

May 31, 1950

SANTA FE CITY NEWSPAPER

Santa Fe, New Mexico

Re: Case 224  
Notice of Publication

Gentlemen:

Please publish the enclosed notice once, immediately. Please proof read the notice carefully and send a copy of the paper carrying such notice to this office.

UPON COMPLETION OF THE PUBLICATION SEND PUBLISHER'S AFFIDAVIT IN DUPLICATE.

For payment, please submit statement in duplicate, and sign and return the enclosed voucher.

Very truly yours,

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

R. R. Spurrier  
Secretary-Director

RMS:lw  
encl.

May 31, 1950

Mr. E. H. Greenson  
Box 1302  
Albuquerque, New Mexico

Dear Mr. Greenson:

We are having a hearing on June 14, as per Notice of Publication attached.

We would appreciate it if you could come and take the record, or send a substitute.

Very truly yours,

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

R. R. Spurrier  
Secretary-Director

RRS:bw  
encl.

May 31, 1950

REGENT AND MAIL

FARRINGTON NEWS MUSTER

Farrington, New Mexico

Re: Case 224  
Notice of Publication

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STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

R. R. Spurrier  
Secretary-Director

RNS:bw  
encl.

# Affidavit of Publication

State of New Mexico }  
County of Santa Fe } ss.

**NOTICE FOR PUBLICATION**  
**STATE OF NEW MEXICO**  
**OIL CONSERVATION COMMISSION**  
The State of New Mexico by its Oil Conservation Commission hereby gives notice pursuant to law and the rules and regulations of said Commission promulgated thereunder, of the following public hearing to be held June 14, 1950, beginning at 10:00 o'clock a.m. on that day in the City of Santa Fe, New Mexico, in the Capitol (Hall of Representatives).

**STATE OF NEW MEXICO TO:**  
All named parties in the following case and notice to the public:  
Case 224  
In the matter of application of Amerada Petroleum Corporation for an order for final approval of the Allison Unit Agreement embracing lands located as described in the application in Township 32 north, Range 6 west, and Township 32 north, Range 7 west, N.M.P.M., San Juan County, New Mexico, and other lands located in the State of Colorado, all containing 13,774.22 acres.

Given under the seal of the Oil Conservation Commission of New Mexico, at Santa Fe, New Mexico, on May 31, 1950.  
**OIL CONSERVATION COMMISSION**  
**STATE OF NEW MEXICO**  
R. R. SPURRIER, Secretary

SEAL  
Pub. June 5, 1950

I, Will Harrison, being first duly sworn, declare and say that I am the ~~Business Manager~~ (Editor) of the Santa Fe New Mexican, a daily newspaper, published in the English Language, and having a general circulation in the City and County of Santa Fe, State of New Mexico, and being a newspaper duly qualified to publish legal notices and advertisements under the provisions of Chapter 167 of the Session Laws of 1937; that the publication, a copy which is hereto attached, was published in said paper ~~once each week~~ for 1 time ~~consecutive weeks, and on the same day of each week~~ in the regular issue of the paper during the time of publication, and that the notice was published in the newspaper proper, and not in any supplement, ~~once each week~~ for 1 time ~~week consecutively, the first~~ publication being on the 5th day of June, 1950, ~~and the last publication on the~~ 6th day of June, 1950; that payment for said advertisement has been (duly made), or (assessed as court costs); that the undersigned has personal knowledge of the matters and things set forth in this affidavit.

Will Harrison  
Editor-Manager

Subscribed and sworn to before me this 6th day of June, A.D., 1950  
Anna K. Ormsbee  
Notary Public

My Commission expires  
June 14, 1953

## PUBLISHER'S BILL

34 lines, one time at \$ 3.40  
lines, times, \$  
Tax \$ ~~3.40~~  
Total . . . . \$ 3.40

Received payment,  
By

**LEGAL NOTICE**

**NOTICE FOR PUBLICATION  
STATE OF NEW MEXICO  
OIL CONSERVATION  
COMMISSION**

**AFFIDAVIT OF PUBLICATION**

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STATE OF NEW MEXICO }  
COUNTY OF SAN JUAN } ss.

