1941.

*Joseph A. ...*  
Notary Public

My commission expires: Oct 15, 1941