

CASE 2445: Application of SOUTH-
WEST PROD. CO. for an order extend-
ing FLORA VISTA-MESAVERDE POOL.

*John -
Pls see that a
PK of this letter
of copy - promissory
order*

*West -
Pls see that a
PK of this letter
of copy - promissory
order*

- a 5a // 0.

2445

lication, Transcript,
all Exhibits, Etc.

GOVERNOR
EDWIN L. MECHEM
CHAIRMAN

State of New Mexico
Oil Conservation Commission

LAND COMMISSIONER
E. S. JOHNNY WALKER
MEMBER



STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR

P. O. BOX 871
SANTA FE

December 21, 1961

Mr. George Verity
Verity, Burr & Cooley
Attorneys at Law
152 Petroleum Center Building
Farmington, New Mexico

Re: Case No. 2445
Order No. R-2144
Applicant:
Southwest Production Company

Dear Sir:

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Very truly yours,

A handwritten signature in cursive script, reading "A. L. Porter, Jr.", is written over the typed name.

A. L. PORTER, Jr.
Secretary-Director

ir/

Carbon copy of order also sent to:

Hobbs OCC X

Artesia OCC

Aztec OCC X

OTHER

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. 2445
Order No. R-2144

APPLICATION OF SOUTHWEST PRODUCTION
COMPANY FOR AN ORDER EXTENDING THE
FLORA VISTA-MESAVERDE GAS POOL, SAN
JUAN COUNTY, NEW MEXICO, AND ESTAB-
LISHING SPECIAL RULES AND REGULATIONS
IN SAID POOL.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on November 29, 1961, at Santa Fe, New Mexico, before Daniel S. Nutter, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 21st day of December, 1961, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Daniel S. Nutter, 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 applicant, Southwest Production Company, seeks the establishment of Special Rules and Regulations in the Flora Vista-Mesaverde Gas Pool, San Juan County, New Mexico, including a provision for 320-acre units in said pool.

(3) That the applicant further seeks the extension of the Flora Vista-Mesaverde Gas Pool to include all of Sections 22, 23, 26, and 27, all in Township 30 North, Range 12 West, NMPM, San Juan County, New Mexico.

(4) That the evidence indicates that the permeability and drainage characteristics of the Mesaverde formation in the subject area are probably better than in other areas throughout the San Juan Basin where 320-acre drilling and proration units have been established in the Mesaverde formation.

IT IS THEREFORE ORDERED:

(1) That the Flora Vista-Mesaverde Gas Pool is hereby extended to include all of Sections 22, 23, 26, and 27, all in Township 30 North, Range 12 West, NMPM, San Juan County, New Mexico.

(2) That Special Rules and Regulations for the Flora Vista-Mesaverde Gas Pool are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS
FOR THE FLORA VISTA-MESAVERDE GAS POOL

RULE 1: Each well completed or recompleted in the Mesaverde formation within one mile of the boundary of the Flora Vista-Mesaverde Gas Pool and not nearer to nor within the boundaries of another designated Mesaverde gas pool, shall be drilled, spaced, and produced in accordance with the special rules and regulations hereinafter set forth.

RULE 2(a): A standard gas proration unit in the Flora Vista-Mesaverde Gas Pool shall be 320-acres comprising any two contiguous quarter sections of a single governmental section, being a legal subdivision (half section) of the United States Public Lands Survey.

RULE 2(b): The Secretary-Director of the Commission shall have authority to grant an exception to Rule 2(a) without notice and hearing where an application has been filed in due form and where the unorthodox size or shape of the tract is due to a variation in the legal subdivision of the United States Public Land Survey, or where the following facts exist and the following provisions are complied with:

(1) The non-standard unit consists of contiguous quarter-quarter sections or lots.

(2) The non-standard unit lies wholly within a single governmental section.

(3) The entire non-standard unit may reasonably be presumed to be productive of gas from the Flora Vista-Mesaverde Gas Pool.

(4) The length or width of the non-standard unit does not exceed 5280 feet.

(5) The applicant presents written consent in the form of waivers from all offset operators and from all operators owning interests in the section in which any part of the non-standard unit is situated and which acreage is not included in said non-standard unit.

-3-

CASE No. 2445
Order No. R-2144

(6) In lieu of Paragraph 5 of this Rule, the applicant may furnish proof of the fact that all of the aforesaid operators were notified by registered mail of his intent to form such non-standard unit. The Secretary-Director of the Commission may approve the application if, after a period of 30 days following the mailing of said notice, no such operator has made objection to the formation of such non-standard unit.

RULE 3(a): Each well completed or recompleted in the Flora Vista-Mesa Verde Gas Pool shall be located no nearer than 790 feet to the outer boundary of the unit and shall be located no nearer than 130 feet to a governmental quarter-quarter section line or subdivision inner boundary line. Further tolerance shall be allowed by the Commission only in cases of extremely rough terrain where compliance would necessarily cause an undue increase in drilling costs.