**STATE OF NEW MEXICO TO:**

Orval Ricketts, being first duly sworn, on oath states: that he is the ~~publisher~~-advertising manager of the Farmington Daily Times, a daily newspaper published, and of general paid circulation in San Juan County, New Mexico, said newspaper being the successor, without interruption, of the Farmington Times Hustler, a weekly newspaper formerly published and of general paid circulation in said County and State, continuously and without interruption, for more than 26 weeks immediately prior to its succession by said daily paper; that said Farmington Times Hustler was, and the Farmington Daily Times is entered and mailed under the second class postal privilege in said County, that being the County in which the notice, of which a copy as published, is hereto attached and made part hereof, is required to be published; that said notice was published in the Farmington Daily Times in the English language once each week for 000 consecutive weeks on the following dates, to-wit:

All named parties in the following case and notice to the public:

Case 224

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Given under the seal of the Oil Conservation Commission of New Mexico, at Santa Fe, New Mexico, on May 31, 1950.

State of New Mexico  
Oil Conservation Commission  
R. R. Spurrier, Secretary  
(SEAL)

Legal No. 142—Published in the Farmington Daily Times, Farmington, N. M., Saturday, June 3, 1950. 4.30

- 1st Publication on the 3 day of June, 1950
- 2nd Publication on the \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_\_
- 3rd Publication on the \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_\_
- 4th Publication on the \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_\_

Orval Ricketts  
Publisher-Advertising Manager

Subscribed and sworn to before me this 5 day of June, 1950

Tax ----- \$ \_\_\_\_\_  
Total ----- \$ 4.30

Lew Smith  
Notary Public

Received payment,

My commission expires: My Commission Expires Feb. 23, 1954  
19\_\_\_\_\_

LEGAL NOTICE

NOTICE FOR PUBLICATION
STATE OF NEW MEXICO
OIL CONSERVATION
COMMISSION

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State of New Mexico
Oil Conservation Commission
R. R. Spurrier, Secretary

(SEAL) Legal No. 142—Published in the Farmington Daily Times, Farmington, N. M., Saturday, June 3, 1950.

AFFIDAVIT OF PUBLICATION

STATE OF NEW MEXICO }
COUNTY OF SAN JUAN } ss.

Orval Ricketts

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- 1st Publication on the 3 day of June, 1950
2nd Publication on the day of , 19
3rd Publication on the day of , 19
4th Publication on the day of , 19

Orval Ricketts
Publisher-Advertising Manager

Subscribed and sworn to before me this 5 day of June, 1950

Lew Smith
Notary Public

Tax \$
Total \$ 4.30

Received payment,

My commission expires: My Commission Expires, Feb. 23, 1954, 19

GENERAL OFFICES  
120 BROADWAY, NEW YORK

**AMERADA PETROLEUM CORPORATION**  
BEACON BUILDING

P. O. BOX 2040

**TULSA 2, OKLA.**

May 16, 1950

*Case  
224*

Re: Allison Unit Area,  
San Juan County, New Mexico  
and LaPlata and Archuleta  
Counties, Colorado

Commissioner of Public Lands  
State Land Office  
Santa Fe, New Mexico

Director, New Mexico Oil  
Conservation Commission  
Santa Fe, New Mexico

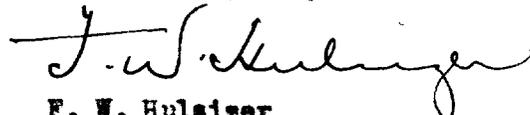
Gentlemen:

There is attached Application for Final Approval of the Allison Unit Agreement embracing lands in the Counties of San Juan, New Mexico and LaPlata and Archuleta, Colorado. Also attached is cashiers check on The First National Bank and Trust Company, Tulsa, Oklahoma, in the amount of \$155.00, payable to the order of the Commissioner of Public Lands, to cover the required filing fee.

