CASE 7405: CARL SCHELLINGER FOR DUAL COMPLETION AND AN UNORTHODOX LOCATION, CHAVES COUNTY, NEW MEXICO

DOCKET MAILED

Date 10/23/81

Case No.

7405

Application

Transcripts

Small Exhibits

ETC

STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

November 18, 1981

Re: CASE NO. 7405
ORDER NO. R-6819

Applicant:

Carl Schellinger

Mr. Ernest Padilla
P. O. Box 2523
Santa Fe, New Mexico 87502

Dear Sir:

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

Yours very truly,

JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCD
Artesia OCD x
Aztec OCD x

Other

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

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

CASE NO. 7405
Order No. R-6819

APPLICATION OF CARL SCHELLINGER FOR
A DUAL COMPLETION AND AN UNORTHODOX
LOCATION, CHAVES COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 o'clock a.m. on November 4, 1981, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 18th day of November, 1981, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Carl Schellinger, seeks authority to complete his Campbell Station Unit Well No. 1 at an unorthodox Pennsylvanian gas well location 660 feet from the South line and 660 feet from the West line of Section 34, Township 8 South, Range 27 East, NMPM, Chaves County, New Mexico, as a dual completion (conventional) to produce gas from the Abo and Pennsylvanian formations.

(3) That said well was projected to and drilled as an oil well in the Montoya formation at a standard location therefor, but was dry in the Montoya and plugged back to its present depth.

(4) That the S/2 of said Section 34 is to be dedicated to the Pennsylvanian formation and the SW/4 to the Abo formation.

(5) That the Abo formation would be produced through the casing-tubing annulus and the Pennsylvanian through 2 3/8-inch tubing, with separation of the zones achieved by means of a packer set at 6274 feet.

(6) That the mechanics of the proposed dual completion are feasible and in accord with good conservation practices.

(7) That approval of the subject application will prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Carl Schellinger, is hereby authorized to complete its Campbell Station Unit Well No. 1, located at an unorthodox Pennsylvanian gas well location 660 feet from the South line and 660 feet from the West line of Section 34, Township 8 South, Range 27 East, NMPM, Chaves County, New Mexico, as a dual completion (conventional) to produce gas from the Abo and Pennsylvanian formations through the casing-tubing annulus and through 2 3/8-inch tubing, respectively, with separation of the zones achieved by means of a packer set at 6274 feet.

PROVIDED HOWEVER, that the applicant shall complete, operate, and produce said well in accordance with the provisions of Rule 112-A of the Division Rules and Regulations insofar as said rule is not inconsistent with this order;

PROVIDED FURTHER, that the applicant shall take packer leakage tests upon completion and annually thereafter during the Annual Shut-in Pressure Test Period for the Pennsylvanian zone in said well.

(2) That the S/2 of said Section 34 is dedicated to the Pennsylvanian formation and the SW/4 to the Abo formation.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY,
Director

S E

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
4 November 1981

EXAMINER HEARING

IN THE MATTER OF:

Application of Carl Schellinger for dual completion and an unorthodox location, Chaves County, New Mexico.

CASE 7405

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

APPEARANCES

For the Oil Conservation Division:

W. Perry Pearce, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For [illegible]:

Ernest L. Padilla, Esq.
P. O. Box 2523
Santa Fe, New Mexico 87501

I N D E X

E X H I B I T S

MR. NUTTER: Call Case Number 7405.

MR. PEARCE: Application of Carl Schellinger for a dual completion and an unorthodox location, Chaves County, New Mexico.

MR. PADILLA: Mr. Examiner, Ernest L. Padilla on behalf of the applicant in this case. In association with me in this case is Mr. Roger Copple also of Santa Fe.

MR. NUTTER: And who is the applicant, Mr. Padilla?

MR. PADILLA: The applicant is Mr. Carl Schellinger.

MR. NUTTER: Does he have an attorney?

MR. PADILLA: I hope a good one.

Mr. Examiner, I have two witnesses who need to be sworn.

(Witnesses sworn.)

MR. PADILLA: Call Mr. George Scott.

GEORGE SCOTT

being called as a witness and being duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. PADILLA:

Q. Mr. Scott, for the record would you please state your name and by whom you're employed and in what capacity?

A. George L. Scott. Consulting Geologist. I live in Roswell, New Mexico, and in this matter I am representing the operator of the Campbell Station Unit, Carl Schellinger.

Q. Mr. Scott, have you previously testified before the Oil Conservation Division and had your credentials accepted as a matter of record?

A. I have.

Q. Are you familiar with the purpose of the case and with the well which is under consideration today?

A. Yes, I am.

Q. Mr. Scott, you've been --

MR. PADILLA: Mr. Examiner, are the witness' qualifications acceptable?

MR. NUTTER: Yes, they are.

Q. Mr. Scott, referring to what has been marked as Exhibit Number One, would you please identify that

and tell the Examiner what it contains?

A. Okay. Exhibit Number One consists of two maps. The top map is a portion of the lease ownership map of the area with the unit, Campbell Station Unit, outline is shown; also the area for which a Pennsylvanian proration is requested is outlined in orange, and the Abo proration unit is outlined in green.

The second map, the lower map, larger scale map, is taken from the Campbell Statio Unit, and it's a more detailed exhibit. It shows the original working interest ownership prior to the formation of the Campbell Station Unit.

Q. Mr. Scott, does that Exhibit Number One also show the location of the well in question?

A. Yes, it does. The well in question is the Carl Schellinger No. 1 Campbell Station Unit, located 660 feet from south, 660 from west of Section 34, 8 South, 27 East, inside the Campbell Station Unit.

It is shown on both maps.

Q. Mr. Scott, what is the ownership, how is the ownership, or the allocation of production going to be distributed under the unit agreement?

A. The working interest participation within the unit is based on the -- the percentage of ownership

inside the unit. It's allocated out on the basis of participation.

Q. And what is the royalty interest within the unit?

A. The, all of the royalty interest within the unit is owned by the State of New Mexico.

Q. Mr. Scott, referring to what has been marked as Exhibit Number Two and Two-A, would you tell the Examiner what that contains?

A. All right. Exhibit Number Two consists of the unit agreement for the Campbell Station Unit, and Two, Exhibit Two-A is an order by the Division approving the Campbell Station Unit.

Q. Mr. Scott, would you now tell us a little bit about the history of this well from the time that it was initially drilled?

A. Yes, I will. Originally, well, our principal and our original objective in this test was the Montoya formation, which was encountered in the -- in this well at a top of approximately 6600 feet. We were expecting to find oil in this zone inasmuch as it is an oil producer, back to the southeast not too far away.

Accordingly, we selected a 40-acre proration unit on which to put our well, 660 from south and

west lines of Section 34.

Q. That was a legal location for the Montoya?

A. Yes.

Q. What happened after that? Did -- was the Montoya productive?

A. No, it was not. We did have some shows in the Montoya, in the samples, and we ran pipe on the well and casing on the well, and attempted a completion out of the Montoya, but the reservoir was just too tight; permeability too low. We were unable to complete out of the Montoya.

Accordingly, we came back up hole to two zones that we had favorable shows in while we were drilling, one in the Pennsylvanian and one in the Abo, and we have since perforated and production tested both of those zones.

MR. PADILLA: Mr. Examiner, we have a copy of the log here if you want to see that. We only have one -- the applicant only has one log on it, but we do have a copy of a portion of the log here that shows the perforations --

MR. NUTTER: That's Exhibit Three. That's what I was looking for, Exhibit Three.

Q. Where are the perforations for the Penn-

sylvanian and Abo?

A. Okay, they are marked on the exhibit which you just furnished the Examiner there. The Pennsylvanian was perforated from 6373 to 6388 and the Abo formation was perforated from 5177 to 5229.

Q. Mr. Scott, would approval of an unorthodox location for the Pennsylvanian formation be in the -- or impair correlative rights in this case?

A. It would not impair correlative rights.

MR. PADILLA: Mr. Examiner, that's all I have of this witness and I pass the witness.

CROSS EXAMINATION

BY MR. NUTTER:

Q. Okay, now what was the primary objective when the notice of intent was filed, Mr. Scott?

A. It was the Montoya formation, the pre-Penn, pre-Mississippian section.

Q. Okay, so the well was drilled to --

A. Oh, yes. Yes. If you'll look at that exhibit there you'll see that we reached TD very near the top of the Granite. We went -- we had some Mississippian and a Montoya section that may have included some Ellenburger. It's very difficult to pick Ellenburger in that area. The

top of the Montoya is there about 6594, to be precise.

Q. Okay, and then I can't read this on here but does this say the top of the Granite is down here at about 67 -- 6775, something like that?

A. No, sir, those are markings of Schlumberger's in regard to the -- these notations as to the, I believe, the first pickup of the -- first recording of the gamma ray --

Q. Okay, that "GR" means gamma ray then.

A. Yeah, yes, sir, "FRGR" there. It's difficult to read. This is a copy of a field print, the only copy available, left available.

Q. Well, where was the Granite then?

A. We did not -- we did not reach Granite for certain in the well.

Q. Oh.

A. We know from the thickness of this sequence in wellsnearby that we got close, but we had -- we had essentially tested all the likely pay zones at that depth.

Q. And all -- and you didn't recover anything but water in the Montoya, then.

A. That is -- that is correct. We didn't get a great deal of -- of water, but enough to -- enough to be conclusive.

Also, our drill stem tests results indicated it was a very low permeability reservoir. But to be -- to be sure, we went ahead and gave it a completion attempt.

Q. Is the casing set down here in the Montoya? Yeah, it says 6800 feet.

A. Yes, sir, it is. The casing strings and the completion procedure and everything will be covered more fully by Mr. Joy.

Q. Okay.

MR. NUTTER: Are there any further questions of Mr. Scott? He may be excused.

MR. PADILLA: Call Mr. Charles Joy.

CHARLES JOY

being called as a witness and being duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. PADILLA:

Q. Mr. Joy, for the record, would you please state by whom -- your name, by whom you're employed, and in what capacity?

A. My name is Charles Joy and I'm a con-

sultant engineer out of Artesia, New Mexico, and I'm representing Carl A. Schellinger.

Q. Mr. Joy, have you previously testified before the Oil Conservation Division and had your credentials accepted as a matter of record?

A. Yes, I have.

Q. Are you familiar with the Campbell Station Unit No. 1 Well?

A. Yes, I am.

Q. And the purpose of the hearing today?

A. Yes.

MR. PADILLA: Mr. Examiner, are the witness' qualifications acceptable?

MR. NUTTER: Yes, they are.

Q. Mr. Joy, you've been handed what has been marked as Exhibit Four. Would you please tell us what that is and what it contains?

A. Yes, I will. This is a schematic of the Carl A. Shellinger Campbell Station Unit No. 1 Well, and the complete mechanical installation of this, and I'll start here on the right side and continue downward.

20 inch casing was set at 40 feet and cemented with 3 yards of cement and the top of the cement is at the surface.

And 13-3/8ths inch 48-pound casing was set at 345 feet and cemented with 365 sacks and top of the cement is at the surface.

8-5/8ths inch 24-pound casing was set at 2175 feet and cemented with 1480 sacks and top of cement is at the surface.

Now, let's cross over to the left side of the schematic, you'll notice I've got an arrow there from the 2-3/8ths inch tubing which goes -- in connected with the packer down well.

And right below that is the Abo formation and the Abo formation is completed, if you'll go the right side of the schematic, from 5177 to 5229. Then as I move downward on the inside of your annulus there, your tubing, you have an on and off tool and a 2-3/8ths incl 4-foot sub and at 6274 feet a Baker Locset packer set.

All right, moving down, then, you go back to the left side of the sheet, you'll see this is the Penn formation and it's perforated from 6373 feet to 6388 feet, and right below that is a 75-foot cement cap which is placed on top of a Baker CI bridge plug set at 6570, which is shut off the bottom of the Montoya formation which was -- they made an attempt to complete in the lower part of the well.

And the 5-1/2 inch casing, 15.5 pounds, is set at 6657 feet and was cemented with 530 sacks. Now the top of this cement around the 5-1/2 is at 4500 feet, if you'll look up in the middle of the righthand side of the schematic.

And the TD of the well was at 6800 feet.

Q. Mr. Joy, turning now to what has been marked as Exhibit Number Five, will you tell the Examiner what that is?

A. Yes. That's the well completion and recompletion report in the Pennsylvanian zone, and if you'll notice on the initial potential test it averaged 370 Mcf at 1510 psig, and going over to the next page, this is your multipoint or your absolute open flow, and this well made 931.7 on the -- Mcf a day on the open flow test.

The next is the chart of the -- and graph of the -- where you calculate the absolute open flow.

Then the subsurface pressure measurement is the next page, and that covers three pages in here.

Then we go to the graphs where you have the time versus pressure graph, two of those.

And we get to the pressure versus depth and then we have the chart of the flow time during the test period of the absolute open flow.

The next is the analysis of the gas from the Penn and if you'll notice it's a relatively dry gas and there's no hydrosulfide in this gas; it's a sweet gas.

The next page was the data sheet for the initial potential test and that covers the data they used to calculate the initial potential, and following that would be the chart recording the initial potential test and the rate of flows through the meter line at that time.

Q. Mr. Joy, referring now to what has been marked as Exhibit Six, would you please tell us what that is?

A. The number -- Exhibit Number Six is the same identical information covering the Abo pay formation as Exhibit Five did for the Penn formation.

Q. Is the gas being or out of the Abo the same dry gas that was --

A. Well, the analysis is a little bit different but it's still a sweet gas and a relative dry gas.

Q. Mr. Joy, what is the pressure differential between the two zones?

A. 1243 pounds differential between the two zones. The Penn had a bottom hole pressure of 2374 pounds psig after being shut-in 72 hours and the Abo had a bottom hole pressure of 1131 pounds after being shut-in 78 hours.

Q. Mr. Joy, would you --

MR. NUTTER: What were those two pressures again, please?

A. The Penn had 2374, that's midpoint of perforations.

MR. NUTTER: After how many hours?

A. 72. And the Abo had 1131 after 78.

MR. NUTTER: Okay.

Q. Mr. Joy, in your opinion is the downhole assembly sufficient to withstand the differential in pressure in the two zones?

A. Yes, it is. This is just normal engineering practice to complete like this.

Q. Is there any chance of downhole commingling the way this well is equipped?

A. No. And they set this packer with approximately a little over -- in excess of 12,000 pound pressure on the annulus.

Q. And both zones are going to be separately metered, is that correct?

A. Correct.

MR. PADILLA: Mr. Examiner, I have no other questions and I pass the witness.

MR. NUTTER: What were those two pressures again, please?

A. The Penn had 2374, that's midpoint of perforations.

MR. NUTTER: After how many hours?

A. 72. And the Abo had 1131 after 78.

MR. NUTTER: Okay.

Q. Mr. Joy, in your opinion is the downhole assembly sufficient to withstand the differential in pressure in the two zones?

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Q. Is there any chance of downhole commingling the way this well is equipped?

A. No. And they set this packer with approximately a little over -- in excess of 12,000 pound pressure on the annulus.

Q. And both zones are going to be separately metered, is that correct?

A. Correct.

MR. PADILLA: Mr. Examiner, I have no other questions and I pass the witness.

CROSS EXAMINATION

BY MR. NUTTER:

Q. Mr. Joy, now the Penn will be coming up the tubing; the Abo will be coming up the casing-tubing annulus.

A. Correct.

Q. Were any liquids of any kind produced from the Abo?

A. According to the records, very little; just a trace.

Q. Neither oil -- no condensate nor water?

A. No condensate. I just noticed in the analysis they had a real low, less than 2 gallons per 100,000 Mcf here, that was on the Abo, and less, just a little over one gallon on the Penn.

Q. So the production from the Abo coming up that annulus will be dry.

A. Right.

Q. Okay.

MR. NUTTER: Are there any further questions of this witness? He may be excused.

MR. PADILLA: Mr. Examiner, I offer Exhibits One through Six.

MR. NUTTER: Exhibits One through Six

1
2 will be admitted in evidence.
3 Do you have anything further, Mr. Padilla?
4 MR. PADILLA: Nothing further.
5 MR. NUTTER: Does anyone have anything
6 they wish to offer in Case Number 7405?
7 We'll take the case under advisement.
8
9 (Hearing concluded.)
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6 by me; that the said transcript
7 is a full, true, and correct record of the hearing, prepared
8 by me to the best of my ability.
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10 Sally W. Boyd CSR
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SALLY W. BOYD, C.S.R.
Rt. 1 Box 193-B
Santa Fe, New Mexico 87501
Phone (505) 455-7409

1

2 C E R T I F I C A T E

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4 I, [illegible], [illegible], [illegible] that

5 [illegible] hearing before the Oil Conservation

6 Division [illegible] by me; that the said transcript

7 [illegible] a full, true, and correct record of the hearing, prepared

8 by me to the best of my ability.

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10 Sally W. Boyd CSR

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16 [illegible] Examiner

17 Oil Conservation Division

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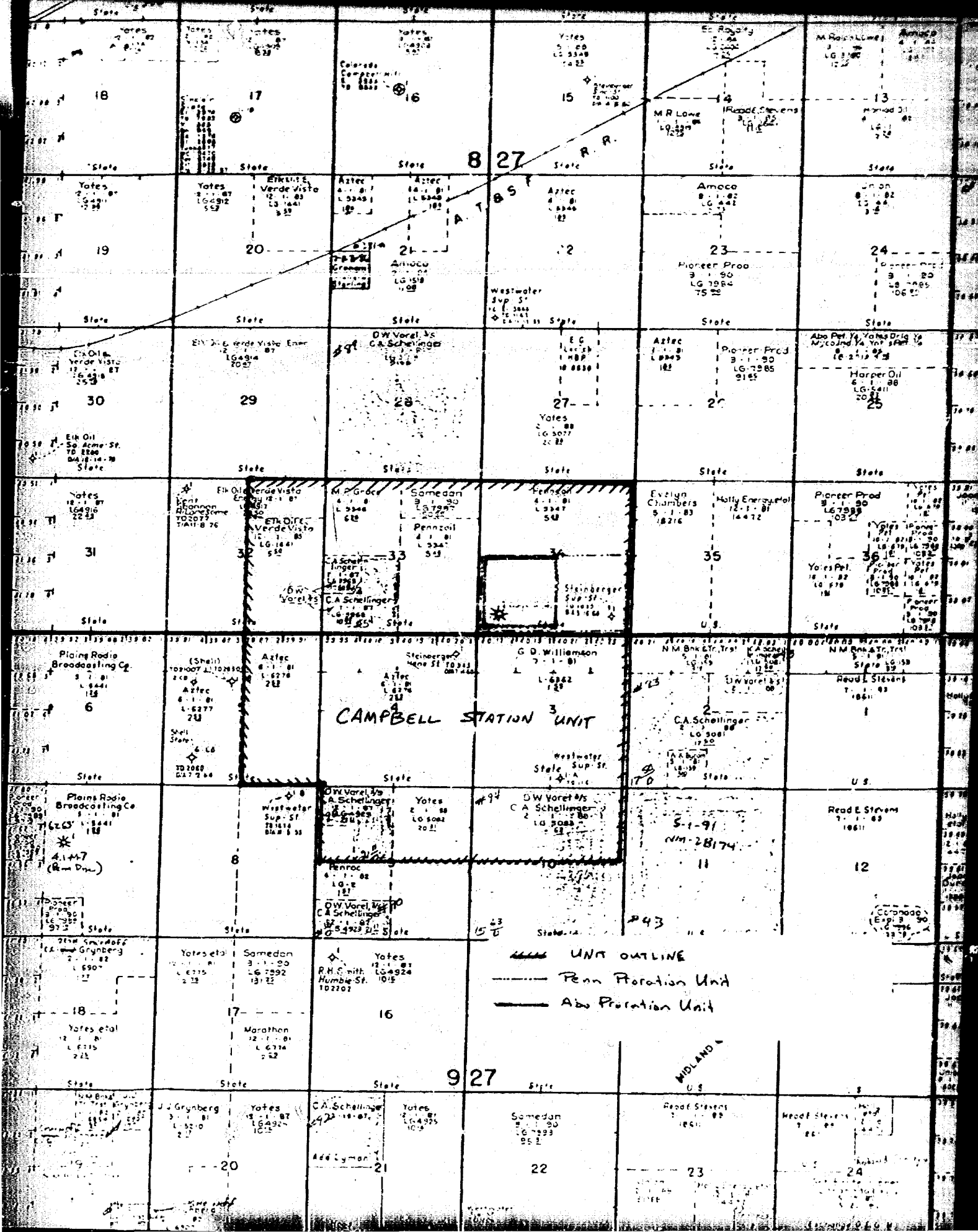
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CAMPBELL STATION UNIT
UNIT OUTLINE
Penn Proration Unit
Abo Proration Unit
MIDLAND