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

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

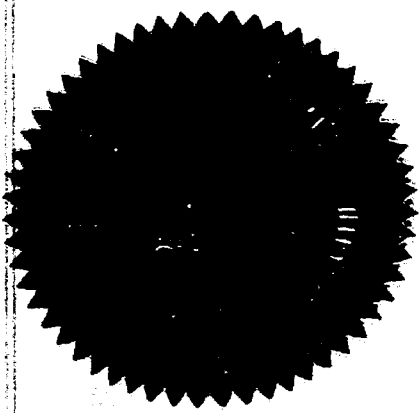
STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION



EDWIN L. MECHEM, Chairman


E. S. WALKER, Member

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



esx/

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Date 12-7-61

CASE 2445

Hearing Date 9am 11/29/61

DSN @ SF

My recommendations for an order in the above numbered cases are as follows:

Enter an order approving 320 acre drilling units in the Hara Vista Mesaverde Pool. Specify that wells shall be drilled in accordance with an identical rule to Rule 2 for the Blanco-MV ^{Play} ~~unit~~ ^{the units may} be the N/2, S/2, E/2, or W/2 of the section. Also extend the Pool to include all of Secs 22, 23, 26 and 27.

Base spacing of 320 on finding that 320 has been adapted for the MV formation throughout the basin and the permeability and drainage characteristics of this area are, if anything, better than the average of the remainder of the MV ^{Staff} ~~formation~~

VERITY, BURR & COOLEY
ATTORNEYS AND COUNSELORS AT LAW
SUITE 152 PETROLEUM CENTER BUILDING
FARMINGTON, NEW MEXICO

October 27, 1961

TELEPHONE 325-1702

GEO. L. VERITY
JOEL B. BURR, JR.
WM. J. COOLEY
NORMAN S. THAYER

Case 2445

Oil Conservation Commission
Land Office Building
Santa Fe, New Mexico

Gentlemen:

Our File 1320-L

Enclosed herewith is application for spacing the
Flora Vista-Mesa Verde 320 acres.

We will appreciate your filing the same and we have
no objection to the matter being heard before the
trial examiner.

Very truly yours,

VERITY, BURR & COOLEY

By

[Signature]
Geo. L. Verity

GLV:mts
Encs.

cc: Emery Arnold
Southwest Production
El Paso Natural Gas

*Docketed
Mailed
11-16-61*

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF -)
THE APPLICATION OF SOUTHWEST PRODUCTION)
COMPANY, a co-partnership consisting of)
JOHN H. HILL and JOSEPH P. DRISCOLL,)
FOR AN ORDER ENLARGING THE FLORA VISTA-)
MESA VERDE GAS POOL TO INCLUDE ALL OF)
Sections 22, 23, 26 and 27, Township)
30 North, Range 12 West, N.M.P.M., SAN)
JUAN COUNTY, NEW MEXICO, and FOR AN)
ORDER PROVIDING FOR 320 ACRE GAS PRO-)
RATION UNITS IN SAID POOL.)

Case No. 2445

A P P L I C A T I O N

Verity & Cooley
Comes now the applicant, Southwest Production Company, a co-partnership consisting of John H. Hill and Joseph P. Driscoll, and states:

1. That applicant is the owner of the following described gas wells which have been drilled and completed as commercial wells in the Flora Vista-Mesa Verde formation at the locations indicated, to-wit:

Irene Brown No. 1 well, located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 22, Township 30 North, Range 12 West;

Hewlett No. 1 well, located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 23, Township 30 North, Range 12 West;

Carl Hudson No. 1 well, located in the NW $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 26, Township 30 North, Range 12 West;

Paul Palmer No. 1 well, located in the NW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 26, Township 30 North, Range 12 West.

Applicants further allege that in addition to the above described wells the following described wells have been drilled and completed in the Flora Vista-Mesa Verde formation:

J. Glen Turner-Osborn No. 1-22 well, located in the SW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 22, Township 30 North, Range 12 West;

VERITY, BURR
& COOLEY
ATTORNEYS AT LAW
152 PETROLEUM
CENTER BUILDING
FARMINGTON,
NEW MEXICO

Monsanto Chemical Company-Northwest Production Company Unit No. 1 well, located in the NE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 23, Township 30 North, Range 12 West.

Applicant further alleges that Pan American Petroleum Corporation is, at this time, drilling:

Stedje No. 1 well, located in the NE $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 27, Township 30 North, Range 12 West, and are advised that such well is to be completed as a Flora Vista-Mesa Verde well.

2. That the New Mexico Oil Conservation Commission recently has entered an Order designating the following described land as being included within the Flora Vista-Mesa Verde pool, to-wit:

The South Half (S $\frac{1}{2}$) of Section 22
The South Half (S $\frac{1}{2}$) of Section 23
The West Half (W $\frac{1}{2}$) of Section 26
The Northeast Quarter (NE $\frac{1}{4}$) of Section 27

All in Township 30 North, Range 12 West

3. That the Mesa Verde formation is found in the Flora Vista-Mesa Verde pool between the depths of 3300 and 3500 feet, and that it costs the approximate sum of \$60,000.00 to drill and complete a well in such formation.