Submission of executed counterparts of the Unit Agreement is being deferred, inasmuch as we are continuing in our efforts to secure the signatures of those owners of royalty interest who have not as yet consented to unitization.

It is respectfully requested that a hearing on this application be held at the earliest possible date, at which time executed counterparts of the Unit Agreement will be submitted. It is also requested that you advise this office as to the date and time set for such hearing in order that your applicant may have representatives present.

Very truly yours,



F. W. Hulsizer  
Land Department

FWH:vp  
Encls.



Exhibit  
A



Tulsa, Oklahoma  
June 17, 1955

Geological Report  
Huerfanito Unit  
San Juan County,  
New Mexico

The following geological information is submitted in support of Skelly Oil Company's contention that on the basis of present data there is no proof that the Pictured Cliffs gas wells in the southern portion of the Huerfanito Unit area are producing from a different or separate reservoir than the wells in the northern portion of the Unit area.

We have on hand Mr. Albert R. Greer's engineering report concerning the Huerfanito Unit, which was prepared for Mr. J. Glenn Turner.

Mr. Greer's report attempts to show that the southern and northern gas wells in the Unit area are producing from separate Pictured Cliffs reservoirs. Mr. Greer's argument consists of two major parts: (1) The difference in initial shut-in pressures between the northern as opposed to southern wells; (2) Two electric log cross-sections between the south end of the Ballard Field and the South Blanco Field, said cross-sections being 2-1/2 to 6 miles respectively east of the Huerfanito Unit area. These cross-sections each include one dry hole apiece, which Mr. Greer presents as proof that an impermeable barrier separates the northern and southern portions of the Huerfanito Unit some 2-1/2 to 6 miles northwestward.

As every geologist knows, there are many oil and gas fields within which dry holes occur as a result of detrimental lithologic factors in the reservoir formation. In the particular case of the Pictured Cliffs sandstone one, two, or even several dry holes widely separated from each other are not conclusive evidence that the same lithologic conditions in the reservoir formation will continue for any determinable distance in any direction.

As Mr. Greer shows in his cross-sections, and as is commonly known by all practicing San Juan Basin geologists, the Pictured Cliffs sandstone is an erratically developed formation as to

thickness, cleanness and permeability. From one location to the next, it is often difficult to predict the conditions that will be encountered. It is true that in general the Pictured Cliffs sandstone production has been developed along northwest-southeast trending lines, but as development has progressed in the older areas, originally separated patches of development have grown together to form a continuous field. For example, the Fulcher-Kutz and South Kutz Canyon fields merge in the southwest part of T27N, R10W, and the northwest part of T26N, R10W (see Enclosure "B"). Not long ago a cross section could have been drawn through a dry hole or two in that area and offered as proof that these two fields would always remain separated throughout their entire length.

On Exhibit "G" of Mr. Greer's report is a cross hatched area in green, which he says represents the "approximate location of impermeable barrier separating Ballard Field from South Blanco Field". This barrier extends into the Huerfanito Unit area and separates the northern producing wells from the southern producing wells in the Unit. Mr. Greer admits (see Paragraph 4, Page 7, of this report) that it is impossible to determine the exact location or width of this barrier.

It is the Skelly Oil Company's contention that the "barrier" as proposed by Mr. Greer may not even be completely valid in the area between the Ballard and South Blanco fields and certainly cannot be projected into the Huerfanito Unit area on the basis of two dry holes 2-1/2 and 6 miles respectively east of the Unit area.

The dry holes which exist in this region can only be said to reflect extremely local conditions and their use for determining conditions miles away is inconsistent with the known lithologically erratic nature of the Pictured Cliffs sandstone.

It is Skelly's contention that in general failure of the Pictured Cliffs interval to produce is not simply lack of permeability in the sandstone, as Mr. Greer states on Page 3 of his report, but is much more closely related to the amount of actual sand present in the section.