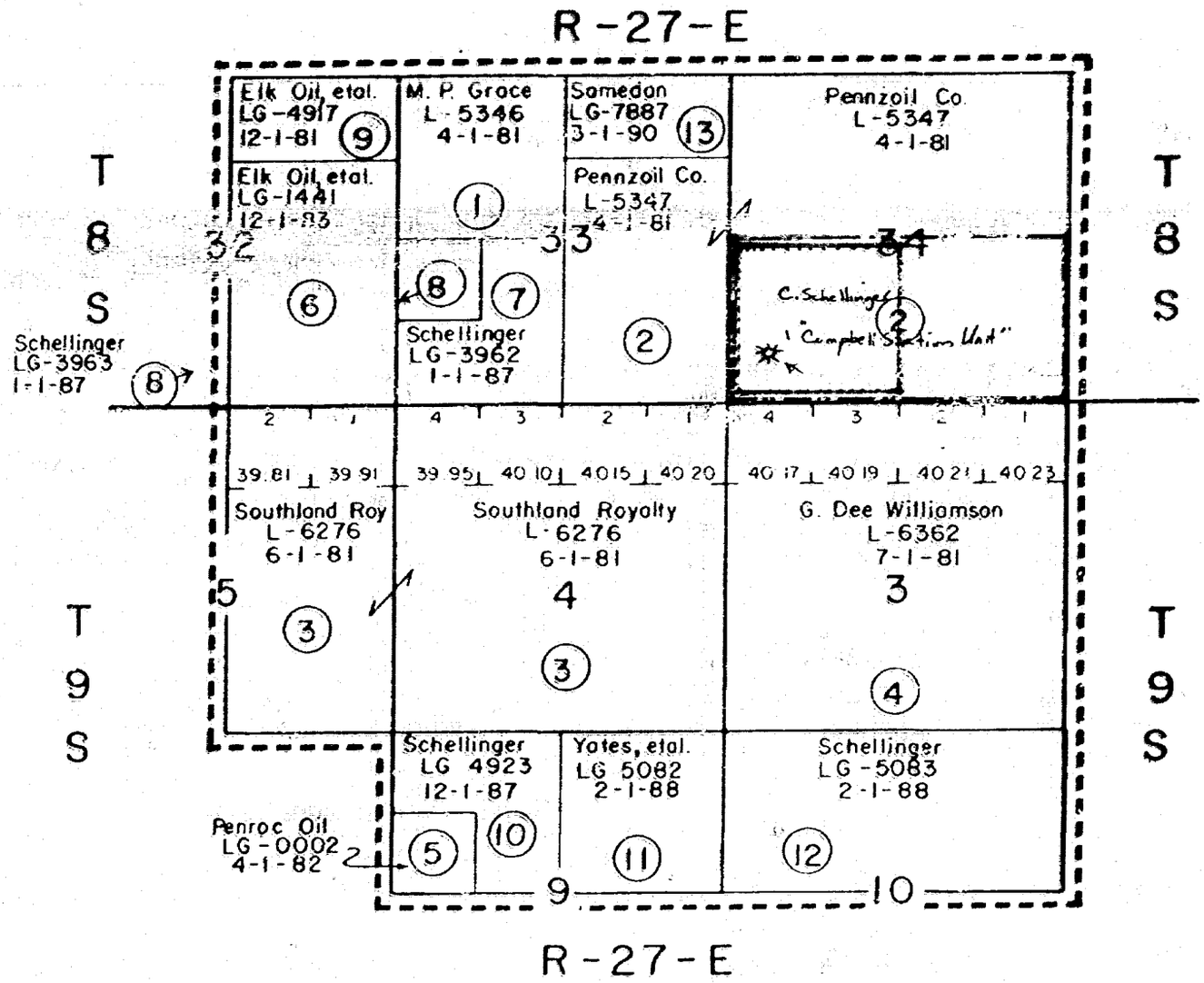


EXHIBIT "A"

Campbell Station Unit Area

Chaves County, New Mexico

- - - - - UNIT OUTLINE

○ TRACT NUMBER

□ STATE OF NEW MEXICO LANDS
3,840.98 ACRES - 100% UNIT AREA

—·—·— PENN PRORATION UNIT

····· ABO PRORATION UNIT

7405

1

NEW MEXICO STATE LAND OFFICE

CERTIFICATE OF APPROVAL

COMMISSIONER OF PUBLIC LANDS, STATE OF NEW MEXICO

CAMPBELL STATION UNIT

CHAVES COUNTY, NEW MEXICO

There having been presented to the undersigned Commissioner of Public Lands of the State of New Mexico for examination, the attached Agreement for the development and operation of acreage which is described within the attached Agreement, dated January 26, 1981, which said Agreement has been executed by parties owning and holding oil and gas leases and royalty interests in and under the property described, and upon examination of said Agreement, the Commissioner finds:

(a) That such agreement will tend to promote the conservation of oil and gas and the better utilization of reservoir energy in said area.

(b) That under the proposed agreement, the State of New Mexico will receive its fair share of the recoverable oil or gas in place under its lands in the area.

(c) That each beneficiary Institution of the State of New Mexico will receive its fair and equitable share of the recoverable oil and gas under its lands within the area.

(d) That such agreement is in other respects for the best interests of the state, with respect to state lands.

NOW, THEREFORE, by virtue of the authority conferred upon me under Sections 19-10-45, 19-10-46, 19-10-47, New Mexico Statutes Annotated, 1978 Compilation, I, the undersigned Commissioner of Public Lands of the State of New Mexico, do hereby consent to and approve the said Agreement, however, such consent and approval being limited and restricted to such lands within the Unit Area, which are effectively committed to the Unit Agreement as of this date, and, further, that leases insofar as the lands covered thereby committed to this Unit Agreement shall be and the same are hereby amended to conform with the terms of such Unit Agreement, and said leases shall remain in full force and effect in accordance with the terms and conditions of said Agreement. This approval is subject to all of the provisions and requirements of the aforesaid statutes.

IN WITNESS WHEREOF, this Certificate of Approval is executed, with seal affixed, this 25th. day of March, 19 81.

COMMISSIONER OF PUBLIC LANDS
of the State of New Mexico

7405 2

UNIT AGREEMENT
FOR THE DEVELOPMENT AND OPERATION
OF THE

CAMPBELL STATION UNIT AREA

CHAVES COUNTY, NEW MEXICO

NO. _____

THIS AGREEMENT, entered into as of the 26th day of January 1981 by and between the parties subscribing, ratifying or consenting hereto, and herein referred to as the "parties hereto";

WITNESSETH:

WHEREAS, the parties hereto are the owners of working, royalty, or other oil or gas interests in the unit area subject to this agreement; and

WHEREAS, the Commissioner of Public Lands of the State of New Mexico is authorized by an Act of the Legislature (Sec. 3, Chap. 88, Laws 1943) as amended by Dec. 1 of Chapter 162, Laws of 1951, (Chap. 19, Art. 10, Sec. 45, N. M. Statutes 1978 Annot.), to consent to and approve the development or operation of State Lands under agreements made by lessees of State Land jointly or severally with other lessees where such agreements provide for the unit operation or development of part of or all of any oil or gas pool, field, or area; and

WHEREAS, the Commissioner of Public Lands of the State of New Mexico is authorized by and Act of the Legislature (Sec. 1, Chap. 162), (Laws of 1951, Chap. 19, Art. 10, Sec. 47, N. M. Statutes 1978 Annotated) to amend with the approval of lessee, evidenced by the lessee's execution of such agreement or otherwise, any oil and gas lease embracing State Land so that the length of the term of said lease may coincide with the term of such agreement for the unit operation and development of part or all of any oil or gas pool, field, or area; and

WHEREAS, the Oil Conservation Division of the Energy and Minerals Department of the State of New Mexico (hereinafter referred to as the "Division"), is authorized by an Act of the Legislature (Chap. 72, Laws 1935, as amended, being Section [illegible] of the New Mexico [illegible] Annotated, 1978 Compilation) to approve this agreement and the conservation provisions hereof; and

WHEREAS, the parties hereto hold sufficient interests in the Campbell Station Unit Area covered by this agreement to give reasonably effective control of operations therein; and

WHEREAS, it is the purpose of the parties hereto to conserve natural resources, prevent waste and secure other benefits obtainable through development and operation of the area subject to this agreement under the terms, conditions and limitations herein set forth;

NOW, THEREFORE, in consideration of the premises and the promises herein contained, the parties hereto commit to this agreement their respective interests in the below defined unit area, and agree severally among themselves as follows:

1. UNIT AREA: The following described land is hereby designated and recognized as constituting the unit area:

T-8-S, R-27-E, NMPM	T-9-S, R-27-E, NMPM
Sec. 32; E½	Secs. 3, 4; All
Secs. 33, 34; All	Sec. 5; E½
	Sec. 9; N½
	Sec. 10; N½

Containing 3,840.96 acres,
Chaves County, New Mexico

Exhibit A attached hereto is a map showing the unit area and the boundaries and identity of tracts and leases in said area to the extent known to the unit operator. Exhibit B attached hereto is a schedule showing to the extent known to the unit operator the acreage, percentage and kind of ownership of oil and gas interests in all lands in the unit area. However, nothing herein or in said schedule or map shall be construed as a representation by any party hereto as to the ownership of any interest other than such interest or interests as are shown on said map or schedule as owned by such party. Exhibits A and B shall be revised by the unit operator whenever changes in ownership in the unit area render such revisions necessary or when requested by the Commissioner of Public Lands, hereinafter referred to as "Commissioner" or the Oil Conservation Division, hereinafter referred to as the "Division".

All land committed to this agreement shall constitute land referred to herein as "unitized land" or "land subject to this agreement".

2. UNITIZED SUBSTANCES: All oil, gas, natural gasoline, and associated fluid hydrocarbons in any and all formations of the unitized land are unitized under the terms of this agreement and herein are called "unitized substances".

3. UNIT OPERATOR: Carl A. Sonellinger [illegible], whose address is P. O. Box 447, Roswell, New Mexico [illegible] is hereby designated as unit operator and by signature hereto commits to this agreement all [illegible] to unitized substances vested in it as set forth in Exhibit B, [illegible] to accept the duties and obligations of unit operator for the discovery, development and production of unitized substances as herein provided. Whenever reference is made herein to the unit operator,

such reference means the unit operator acting in that capacity and not as an owner of interests in unitized substances, and the term "working interest owner" when used herein shall include or refer to unit operator as the owner of a working interest when such an interest is owned by it.

4. RESIGNATION OR REMOVAL OF UNIT OPERATOR: Unit operator shall have the right to resign at any time but such resignation shall not become effective until a successor unit operator has been selected and approved in the manner provided for in Section 5 of this agreement. The resignation of the unit operator shall not release the unit operator from any liability or any default by it hereunder occurring prior to the effective date of its resignation.

Unit operator may, upon default or failure in the performance of its duties or obligations hereunder, be subject to removal by the same percentage vote of the owners of working inerersts determined in like manner as herein provided for the selection of a new unit operator. Such removal shall be effective upon notice thereof to the Commissioner and the Division.

The resignation or removal of the unit operator under this agreement shall not terminate his right, title or interest as the owner of a working interest or other interest in unitized substances, but upon the resignation or removal of unit operator becoming effective, such unit operator shall deliver possession of all equipment, materials, and appurtenances used in conducting the unit operations and owned by the working interest owners to the new duly qualified successor unit operator, or to the owners thereof if no such new unit operator is elected, to be used for the purpose of conducting unit operations hereunder. Nothing herein shall be construed as authorizing removal of any material, equipment and appurtenances needed for the preservation of wells.

5. SUCCESSOR UNIT OPERATOR: Whenever the unit operator shall resign as unit operator or shall be removed as hereinabove provided, the owners of the working interests according to their respective acreage interests in all unitized land shall by a majority vote select a successor unit operator; provided that, if a majority but less than seventy-five percent (75%) of the working interests qualified to vote is owned by one party to this agreement, a concurring vote of sufficient additional parties, so as to constitute in the aggregate not less than seventy-five percent (75%) of the total working interests, shall be required to select a new operator. Such selection shall not become effective until (a) a unit operator so selected shall accept in writing the duties and responsibilities of unit operator, and (b) the selection shall

have been approved by the Commissioner. If no successor unit operator is selected and qualified as herein provided, the Commissioner at his election, with notice to the Division, may declare this unit agreement terminated.

6. ACCOUNTING PROVISIONS: The unit operator shall pay in the first instance all costs and expenses incurred in conducting unit operations hereunder, and usch costs and expenses and the working interest benefits accruing hereunder shall be apportioned, among the owners of the unitized working interests in accordance with an operating agreement entered into by and between the unit operator and the owners of such interests, whether one or more, separately or collectively. Any agreement or agreements entered into between the working interest owners and the unit operator as provided in this section, whether one or more, are herein referred to as the "Operating Agreement". No such agreement shall be deemed either to modify any of the terms and conditions of this unit agreement or to relieve the unit operator of any right or obligation established under this unit agreement and in case of any inconsistencies or conflict between this unit agreement and the operating agreement, this unit agreement shall prevail.

7. RIGHTS AND OBLIGATIONS OF UNIT OPERATOR: Except as otherwise specifically provided herein, the exclusive right, privilege and duty of exercising any and all rights of the parties hereto which are necessary or convenient for prospecting for, producing, storing, allocating and distributing the untized substances are hereby delegated to and shall be exercised by the unit operator as herein provided. Acceptable evidence of title to said rights shall be deposited with said unit operator and, together with this agreement, shall constitute and define the rights, privileges and obligations of unit operator. Nothing herein, however, shall be construed to transfer title to any land or to any lease or operating agreement, it being understood that under this agreement the unit operator, in its capacity as unit operator, shall exercise the rights of possession and use vested in the parties hereto only for the purposes herein specified.

8. DRILLING TO DISCOVERY: The unit operator shall, within sixty (60) days after the effective date of this agreement, commence operations upon an adequate test well for oil and gas upon some part of the lands embraced within the unit area and shall drill said well with due diligence to a depth sufficient to penetrate the basement granite formation or to such a depth at unitized substances shall be discovered in paying quantities at a lesser depth or until it shall, in the opinion of unit operator, be determined that the further drilling of said well shall be unwarranted or impracticable; provided, however, that unit operator shall not, in any event, be required to drill said well to a depth in excess of [illegible] feet. Until

a discovery of a deposit of unitized substances capable of being produced in paying quantities (to-wit: quantities sufficient to repay the costs of drilling and producing operations with a reasonable profit) unit operator shall continue drilling diligently, one well at a time, allowing not more than six months between the completion of one well and the beginning of the next well, until a well capable of producing unitized substances in paying quantities is completed to the satisfaction of the Commissioner or until it is reasonably proven to the satisfaction of the unit operator that the unitized land is incapable of producing unitized substances in paying quantities in the formation drilled hereunder.

Any well commenced prior to the effective date of this agreement upon the unit area and drilled to the depth provided herein for the drilling of an initial test well shall be considered as complying with the drilling requirements hereof with respect to the initial well. The Commissioner may modify the drilling requirements of this section by granting reasonable extensions of time when in his opinion such action is warranted. Upon failure to comply with the drilling provisions of this article the Commissioner may, after reasonable notice to the unit operator and each working interest owner, lessee and lessor at their last known addresses, declare this unit agreement terminated, and all rights, privileges and obligations granted and assumed by this unit agreement shall cease and terminate as of such date.

9. OBLIGATIONS OF UNIT OPERATOR AFTER DISCOVERY OF UNITIZED SUBSTANCES:

Should unitized substances in paying quantities be discovered upon the unit area, the unit operator shall on or before six months from the time of the completion of the initial discovery well and within thirty days after the expiration of each twelve months period thereafter, file a report with the Commissioner and Division of the status of the development of the unit area and the development contemplated for the following twelve months period.

It is understood that one of the main considerations for the approval of this agrement by the Commissioner of Public Lands is to secure the orderly development of the unitized lands in accordance with good conservation practices so as to obtain the greatest ultimate recovery of unitized substances.

After discovery of unitized substances in paying quantities, unit operator shall proceed with diligence to reasonably develop the unitized area as a reasonably prudent operator would develop such area under the same or similar circumstances.

If the unit operator should fail to comply with the above covenant for reasonable development this agreement may be terminated by the Commissioner as to all lands of the State of New Mexico subject hereto and develop irregular well spacing or proration units, but in such event, the lands so participating by the working interest owners shall remain the same as if this agreement had not been terminated as to such

lands; provided, however, the Commissioner shall give notice to the unit operator and the lessees of record in the manner prescribed by (Sec. 19-10-20 N. M. Statutes 1978 Annotated,) of intention to cancel on account of any alleged breach of said covenant for reasonable development and any decision entered thereunder shall be subject to appeal in the manner prescribed by (Sec. 19-10-23 N.M. Statutes 1978 Annotated and, provided further, in any event the unit operator shall be given a reasonable opportunity after a final determination within which to remedy any default, failing in which this agreement shall be terminated as to all lands of the State of New Mexico embracing undeveloped regular well ing or proration units.

10. PARTICIPATION AFTER DISCOVERY: Upon completion of a well capable of producing unitized substances in paying quantities, the owners of working interests shall participate in the production therefrom and in all other producing wells which may be drilled pursuant hereto in the proportions that their respective leasehold interests covered hereby on an acreage basis bears to the total number of acres committed to this unit agreement, and such unitized substances shall be deemed to have been produced from the respective leasehold interests particpating therein. For the purpose of determining any benefits accuring under this agreement and the distribution of the royalties payable to the State of New Mexico and other lessors, each separate lease shall have allocated to it such percentage of said production as the number of acres in each lease respectively committed to this agreement bears to the total number of acres committed hereto.

Notwithstanding any provisions contained herein to the contrary, each working interest owner shall have the right to take such owner's proportionate share of the unitized substances in kind or to personally sell or dispose of the same, and nothing herein contained shall be construed as giving or granting to the unit operator the right to sell or otherwise dispose of the proportionate share of any working interest owner without specific authorization from time to time so to do.

11. ALLOCATION OF PRODUCTION: All unitized substances produced from each tract in the unitized area established under this agreement, except any part thereof used for production or development purposes hereunder, or unavoidably lost, shall be deemed to be produced equally on an acreage basis from the several tracts of the unitized land, and for the purpose of determining any benefits that accrue on an acreage basis, each such tract shall have allocated to it such percentage of said production as its area bears to the entire unitized area. It is hereby agreed that production of unitized substances from the unitized area shall be allocated as provided herein, regardless of whether any wells are drilled on any particular tract of said unitized area.

12. PAYMENT OF RENTALS, ROYALTIES AND OVERRIDING ROYALTIES:

All rentals due the State of New Mexico shall be paid by the respective lease owners in accordance with the terms of their leases.

All royalties due to the State of New Mexico under the terms of the leases committed to this agreement shall be computed and paid on the basis of all unitized substances allocated to the respective leases committed hereto; provided, however, the State shall be entitled to take in kind its share of the unitized substances allocated to the respective leases, and in such case the unit operator shall make delivery of such royalty oil in accordance with the terms of the respective leases.

All rentals, if any, due under any leases embracing lands other than the State of New Mexico, shall be paid by the respective lease owners in accordance with the terms of their leases and all royalties due under the terms of any such leases shall be paid on the basis of all unitized substances allocated to the respective leases committed hereto.

If the unit operator introduces gas obtained from sources other than the unitized substances into any producing formation for the purpose of repressuring, stimulating or increasing the ultimate recovery of unitized substances therefrom, a like amount of gas, if available, with due allowance for loss or depletion from any cause may be withdrawn from the formation into which the gas was introduced royalty free as to dry gas but not as to the products extracted therefrom: provided, that such withdrawal shall be at such time as may be provided in a plan of operation consented to by the Commissioner and approved by the Division as conforming to good petroleum engineering practice; and provided further, that such right of withdrawal shall terminate on the termination of this unit agreement.

If any lease committed hereto is burdened with an overriding royalty, payment out of production or other charge in addition to the usual royalty, the owner of each such lease shall bear and assume the same out of the unitized substances allocated to the lands embraced in such lease as provided herein.

13. LEASES AND CONTRACTS CONFORMED AND EXTENDED INSOFAR AS THEY APPLY TO LANDS WITHIN [illegible]

The terms, conditions and provisions of all leases, subleases, operating agreements and other contracts relating to the exploration, drilling, development or operation for oil or gas of the lands committed to this agreement, shall as of the effective date hereof, be and the same are hereby expressly modified and amended insofar as they apply to lands within the unitized area to the extent necessary to

make the same conform to the provisions hereof and so that the respective terms of said leases and agreements will be extended insofar as necessary to coincide with the term of this agreement and the approval of this agreement by the commissioner and the respective lessors and lessees shall be effective to conform the provisions and extend the terms of each such lease as to lands within the unitized area to the provisions and terms of this agreement; but otherwise to remain in full force and effect. Each lease committed to this agreement, insofar as it applies to lands within the unitized area, shall continue in force beyond the term provided therein as long as this agreement remains in effect, provided, drilling operations upon the initial test well provided for herein shall have been commenced or said well is in the process of being drilled by the unit operator prior to the expiration of the shortest term lease committed to this agreement. Termination of this agreement shall not effect any lease which pursuant to the terms thereof or any applicable laws would continue in full force and effect thereafter. The commencement, completion, continued operation or production on each of the leasehold interests committed to this agreement and operations or production pursuant to this agreement shall be deemed to be operations upon and production from each leasehold interest committed hereto and there shall be no obligation on the part of the unit operator or any of the owners of the respective leasehold interests committed hereto to drill offsets to wells as between the leasehold interests committed to ths agreement, except as provided in Section 9 hereof.

Any lease embracing lands of the State of New Mexico having only a portion of its lands committed hereto shall be segregated as to the portion committed and as to the protion not committed and the terms of such leases shall apply separately as to such segregated portions commencing as of the effective date hereof. Notwithstanding any of the provisions of this agreement to the contrary, any lease embracing lands of the State of New Mexico having only a portion of its lands committed hereto shall continue in full force and effect beyond the term provided therein as to all lands embraced in such lease, if oil and gas, or either of them, are discovered and are being produced in paying quantities from some part of the lands embraced in such lease committed to this agreement at the expiration of the secondary term of such lease, or if, at the expiration of the secondary term, the lessee or the unit operator is then engaged in bona fide drilling or reworking operations on some part of the lands embraced therein shall remain in full force and effect so long as such operations are being diligently prosecuted, and they result in the production of oil or gas, said lease shall continue in full force and effect as to all of the lands embraced therein, so long thereafter as oil and gas, or either of them, is being produced in paying quantities from any portion of said lands.

14. CONSERVATION: Operations hereunder and production of unitized substances shall be conducted to provide for the most economical and efficient recovery of said substances without waste, as defined by or pursuant to State laws or regulations.

15. DRAINAGE: In the event a well or wells producing oil or gas in paying quantities should be brought in on land adjacent to the unit area draining unitized substances from the lands embraced therein, unit operator shall drill such offset well or wells as a reasonably prudent operator would drill under the same or similar circumstances.