4. That one well drilled into the above described Flora Vista-Mesa Verde formation will adequately, efficiently and economically drain an area of 320 acres, and this Commission should enter an Order providing for 320 acre gas proration units for said pool. That said Order should provide that each governmental 640 acre section may be divided into two gas proration units consisting of either the North Half (N $\frac{1}{2}$) and the South Half (S $\frac{1}{2}$), or in the alternative, the East Half (E $\frac{1}{2}$) and the West Half (W $\frac{1}{2}$) of such sections as the owners of the working interest may desire.

5. That drilling more than one well to each 320 acres in

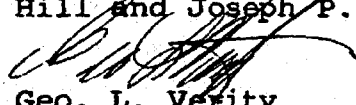
the above described pool will cause waste and that granting an Order providing for 320 acre gas proration units in said pool will prevent waste and protect the correlative rights of the parties in interest in said pool.

6. That all of Sections 22, 23, 26 and 27 are underlain with the Flora Vista-Mesa Verde sand formation and that all of said four sections should be included in the Flora Vista-Mesa Verde pool.

7. That the names and addresses of those parties known to be interested in the subject matter of this application so far as known to applicant are set out in Exhibit "A" attached hereto and made a part hereof.

WHEREFORE, applicant prays that this Application be set down for hearing, that due notice thereof be given in accord with the Rules of this Commission and the Laws of the State of New Mexico; that upon hearing such application and from the evidence to be adduced, the Commission enter an Order enlarging the Flora Vista-Mesa Verde gas pool to include all of Sections 22, 23, 26 and 27, all in Township 30 North, Range 12 West, and granting 320 acre gas proration units for said Flora Vista-Mesa Verde pool; and providing that each governmental 640 acre section shall be divided into two gas proration units consisting of either the North Half ($N\frac{1}{2}$) and the South Half ($S\frac{1}{2}$), or in the alternative, the East Half ($E\frac{1}{2}$) and the West Half ($W\frac{1}{2}$) of the section, and further promulgating such rules and regulations with regard to drilling for and the production of gas from said well as may be necessary to prevent waste and protect the correlative rights of the parties.

SOUTHWEST PRODUCTION COMPANY
a co-partnership consisting of John
H. Hill and Joseph P. Driscoll,

By 
Geo. L. Verity
Verity, Burr & Cooley
Its Attorney

VERITY, BURR
& COOLEY
ATTORNEYS AT LAW
152 PETROLEUM
CENTER BUILDING
FARMINGTON,
NEW MEXICO

EXHIBIT "A"

J. Glen Turner

19th Floor
Mercantile Dallas Building
Dallas, Texas

Monsanto Chemical Company

1310 Denver Club Building
Denver 2, Colorado

Pan American Petroleum
Corporation

Petroleum Center Building
Farmington, New Mexico

*Doyle
mailed
11-16-61*

OFF. 325-8093
RES. 327-9094

J. GREGORY MERRION
PETROLEUM ENGINEER
P. O. BOX 807
FARMINGTON, NEW MEXICO 87401

July 19, 1972

New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico 87501

Attn: Mrs. Ida Rodriguez

Dear Mrs. Rodriguez,

Thank you for the Transcript of Hearing of Case No. 2445. We have made copies and the original is being returned.

Yours truly,


J. Gregory Merrion

JGM/car

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico

November 29, 1961

EXAMINER HEARING

IN THE MATTER OF:

Application of Southwest Production Company
for an order extending the Flora Vista-
Mesaverde Pool, San Juan County, New Mexico,
and establishing special rules and regula-
tions in said pool. Applicant, in the above-
styled cause, seeks an order extending the
Flora Vista-Mesaverde Pool to include Sec-
tions 22, 23, 26 and 27, all in Township
30 North, Range 12 West, San Juan County,
New Mexico, and establishing special rules
and regulations including a provision for
320-acre spacing units in said pool.

CASE NO. 2445

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

EXAMINER NUTTER: The Hearing will come to order, please.
We will call Case No. 2445.

MR. WHITFIELD: Application of Southwest Production
Company for an order extending the Flora Vista-Mesaverde Pool,
San Juan County, New Mexico, and establishing special rules and
regulations in said pool.

MR. VERITY: George L. Verity, Verity, Burr and Cooley,
Farmington, representing the Applicant. We have one witness,
Mr. Leon Wiederkehr.

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325.1182

ALBUQUERQUE, N. M.
PHONE 243.6691



DEARNLEY-MEIER REPORTING SERVICE, Inc.
 FARMINGTON, N. M.
 PHONE 325.1182

ALBUQUERQUE, N. M.
 PHONE 243.6691

(Witness sworn.)

MR. VERITY: This is an application for spacing on the Flora Vista-Mesaverde formation. We are requesting 320-acre spacing with regard to the proration unit.

LEON WIEDERKEHR,

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

DIRECT EXAMINATION

BY MR. VERITY:

Q Will you please state your name?

A Leon Wiederkehr.

Q Mr. Wiederkehr, have you testified before this Commission heretofore as an expert oil and gas proration reservoir engineer?

A Yes, sir, I have.

Q I believe you have a degree in physics?

A That's right.

Q And you are familiar with the reservoir and oil-gas characteristics of the Flora Vista-Mesaverde oil-gas pool in San Juan County, New Mexico?

A Yes, sir.