Mr. Greer states in Part III on Page 3 of his report that the Pictured Cliffs sandstone is a "blanket deposit". He is only partially correct. The Pictured Cliffs interval is a blanket deposit, but the Pictured Cliffs sandstone is not a blanket deposit.

You are referred to Mr. Greer's own Cross Sections in which he very definitely and correctly shows that the Pictured Cliffs sandstone is not a blanket deposit but a highly erratic lenticular type of sandstone development in a fairly uniform overall interval.

Those areas of reservoir type sandstone are probably strand-line shore-line type deposits and as such are only erratically traceable and continuous. Every student of shore lines where deposition is now taking place (such as on the Gulf Coast) knows that such deposits are erratic both vertically and geographically. Shore lines and strand lines are cut by stream channels and tidal gaps; are crooked and influenced by shore line topography such that a sand deposit may bend 90 degrees or more in its horizontal path; are influenced by long-shore currents; and changed by differences in the source areas and hydraulic carrying agents.

So it is not difficult to see that, although the Pictured Cliffs sandstone development in general follows northwest-south east trends, limiting any one of these trends in any direction is pure guesswork if based on the present density of control.

The Skelly Oil Company, in developing its leases in the northeastern corner of T27N, R9W, has found that offsetting wells may vary in ability to produce gas by several million cubic feet and this variation is directly related to the amount of sandstone present in the section and not to any difference of permeability in the sandstone which is present. Such permeability differences do exist, but they are not a prime factor influencing Pictured Cliffs production in the San Juan Basin.

Admittedly, dry holes occur in and around the Huerfanito Unit area, but that they prove complete separation of the Unit area is highly questionable. More tests would have to be drilled within the Unit area before positive conclusions could be drawn.

Enclosure "B" shows the traces of three cross-sections, A-A' (Enclosure C); B-B' (Enclosure D); C-C' (Enclosure E).

Enclosure D is a northeast-southwest cross-section through the Huerfanito Unit. This cross-section shows the Pictured Cliffs to be a continuous commercially producible bed completely across the Unit area from north to south. The Magnolia #1 Crandall dry hole in the NE4 NE4 Section 3, T26N, R9W never tested the Pictured Cliffs sandstone and Mr. Greer agrees (see Paragraph 4, Page 7 of his report) that the electric log indicates that the Pictured Cliffs in that well would in all likelihood be commercially productive.

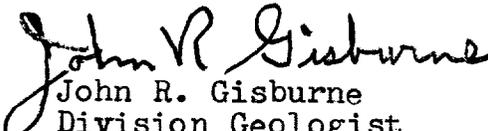
Enclosure E includes the Southern Union #1 Starr in Section 6, T26N, R8W, which lies about mid-way between the South Blanco Field and the Ballard Field and is a commercially productive gas well. This well is much closer to the Huerfanito Unit than those used by Mr. Greer in this cross-sections, and from Enclosure E of this

report, it would appear that there is little interruption of the productive Pictured Cliffs sandstone between the northern and southern portions of the Huerfanito Unit. Mr. Greer carefully avoids this well with his "impermeable barrier" although for a distance of 2-1/4 to 2-1/2 miles in any direction from it there are no dry holes.

Our Enclosure C shows a dry hole between the Fulcher-Kutz field and the South Kutz Canyon field. An attempt to use this as proof that complete separation of these two fields exists (as Mr. Greer has done with his cross-sections "Exhibits 'H' and 'I'" between the Ballard and South Blanco fields) could easily be demolished by constructing a parallel cross-section which would include the producing wells in Sections 28 and 32, T27N, R10W.

The Skelly Oil Company believes that the dry holes within the Unit area are a reflection of local changes in the original deposition of the sand body and that they cannot at this time, be used as evidence to condemn or separate any extensive areas of the Huerfanito Unit.

Mr. Greer's arguments pertaining to the pressure differentials observed within the Huerfanito Unit area will be answered by Skelly Oil Company's reservoir engineers in a separate report.

  
John R. Gisburne  
Division Geologist  
Skelly Oil Company

JRG:bjs

ENCLOSURE

B