16. COVENANTS RUN WITH LAND: The covenants herein shall be construed to be covenants running with the land with respect to the interests of the parties hereto and their successors in interest until this agreement terminates, and any grant, transfer or conveyance of interest in land or leases subject hereto shall be and hereby is conditioned upon the assumption of all privileges and obligations hereunder to the grantee, transferee or other successor in interest. No assignment or transfer or any working, royalty, or other interest subject hereto shall be binding upon unit operator until the first day of the calendar month after the unit operator is furnished with the original, photostatic, or certified copy of the instrument of transfer.

17. EFFECTIVE DATE AND TERM: This agreement shall become effective upon approval by the Commissioner and the Division and shall terminate in two years after such date unless (a) such date of expiration is extended by the Commissioner, or (b) a valuable discovery of unitized substances has been made on unitized land during said initial term or any extension thereof in which case this agreement shall remain in effect so long as unitized substances are being produced in paying quantities from the unitized land and, should production cease, so long thereafter as diligent operations are in progress for the restoration of production or discovery of new production and so long thereafter as the unitized substances so discovered are being produced as aforesaid. This agreement may be terminated at any time by not less than seventy-five percent (75%) on an acreage basis of the owners of the working interests, signatory hereto, with the approval of the Commissioner and with notice to Division. Likewise, the failure to comply with the drilling requirements of Section 8 hereof, may subject this agreement to termination as provided in said Section.

18. RATE OF PRODUCTION: All production and the disposal thereof shall be in conformity with allocations, allotments, and quotas made or fixed by the Commissioner, and in conformity with all applicable laws and lawful regulations.

19. APPEARANCES: Unit operator shall, after notice to other parties affected, have the right to appear for and on behalf of any and all interests affected hereby, before the Commissioner of Public Lands and the Division, and to appeal from orders issued under the regulations of the Commissioner or Division, or to apply for relief from any of said regulations or in any proceedings on its own behalf relative to operations pending before the Commissioner or Division; provided, however, that any other interest party shall also have the right at his own expense to appear and to participate in any such proceeding.

20. NOTICES: All notices, demands, or statements required hereunder to be given or rendered to the parties hereto, shall be deemed fully given, if given in writing and sent by postpaid registered mail, addressed to such party or parties at their respective addresses, set forth in connection with the signatures hereto or to the ratification or consent hereof, or to such other address as any such party may have furnished in writing to party sending the notice, demand, or statement.

21. UNAVOIDABLE DELAY: All obligations under this agreement requiring the unit operator to commence or continue drilling or to operate on or produce unitized substances from any of the lands covered by this agreement, shall be suspended while, but only so long as, the unit operator, despite the exercise of due care and diligence, is prevented from complying with such obligations, in whole or in part, by strikes, war, act of God, Federal, State, or municipal law or agencies, unavoidable accidents, uncontrollable delays in transportion, inability to obtain necessary materials in open market, or other matters beyond the reasonable control of the unit operator, whether similar to matters herein enumerated or not.

22. LOSS OF TITLE: In the event title to any tract of unitized land or substantial interest therein shall fail, and the true owner cannot be induced to join the unit agreement so that such tract is not committed to this agreement, or the operation thereof hereunder becomes impracticable as a result thereof, such tract may be eliminated from the unitized area, and the interest of the parties readjusted as a result of such tract being eliminated from the unitized area. In the event of a dispute as to the title to any royalty, working, or other interest subject hereto, the unit operator may withhold payment or delivery of the allocated portion of the unitized substances involved on account thereof, without liability for interest until the dispute is finally settled, provided that no payments of funds due the State of New Mexico shall be withheld. Unit operator, as such, is relieved from any responsibility for any defect or failure of any title hereunder.

23. SUBSEQUENT JOINDER: Any oil or gas interest in lands within the unit area not committed hereto, prior to the submission of this agreement for final approval

by the Commissioner and the Division, may be committed hereto by the owner or owners of such rights, subscribing or consenting to this agreement, or executing a ratification thereof, and if such owner is also a working interest owner, by subscribing to the operating agreement providing for the allocation of costs of exploration, development, and operation. A subsequent joinder shall be effective as of the first day of the month following the approval by the Commissioner and the filing with the Division of duly executed counterparts of the instrument or instruments committing the interest of such owner to this agreement, but such joining party or parties, before participating in any benefits hereunder, shall be required to assume and pay to unit operator, their proportionate share of the unit expenses incurred prior to such party's or parties' joinder in the unit agreement, and the unit operator shall make appropriate adjustments caused by such joinder, without any retroactive adjustment or revenue.

24. COUNTERPARTS: This agreement may be executed in any number of counterparts, no one of which needs to be executed by all parties, or may be ratified or consented to by separate instrument in writing specifically referring hereto, and shall be binding upon all those parties who have executed such a counterpart, ratification, or consent hereto with the same force and effect as if all such parties had signed the same document, and regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands within the above described unit area.

IN WITNESS WHEREOF, the undersigned parties hereto have caused this agreement to be executed as of the respective dates set forth opposite their signatures.

UNIT OPERATOR AND WORKING INTEREST OWNER

Carl A. Schellinger
P. O. Box 447
Roswell, New Mexico 88201

STATE OF NEW MEXICO)
)
COUNTY OF CHAVES)

The foregoing instrument was acknowledged before me this 23rd day of March, 1981, by Carl A. Schellinger.

My Commission Expires:
12-8-82

OFFICIAL SEAL

Notary Public

12-8-82

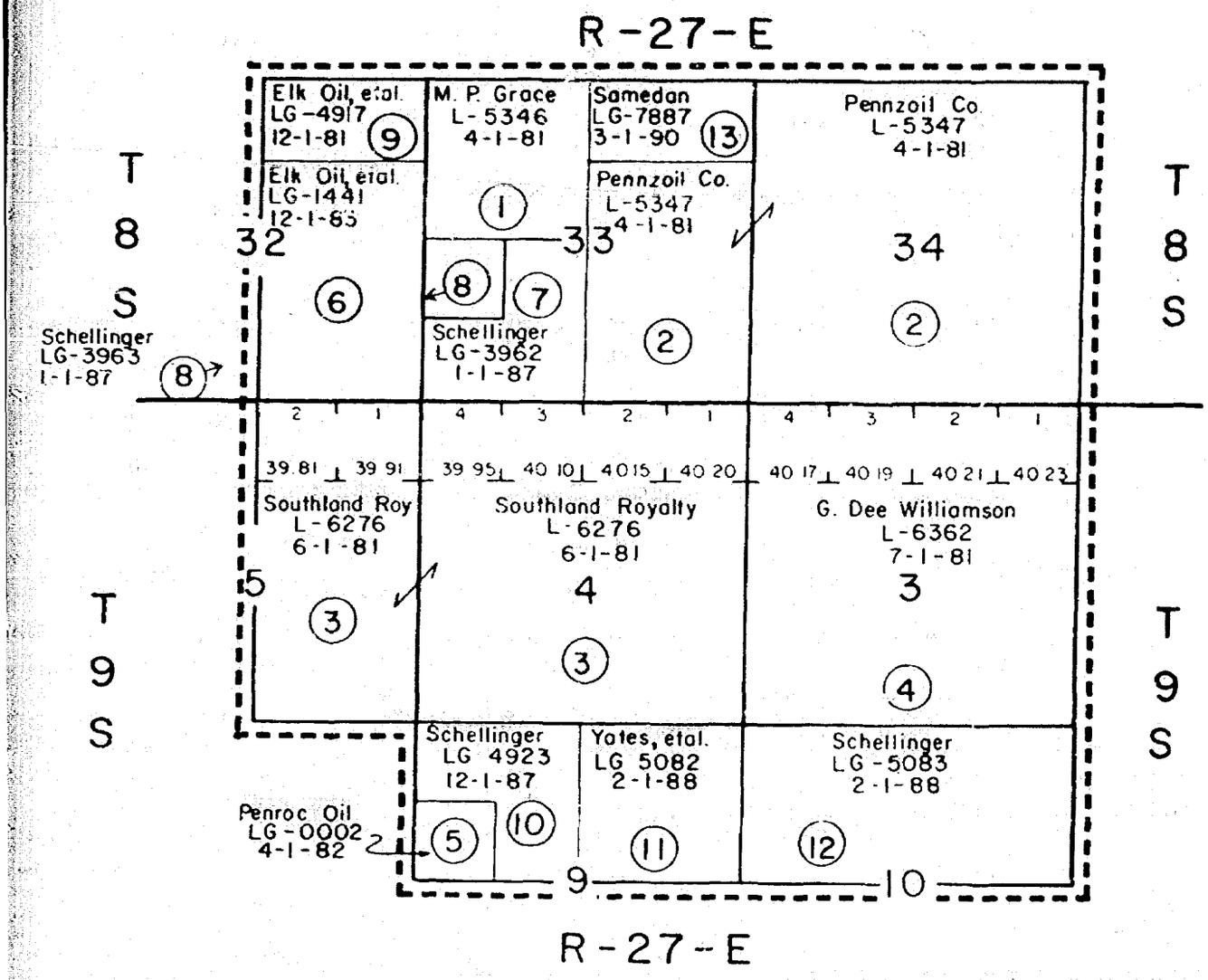


EXHIBIT "A"

Campbell Station Unit Area

Chaves County, New Mexico

UNIT OUTLINE

TRACT NUMBER

STATE OF NEW MEXICO LANDS
3,840.98 ACRES - 100% UNIT AREA

EXHIBIT "B"
Schedule Showing all Lands and Leases
Within the Campbell Station Unit Area
Chaves County, New Mexico

TRACT NO.	DESCRIPTION OF LAND	ACRES	LEASE NO. AND EXP. DATE	BASIC ROYALTY & PERCENTAGE	LESSEE OF RECORD AND PERCENTAGE	OVERRIDING ROYALTY AND PERCENTAGE	WORKING INTEREST AND PERCENTAGE
				ALL LANDS - State of New Mexico			
1.	T-8-S, R-27-E, NMPM Sec. 33: NW¼	160.00	L-5346 4-1-81	State 12.5	M. P. Grace All	None	M. P. Grace [illegible]
2.	T-8-S, R-27-E, NMPM Sec. 33: S½NE¼, SE¼ Sec. 34: All	880.00	L-5347 4-1-81	State 12.5	Pennzoil Co. All	None	[illegible]
3.	T-9-S, R-27-E, NMPM Sec. 4: Lots 1,2,3,4, S½N½, S½ (All) Sec. 5: Lots 1,2,S½NE¼, SE¼	960.18	L-6276 6-1-81	State 12.5	Southland Royalty Company All	None	[illegible]
4.	T-9-S, R-27-E, NMPM Sec. 3: Lots 1,2,3,4, S½N½, S½ (All)	640.80	L-6362 7-1-81	State 12.5	G. Dee Williamson All	None	David G. [illegible] G. Dee Williamson [illegible] Beatrice G. Williamson [illegible] Glenn G. Stiff [illegible] Charles [illegible]
5.	T-9-S, R-27-E, NMPM Sec. 9: SW¼ NW¼	40.00	LG-0002 4-1-82	State 12-5	Penroc Oil Corp. All	John B. Castle [illegible] Dorwan Company [illegible]	Penroc Oil Corp. All
6.	T-8-S, R-27-E, NMPM Sec. 32: S½NE¼, SE¼	240.00	LG-1441 12-1-83	State 12.5	Elk Oil Company 50.00 Verde Vista Energy 50.00	None	Elk Oil Co. [illegible] Verde Vista Energy [illegible]

7.	T-8-S, R-27-E, NMPM Sec. 33: S½SW¼, NE¼SW¼	120.00	LG-3962 1-1-87	State 12.5	Carl A. Schellinger	All	None	Daniel W. Varel Carl A. Schellinger George L. Scott, Jr. George R. Heddy R. Paul Creson	60.0 10.0 10.0 10.0 10.0
8.	T-8-S, R-27-E, NMPM Sec. 33: NW¼SW¼	40.00	LG-3963 1-1-87	State 12.5	Carl A. Schellinger	All	None	Same as Tract #7 above	
9.	T-8-S, R-27-E, NMPM Sec. 32: N½NE¼	80.00	LG-4917 12-1-87	State 12.5	Elk Oil Company Verde Vista Energy	50.0 50.0	None	Elk Oil Co. Verde Vista Energy	50.0 50.0
10.	T-9-S, R-27-E, NMPM Sec. 9: N½NW¼, SE¼NW¼	120.00	LG-4923 12-1-87	State 12.5	Carl A. Schellinger	All	None	Same as Tract #7 above	
11.	T-9-S, R-27-E, NMPM Sec. 9: NE¼	160.00	LG-5082 2-1-88	State 12.5	Yates Pet. Corp.	All	None	Yates Pet. Corp. Yates Drl. Co. MYCO Industries Abo Pet. Co.	[illegible] [illegible] [illegible] [illegible]
12.	T-9-S, R-27-E, NMPM Sec. 10: N½	320.00	LG-5083 2-1-88	State 12.5	Carl A. Schellinger	All	None	Same as Tract #7 above	
13.	T-8-S, R-27-E, NMPM Sec. 33: N½NW¼	80.00	LG-7987 3-1-90	State 12.5	Samedan Oil Co.	All	None	[illegible]	

TOTAL - - - 3,840.98 Acres, State of New Mexico Lands, 100% of Unit Area

CONSENT AND RATIFICATION

CAMPBELL STATION UNIT AGREEMENT

CHAVES COUNTY, NEW MEXICO

The undersigned (whether one or more), hereby acknowledges receipt of a copy of the Unit Agreement for the Development and Operation of the Campbell Station Unit Area embracing lands situated in Chaves County, New Mexico, which said Agreement is dated the 26th day of January, 1981, and acknowledged that they have read the same and are familiar with the terms and conditions thereof. The undersigned, also being the owners of the leasehold, royalty, or other interests in the lands or minerals embraced in said Unit Area, as indicated on the schedule attached to said Unit Agreement as Exhibit "B," do hereby consent thereto and ratify all of the terms and provisions thereof, exactly the same as if the undersigned had executed the original of said Unit Agreement or a counterpart thereof.

IN WITNESS WHEREOF, this instrument is executed by the undersigned as of the date set forth in their respective acknowledgments.

Michael P. Grace

Michael P. Grace

INDIVIDUAL

STATE OF NEW MEXICO)
)SS.
COUNTY OF CHAVES)

The foregoing instrument was acknowledged before me this 19 day of March, 1981, by Michael P. Grace.

My Commission Expires:

March 5, 1984

Melissa Randle
Notary Public

CORPORATE

STATE OF _____)
)SS.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 198___, by _____, _____, President of _____ a _____ corporation, on behalf of said corporation.

My Commission Expires:

_____ Notary Public

CONSENT AND RATIFICATION

CAMPBELL STATION UNIT AGREEMENT

CHAVES COUNTY, NEW MEXICO

The undersigned (whether one or more), hereby acknowledges receipt of a copy of the Unit Agreement for the Development and Operation of the Campbell Station Unit Area embracing lands situated in Chaves County, New Mexico, which said Agreement is dated the 26th day of January, 1981, and acknowledged that they have read the same and are familiar with the terms and conditions thereof. The undersigned, also being the owners of the leasehold, royalty, or other interests in the lands or minerals embraced in said Unit Area, as indicated on the schedule attached to said Unit Agreement as Exhibit "B," do hereby consent thereto and ratify all of the terms and provisions thereof, exactly the same as if the undersigned had executed the original of said Unit Agreement or a counterpart thereof. This Consent and Ratification is made for undersigned's fifty percent (50%) undivided interst in the lease #L-5346, T-8-S, R-27-E, NMPM, Sec. 33: NW¼ and 50% of any other interest earned in the Campbell Station Unit through having consented and ratified the above lease in said unit agreement.

IN WITNESS WHEREOF, this instrument is executed by the undersigned as of the date set forth in their respective acknowledgments.

_____ Corinne Grace

TR-1

INDIVIDUAL

STATE OF New Mexico)
)SS.
COUNTY OF Eddy)

The foregoing instrument was acknowledged before me this 13th day of March, 1981, by Corinne Grace.

My Commission Expires:

Aug. 15, 1981

Kaye Hartley Bradford
Notary Public

CORPORATE

STATE OF _____)
)SS.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 198__, by _____, _____, President of _____ a _____, corporation, on behalf of said corporation.

My Commission Expires:

_____ _____
Notary Public

Campbell Station Unit
Case reference

CONSENT AND RATIFICATION

CAMPBELL STATION UNIT AGREEMENT

CHAVES COUNTY, NEW MEXICO

The undersigned (whether one or more), hereby acknowledges receipt of a copy of the Unit Agreement for the Development and Operation of the Campbell Station Unit Area embracing lands situated in Chaves County, New Mexico, which said Agreement is dated the 20th day of January, 1981, and acknowledged that they have read the same and are familiar with the terms and conditions thereof. The undersigned, also being the owners of the leasehold, royalty, or other interests in the lands or minerals embraced in said Unit Area, as indicated on the schedule attached to said Unit Agreement as Exhibit "B," do hereby consent thereto and ratify all of the terms and provisions thereof, exactly the same as if the undersigned had executed the original of said Unit Agreement or a counterpart thereof.

IN WITNESS WHEREOF, this instrument is executed by the undersigned as of the date set forth in their respective acknowledgments.

APPROVED
K

PENNZOIL COMPANY

By: H. W. Hollingshead, Jr.
H. W. Hollingshead, Jr.
Agent and Attorney-in-Fact

INDIVIDUAL TR-2

STATE OF _____)
)SS.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 19__, by _____.

My Commission Expires:

_____ Notary Public

CORPORATE

STATE OF TEXAS)
COUNTY OF MIDLAND)

The foregoing instrument was acknowledged before me this 18th day of February, 19 81, by H. W. Hollingshead, Jr., Agent and Attorney-in-Fact of Pennzoil Company, a Delaware Corporation, on behalf of said corporation.

My Commission Expires:

March 20, 1984

KAREN STACK

CONSENT AND RATIFICATION

CAMPBELL STATION UNIT AGREEMENT

CHAVES COUNTY, NEW MEXICO

The undersigned (whether one or more), hereby acknowledges receipt of a copy of the Unit Agreement for the Development and Operation of the Campbell Station Unit Area embracing lands situated in Chaves County, New Mexico, which said Agreement is dated the 16th day of January, 1981, and acknowledged that they have read the same and are familiar with the terms and conditions thereof. The undersigned, also being the owners of the leasehold, royalty, or other interests in the lands or minerals embraced in said Unit Area, as indicated on the schedule attached to said Unit Agreement as Exhibit "B," do hereby consent thereto and ratify all of the terms and provisions thereof, exactly the same as if the undersigned had executed the original of said Unit Agreement or a counterpart thereof.

IN WITNESS WHEREOF, this instrument is executed by the undersigned as of the date set forth in their respective acknowledgments.

_____ by C E Mear
Attorney-In-Fact

_____ _____

_____ _____

INDIVIDUAL TR-3

STATE OF _____)
)SS.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 198___, by _____.

My Commission Expires:

_____ _____
Notary Public

CORPORATE

STATE OF TEXAS)
)SS
COUNTY OF MIDLAND)

The foregoing instrument was acknowledged before me this 2nd day of March, 1, by C. E. Mear, Attorney-In-Fact, Southland Royalty Company, a Delaware corporation, on behalf of said corporation.

My commission expires:

Oct. 31, 1984

Lee Harrell

CONSENT AND RATIFICATION

CAMPBELL STATION UNIT AGREEMENT

CHAVES COUNTY, NEW MEXICO

The undersigned (whether one or more), hereby acknowledges receipt of a copy of the Unit Agreement for the Development and Operation of the Campbell Station Unit Area embracing lands situated in Chaves County, New Mexico, which said Agreement is dated the 26th day of January, 1981, and acknowledged that they have read the same and are familiar with the terms and conditions thereof. The undersigned, also being the owners of the leasehold, royalty, or other interests in the lands or minerals embraced in said Unit Area, as indicated on the schedule attached to said Unit Agreement as Exhibit "B," do hereby consent thereto and ratify all of the terms and provisions thereof, exactly the same as if the undersigned had executed the original of said Unit Agreement or a counterpart thereof.

IN WITNESS WHEREOF, this instrument is executed by the undersigned as of the date set forth in their respective acknowledgments.

David J. Sorenson

INDIVIDUAL TR-4

STATE OF NEW MEXICO)
) ss.
COUNTY OF CHAVES)

The foregoing instrument was acknowledged before me this 12th day of February, 1981, by David J. Sorenson.

My Commission Expires:

May 31, 1982

Barbara J. Moore
Notary Public

CORPORATE

STATE OF _____
) ss.
COUNTY OF _____

The foregoing instrument was acknowledged before me this _____ day of _____, 19__, by _____, _____ of _____, a _____ corporation, on behalf of said corporation.

My Commission Expires:

_____
Notary Public

CONSENT AND RATIFICATION

CAMPBELL STATION UNIT AGREEMENT

CHAVES COUNTY, NEW MEXICO

The undersigned (whether one or more), hereby acknowledges receipt of a copy of the Unit Agreement for the Development and Operation of the Campbell Station Unit Area embracing lands situated in Chaves County, New Mexico, which said Agreement is dated the 26th day of January, 1981, and acknowledged that they have read the same and are familiar with the terms and conditions thereof. The undersigned, also being the owners of the leasehold, royalty, or other interests in the lands or minerals embraced in said Unit Area, as indicated on the schedule attached to said Unit Agreement as Exhibit "B," do hereby consent thereto and ratify all of the terms and provisions thereof, exactly the same as if the undersigned had executed the original of said Unit Agreement or a counterpart thereof.

IN WITNESS WHEREOF, this instrument is executed by the undersigned as of the date set forth in their respective acknowledgments.

G. Dee Williamson

INDIVIDUAL TR -4

STATE OF New Mexico)
)SS.
COUNTY OF Chaves)

The foregoing instrument was acknowledged before me this 12th day of February, 1981, by G. Dee Williamson.