Q Have you studied the logs and the geological information in Section 22, 23, 26 and 27 of Township 30 North, Range 12 West?

A Yes, sir, I have.

Q Have you familiarized yourself with the Mesa Verde



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

ALBUQUERQUE, N. M.
PHONE 243-6691

formation underlying those four sections?

A Yes, sir.

Q Do you have an opinion as to whether or not the Mesaverde formation does underlie those entire four sections?

A I believe it does.

Q Do you think that it will be productive underlying the entire four sections?

A Yes, sir, I do.

(Applicant's Exhibits 1, 2,
and 3 marked.)

Q (by Mr. Verity) Mr. Wiederkehr, I hand you what the reporter has marked Exhibit 1. Will you tell us what it is, please.

A This is a plat, showing the four sections concerned in this application, Sections 22, 23, 26 and 27, Township 30 North, Range 12 West. It shows the Mesaverde wells in this pool and also the Dakota wells. Also, it indicates on the bottom, the one dual Mesaverde well.

Q Which is the dualled well?

A The well in Section 27, the Pan American **Stedje # 1**

Q I notice you have circle marks drawn on here. What was the purpose of those marks upon Exhibit 1?

A The circles drawn around the **J. . Glen Turner No. 1**, the Turner-Osborne well in the pool, using a radius through the Pan American **Stedje** well, which is approximately --



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 323-1162

ALBUQUERQUE, N. M.
PHONE 243-6691

Q Without going into them in detail at this time, were they drawn on the exhibit for the purpose of showing drainage areas?

A Yes.

Q Do you have information which will be presented that demonstrates why you have this much drainage?

A Yes. We have pressure information that I will present.

Q I hand you now what the reporter has marked as Exhibit 2. Will you please tell us what it is?

A This is a graph plotting our pressure decline, pressure against time, using initial shut-in pressures from drillstem tests on the wells shown on this plat in the Flora Vista-Mesa-verde pool. The dotted line suggests pressure decline with time. The key at the bottom of the map identifies each of these wells and gives the initial shut-in pressure as recorded on drillstem tests on each of these wells.

Q Is there anything peculiar about this pool with regard to how many of the wells are producing in it?

A There is only one well producing in it.

Q Although there have been how many wells completed?

A There have been seven wells completed in these four sections. Only six of them are shown. The seventh one was a recompletion from a Dakota well and the information is not available. The bottomhole pressure information was not available to me.



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1112

ALBUQUERQUE, N. M.
PHONE 243-6691

Q You have only one well completed in the pool?

A That is correct, up to the end of September. We may have had some completed since September, but I don't have any information on that.

Q I notice on the lefthand side of your graph you have numbers. What do these represent?

A Those are pressures.

Q On the bottom of your graph running toward the right, you have months to designate time of completion.

A Time of drillstem test pressure which we used in this graph.

Q Do you have any comments to make with regard to the pressure taken in the No. 1 Glen Turner well?

A When it was drilled, it blew out and was out of control for some two days, topping up and around in an abandoned well, blowing through a seven-inch line. It was two days before it was controlled. Then this drillstem test was run and recorded a bottomhole pressure of 1535 pounds. We think it's a safe assumption that if the virgin pressure had been recovered before this blowout, this pressure would have been higher.

Q Although you couldn't predict it, you think it probably would have been above the decline you have drawn on Exhibit 2?

A It would have been, yes. Well No. 2 was tested some three or four months later about a mile and a half away and recorded a higher bottomhole pressure than this discovery well which



blew out. Consequently, we had a chance to lower the bottomhole pressure at the core hole. I think it did reduce then that initial shut-in pressure on drillstem test.

Q I notice that the wells you have designated as 3, 4, 5 and 6 are all considerably lower in initial pressure than the first two wells.

A That is correct.

Q What is the amount of decline in the initial pressure in the later wells than you found in the original well, the J. Glen Turner?

A We recorded 1535 from this drillstem test. These subsequent wells were drillstem tested in September and October and show a drop in bottomhole pressure of, well, in the neighborhood of 50 pounds.

Q With only one well in the pool producing, that being the J. Glen Turner well, how do you account for the lower production in the other four wells when it's in the same common source of supply?

A You use the word "production". I believe that the Glen Turner is the only one that has been on production. Would you re-state your question please?

Q How do you account for the fact that wells that were brought in September and October have a lower bottomhole pressure than the J. Glen Turner and the Southwest Production Company Well No. 1, the Smith well?



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

ALBUQUERQUE, N. M.
PHONE 243-6691

A The Smith well was tested before the Turner well. In May the Glen Turner well went on production and has produced quite prolifically. I feel that production from the Glen Turner well has reduced the reservoir pressure throughout the field and that accounts for these lower bottomhole pressures, shut-in pressures on these succeeding wells which were tested after the Glen Turner well had been on production from the first of May.

Q Would you anticipate if the virgin reservoir pressure were tested on each of these six wells that it would be the same or very close to the same if there had been no production from the pool?

A I should think it would have been the same. I think we have been able to establish continuity across, between these wells. They have all been set up as a Flora Vista-Mesaverde pool by previous order of the Commission.

Q I hand you now what the reporter has marked Exhibit 3. Will you tell us what it is, please?