My Commission Expires:

4/4/83

Amy W. Duncan
Notary Public

Amy W. Duncan
4/4/83

CORPORATE

STATE OF _____)
)SS.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 19__, by _____, _____, _____ corporation, on behalf of said corporation.

My Commission Expires:

_____ Notary Public

CONSENT AND RATIFICATION

CAMPBELL STATION UNIT AGREEMENT

CHAVES COUNTY, NEW MEXICO

The undersigned (whether one or more), hereby acknowledges receipt of a copy of the Unit Agreement for the Development and Operation of the Campbell Station Unit Area embracing lands situated in Chaves County, New Mexico, which said Agreement is dated the 26th day of January, 1981, and acknowledged that they have read the same and are familiar with the terms and conditions thereof. The undersigned, also being the owners of the leasehold, royalty, or other interests in the lands or minerals embraced in said Unit Area, as indicated on the schedule attached to said Unit Agreement as Exhibit "B," do hereby consent thereto and ratify all of the terms and provisions thereof, exactly the same as if the undersigned had executed the original of said Unit Agreement or a counterpart thereof.

IN WITNESS WHEREOF, this instrument is executed by the undersigned as of the date set forth in their respective acknowledgments.

Lanita C. Williamson
3014 N. Edgewood, Roswell, NM 88201
463-46-4644

INDIVIDUAL T-4

STATE OF New Mexico)
) ss.
COUNTY OF Chaves)

The foregoing instrument was acknowledged before me this 26th day of February, 1981, by Lanita C. Williamson.

My Commission Expires:

8-11-82

Notary Public

OFFICIAL SEAL
Kayla A. Pratt
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires 8-11-82

CORPORATE

STATE OF _____)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 19__, by _____, _____ of _____, a _____ corporation, on behalf of said corporation.

My Commission Expires:

_____

Notary Public

CONSENT AND RATIFICATION

CAMPBELL STATION UNIT AGREEMENT

CHAVES COUNTY, NEW MEXICO

The undersigned (whether one or more), hereby acknowledges receipt of a copy of the Unit Agreement for the Development and Operation of the Campbell Station Unit Area embracing lands situated in Chaves County, New Mexico, which said Agreement is dated the 20th day of January, 1981, and acknowledged that they have read the same and are familiar with the terms and conditions thereof. The undersigned, also being the owners of the leasehold, royalty, or other interests in the lands or minerals embraced in said Unit Area, as indicated on the schedule attached to said Unit Agreement as Exhibit "B," do hereby consent thereto and ratify all of the terms and provisions thereof, exactly the same as if the undersigned had executed the original of said Unit Agreement or a counterpart thereof.

IN WITNESS WHEREOF, this instrument is executed by the undersigned as of the date set forth in their respective acknowledgments.

Glenn G Stiff

INDIVIDUAL TR-4

STATE OF New Mexico)
)SS.
COUNTY OF Chaves)

The foregoing instrument was acknowledged before me this 12th day of March, 1981, by Glenn G. Stiff.

My Commission Expires:

8-11-82

OFFICIAL SEAL
Kayla A. Pratt
Notary Public
NOTARY PUBLIC - STATE OF NEW MEXICO
My Commission Expires 8-11-82

CORPORATE

STATE OF _____)
)SS.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____, _____ of _____ Corporation, on behalf of said corporation.

My Commission Expires:

_____ Notary Public

CONSENT AND RATIFICATION

CAMPBELL STATION UNIT AGREEMENT

CHAVES COUNTY, NEW MEXICO

The undersigned (whether one or more), hereby acknowledges receipt of a copy of the Unit Agreement for the Development and Operation of the Campbell Station Unit Area embracing lands situated in Chaves County, New Mexico, which said Agreement is dated the 26th day of January, 1981, and acknowledged that they have read the same and are familiar with the terms and conditions thereof. The undersigned, also being the owners of the leasehold, royalty, or other interests in the lands or minerals embraced in said Unit Area, as indicated on the schedule attached to said Unit Agreement as Exhibit "B," do hereby consent thereto and ratify all of the terms and provisions thereof, exactly the same as if the undersigned had executed the original of said Unit Agreement or a counterpart thereof.

IN WITNESS WHEREOF, this instrument is executed by the undersigned as of the date set forth in their respective acknowledgments.

Charles D. Plunkett

INDIVIDUAL TR-4

STATE OF New Mexico)
)SS.
COUNTY OF Santa Fe)

The foregoing instrument was acknowledged before me this 9 day of March, 1981, by Charles D. Plunkett

My Commission Expires:

9/15/84

Shirley Ding
Notary Public

CORPORATE

STATE OF _____)
)SS.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, _____, by _____, _____ of _____, a _____ corporation, on behalf of said corporation.

My Commission Expires:

_____ Notary Public

JOINDER AND RATIFICATION

CAMPBELL STATION UNIT AGREEMENT

CHAVES COUNTY, NEW MEXICO

The undersigned (whether one or more), hereby acknowledges receipt of a copy of the Unit Agreement for the Development and Operation of the Campbell Station Unit Area embracing lands situated in Chaves County, New Mexico, which said Agreement is dated the 26th day of January, 1981, and acknowledged that they have read the same and are familiar with the terms and conditions thereof. The undersigned, also being the owners of the leasehold, royalty, or other interests in the lands or minerals embraced in said Unit Area, as indicated on the schedule attached to said Unit Agreement as Exhibit "B," do hereby consent thereto and ratify all of the terms and provisions thereof, exactly the same as if the undersigned had executed the original of said Unit Agreement or a counterpart thereof.

IN WITNESS WHEREOF, this instrument is executed by the undersigned as of the date set forth in their respective acknowledgments.

ELK OIL COMPANY

BY: _____

Assistant Secretary — Joseph J. Kelly, President

VERDE VISTA ENERGY COMPANY

BY: _____

Assistant Secretary — J. Michael Kelly, President

TR-6-9

INDIVIDUAL

STATE OF _____)
)SS.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 198___, by _____.

My Commission Expires:

_____ _____
Notary Public

CORPORATE

STATE OF NEW MEXICO)
)SS.
COUNTY OF CHAVES)

The foregoing instrument was acknowledged before me this 27th day of February, 1981, by Joseph J. Kelly, President of ELK OIL COMPANY New Mexico corporation, on behalf of said corporation.

OFFICIAL SEAL
KATHY A. PALE
NOTARY PUBLIC - NEW MEXICO
MY COMMISSION EXPIRES: SEPTEMBER 14, 1983

My Commission Expires:

September 14, 1983

CONSENT AND RATIFICATION

CAMPBELL STATION UNIT AGREEMENT

CHAVES COUNTY, NEW MEXICO

The undersigned (whether one or more), hereby acknowledges receipt of a copy of the Unit Agreement for the Development and Operation of the Campbell Station Unit Area embracing lands situated in Chaves County, New Mexico, which said Agreement is dated the 26th day of January, 1981, and acknowledged that they have read the same and are familiar with the terms and conditions thereof. The undersigned, also being the owners of the leasehold, royalty, or other interests in the lands or minerals embraced in said Unit Area, as indicated on the schedule attached to said Unit Agreement as Exhibit "B," do hereby consent thereto and ratify all of the terms and provisions thereof, exactly the same as if the undersigned had executed the original of said Unit Agreement or a counterpart thereof.

IN WITNESS WHEREOF, this instrument is executed by the undersigned as of the date set forth in their respective acknowledgments.

George L. Scott Jr

INDIVIDUAL TR - 7-8-10-12

STATE OF NEW MEXICO)
)ss.
COUNTY OF CHAVES)

The foregoing instrument was acknowledged before me this 17th day of February, 1981, by George L. Scott, Jr.

My Commission Expires:
May 9, 1981

Albert M. Hill
Notary Public

CORPORATE

STATE OF _____)
)ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, _____, _____, _____ of _____ corporation, on behalf of said corporation.

My Commission Expires:

_____
Notary Public

CONSENT AND RATIFICATION

CAMPBELL STATION UNIT AGREEMENT

CHAVES COUNTY, NEW MEXICO

The undersigned (whether one or more), hereby acknowledges receipt of a copy of the Unit Agreement for the Development and Operation of the Campbell Station Unit Area embracing lands situated in Chaves County, New Mexico, which said Agreement is dated the 20th day of January, 1981, and acknowledged that they have read the same and are familiar with the terms and conditions thereof. The undersigned, also being the owners of the leasehold, royalty, or other interests in the lands or minerals embraced in said Unit Area, as indicated on the schedule attached to said Unit Agreement as Exhibit "B," do hereby consent thereto and ratify all of the terms and provisions thereof, exactly the same as if the undersigned had executed the original of said Unit Agreement or a counterpart thereof.

IN WITNESS WHEREOF, this instrument is executed by the undersigned as of the date set forth in their respective acknowledgments.

Daniel Marel

INDIVIDUAL TR - 7-8-10-12

STATE OF Texas)
)SS.
COUNTY OF Dallas)

The foregoing instrument was acknowledged before me this 4th day of March, 1981, by Daniel W. Marel.

My Commission Expires:

Notary Public

CORPORATE

STATE OF)
)SS.
COUNTY OF

The foregoing instrument was acknowledged before me this _____ day of _____, _____, _____ of _____, a _____ corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

CONSENT AND RATIFICATION

CAMPBELL STATION UNIT AGREEMENT

CHAVES COUNTY, NEW MEXICO

The undersigned (whether one or more), hereby acknowledges receipt of a copy of the Unit Agreement for the Development and Operation of the Campbell Station Unit Area embracing lands situated in Chaves County, New Mexico, which said Agreement is dated the 26th day of January, 1981, and acknowledged that they have read the same and are familiar with the terms and conditions thereof. The undersigned, also being the owners of the leasehold, royalty, or other interests in the lands or minerals embraced in said Unit Area, as indicated on the schedule attached to said Unit Agreement as Exhibit "B," do hereby consent thereto and ratify all of the terms and provisions thereof, exactly the same as if the undersigned had executed the original of said Unit Agreement or a counterpart thereof.

IN WITNESS WHEREOF, this instrument is executed by the undersigned as of the date set forth in their respective acknowledgments.

INDIVIDUAL TR-7-8-10-12

STATE OF New Mexico)
) SS.
COUNTY OF Chaves)

The foregoing instrument was acknowledged before me this 12th day of February, 1981, by George R. Kelley.

My Commission Expires:

10/10/82

Notary Public

CORPORATE

STATE OF _____)
) SS.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 19__, by _____, _____ of _____, a _____ corporation, on behalf of said corporation.

My Commission Expires:

CONSENT AND RATIFICATION

CAMPBELL STATION UNIT AGREEMENT

CHAVES COUNTY, NEW MEXICO

The undersigned (whether one or more), hereby acknowledges receipt of a copy of the Unit Agreement for the Development and Operation of the Campbell Station Unit Area embracing lands situated in Chaves County, New Mexico, which said Agreement is dated the 26th day of January, 1981, and acknowledged that they have read the same and are familiar with the terms and conditions thereof. The undersigned, also being the owners of the leasehold, royalty, or other interests in the lands or minerals embraced in said Unit Area, as indicated on the schedule attached to said Unit Agreement as Exhibit "B," do hereby consent thereto and ratify all of the terms and provisions thereof, exactly the same as if the undersigned had executed the original of said Unit Agreement or a counterpart thereof.

IN WITNESS WHEREOF, this instrument is executed by the undersigned as of the date set forth in their respective acknowledgments.

Paul Creson

INDIVIDUAL TR-1-8-10-12

STATE OF TEXAS)
)SS.
COUNTY OF DALLAS)

The foregoing instrument was acknowledged before me this 13th day of February, 1981, by Paul Creson.

My Commission Expires:

3-17-84

Notary Public
Kris Stormer

CORPORATE

STATE OF _____)
)SS.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 198__, by _____, _____, President of _____, corporation, on behalf of said corporation.

My Commission Expires:

_____ Notary Public

CONSENT AND RATIFICATION

CAMPBELL STATION UNIT AGREEMENT

CHAVES COUNTY, NEW MEXICO

The undersigned (whether one or more), hereby acknowledges receipt of a copy of the Unit Agreement for the Development and Operation of the Campbell Station Unit Area embracing lands situated in Chaves County, New Mexico, which said Agreement is dated the 26th day of January, 1981, and acknowledged that they have read the same and are familiar with the terms and conditions thereof. The undersigned, also being the owners of the leasehold, royalty, or other interests in the lands or minerals embraced in said Unit Area, as indicated on the schedule attached to said Unit Agreement as Exhibit "B," do hereby consent thereto and ratify all of the terms and provisions thereof, exactly the same as if the undersigned had executed the original of said Unit Agreement or a counterpart thereof.

IN WITNESS WHEREOF, this instrument is executed by the undersigned as of the date set forth in their respective acknowledgments.

YATES PETROLEUM CORPORATION

By: S P Yates
Attorney-in-Fact

YATES DRILLING COMPANY

By: S P Yates
Attorney-in-Fact

ABO PETROLEUM CORPORATION

By: John A Yates
Attorney-in-Fact

MYCO INDUSTRIES, INC.

By: Frank Yates
Attorney-in-Fact

INDIVIDUAL

TR-11

STATE OF _____)
)SS.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 198___, by _____.

My Commission Expires:

_____ _____
Notary Public

STATE OF NEW MEXICO)
: ss
COUNTY OF EDDY)

The foregoing instrument was acknowledged before me this 20th day of February, 1981, by S. P. Yates, Attorney-in-Fact for YATES PETROLEUM CORPORATION; S. P. Yates, Attorney-in-Fact for YATES DRILLING COMPANY; John A Yates, Attorney-in-Fact for ABO PETROLEUM CORPORATION; Frank Yates, Attorney-in-Fact for MYCO INDUSTRIES, INC., all New Mexico corporations, on behalf of said corporations.

My Commission Expires:
9/14/83

Theresa K. Stogsdill
Notary Public

[illegible] AND RATIFICATION

CAMPBELL STATION UNIT AGREEMENT

CHAVES COUNTY, NEW MEXICO

The undersigned (whether one or more), hereby acknowledges receipt of a copy of the Unit Agreement for the Development and Operation of the Campbell Station Unit Area embracing lands situated in Chaves County, New Mexico, which said Agreement is dated the 20th day of January, 1981, and acknowledged that they have read the same and are familiar with the terms and conditions thereof. The undersigned, also being the owners of the leasehold, royalty, or other interests in the lands or minerals embraced in said Unit Area, as indicated on the schedule attached to said Unit Agreement as Exhibit "B," do hereby consent thereto and ratify all of the terms and provisions thereof, exactly the same as if the undersigned had executed the original of said Unit Agreement or a counterpart thereof.

IN WITNESS WHEREOF, this instrument is executed by the undersigned as of the date set forth in their respective acknowledgments.

1
2
3
4
5

ATTEST:

Secretary

SAMEDAN OIL CORPORATION

By: Thomas C. Jobe, Vice-President

INDIVIDUAL

TR-13

STATE OF _____)
)ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 19[illegible], by _____.

My Commission Expires:

_____ Notary Public

CORPORATE

STATE OF OKLAHOMA

COUNTY OF Carter

The foregoing instrument was acknowledged before me this _____ day of _____, 19[illegible], by Thomas C. Jobe, Vice President of Samedan Oil Corp. Delaware Corporation, on behalf of said corporation.

My Commission Expires:

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

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

CASE NO. 7157
Order No. R-6606

APPLICATION OF CARL A. SCHELLINGER
FOR APPROVAL OF THE CAMPBELL STATION
UNIT AGREEMENT, CHAVES COUNTY, NEW
MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on February 25, 1981, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this _____ day of March, 1981, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Carl A. Schellinger, seeks approval of the Campbell Station Unit Agreement covering 3,840.98 acres, more or less, of State lands described as follows:

CHAVES COUNTY, NEW MEXICO

TOWNSHIP 8 SOUTH, RANGE 27 EAST, NMPM
Section 32: E/2
Sections 33 and 34: All

TOWNSHIP 9 SOUTH, RANGE 27 EAST, NMPM
Sections 3 and 4: All
Section 5: E/2
Section 9: N/2
Section 10: N/2

BEFORE THE
OIL CONSERVATION DIVISION
7405 EXHIBIT NO. 2A
CASE NO.

(3) That all plans of development and operation and creations, expansions, or contractions of participating areas or expansions or contractions of the unit area, should be submitted to the Director of the Division for approval.

(4) That approval of the proposed unit agreement should promote the prevention of waste and the protection of correlative rights within the unit area.

IT IS THEREFORE ORDERED:

(1) That the Campbell Station Unit Agreement is hereby approved.

(2) That the plan contained in said unit agreement for the development and operation of the unit area is hereby approved in principle as a proper conservation measure; provided, however, that notwithstanding any of the provisions contained in said unit agreement, this approval shall not be considered as waiving or relinquishing, in any manner, any right, duty, or obligation which is now, or may hereafter be, vested in the Division to supervise and control operations for the exploration and development of any lands committed to the unit and production of oil or gas therefrom.

(3) That the unit operator shall file with the Division an executed original or executed counterpart of the unit agreement within 30 days after the effective date thereof; that in the event of subsequent joinder by any party or expansion or contraction of the unit area, the unit operator shall file with the Division within 30 days thereafter counterparts of the unit agreement reflecting the subscription of those interests having joined or ratified.

(4) That all plans of development and operation, all unit participating areas and expansions and contractions thereof, and all expansions or contractions of the unit area, shall be submitted to the Director of the Oil Conservation Division for approval.

(5) That this order shall become effective upon the approval of said unit agreement by the Commissioner of Public Lands for the State of New Mexico; that this order shall terminate ipso facto upon the termination of said unit agreement; and that the last unit operator shall notify the Division immediately in writing of such termination.

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

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

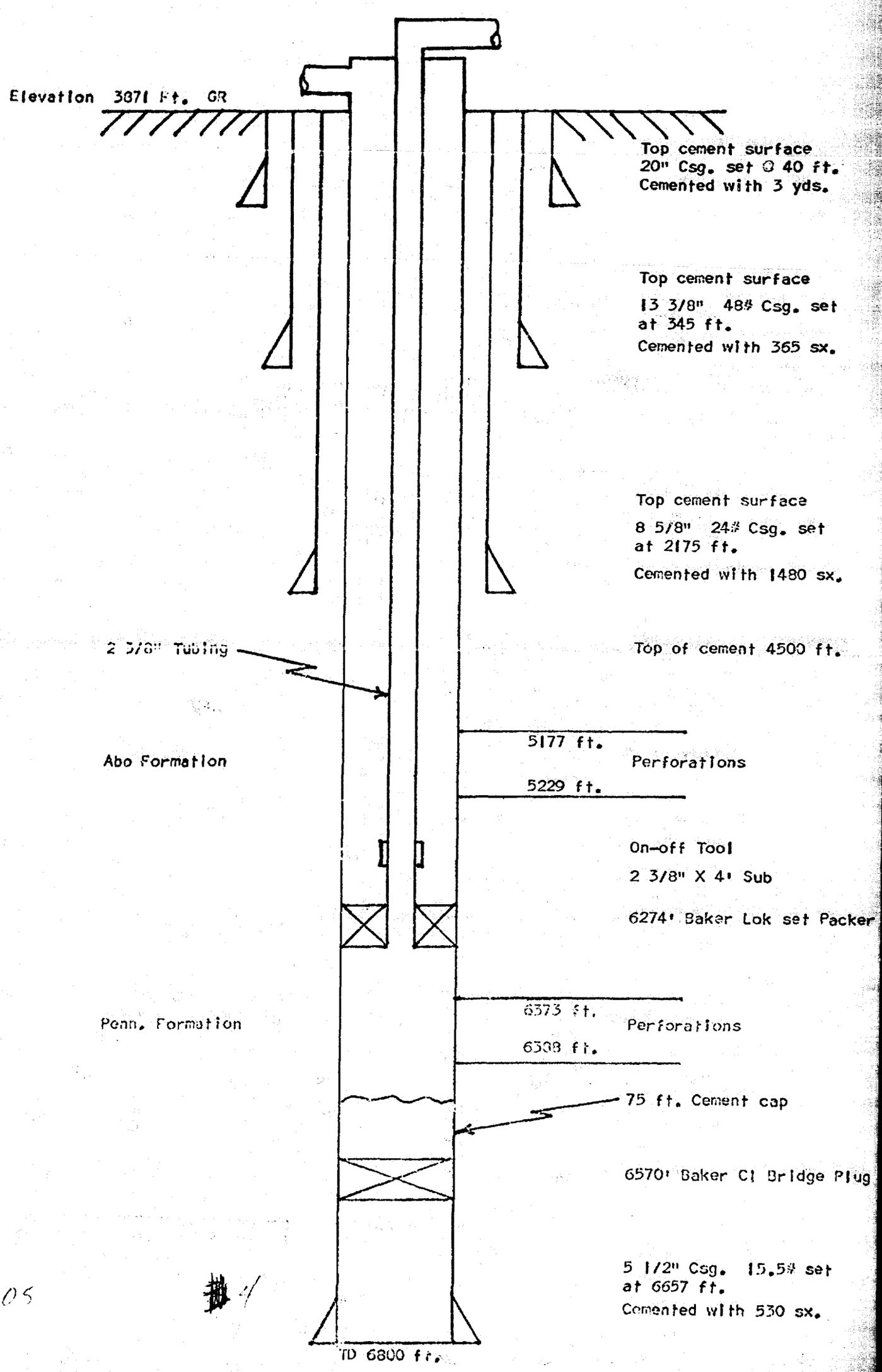
STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY,
Director

S E A L

dr.

CARL A. SCHELLINGER
Campbell Station Unit No. 1 Well
Location: 660' FSL & FWL Sec. 34
T-8-S, R-27-E
Chaves County, New Mexico



2405

#4

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SANTA FE	
FILE	
U.S.G.S.	
LAND OFFICE	
OPERATOR	

Form C-105
Revised 8-1-8

NEW MEXICO OIL CONSERVATION COMMISSION
WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5a. Indicate Type of Lease: State [X] Fee [ ]

5. State Oil & Gas Lease No.: L-5347

1a. TYPE OF WELL: OIL WELL [ ] GAS WELL [X] DRY [ ] OTHER

b. TYPE OF COMPLETION: NEW WELL [X] WORK OVER [ ] DEEPEN [ ] PLUG BACK [ ] DIFF. RESVR. [ ] OTHER

7. Unit Agreement Name: Campbell Station Uni

8. Farm or Lease Name: Campbell Station Unit

2. Name of Operator: Carl A. Schellinger

9. Well No.: 1

3. Address of Operator: P.O. Box 447, Roswell, New Mexico 88201

10. Field and Pool, or Wildcat: Wildcat

4. Location of Well

UNIT LETTER M LOCATED 660' FEET FROM THE South LINE AND 660' FEET FROM THE West LINE OF SEC. 34 TWP. 8-S RGE. 27-E NMPM

12. County: Chaves

15. Date Spudded	16. Date T.D. Reached	17. Date Compl. (Ready to Prod.)	18. Elevations (DF, RKB, RT, GR, etc.)	19. Elev. Cashinghead
5/10/81	6/14/81	9/17/81	3871' G.R. 3882' K.B.	3871'

20. Total Depth	21. Plug Back T.D.	22. If Multiple Compl., How Many	23. Intervals Drilled By →	Rotary Tools	Cable Tools
6800	5300'	2		All	

24. Producing Interval(s), of this completion – Top, Bottom, Name: 6373' - 6388' (Penn)

25. Was Directional Survey Made: No

26. Type Electric and Other Logs Run: CNFD, DLL, MSFL

27. Was Well Cored: Yes

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8-5/8"	24#/ft.	2172'	12-1/4"	700 sks Halliburton Lite	------
				300 sks Class "C"	
5-1/2"	15.50#/ft.	6793'	7-7/8"	530 sks Class "H"	
				50/50 poz	--------

29. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN
None				

30. TUBING RECORD

SIZE	DEPTH SET	PACKER SET

31. Perforation Record (Interval, size and number): 6373' - 6388' (6 holes)

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
6373' - 6388'	900 gallons spearhead 15% Acid, frac with 10,000 gelled 2% H2O with 5000 gallons CO2, + 22,000# sand

33. PRODUCTION

Date First Production	Production Method (Flowing, gas lift, pumping – Size and type pump)	Well Status (Prod. or Shut-in)
8/12/81	Flowing	Shut-in

Date of Test	Hours Tested	Choke Size	Prod'n. For Test Period →	Oil – Bbl.	Gas – MCF	Water – Bbl.	Gas – Oil Ratio
8/25/81	24	1/4"		-0-	370	1	------

Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate →	Oil – Bbl.	Gas – MCF	Water – Bbl.	Oil Gravity – API (Corr.)
1510 psig	Pkr		------	370	1	----------

34. Disposition of Gas (Sold, used for fuel, vented, etc.): Vented

Test Witnessed By: Don Bennett

35. List of Attachments: Logs, and C-122 forms.

36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED _____ TITLE _____ DATE 9/11/81

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
EXHIBIT NO. 5
CASE NO. 7405

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Commission not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radioactivity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 30 through 34 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico				Northwestern New Mexico			
T. Anhy		T. Canyon		T. Ojo Alamo		T. Penn. "B"	
T. Salt		T. Strawn		T. Kirtland-Fruitland		T. Penn. "C"	
B. Salt	Rustler 230'	T. Atoka		T. Pictured Cliffs		T. Penn. "D"	
T. Yates	317	T. Miss	6408'	T. Cliff House		T. Leadville	
T. 7 Rivers		T. Devonian		T. Menefee		T. Madison	
T. Queen	912'	T. Silurian		T. Point Lookout		T. Elbert	
T. Grayburg		T. Montoya	6593'	T. Mancos		T. McCracken	
T. San Andres	1401	T. Simpson	Pi Marker 1887	T. Gallup		T. Ignacio Qtzte	
T. Glorieta	2595'	T. McKee	P-1 2015'	Base Greenhorn		T. Granite	
T. Paddock		T. Ellenburger		T. Dakota		T.	
T. Blinebry	Yeso 2660'	T. Gr. Wash		T. Morrison		T.	
T. Tubb	4060'	T. Granite		T. Todilto		T.	
T. Drinkard		T. Delaware Sand		T. Entrada		T.	
T. Abo	4842'	T. Bone Springs		T. Wingate		T.	
T. Wolfcamp	5538	T.		T. Chinle		T.	
T. Penn.	6075'	T.		T. Permian		T.	
T. Cisco (Bough C)		T.		T. Penn "A"		T.	

OIL OR GAS SANDS OR ZONES

No. 1, from 2030 to 2064 No. 4, from ..... to .....

No. 2, from 6373 to 6388 No. 5, from ..... to .....

No. 3, from 6598 to 6657 No. 6, from ..... to .....

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from ..... to ..... feet. .....

No. 2, from ..... to ..... feet. .....

No. 3, from ..... to ..... feet. .....

No. 4, from ..... to ..... feet. .....

FORMATION RECORD (Attach additional sheets if necessary)

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation
-0-	345	345	Anhydrite & Red Bed	4680'	-4900	220'	Anhydrite and shale
345	990	645	Anhydrite & Salt	4900	5165	265	Lime
990	1410	420	Anhydrite & Dolomite	5165	5295	130	Shale
1410	2715	1305	Anhydrite & Salt	5295	5705	410	Shale & Lime
2715	3330	615	Dolomite & Sand	5705	5990	285	Dolomite & Lime
3330	3717	387	Sand & Anhydrite	5990	6275	285	Anhydrite & Lime
3717	4095	378	Anhydrite & Shale	6275'	6395	120	Shale, Lime, and Sand
4095'	4470	375	Anhydrite & Lime	6395	6505	110	Lime & Chert
4470'	4680	210	Lime & Shale	6505	6645	140	Lime, Shale, & Chert
				6645	6800	155	Dolomite & Chert

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-122
Revised 10-1-78

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test: [X] Initial FOUR POINT [ ] Annual [ ] Special		Test Date: 9-22-81	660 FSL
Operator: CARL A. SCHELLINGER	Connection: AIR NEW WELL		660 FWL
Pool: WILDCAT	Formation: ABO		Unit: M
Completion Date: 4-15-81	Total Depth: 6800	Plug Back TD: 5300	Elevation: 3882 KB
Farm or Lease Name: CAMPBELL STATION UNIT			

Tubing Size	Wt.	d	Set At	Perforations:	Well No.
5.5	15.5	4.950	5300	From 5177 To 5229	1

Casing Size	Wt.	d	Set At	Perforations:	Unit	Sec.	Twp.	Rge.
2.375	4.7	1.995	5097	From OPEN To	M	34	8S	27E

Type Well - Single - Bradenhead - G.G. or G.O. Multiple	Packer Set At	County
DUAL	NONE	CHAVES

Producing Thru	Reservoir Temp. °F	Mean Annual Temp. °F	Baro. Press. - P_a	State
TUBING	105 @ 5093	60	13.2	NEW MEXICO

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
5203	5203	.7907	.31	22.17			4"	FLANGE

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover	X	Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	Press. p.s.i.g.	Temp. °F	B.H.P.	CHOKE	
SI							983	80	1118		78 HRS.
1.	4"	X	1"	400.	3.5	86	950	69	1087	8/64	1
2.	4"	X	1"	400.	8.0	99	900	66	1041	10/64	1
3.	4"	X	1"	400.	17.0	96	840	65	963	13/64	1
4.	4"	X	1"	400.	31.0	91	735	65	851	16/64	1
5.											

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hours)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. Factor Ft	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1.	4.8740	38.04	413.2	.9759	1.1893	1.0420	224.
2.	4.8740	57.15	408.2	.9645	1.1893	1.0375	331.
3.	4.8740	83.81	413.2	.9671	1.1893	1.0392	488.
4.	4.8740	113.19	413.2	.9715	1.1893	1.0403	663.
5.							

NO.	P_t	Temp. °R	h_t	Z
1.	.92	546	1.40	.921
2.	.93	550	1.44	.929
3.	.92	546	1.43	.926
4.	.92	551	1.42	.924
5.				

Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
Specific Gravity Separator Gas .7070 — XXXXXXXXXX
Specific Gravity Flowing Fluid XXXXX — .7070
Critical Pressure 668 P.S.I.A. — P.S.I.A.
Critical Temperature 389 R — R

P_c = 1279.6

NO.	P_t^2	$P_c^2 - P_t^2$	$P_c^2 / (P_c^2 - P_t^2)$
1.	1192.2	1210.4	69.0
2.	1174.5	1111.2	168.0
3.	1176.2	953.9	327.0
4.	1176.2	790.5	533.0
5.			

(1) $\frac{P_c^2}{P_c^2 - P_w^2}$ = 2.4008 (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n$ = 1.6921

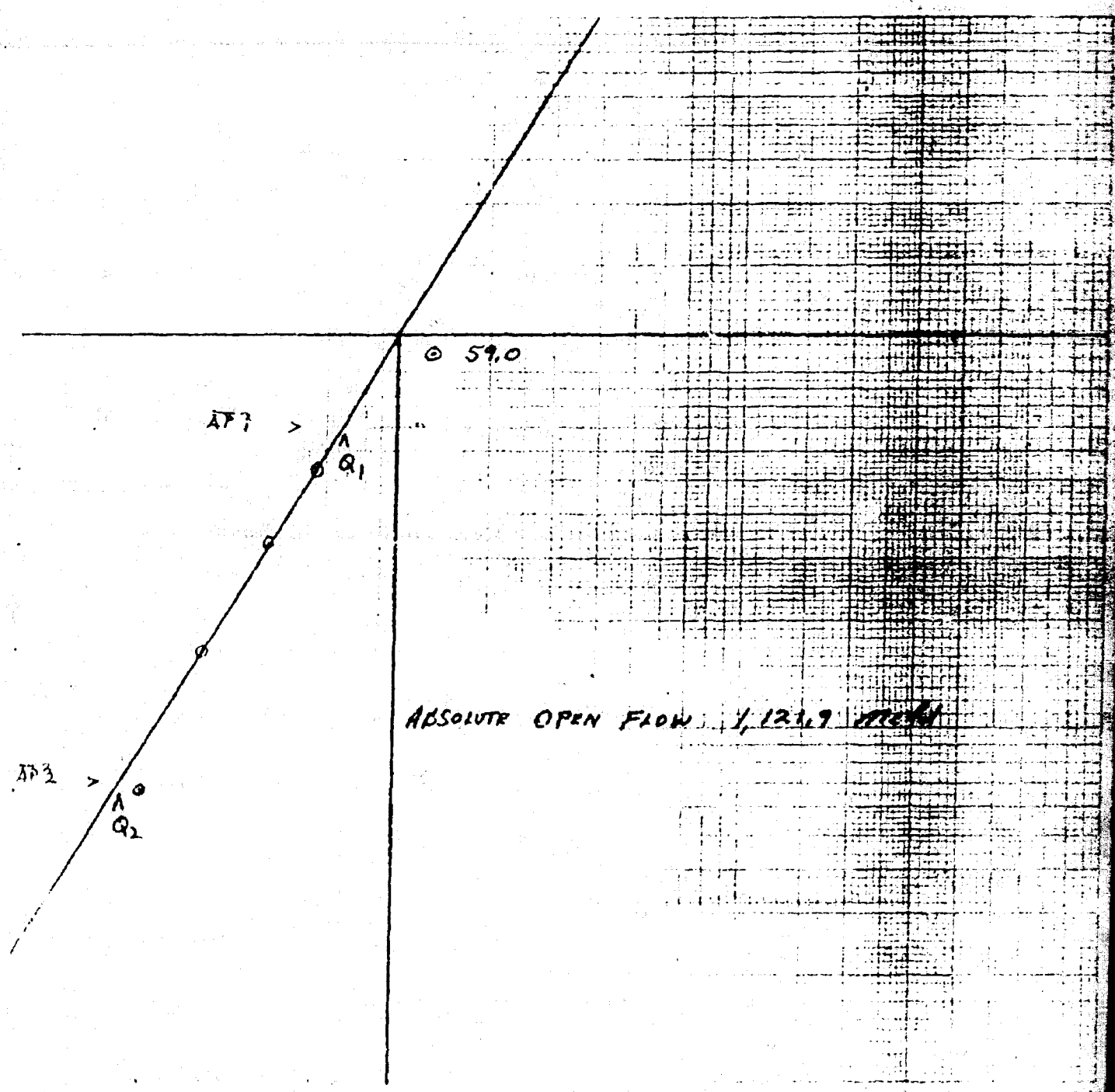
$\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n$ = 1,121.9

Absolute Open Flow 1,121.9 Mcfd @ 15.025 Angle of Slope θ 59.0 Slope, n .6006

Remarks: BOTTOM HOLE PRESSURE MEASURED WITH AMERADA PRESSURE ELEMENTS.

Approved By:	Title:	Calculated By:	Checked By:

Cont. No. Schlesinger
Campbell Station Unit [illegible]
Unit M, Sec 34, Twp 8S, Rge [illegible]
Chaves County New Mexico
9-22-81



ΔP² $P_c^2 - P_w^2$ = 70.0

ΔP² $P_c^2 - P_w^2$ = 70

Q_1 = 700 mcfd

Q_2 = 150 mcfd

log Q_1 = 2.8906

log Q_2 = 2.2900

[illegible]

BENNETT-CATHEY WIRE LINE SERVICE

P. O. BOX 787
ARTESIA, NEW MEXICO 88210
Phone 746-3281

BOTTOM HOLE PRESSURE SURVEY REPORT

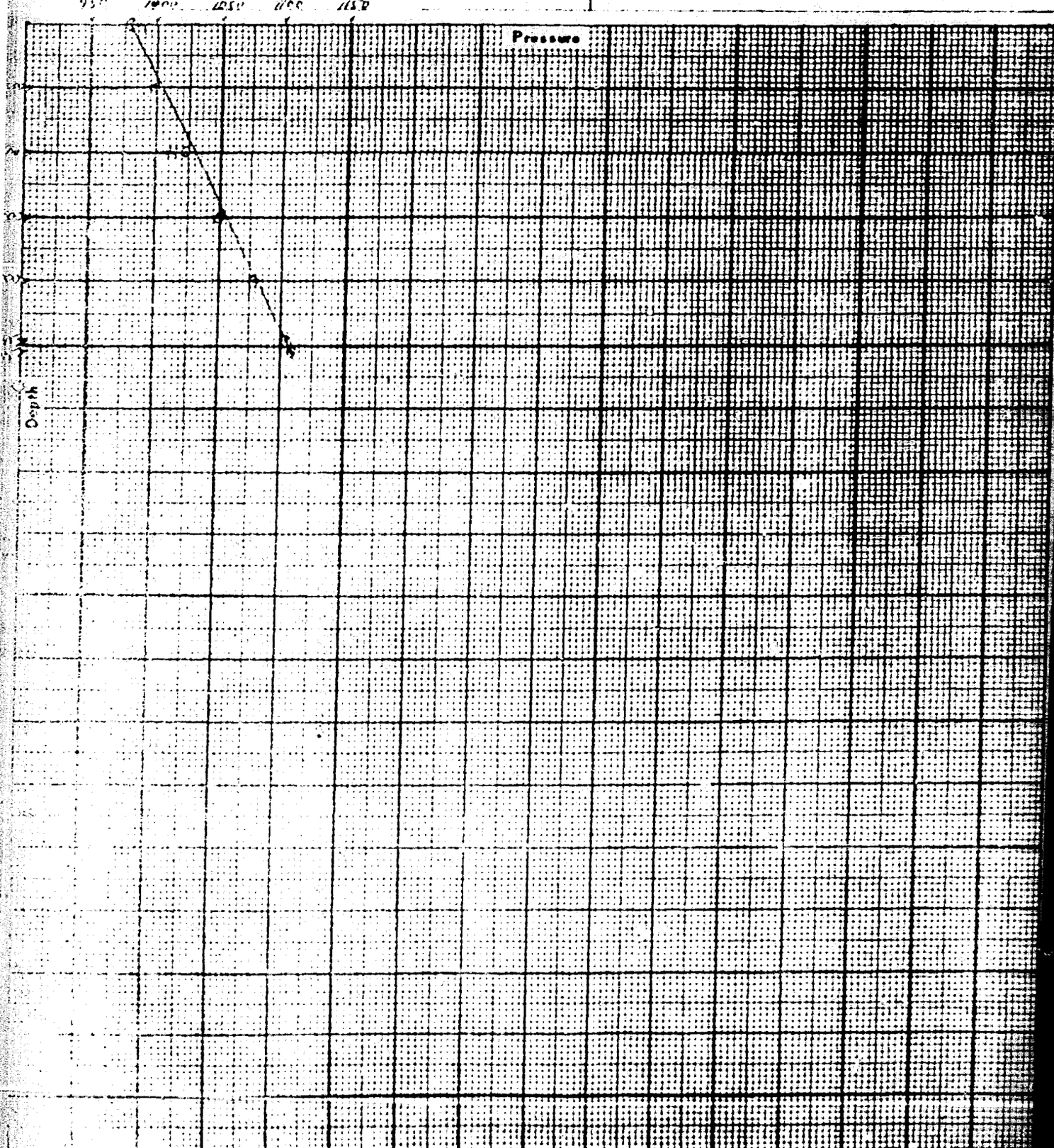
OPERATOR [illegible]
LEASE [illegible]
WELL NO. [illegible]
POOL [illegible] FORMATION [illegible]
DATE [illegible] TIME 1547 HOURS

STATUS [illegible] TEST DEPTH 5095
TIME S.I. [illegible] LAST TEST DATE [illegible]
CAS. PRES. [illegible] BHP LAST TEST [illegible]
TUB. PRES. 1100 BHP CHANGE [illegible]
ELE. [illegible] FLUID TOP [illegible]
DATUM PLANE [illegible] WATER TOP [illegible]
DATUM PSIA [illegible] RUN BY STEVE HARWELL
TEMP 106 PRESSURE RANGE 6,000
CLOCK NO. [illegible]
ELEMENT NO. [illegible] #1552

DEPTH	PRESSURE	GRADIENT
0	980	
1000	998	1.8
2000	1023	2.5
3000	1050	2.7
4000	1078	2.8
4945	1105	2.7
5095	1109	2.7

TIME B.H.P. MEASURED: 1547 HOURS

LENGTH OF TIME WELL SHUT IN: 87 HOURS 47 MIN.



BENNETT - CATHEY
Artesia, New Mexico 88210

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY CARL SCHELLINGER
DATE OF TEST 9-22-81

WELL NAME CAMPBELL STATION UNIT WELL NO. 1
FORMATION ABO

CHART READINGS AND CALCULATIONS FOR BUILDUP OR DRAWDOWN TEST

ELEMENT NUMBER RPG3 #41552 RANGE 0 - 6,000 LBS.
CLOCK NUMBER G 9489 RANGE 144 HOURS
TIME WELL SHUT IN 2300 HOURS
TIME CLOCK STARTED 1718 HOURS
DEAD WEIGHT ELEMENT ON SURFACE 996 LBS.
TIME ELEMENT REACHED BOTTOM 1804
DEAD WEIGHT ELEMENT ON BOTTOM 996 LBS.
ELEMENT SET AT 5095 FEET.
TEMPERATURE 5095 FT. 119 °F.
DEAD WEIGHT AT THE END OF HOURS MINUTES.
TANDUM ELEMENT #RPG3 #46950, 0 - 7,000 LBS.