A This is the bottomhole pressure survey run on our Hewlett Smith just two days ago, on the 27th of November.

Q Now, is this the well that you have on Exhibit 2 as Well No. 2 that you completed in the month of April?

A Yes.

Q Will you tell us, please, what the bottomhole pressure of this well was and relate it to the initial bottomhole pressure of the well?



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

ALBUQUERQUE, N. M.
PHONE 243-6691

A Let's go back to April when this Hewlett Smith well was first tested. We recorded a bottomhole pressure of 1570 pounds. The well was then tested and cleaned but never produced. It then had been shut-in from April, has been shut-in since April. Some seven months later, this bottomhole pressure, which is Exhibit 3, was taken and we recorded a bottomhole pressure of 1540 pounds, showing a decline over that seven-month period of 30 pounds, though the well had never gone into production. It had only been tested.

Q Do you have an opinion as to whether or not that demonstrates that the J. Glen Turner No. 1, the Osborne well is draining gas from under the Southwest Production Smith Well No. 1?

A I feel it is reducing the pressure on over in the Hewlett. I think that's the only explanation for the 30-pound decline in pressure, since the Hewlett Smith has never been produced.

Q What is the distance from the J. Glen Turner to Southwest Production's Hewlett Smith?

A 7700 feet.

Q What is the distance between the J. Glen Turner well and the well stake?

A Approximately 2600 feet.

Q What do these declining pressures and drainage radii show you with regard to the area that one well in this pool will



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182ALBUQUERQUE, N. M.
PHONE 243-6691

effectively drain?

A The completed circle drawn around the Osborne, and at the radius, shows some 40 pounds lower bottomhole pressure in the Stedje as compared to the Glen Turner-Osborne.

Q And what is the area encompassed within a circle with that radius with the J. Glen Turner well?

A Approximately 500 acres.

Q What area would be drained with the radii between the Turner well and Southwest Production Company's No. 1 Smith?

A It would be more than four square miles. The circle is in the neighborhood of six square miles, as a matter of fact.

Q Would you say, then, that one well to each 320 would definitely drain the gas from under this pool?

A I would say it would adequately drain the gas from there.

Q Mr. Wiederkehr, do you know the approximate cost of drilling and completing a well to the Mesaverde formation in this pool?

A We experienced some \$60,000 on the Hewlett Smith No. 1.

Q Have you made any study with regard to reservoir recoveries that might be expected in the average well in this pool?

A The sand thickness varies between wells. I have come up with a return of three-to-one with wells drilled on 320 acres.

Q What return would this give you if only 160-acre spacing were used in accord with general orders?

A Well, that would cut the return down to one and a half,



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

ALBUQUERQUE, N. M.
PHONE 243-6691

which, extended over a period, would look somewhat mechanical.

Q Do you think it is economic to develop on 320-acre spacing?

A Yes.

Q But not on 160?

A That's correct.

Q Do you have any recommendations to make to the Commission with regard to how sections be divided if they enter a 320-acre spacing order?

A In view of the wells that are already drilled, I think it would be wise to leave it to the operators' choice to dedicate either the east unit or west unit or north unit or south unit.

Q In other words, to allow the operators in each section to determine whether they divide it with a line running north-south through the center section or line running east-west?

A Yes. I think it should be left to the operators' choice.

Q Do you have any recommendation to make to the Commission with regard to a spacing pattern if they okay a 320-acre spacing?

A I think the rules applicable to other wells of the Mesaverde or Dakota spacing from the lease line should follow the space-wide pattern.

Q Do I understand that to mean that you feel the well operator should be allowed to drill any place in these 320-acre spaces so long as they comply with general Commission orders re-



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

ALBUQUERQUE, N. M.
PHONE 243-6691

garding spacing from lease lines?

A That is correct.

MR. VERITY: We offer Exhibit 1, 2, and 3 in evidence.

EXAMINER NUTTER: Southwest Production Company Exhibits 1, 2, and 3 will be admitted in evidence.

MR. VERITY: I believe that's all.

EXAMINER NUTTER: Are there any questions of Mr. Wiederkehr?

CROSS EXAMINATION

BY MR. MORRIS:

Q Mr. Wiederkehr, I realize that the Commission has established Flora Vista-Mesaverde as a separate pool. Do you feel the possibility exists that it could eventually become joined with the Blanco-Mesaverde?

A No, sir. I do not feel that at all.

Q Then, you see no danger in establishing special rules and regulations for this pool that would be different from those of the Blanco-Mesaverde?

A If you are speaking in terms of drilling in the Northeast and Southwest quarters -- is that it?

Q That's part of it, yes, sir.

A The wells already drilled would conflict with such a pattern as that.

Q Some of them would require exceptions, anyway?

A Yes, sir.



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1132

ALBUQUERQUE, N. M.
PHONE 243-6691

MR. VERITY: We feel this spacing would promote the greatest ultimate recovery if it was permitted.

Q (by Mr. Morris) You state it to be your opinion that you believe that the 320-acre proration units in this pool would be sufficient to efficiently and economically drain, be drained and developed by one well on each proration unit of that size?