DATE	HOUR	TIME	DEFLECTION in/inches	CALCULATED PRESSURE psig	CORRECTION P ± PC psig	CORRECTED PRESSURE psia	PRESSURE AT MID-POINT OF PERFORATIONS psia
9-22-81		804		1118	13.2		1131
START TEST	0	1900		1118	13.2		1131
	1/4	1915		1109	13.2		1122
	1/2	1930		1096	13.2		1109
	3/4	1945		1088	13.2		1101
END RATE 1	1	2000		1087	13.2		1100
	1-1/4	2015		1068	13.2		1081
	1-1/2	2030		1053	13.2		1066
	1-3/4	2045		1047	13.2		1060
END RATE 2	2	2100		1041	13.2		1054
	2-1/4	2115		1009	13.2		1022
	2-1/2	2130		988	13.2		1001
	2-3/4	2145		972	13.2		985
END RATE 3	3	2200		963	13.2		976
	3-1/4	2215		925	13.2		938
	3-1/2	2230		885	13.2		989
	3-3/4	2245		863	13.2		876
END RATE 4	4	2300		851	13.2		864
WELL FLOWING	0	2300		851	13.2		864
	1/4	2315		888	13.2		901
	1/2	2330		900	13.2		913
	3/4	2345		910	13.2		923
	1	2400		928	13.2		941
	1-1/4	2415		935	13.2		948
	1-1/2	2430		941	13.2		954
	1-3/4	2445		947	13.2		960
9-23-81	2	0100		950	13.2		963
	2-1/2	0130		950	13.2		963
	3	0200		950	13.2		963
	3-1/2	0230		950	13.2		963
	4	0300		947	13.2		960
	5	0400		941	13.2		954
	6	0500		936	13.2		949
	7	0600		935	13.2		948
	8	0700		931	13.2		944
	9	0800		922	13.2		935
	10	0900		916	13.2		929

BENNETT WIRE LINE SERVICE
Artesia, New Mexico 88210

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY CARL A. SCHELLINGER WELL NAME CAMPBELL STATION UNIT #1
DATE OF TEST 9-22-81 LOCATION PAGE 2 OF 2

CHART READINGS AND CALCULATIONS FOR BUILDUP OR DRAWDOWN TEST

DATE	[illegible]	TIME	DEFLECTION in/inches	CALCULATED PRESSURE psig	CORRECTION P & PC psig	CORRECTED PRESSURE psig	PRESSURE AT MID-POINT OF PERFORATIONS psig
	11	1000		913	13.2		926
	12	1100		910	13.2		923
	13	1200		907	13.2		920
	14	1300		903	13.2		916
	15	1400		897	13.2		910
	16	1500		894	13.2		907
	17	1600		891	13.2		904
	18	1700		879	13.2		892
	19	1800		872	13.2		885
	20	1900		872	13.2		885
	21	2000		872	13.2		885
	22	2100		870	13.2		883
	23	2200		870	13.2		883
	24	2300		870	13.2		883
WELL SHUT IN	0	2300		870	13.2		883
	1/4	2315		910	13.2		923
	1/2	2330		941	13.2		954
	3/4	2345		960	13.2		973
	1	2400		984	13.2		997
	1-1/4	2415		994	13.2		1007
	1-1/2	2430		1003	13.2		1016
	1-3/4	2445		1009	13.2		1022
9-24-81	2	0100		1012	13.2		1025
	2-1/2	0130		1022	13.2		1035
	3	0200		1028	13.2		1041
	3-1/2	0230		1034	13.2		1047
	4	0300		1037	13.2		1050
	4-1/2	0330		1040	13.2		1053
	5	0400		1043	13.2		1056
	6	0500		1046	13.2		1059
	7	0600		1048	13.2		1061
	8	0700		1050	13.2		1063
	9	0800		1053	13.2		1066
	10	0900		1057	13.2		1070
	15	1400		1062	13.2		1075
	20	1900		1071	13.2		1083
	25	2400		1073	13.2		1088
9-25-81	30	0500		1078	13.2		1091
	35	1000		1079	13.2		1092
	40	1500		1079	13.2		1092
	45	2000		1079	13.2		1092
9-26-81	50	0100		1079	13.2		1092
	55	0600		1090	13.2		1103
	60	1100		1091	13.2		1104
	70	2200		1093	13.2		1106
	75	0800		1096	13.2		1109
	87	1500		1097	13.2		1110

TEST DATE: 9-22-81
TEST DEPTH: 5095 FEET

ELEMENT NO.: RPG3 #41552 & RPG3 #46950
RANGE: 0 - 6,000 LBS. & 0 - 7,000 LBS.
CLOCKS: G9489 & G3179
RANGE: 144 HOURS & 144 HOURS

OPERATOR: DON BENNETT

Note: See Attached Sheet for Tabulation of Pressure

NOTE: FOUR POINT BACK PRESSURE TEST

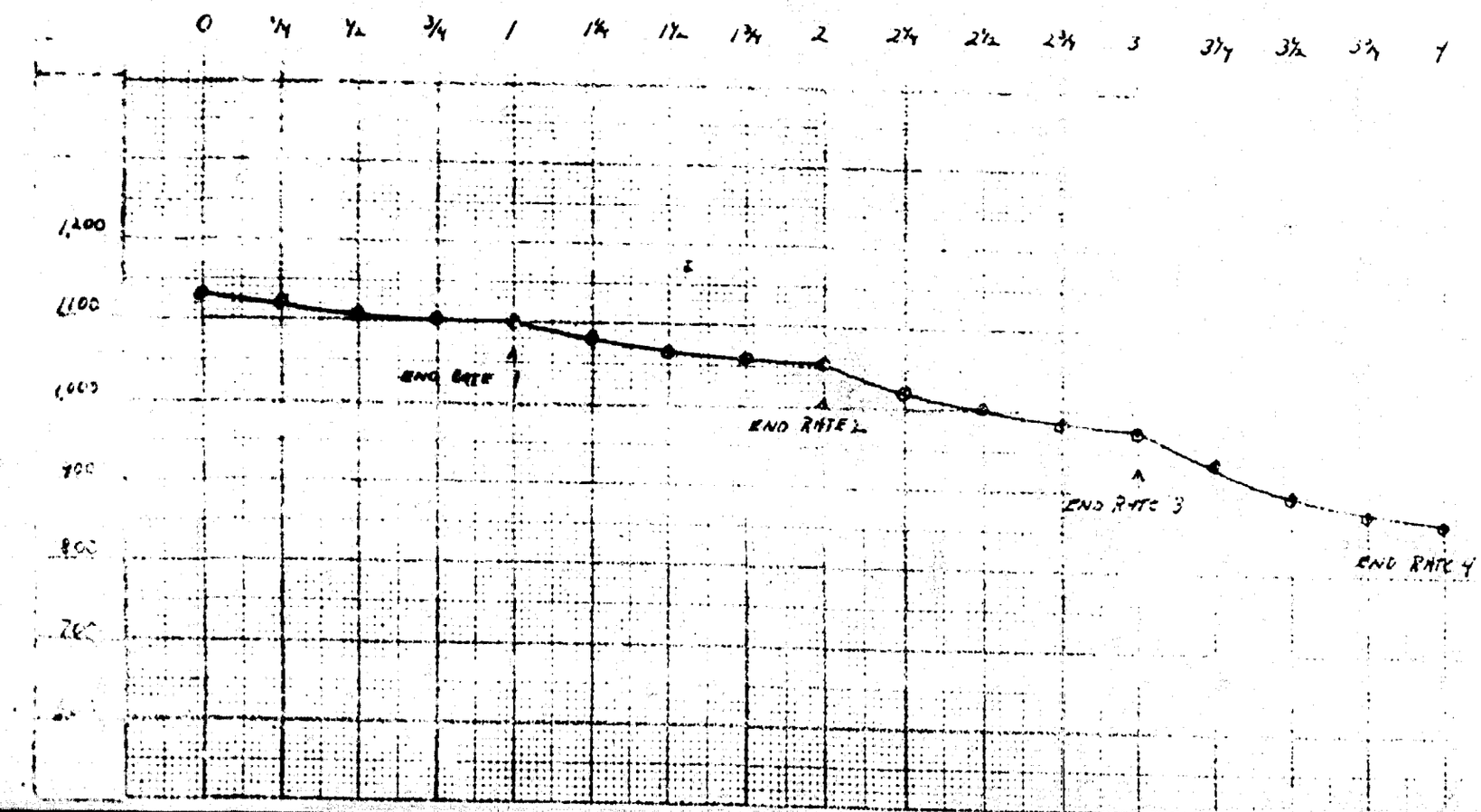
GEORGE MC KINSEY

CARL SCHELLINGER

CAMPBELL STATION UNIT #1

BENNETT-CATHEY WIRE LINE SERVICE
Box 787 Artesia N M 88210 505 746-3281
Drawn By

BENNETT-
CATHEY
WELL SERVICES



SUGGESTED FIELD DATA SHEET (Not Required To File)

Test Date: [ ] Initial [ ] Annual [X] Special 9-22-81 TO 9-23-81

Lease No. or Serial No.

Operator: CARL A. SCHELLINGER

Connection: AIR NEW WELL

Allottee

Field: WILDCAT

Reservoir: ABO

Location

Unit: M

Date Completed: 9-19-81

Total Depth: 6800

Plug Back TD: 5300

Elevation: 3882 KB

Farm or Lease Name: CAMPBELL STATION UNIT

Size: 5.500 Wt.: 15.5 d: 4.950 Set At: 5300 Perforations: From 5.77 To 5229

Well No.: 1

Size: 2.375 Wt.: 4.7 d: 1.995 Set At: 5097 Perforations: From OPEN To ENDED

Sec.: M Twp.-Blk.: 34 8S Rge.-Sur.: 27E

Completion (Describe): Packer Set At: NONE

County or Parish: CHAVES

Date of Last Test: Reservoir Temp. F: 106 Mean Annual Temp. F: 60 Baro. Press. - P_a: 13.2

State: NEW MEXICO

L	H	G_g	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
5203	5203	.7207	.31	22.17			4"	FLANGE

DATE	ELAP. TIME	Wellhead Working Pressure			METER OR PROVER				REMARKS
Time of Reading	Hrs.	Hrs. Daily	B.H.P. PSIA	Temp. F	Pressure Psig.	Diff.	Temp. F	Orifice	MCFD (Include liquid production data: Type-A.P.I. Gravity-Amount)
1100	0	735	864	65	400	9	91	1"	479.4 12 1/64
1200	1	800	941	65	400	9	87	1"	500.1 12/64 1145 HRS
0100	2	820	963	63	400	9	89	1"	506.3 11 3/4 /64 1200 HRS
0200	3	820	963	63	400	9	88	1"	506.3
0300	4	820	960	60	400	9	87	1"	506.3
0400	5	820	954	62	400	9	87	1"	506.3
0500	6	820	949	60	400	9	87	1"	506.3
0600	7	810	948	61	400	9	85	1"	503.2
0700	8	810	944	61	400	9	87	1"	503.2
0800	9	805	935	63	400	9	88	1"	501.7 12/64 0800 HRS
0900	10	800	929	66	400	9	90	1"	500.1
1000	11	790	926	70	400	9	90	1"	496.9
1100	12	790	923	72	400	9	92	1"	496.9
1200	13	785	920	76	400	9	94	1"	495.4
1300	14	780	916	80	400	9	94	1"	493.8
1400	15	780	910	82	400	9	96	1"	493.8
1500	16	775	907	82	400	9	96	1"	492.3
1600	17	765	904	84	400	9	96	1"	489.1 12 1/64
1700	18	745	892	84	400	9	95	1"	482.6 12 3/64 1715 HRS
1800	19	715	885	80	400	9	94	1"	472.8 12 3/4 /64 1845 HRS
1900	20	685	885	74	400	9	92	1"	462.8 13/64 1950 HRS
2000	21	660	885	72	400	9	91	1"	454.3
2100	22	625	883	66	400	9	91	1"	442.1
2200	23	610	883	63	400	9	90	1"	436.7
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	400	8½	90	1"	433.1 13 1/64 2245 HRS

Page of Data By

TEST DATE: [illegible]

TEST DEPTH: 5095 FEET

ELEMENT NO: RPG3 #41552 & RPG3 #46950

RANGE: 0 - 6,000 LBS. & 0 - 7,000 LBS.

CLOCKS: G 9489 & G 3179

RANGE: 144 HOURS & 144 HOURS

OPERATOR: DON BENNETT

[illegible] Sheet for Tabulation of Pressure

GEORGE MC KINSEY

CARL SCHELLINGER

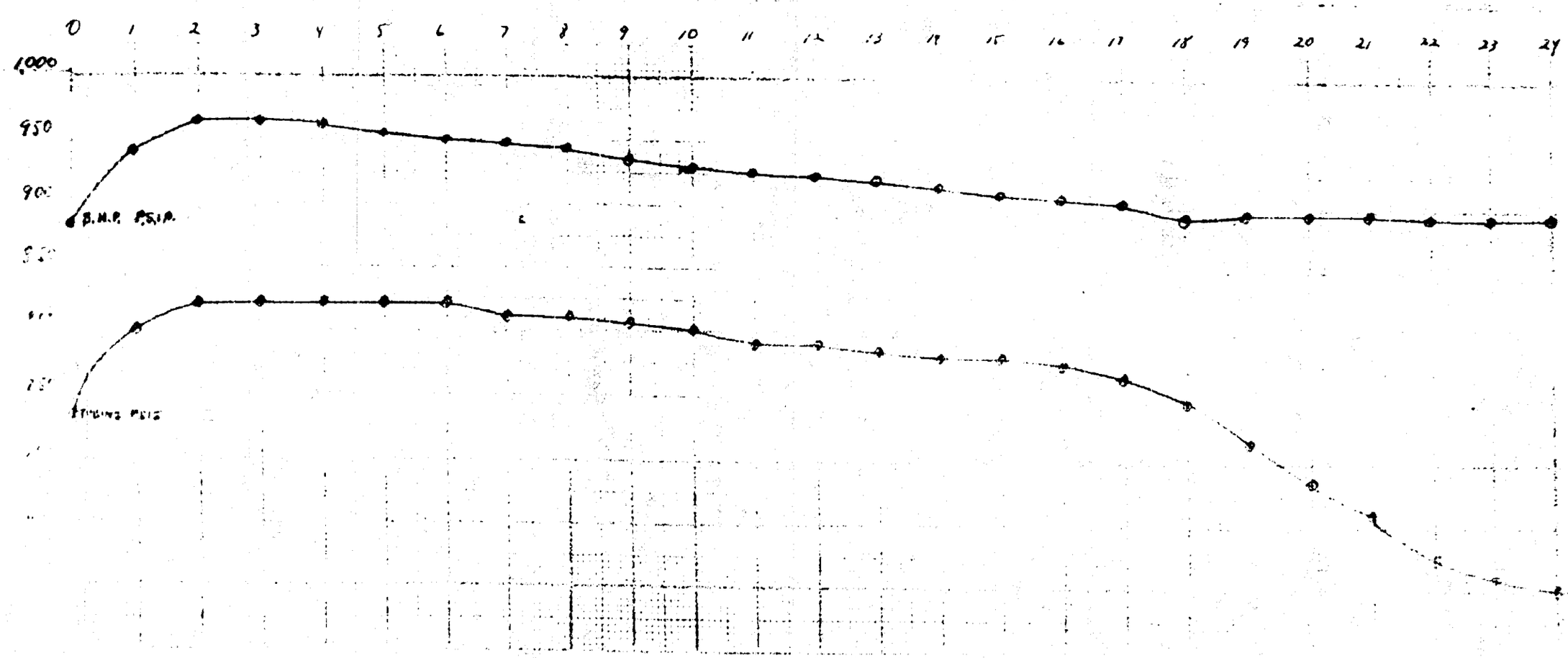
CAMPBELL STATION UNIT #1

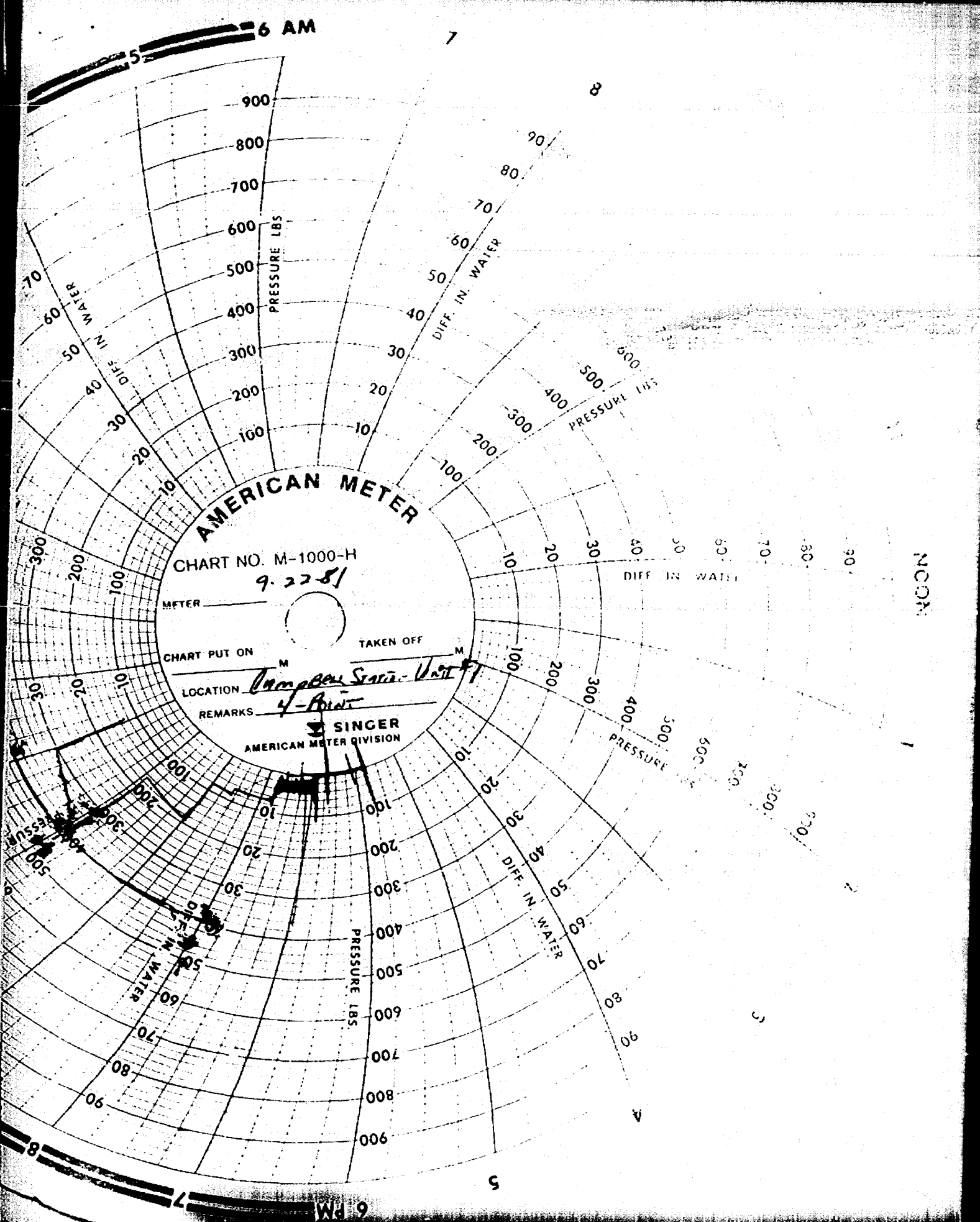
BENNETT-CATHEY WIRE LINE SERVICE
Box 787 Artesia, N.M. 882[illegible] 505/746-3281

Drawn By [illegible]

BENNETT-CATHEY WELL SERVICES

NOTE: 24 HOUR FLOW TEST




6 AM
PRESSURE LBS
DIFF. IN. WATER
AMERICAN METER
CHART NO. M-1000-H
9-22-81
METER
CHART PUT ON
TAKEN OFF
LOCATION Campbell State - Unit 7
REMARKS 4-Point
SINGER
AMERICAN METER DIVISION
NOON
6 PM

NEW-TEX LAB
P. O. BOX 1161
HOBBS, N.M. 88240

No. 5692
Run No.
Date of Run 9-25-81
Date Secured 9-23-81

CERTIFICATE OF ANALYSIS

A Sample
Secured from Carl Shellinger
Bennett-Cathey
At Box 787
Artesia, NM 88210

Campbell Station Unit #1

Secured by
Time Date

Sampling conditions Press
Temp

FRACTIONAL ANALYSIS

	Percentage Composition MOL %	LIQ. %	G.P.M.
Carbon Dioxide	.305		
Air			
Nitrogen	22.171		
Oxygen			
Hydrogen Sulfide			
Hydrogen			
Methane	68.759		
Ethane	5.511		1.470
Propane	1.663		.456
Butanes			
i-Butane	.254		.083
n-Butane	.511		.161
Pentanes			
i-Pentane	.196		.071
n-Pentane	.223		.081
Hexanes	.182		.075
Heptanes	.227		.104
Octanes			
Total	100.000		2.501

Calc. Sp. Gr. — 0.7207
Calc. A.P.I. —
Calc. Vapor Press — PSIA
Sp. Gr.
Mol. Wt. 20.90

LIQUID CONTENT (GAL./MCF)

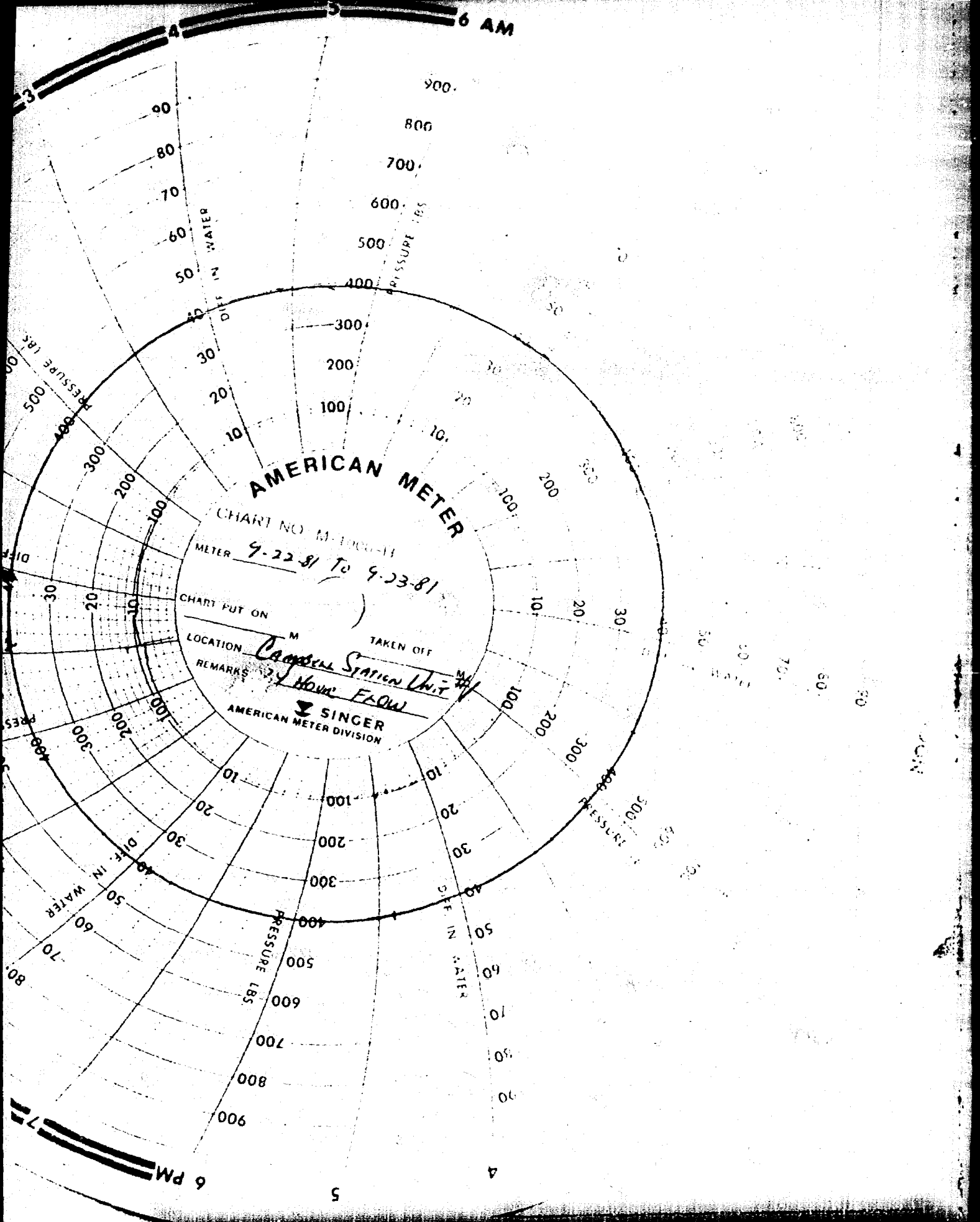
Propane Calc. G.P.M.	.456
Butanes Calc. G.P.M.	.244
Pentanes Plus. G.P.M.	.331
Ethane Calc. G.P.M.	1.470
°RVP Gasoline G.P.M.	

B.T.U./Cu. Ft. @ 14.696 P.S.I.A.
Dry Basis 897
Wet Basis 881

Sulfur Analysis by Titration
Gr./100 Cu. Ft.
Hydrogen Sulfide
Mercaptans
Sulfides
Residual Sulfur
Total Sulfur

R.H. Hamilton Checked by Deane Simpson Approved by Deane Simpson

Additional Data and Remarks


AMERICAN METER
CHART NO. M-100-H
METER 9-22-81 To 9-23-81
CHART PUT ON
TAKEN OFF
LOCATION Campbell Station Unit #1
REMARKS 24 Hour Flow
SINGER
AMERICAN METER DIVISION
DIFF IN WATER
PRESSURE LBS
6 AM
6 PM

NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

Type Test: [X] Initial [ ] Annual [ ] Special		Test Date: 8-25-81	660 FSL
Company: CARL A. SCHELLINGER	Connection: AIR - NEW WELL		660 FWL
Pool: WILDCAT	Formation: PENN		Unit: M

Completion Date	Total Depth	Plug Back TD	Elevation	Farm or Lease Name
8-18-81	6800	6570	3882 KB	CAMPBELL STATION UNIT

Csg. Size	Wt.	d	Set At	Perforations:	Well No.
5.50	15.5	4.950	6793	From 6373 To 6388	1

Tbg. Size	Wt.	d	Set At	Perforations:	Unit	Sec.	Twp.	Rge.
2.375	4.7	1.995	6274	From OPEN To ENDED	M	34	8S	27E

Type Well - Single - Bradenhead - G.G. or G.O. Multiple	Packer Set At	County
SINGLE	6274	CHAVES

Producing Thru	Reservoir Temp. °F	Mean Annual Temp. °F	Baro. Press. - P_a	State
TUBING	144 @ 6270	60	13.2	NEW MEXICO

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
6380	6380	0.6301	1.925	3.637	0	0	4"	FLANGE

NO.	FLOW DATA: Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA: Press. p.s.i.g.	Temp. °F	CASING DATA: B.H.P.	Temp. °F	Duration of Flow
SI							1975	86	2361		72
1.	4"	X	2.250	410	.75	82	1690	86	1817		1
2.	4"	X	1.250	410	4.00	88	1730	86	1948		1
3.	4"	X	1.250	410	7.80	80	1520	83	1719		1
4.	4"	X	1.250	410	12.10	78	1155	70	1329		1
5.											

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. Factor F_t	Gravity Factor F_g	Super Compress. Factor, F_{pv}	Rate of Flow Q, Mcfd
1	26.30	18.40	423.2	.9795	1.2599	1.0303	615
2	7.6610	41.14	423.2	.9741	1.2599	1.0298	398
3	7.6610	57.45	423.2	.9813	1.2599	1.0309	561
4	7.6610	71.56	423.2	.9831	1.2599	1.0309	700
5							

NO	P_t	Temp. °R	T_c	Z
1	.63	542	1.54	.942
2	.63	548	1.55	.943
3	.63	540	1.53	.941
4	.63	538	1.53	.941
5				

Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
Specific Gravity Separator Gas .6300 XXXXXXXXX
Specific Gravity Flowing Fluid .6300 XXXXXX
Critical Pressure 673 P.S.I.A. _____ P.S.I.A.
Critical Temperature 352 R _____ R

P_c^2 2374.2 P_a^2 5636.8

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		1830.2	3349.6	2287
2		1961.2	3846.3	1791
3		1732.2	3000.5	2636
4		1342.2	1801.5	3835
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2}$ = 1.4698 (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n$ = 1.3310

$\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n$ = 931.7

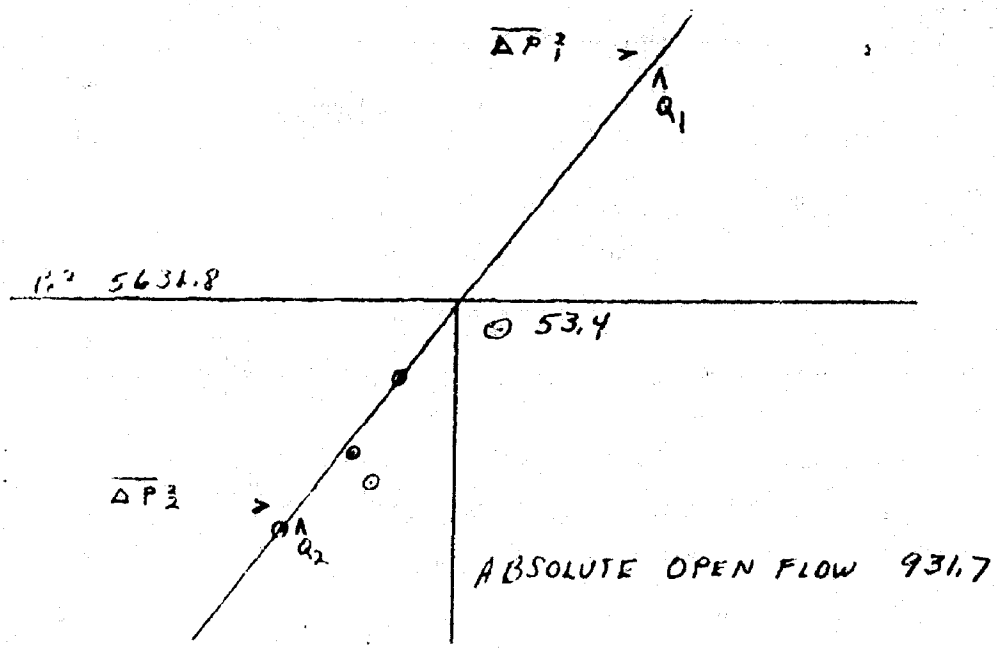
AOF = 931.7 Mcfd @ 15.025 Calculated Slope = 53.4 Slope, n = .7423

NOTE: FLOW BOTTOM HOLE PRESSURES MEASURED WITH TANDEM AMERADA PRESSURE ELEMENTS.

Witnessed by	For	Checked by
DON DEWITT	WOOLFORD & JENKINS	

Carl H. Dohlenitz
Cumbell State Unit Well No. 1
Unit M, Sec 34, Twp 8S, Rge
Chaves County, New Mexico

$P_c^2 - P_w^2$



Q Mcfd

$\overline{\Delta P}_1^2$ [illegible] P_w^2 = [illegible]

$\overline{\Delta P}_2^2$ [illegible] P_w^2 [illegible]

[illegible] 14.400 [illegible]

[illegible]

Log Q_1 = 3.3946

Log Q_2 = 2.6523

[illegible] 7423

FOUR POINT &
24 HOUR FLOW

BENNETT - CATHEY
Artesia, New Mexico 88210

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY CARL A. SCHELLINGER
DATE OF TEST 8-25-81 TO 8-26-81

WELL NAME CAMPBELL STATION UNIT #1
FORMATION PENN

CHART READINGS AND CALCULATIONS FOR BUILDUP OR DRAWDOWN TEST

ELEMENT NUMBER RPG3#36641 RANGE 0-4,000 LBS.
CLOCK NUMBER 21850 RANGE
TIME WELL SHUT IN
TIME CLOCK STARTED 1053 HOURS
DEAD WEIGHT ELEMENT ON SURFACE 1988 LBS.
TIME ELEMENT REACHED BOTTOM 1140
DEAD WEIGHT ELEMENT ON BOTTOM 1988 LBS.
ELEMENT SET AT 6,271 FEET.
TEMPERATURE 6,271 FT. 144 °F.
DEAD WEIGHT AT THE END OF HOURS MINUTES.
TANDEM BOMBS USED #2 - RPG3#46950, 0-7,000 LBS.

DATE	HOUR	TIME	DEFLECTION in/inches	CALCULATED PRESSURE psig	CORRECTION P ± PC psig	CORRECTED PRESSURE psia	PRESSURE AT MID-POINT OF PERFORATIONS psia
8-25-81	0	1140		2,361	13.2		2,374
	1	1240		2,362	13.2		2,375
	2	1340		2,364	13.2		2,377
	3	1440		2,366	13.2		2,379
START HEATER	4	1540		2,352	13.2		2,365
START TEST	0	1545		2,352	13.2		2,365
	¼	1600		2,295	13.2		2,308
	½	1615		2,060	13.2		2,073
	3/4	1630		1,876	13.2		1,889
END RATE 1	1	1645		1,817	13.2		1,830
	1¼	1700		1,967	13.2		1,980
	1½	1715		1,962	13.2		1,975
	1 3/4	1730		1,950	13.2		1,963
END RATE 2	2	1745		1,948	13.2		1,961
	2¼	1800		1,868	13.2		1,881
	2½	1815		1,801	13.2		1,814
	2 3/4	1830		1,752	13.2		1,765
END RATE 3	3	1845		1,719	13.2		1,732
	3¼	1900		1,535	13.2		1,548
	3½	1915		1,423	13.2		1,436
	3 3/4	1930		1,360	13.2		1,373
END TEST	4	1945		1,329	13.2		1,342
START 24 HR.	2	2000		1,433	13.2		1,446
FLOW	1¼	2100		1,723	13.2		1,736
	2¼	2200		1,801	13.2		1,814
	3¼	2300		1,874	13.2		1,887
	4¼	2400		1,892	13.2		1,905
8-26-81	5¼	0100		1,892	13.2		1,905
	6¼	0200		1,829	13.2		1,842
	7¼	0300		1,817	13.2		1,830
	8¼	0400		1,856	13.2		1,869
	9¼	0500		1,878	13.2		1,891
	10¼	0600		1,888	13.2		1,901
	11¼	0700		1,831	13.2		1,844
	12¼	0800		1,794	13.2		1,807
	13¼	0900		1,774	13.2		1,787
	14¼	1000		1,762	13.2		1,775
	15¼	1100		1,788	13.2		1,801

BENNETT WIRE LINE SERVICE
Artesia, New Mexico 88210

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY CARL A. SCHELLINGER WELL NAME CAMPBELL STATION UNIT #1
DATE OF TEST 8-25-81 TO 8-26-81 LOCATION PAGE 2 OF 2

CHART READINGS AND CALCULATIONS FOR BUILDUP OR DRAWDOWN TEST

DATE	HOUR	TIME	DEFLECTION in/inches	CALCULATED PRESSURE psig	CORRECTION P ± PC psig	CORRECTED PRESSURE psig	PRESSURE AT MID-POINT OF PERFORATIONS psig
8-26-81	16½	1200		1,797	13.2		1,810
	17½	1300		1,788	13.2		1,801
	18½	1400		1,785	13.2		1,798
	19½	1500		1,782	13.2		1,795
	20½	1600		1,764	13.2		1,777
	21½	1700		1,773	13.2		1,786
	22½	1800		1,794	13.2		1,807
	23½	1900		1,807	13.2		1,820
	24½	2000		1,795	13.2		1,808

DOCKET MAILED

Date 10/23/81

Case No.

7403

Application

Transcripts.

Small Exhibits

FTC

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

LAFFITY KENDE
SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

November 19, 1981

Re: CASE NO. 7403
ORDER NO. R-6817

Mr. Gary Kilpatric
Montgomery & Andrews
Attorneys at Law
Post Office Box 2307
Santa Fe, New Mexico 87504-2307

Applicant:

ARCO Oil and Gas Company

Dear Sir:

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

Yours very truly,

JOE D. RAMEY
Director

JDR/Ed

Copy of order also sent to:

Hobbs OCD x
Artesia OCD x
Aztec OCD

Other

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

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

CASE NO. 7403
Order No. R-6817

APPLICATION OF ARCO OIL AND GAS
COMPANY FOR DOWNHOLE COMMINGLING,
LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on November 4, 1981, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 18th day of November, 1981, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, ARCO Oil and Gas Company, is the owner and operator of the E. L. Steeler NN Well No. 5, located in Unit J of Section 19, Township 23 South, Range 37 East, NMPM, Lea County, New Mexico.

(3) That the applicant seeks authority to commingle Jalmat Gas Pool and Langlie Mattix Oil Pool production within the wellbore of the above-described well.

(4) That from the Jalmat gas zone, the subject well is capable of low marginal production only.

(5) That from the Langlie Mattix oil zone, the subject well is capable of low marginal production only.

(6) That the proposed commingling may result in the recovery of additional hydrocarbons from each of the subject pools, thereby preventing waste, and will not violate correlative rights.

(7) That the reservoir characteristics of each of the subject zones are such that underground waste would not be caused by the proposed commingling provided that the well is not shut-in for an extended period.

(8) That to afford the Division the opportunity to assess the potential for waste and to expeditiously order appropriate remedial action, the operator should notify the Hobbs district office of the Division any time the subject well is shut-in for 7 consecutive days.

(9) That in order to allocate the commingled production to each of the commingled zones in the subject well, all of the commingled gas production should be allocated to the Jalmat zone, and all of the commingled oil production to the Langlie Mattix zone.

IT IS THEREFORE ORDERED:

(1) That the applicant, ARCO Oil and Gas Company, is hereby authorized to commingle Jalmat and Langlie Mattix production within the wellbore of the E. L. Steeler NN Well No. 5, located in Unit J of Section 19, Township 23 South, Range 37 East, NMPM, Lea County, New Mexico.

(2) That all of the commingled gas production shall be allocated to the Jalmat Gas Pool and all of the commingled oil production shall be allocated to the Langlie Mattix Pool.

(3) That the operator of the subject well shall immediately notify the Division's Hobbs district office any time the well has been shut-in for 7 consecutive days and shall concurrently present, to the Division, a plan for remedial action.

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

DONE at Santa Fe, New Mexico, on the day and year hereinabove [illegible] d.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY
Director

S [illegible]
fd/

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
4 November 1981

EXAMINER HEARING

IN THE MATTER OF:

Application of ARCO Oil and Gas Company for downhole commingling, Lea County, New Mexico. CASE 7403

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: W. Perry Pearce, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant: Gary Kilpatric, Esq.
MONTGOMERY AND ANDREWS
Paseo de Peralta
Santa Fe, New Mexico 87501

A P P E A R A N C E S

For Doyle Hartman: William F. Carr, Esq.
CAMPBELL, BYRD, & BLACK P.A.
Jefferson Place
Santa Fe, New Mexico 87501

I N D E X

E X H I B I T S

MR. NUTTER: We'll call next Case [illegible] 7403.

MR. PEARCE: Application of ARCO Oil and Gas Company for downhole commingling, Lea County, New Mexico.

MR. KILPATRIC: My name is Gary Kilpatric with the law firm of Montgomery and Andrews, P. A., represent[illegible] ARCO Oil and Gas, and I have one witness.

MR. CARR: My name is William F. Carr, with the law firm Campbell, Byrd, & Black, P. A., Santa Fe, appearing on behalf of Mr. Doyle Hartman.

I do not intend to call a witness but I anticipate I will have a statement at the end.

(Witness sworn.)

B. L. STOKELY

being called as a witness and being duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. KILPATRIC:

Q Mr. Stokely, would you please state your name for the record?

A My name is Ben Stokely.

Q And by whom are you employed and in what capacity?

A I'm employed by ARCO Oil and Gas Company as a petroleum engineer.

Q And would you please give a brief description of your duties as a petroleum engineer?

A I do reservoir studies and recommend drilling and workovers and do log interpretation.

Q Have you testified before the Division and had your qualifications accepted and made a matter of record?

A Yes.

Q Are you familiar with the application that ARCO has submitted in this case today?

A Yes, I am.

MR. KILPATRIC: Mr. Examiner, are the witness' qualifications accepted?

MR. NUTTER: They are.

Q What is it that ARCO is seeking today by its application?

A ARCO is seeking approval for the down-hole commingling of the Langlie Mattix-Seven Rivers-Queen formation and the Jalmat-Yates-Seven Rivers formation, in ARCO's E. L. Steeler No. 5 Well.

Q. Mr. Stokely, let me direct your attention to what have been marked as ARCO Exhibits -- ARCO Exhibit Number One, and ask you to identify that exhibit and explain what it shows.

A. ARCO Exhibit Number One is a map of the area showing the Well No. 5 with a red arrow pointing to it. This lease is located in Section 19, Township 23 South, Range 37 East, in Lea County.

Q. Next let me direct you -- direct your attention to what have been marked as ARCO Exhibits Two and Three and ask you to explain and identify those exhibits.

A. ARCO Exhibit Number Two is a wellbore diagram showing the well as it is presently completed with a Baker Locset packer set at 3404 separating the zones with a pumping unit, rod pumping unit pumping the Langlie Mattix and the Jalmat-Yates-Seven Rivers perforations above the packer flowing -- or prepared to flow to sales.

MR. NUTTER: Through the annulus.

A. Through the annulus, yes, sir.

Q. And the Exhibit Number Three?

A. Exhibit Number Three is the wellbore diagram of the well as we hope to complete it. This well has given a substantial amount of trouble in completion. It was necessary to set the pumping unit on it to pump the

Jalmat-Yates-Seven Rivers perforations in order to get them to flow and the Langlie Mattix-Seven Rivers-Queen perforations produced only five barrels of oil per day and five barrels of water per day after being fraced with 60,000 gallons, plus 102,000 pounds of sand.

So it has been a problem well to complete and the -- it is our feeling that if we keep it separate we will not be able to produce the Langlie Mattix-Seven Rivers-Queen because the gas that it makes prevents it from being able to pump. We just haven't been able to produce any fluid from it since we set the packer over it.

Q. Let me next direct your attention to what has been marked as ARCO Exhibit Number Four, a two-page exhibit, and ask you to explain that.

A. ARCO Exhibit Number Four is the gas/oil ratio tests which have been made on the well, showing the production to be five barrels of oil per day and five barrels of water per day, and 40 Mcf of gas per day from the Langlie Mattix-Seven Rivers-Queen. Now this was done while the wells were unseparated.

MR. NUTTER: While they were unseparated?

A. I mean before -- it was while they were separated.

MR. NUTTER: While they were separated.

A. Prior to setting the packer, but it was prior to completion of the Jalmat.

MR. NUTTER: Okay. So this was a pure test on the --

A. Yes, it is, this is a pure test on the Jalmat. And the Jalmat-Seven Rivers-Yates is a flowing test with them separated after it had been completed.

MR. NUTTER: Well, this is a flow test up the annulus.

A. That's right, up the annulus. We did have to pump it through the tubing for some time before we got it cleaned up enough to flow on its own.

MR. NUTTER: You have a sliding sleeve in there.

A. Yes, we do.

MR. NUTTER: And pumped it off and flowed it through the annulus.

A. That's right, and it's been a real problem to get going.

Q. Let me next direct your attention to what has been marked as ARCO Exhibit Number Five and ask you to explain that exhibit, which is a multi-page exhibit, one, two, three, four, five pages exhibit.

A. ARCO Exhibit Number Five is the daily

well history of the well containing all the actions that have been taken, that have taken place since the casing was set, showing the bottom hole pressure tests taken, various pipe settings, packer setting, and so forth. It will verify the information in the wellbore diagrams and in the other sets of information.

Q Mr. Stokely, what is the current status of this well?

A The well is completed but shut-in. It is as indicated in the first wellbore diagram. It has rods and pump in it. It has a Baker Locset packer and it is shut-in awaiting the outcome of this hearing.

Q Have you applied to the Division for dual completion?

A We have not because our information to date indicates that we would have to abandon the Langlie Mattix at this -- if we're not granted permission to commingle.

Q What are the bottom hole pressures of the Langlie Mattix and Jalmat?

A Bottom hole pressures of the Jalmat are 215 pounds and the Langlie Mattix is 195 pounds. That's corrected to equivalent depth.

Q All right, and what pressure differential for the two zones does this correspond to?

A. That's twenty pounds differential.

Q. Is there any evidence that the fluids produced from these two zones are incompatible?

A. No, there is not.

Q. And will the total value of the crude oil be reduced by the commingling sought here, and if not, why not?

A. No, since only one zone produces crude oil, the same crude oil will be sold and will not have its value changed.

Q. And is the ownership of the zones to be commingled common?

A. Yes, the zones are commonly owned by ARCO as the operator.

Q. Do you have an opinion as to whether the commingling sought here today will jeopardize the efficiency of present or future secondary recovery?

A. It will not and if any question should arise in the future ARCO stands ready to separate the zones if required.

Q. All right. I understand that the production from the Langlie Mattix is artificially lifted while the Jalmat is by natural flow, is that correct?

A. That is true; however, over a period

of time in the area we're talking about, the Jalmat tends to load up with water and it is anticipated that if we keep this flowing through the annulus in a period of time we'll have to take some measures to unload the water off, and during that time we will lose production.

Q Mr. Stokely, next let me direct your attention to ARCO Exhibits Six and Seven and ask whether or not you have -- to explain those exhibits and tell the Division what you've done as far as contacting the offset --

A ARCO Exhibit Number Six is a letter that we sent to all the offset operators and we sent that registered mail. And Exhibit Number Seven is a list of the offset operators that we sent this to.

Q And are you aware to any objection from any of the offset operators?

A We had some conversation with Mr. Aycock with Doyle Hartman, and we were able to agree on an approach to this. The subject of our conversation was the allocation of gas between zones.