A Yes, sir. I think we have established that the Glen Turner-Osborne well has decreased pressures at a distance sufficient to show communication over the interval that would encompass more than 320 acres.

Q Do you believe that shows communication and is enough to show that you can get efficient and economic drainage? I agree with you that it shows communication. Do you think it shows efficient drainage?

A I think it would efficiently drain the 320 acres. Most of these wells are normal completions so we think the wells will drain a considerable area in contrast to most Blanco-Mesaverde wells which require hydraulic fracturing.

CROSS EXAMINATION

BY EXAMINER NUTTER:

Q What are the potentials on these six wells completed in here? How about the Turner well?

A IP was 5,988 MCF.

Q How about the Smith?

A 4246.



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

ALBUQUERQUE, N. M.
PHONE 243-6691

Q And the Brown?

A 1741.

Q And the Palmer No. 1?

A 3739.

Q And the Hudson No. 1?

A 1845.

Q And the Stedje?

A I don't know whether the potential has been filed with the Commission or not. We received reports from Pan American on the well as it progressed. The last report I had on it, it was 8155.

Q It may be bigger than the previously-completed well?

A Yes, sir, it would suggest that.

Q How much has that Turner well produced through August of this year, do you know?

A Through September 31st, it produced 524,697 MCF.

Q Do you know if any pressure has been taken on that well since the drillstem test pressure was taken shortly after the well blew out?

A No, sir, I do not know that. That was the only well being produced during this time.

Q This was a drillstem test of pressure?

A Yes, sir. All the pressures shown on the graph are initial shut-in pressures recorded on drillstem tests.

Q This is the only bottomhole pressure that has been



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1192ALBUQUERQUE, N. M.
PHONE 243-6691

made of any well?

A That's the only one that I know of. We ran one on another well by mistake. That bottomhole pressure was taken so soon after the completion of the well that it would not be of any interest in this case.

Q Was it the Flora Vista-Mesaverte?

A Yes, sir, on the Brown well.

Q What did that pressure record?

A I don't recall what it was. We had the pressure run by mistake on that well. I wanted it on the Hewlett Smith because we had some production from the Glen Turner well and there was very little time for production between our initial pressure and the one that we would have gotten. The other day I was looking for pressure on a well after the Glen Turner well had produced so that if there was any decline we could see the decline.

Q Did the pressure which was taken accidentally on the Brown show a decline in pressure?

A It was something less than our drillstem test pressure. It was not many pounds less. They had not time for much production from the Glen Turner well, so I did not consider that useful in this case.

Q Has it been your experience, Mr. Wiederkehr, that pressure surveys were run at a number of depths in grade are more reliable than drillstem pressures?

A I couldn't say one way or the other. The people who



DEARNLEY-MEIER REPORTING SERVICE, Inc.
 FARMINGTON, N. M.
 PHONE 325-1182

ALBUQUERQUE, N. M.
 PHONE 243-6691

ran this test - which pressure recording device had .2 of 1 percent or less error.

Q Normally, you would expect that a normal pressure survey would be more reliable than a shut-in pressure taken on a drillstem test, wouldn't you?

A I should think so. There are variables in a drillstem test. I think the bottomhole pressure is run with the well shut-in, such as in Exhibit 3, is more reliable than a drillstem test.

Q Is the Turner the only well still connected, or is it still the only well disconnected?

A It is the only well that has produced to the end of September. The Monsanto Chemical well may or may not be on production. It wasn't on production at the end of September.

Q Are any of Southwest Production Company wells on production?

A No, sir. They are complete but have not been produced.

EXAMINER NUTTER: Are there any further questions of Mr. Wiederkehr?

REDIRECT EXAMINATION

BY MR. VERITY:

Q Mr. Wiederkehr, any possible error in those drillstem tests would not be sufficient to distort the general proof regarding drainage across the areas demonstrated in Exhibits 1 and 2, would they?

A I think not. However, let me suggest an error of one



percent or less in there about the bottoms. One percent in 1500 pounds is not too much.

MR. VERITY: That's all.

EXAMINER NUTTER: Are there any other questions of Mr. Wiederkehr?

MR. VERITY: Mr. Guy Buell, who is trying to confer with his office in Ft. Worth, asked me to announce to the Commission if he didn't get back in time, that his company, Pan American, supported this application and requested the Commission to grant it.

EXAMINER NUTTER: Thank you.

MR. VERITY: We have nothing further in this case.

EXAMINER NUTTER: The witness may be excused.

(Witness excused.)

EXAMINER NUTTER: Does anyone have anything they wish to offer in Case No. 2445?

The case will be taken under advisement.

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

ALBUQUERQUE, N. M.
PHONE 243-6691



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

ALBUQUERQUE, N. M.
PHONE 243-6691

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

I, THOMAS F. HORNE, NOTARY PUBLIC in and for the County of San Juan, State of New Mexico, do hereby certify that the foregoing and attached transcript of hearing was reported by me in stenotype and that the same was reduced to typewritten transcript under my personal supervision and contains a true and correct record of said proceedings, to the best of my knowledge, skill and ability.

Thomas F. Horne
NOTARY PUBLIC

My Commission Expires:
October 2, 1965

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2445 heard by me on 11/29, 1961.
[Signature], Examiner
New Mexico Oil Conservation Commission



SOUTHWEST PRODUCTION

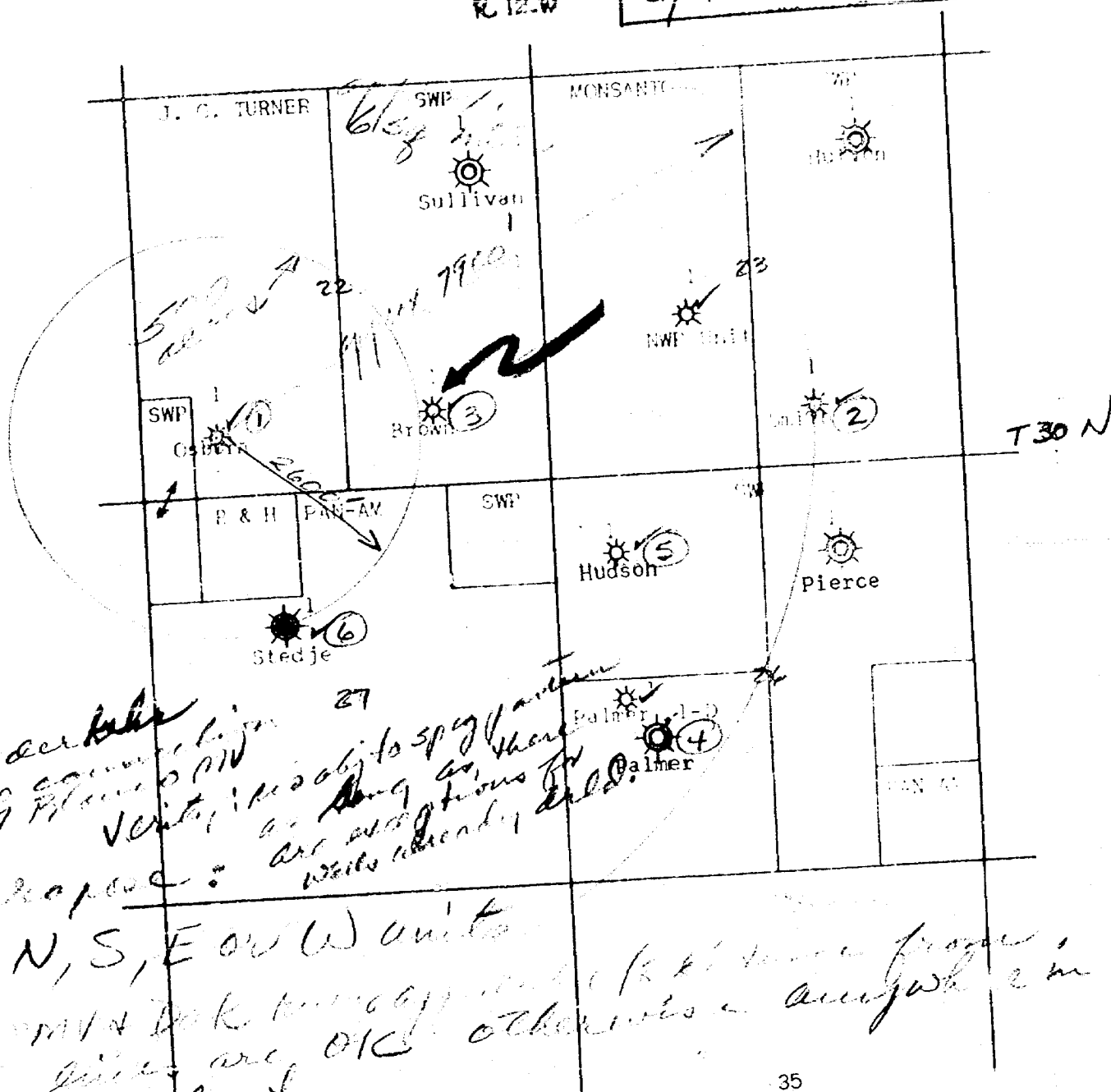
R. 12. W

BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSION

EXHIBIT NO. 1

CASE NO. 2005



Wiederkehr
no connection
w/ Palmer's oil
Verity is subject to 37% interest
proposed: are suggestions for
wells already added.

N, S, E or W units

only 4 Dakota units appear to be in the proper
position are OK otherwise a arrangement in
370 tract.



Mesaverde Well



Dakota Well



Dual Mesaverde Dakota Well

Scale 1" = 2000'

370 tract on 360 acres
1/2 to 1 section on 160 acres (estimated some
period of time, might not be economic)

SOUTHWEST PRODUCTION COMPANY

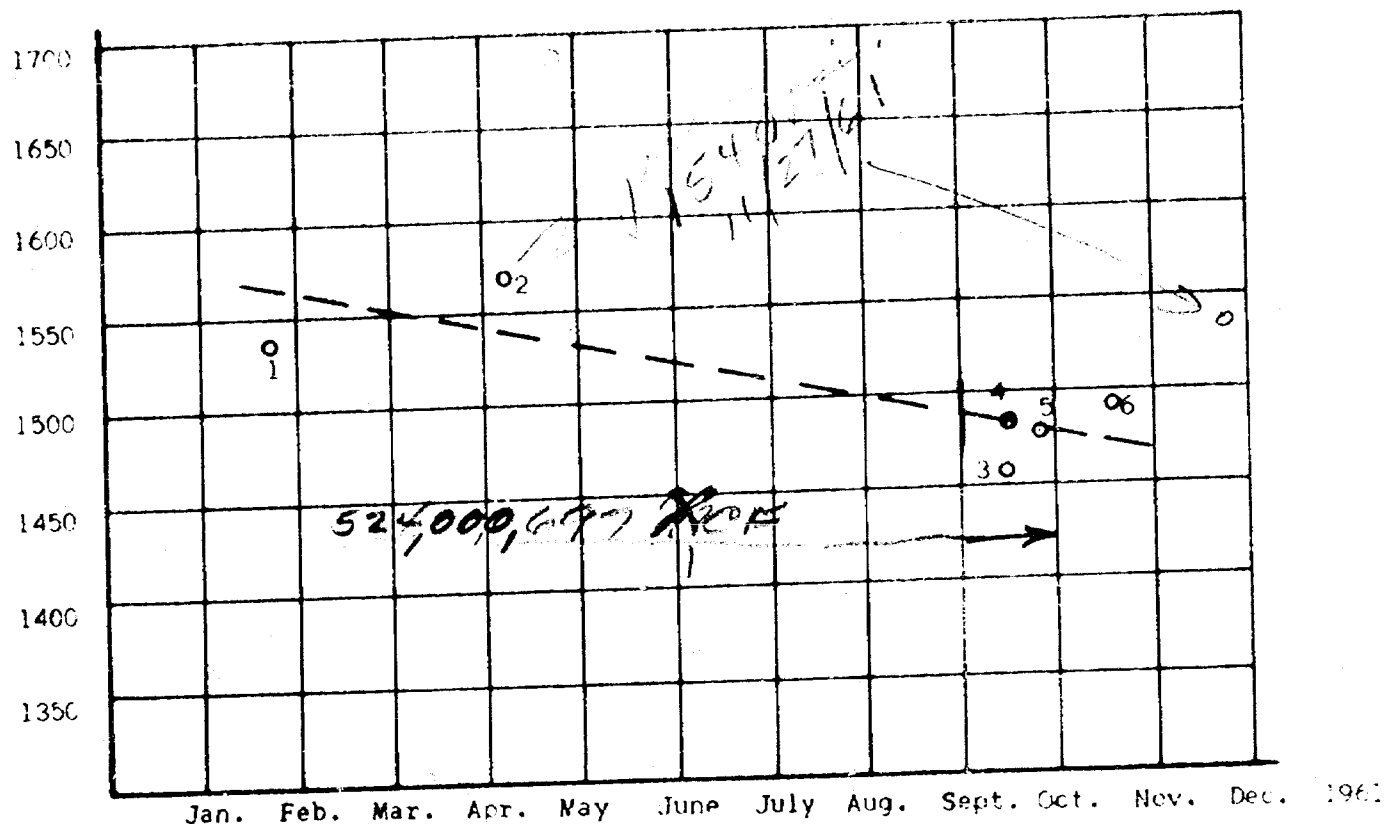
PRESSURE, PSIG, INITIAL ST.
FROM DRILL STEM TESTS VS TIME.

BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSION

EXHIBIT NO. 2

CASE NO. 2415



5988 MCF
4246
1741
3737
1845
8155

1. J. Glen Turner, Ostorn #1-22 Sec. 22, 1-23-61
2. Southwest Prod. Co. Smith #1 Sec. 23, 4-7-61
3. Southwest Prod. Co. Brown #1 Sec. 22, 9-16-61
4. Southwest Prod. Co. Palmer #1 Sec. 26, 9-17-61
5. Southwest Prod. Co. Hudson #1 Sec. 26, 9-25-61
6. Pan American, Steije #1 Sec. 27, 10-19-61

1535#
1570#
1459#
1485#
1482#
1495#

This well
was out of
control for
approx 2
days prior
to taking
this pressure

PAID DAVIS 5-2593

TEMPERATURE

DOWN SERVICE, INC.

* SURVEYS * *

BOX 1018 - FARMINGTON, NEW MEXICO

Pressure Survey

OWNER: SOUTH WEST PRODUCTION

NAME: HUGH STE SMITH

WELL # 1

FILE

LOCATION

COUNTY: SAN JUAN

STATE: NEW MEXICO

DATE: 11-27-61

DRYING: 4-24-61

ELEVATION: 5523 K.B.

DATUM

FEED POINT: G.L. + 11.5'

THIS PRESSURE

CASING PRESSURE

THE DEPTH: 2" @ 3395'

CASING SET: 4 1/2 @ 3392

FEED

PACKING

CASING KEYS

WELL TEMP: 123° F

FLUID LEVEL: NONE

DEPTH

PSIG

GRADIENT

Lube

1357

500

1383

.05

1000

1410

.05

2000

1470

.05

3000

1520

.05

3200

1530

.05

3392

1540

.05

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
AP EXHIBIT NO. 3
CASE NO. 2445