Mr. Aycock was of the opinion that the gas should be allocated for allowable purposes to the Jalmat formation and ARCO has no objection to that.

Q And have you received any correspondence from any of the other offset operators stating that they

have no objection?

A. Yes, We have correspondence here from Mr. James L. Evans saying he approves, and from Coquina Oil Corporation saying they approve.

We have heard from none of the others except Mr. Aycock.

Q. Mr. Stokely, how would you allocate the gas from the commingled well?

A. In light of our conversation with Mr. Aycock, we would agree that we would recommend it be allocated to the Jalmat formation.

Q. In your opinion will the granting of ARCO's application in this case to downhole commingle the production from the Jalmat and Langlie Mattix formations prevent waste and protect correlative rights?

A. Yes, it will. It will prevent waste in that we will have to abandon this Langlie Mattix formation if we don't get this permission.

Q. Were ARCO Exhibits One through Seven prepared by you or under your supervision?

A. Yes, they were.

MR. KILPATRIC: Mr. Examiner, I move the introduction of ARCO Exhibits One through Seven.

MR. NUTTER: Exhibits One through Seven

will be admitted in evidence.

MR. KILPATRIC: And we have no further questions.

CROSS EXAMINATION

BY MR. NUTTER:

Q. Mr. Stokely, this list of offset operators doesn't include Hartman or Aycock. Why were they talking about the allocation of the gas?

A. Well, Mr. Hartman is an offset operator and I thought we had sent him a copy.

Q. He's not listed on Exhibit B or Exhibit Seven.

MR. KILPATRIC: That's correct. He's not listed on those exhibits but we have in fact been in several conversations and contact and Mr. Carr is here today representing him.

MR. NUTTER: He probably owns the gas rights here on one of these offsetting leases.

A. Yes, he does.

MR. CARR: He's also the operator of a well in Unit E, the Samedan Hughes Federal, which produces from the --

MR. NUTTER: Is that a gas well there,

Mr. Carr?

MR. CARR: I think so, yes. I don't have an exhibit but I think that's correct, Mr. Nutter.

Q. Okay. However, Mr. Stokely, ARCO here does own the --

A. Yes, sir.

Q. -- Jalmat gas.

A. Yes.

Q. It would just be that the offset operator, Mr. Hartman, wants to be sure that the gas that's produced from it is charged to the --

A. That's right.

Q. -- Jalmat rather than the Langlie Mattix.

A. That's right. His idea is to protect his top allowable well there, and we have no objection because our projection from the well that we have is that we're going to be able to make our allowable anyway, likely.

Q. Well now I see here in the south half of Section 19 three wells are indicated as being gas wells --

A. Yes, sir, and we --

Q. -- and they may be plugged, I don't know.

A. I think one of them is and we have a -- we've dedicated the acreage part to this well and part to

another well.

Q. Have you already gotten approval for --

A. Yes, sir.

Q. -- simultaneous dedications?

A. Yes, sir.

Q. Okay. All you're looking for here today is just the commingling, not the --

A. That's right.

Q. -- gas --

A. No, sir, just permission to try to produce that Langlie Mattix because there's no way we can produce it economically any other way.

Q. Do you think if you had a casing vent that you'd fail to produce it? It won't pump. Is it a lack of venting on the thing, or what?

A. It is a lack of venting and the small casing, 5-1/2 casing, I think would be difficult to make it work.

Q. Couldn't run a vent string, then.

A. It would not likely be trouble free. We'd probably have problems with the vent string.

Q. Okay. Now you mentioned that the pressures were 215 for the Jalmat and 195 for the Langlie Mattix corrected to a common datum. What were the actual pressures?

Do you have that anywhere?

A. Well, we had a 200 pound shut-in casing pressure on the Jalmat and the actual pressure was measured on the Langlie Mattix and it was measured by bottom hole pressure bomb.

Q. And how much was it?

A. 195.

Q. Okay, so in other words, you took your 215 shut-in casing pressure on the Jalmat --

A. And used the table.

Q. -- adjusted to the datum in the Langlie Mattix.

A. Yes, sir.

Q. Where you had 195.

A. Yes, sir.

Q. And that 200 shut-in casing pressure corrected to 215.

A. That's right.

Q. These are at the Langlie Mattix interface?

A. Yes, sir.

Q. Okay.

MR. NUTTER: Are there any further questions of the witness? He may be excused.

Do you have anything further, Mr. Kilpatric?

MR. KILPATRIC: Nothing further, thank you.

MR. NUTTER: Mr. Carr?

MR. CARR: I just have a very brief statement.

Mr. Hartman is of the opinion that what ARCO is recommending is consistent with what the Commission did in Case 7057, in which they allocated gas and oil between the Jalmat and Langlie Mattix Pools. We believe what they're asking for is reasonable and will give them the necessary incentive and ability to produce the Langlie Mattix, and we support the application.

MR. NUTTER: Thank you.

Does anyone else have anything to offer in Case Number 7403?

We'll take the case under advisement.

(Hearing concluded.)

C E R T I F I C A T E

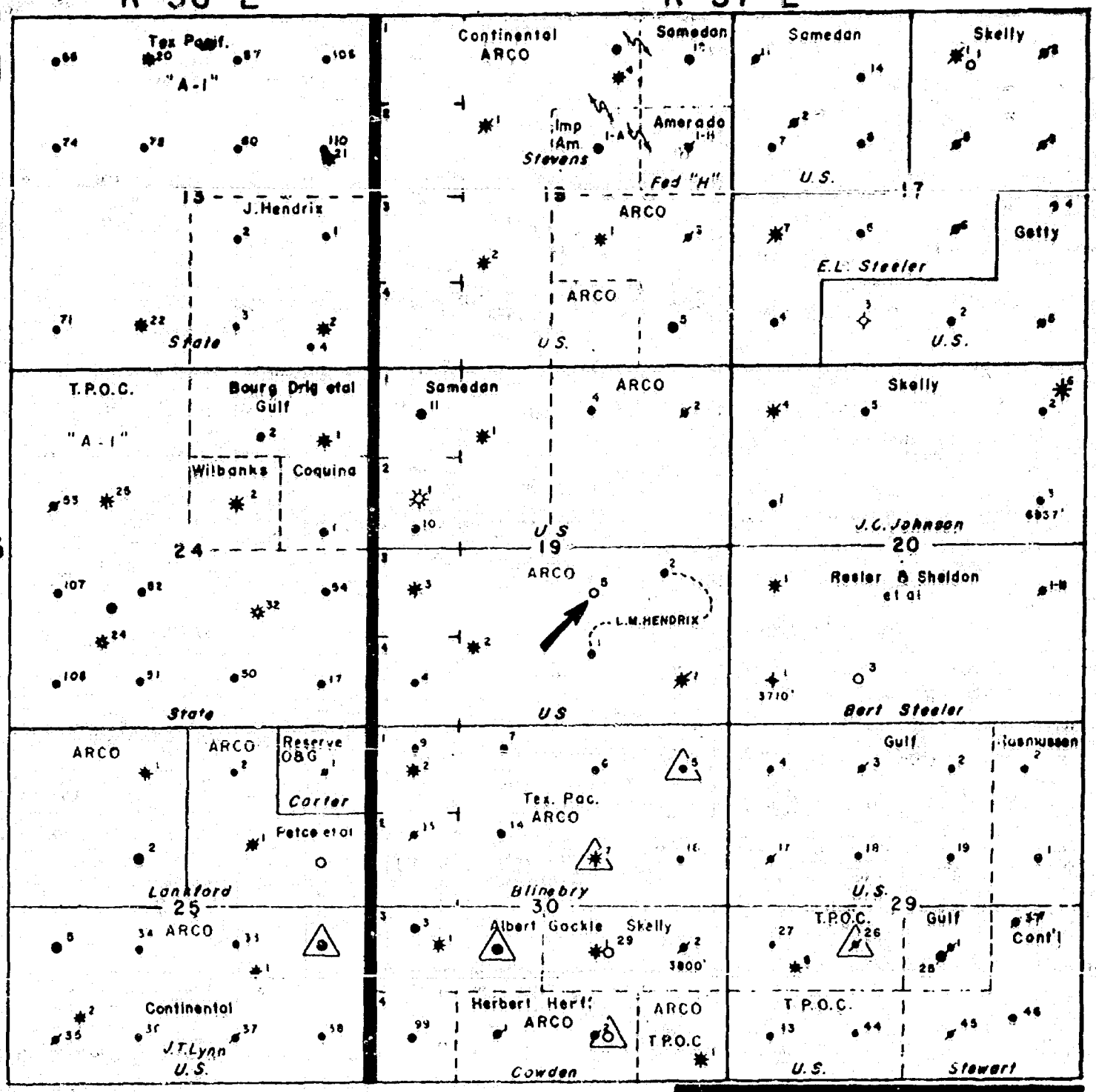
I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSR

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 7403 heard by me on 11/4 1981.

Examiner
Oil Conservation Division

SALLY W. BOYD, C.S.R.
Rt. 1 Box 193-B
Santa Fe, New Mexico 87501
Phone (505) 455-7409



BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
ARCO EXHIBIT NO. 1
CASE NO. 7403

ARCO Oil and Gas Company
Division of Atlantic Richfield Company
Permian District Midland, Texas

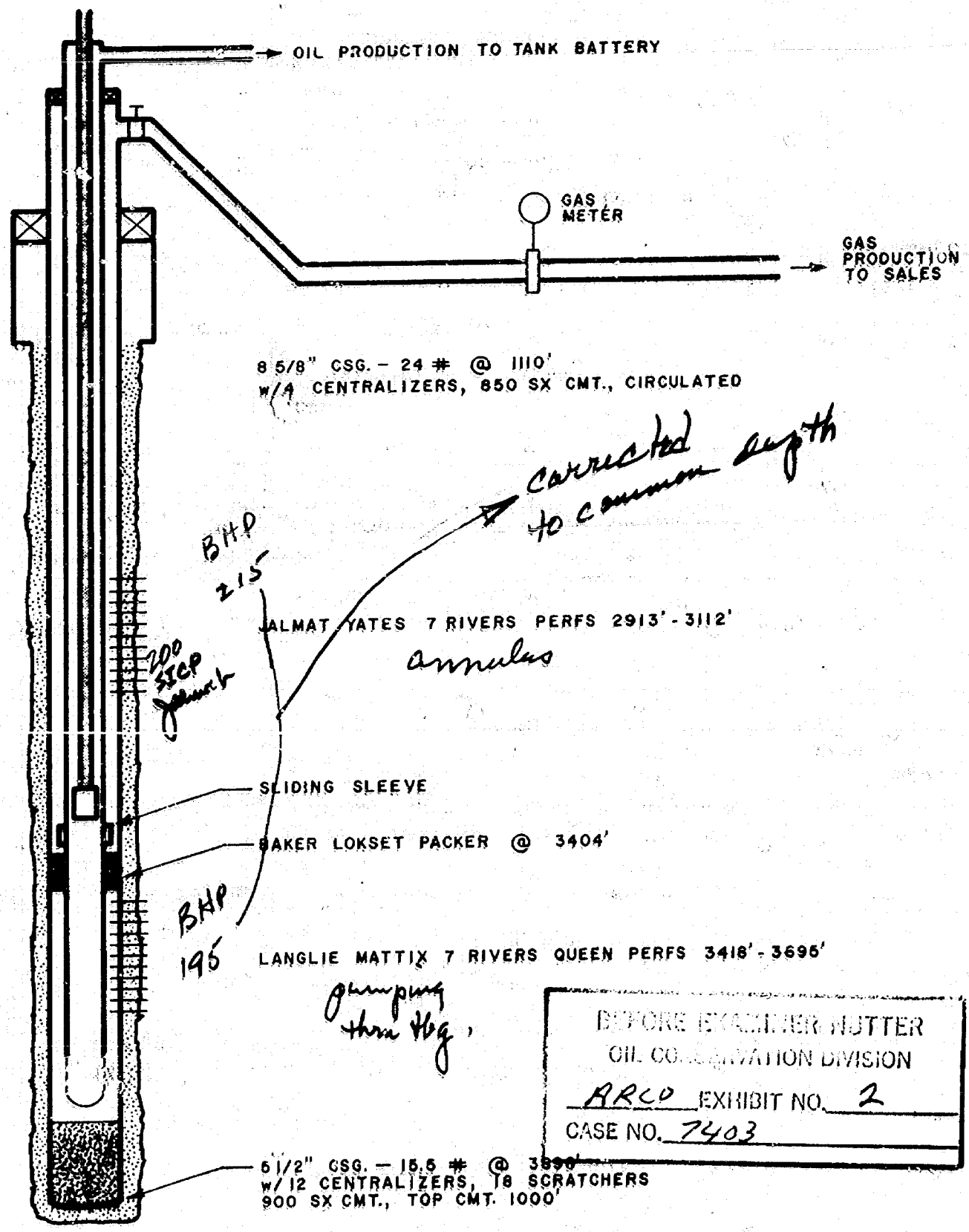
LEA COUNTY, NEW MEXICO

E.L. Steeler Lease
Sec 19 T-23-S R-37-E

SCALE 1" = 2000'

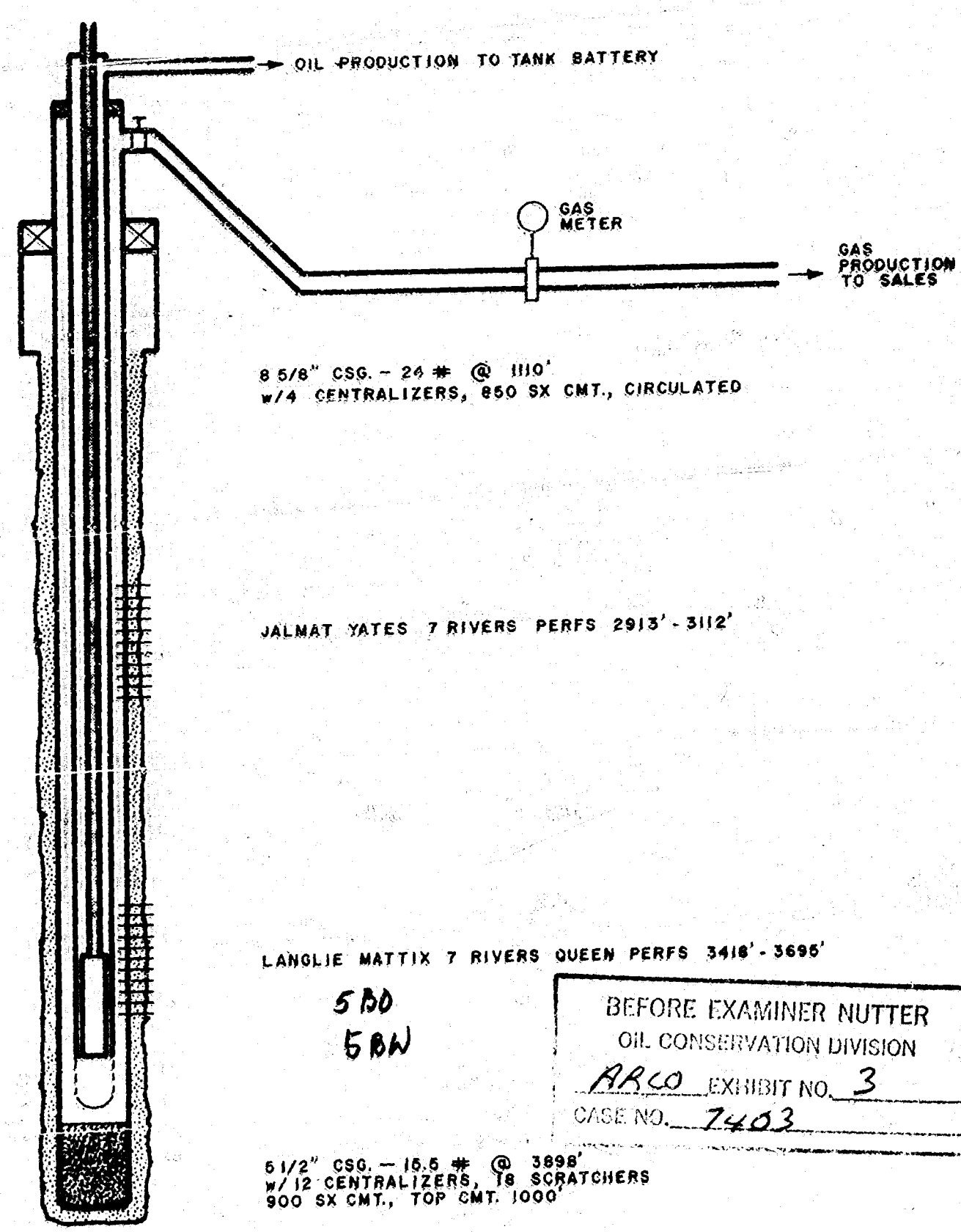
By: B. STOKELY		Drawn By:	Date: 10-81
Date: 10-81		Revised By:	Date:
Dept: WEST AREA ENGR.		Dwg No.	

ARCO OIL & GAS COMPANY
E. F. STEELER NO. 5
ZONES SEPARATED



BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
ARCO EXHIBIT NO. 2
CASE NO. 7403

ARCO OIL & GAS COMPANY
E. F. STEELER NO. 5
ZONES COMMINGLED



BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
ARCO EXHIBIT NO. 3
CASE NO. 7403

NEW MEXICO OIL CONSERVATION COMMISSION

GAS-OIL RATIO TESTS

C-116
Revised 1-1-65

Operator: ARCO Oil & Gas Company
Pool: Langley Mattix 7 Rivers Queen
County: Lea
Address: P. O. Box 1610, Midland, Texas 79701
TYPE OF TEST - (X): Scheduled [ ] Completion [ ] Special [X]

LEASE NAME	WELL NO.	LOCATION U	LOCATION S	LOCATION T	LOCATION R	DATE OF TEST	STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST WATER BBLS.	PROD. DURING TEST GRAV. OIL	PROD. DURING TEST OIL BBLS.	PROD. DURING TEST GAS M.C.F.	GAS - OIL RATIO CU.FT/BBL
E. L. Steeler WM	5 -	J	19	23S	37E	9-25-81	P	0	25#	20	24	5	36°	5	40	8000

EXHIBIT "A" - page 1

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

I hereby certify that the above information is true and complete to the best of my knowledge and belief.

B. L. Stokely (Signature)
Senior Engineer (Title)
September 25 1981

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
ARCO EXHIBIT NO. 4
CASE NO. 7403

NEW MEXICO OIL CONSERVATION COMMISSION

GAS-OIL RATIO TESTS

C-116
Revised 1-1-65

Operator: ARCO Oil & Gas Co.
Pool: Jalmat Yates 7 Rivers
County: Lea
Address: P. O. Box 1610, Midland, Texas 79701
TYPE OF TEST - (X): Scheduled [ ] Completion [ ] Special [X]

LEASE NAME	WELL NO.	LOCATION U	LOCATION S	LOCATION T	LOCATION R	DATE OF TEST	STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST WATER BBLS.	PROD. DURING TEST GRAV. OIL	PROD. DURING TEST OIL BBLS.	PROD. DURING TEST GAS M.C.F.	GAS - OIL RATIO CU.FT/BBL
E. L. Steeler WN	5	J	19	23S	37E	9-20-81	F	20/64	40	-	24	0	-	0	296	8

EXHIBIT "A" - page 2

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowable when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.65.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

I hereby certify that the above information is true and complete to the best of my knowledge and belief.

B L Stokely
B. L. Stokely (Signature)
Senior Engineer (Title)
September 25, 1981

ARCO Oil and Gas Company

Daily Well History—Interim

Instructions: This form is used during drilling or workover operations. If testing, coring, or perforating, show formation name in describing work performed. Number all drill stem tests sequentially. Attach description of all cores. Work performed by Producing Section will be reported on "Interim" sheets until final completion. Report official or representative test on "Final" form. 1) Submit "Interim" sheets when filled out but not less frequently than every 30 days, or (2) on Wednesday of the week in which oil string is set. Submit weekly for workovers and following setting of oil string until completion.

District	County or Parish	State
Permian-West	Lea	New Mexico
Field	**Lease or Unit**	**Well no.**
Jalmat	E.L. Steeler WN	5

Date and depth as of 8:00 a.m.	Complete record for each day while drilling or workover in progress
6/25/81 3898'TD 3805'PBD	Prep to swab LM zone & run BHP survey// Bled off tbg & csg. Csg flwg gas. Pmpd 25 bbl of 2% KCl dn csg to kill well. Unseated pkr, inst BOP. POH, rec WL tool. Ran BP jt tbg, perf sub, 2 jts 2-3/8" tbg, Baker Lok-set pkr, on-off tool w/ 1.56 ID, 6' 2-3/8" tbg sub, Baker sliding sleeve w/1.81 ID & 109 jts 2-3/8"OD tbg. Set tbg @ 3505'. Tbg perf 3470-73', Pkr @ 3404', on-off tool @ 3402', sliding sleeve @ 3394'. Swbd tbg for 1½ hrs w/pkr swinging. Csg started to gassing. Set pkr & cont'd swbg tbg to pit. (-110 BL). In 4 hrs swbd 0 BO & 26 BW. (-84 BW).
6/26/81	Prep to flow Jalmat gas, run LM BHP// 14 hr SITP 150#. 16 hr SICP 125#. In 5 hrs swbd LM, rec 1 BO & 9 BW. IFL 3000', FFL 3150'. Ran btm hole press bomb w/24 & 72 hr clock in hole @ 12:30 PM, 6/25/81. SI for 24 hrs. (AFE $299,400; $293,871)
6/29/81	RD PU// 6/26 18 hrs SITP 150#, SICP 190#. Op csg, bled gas off to a lite blow. Pld press survey. In BHP 157#, 24 hr BHP 183#. Set plug @ 3402'. Op sleeve @ 3394'. Swbd csg thru tbg, rec 6 BW, no oil in 8 trips. IFL 3000', FFL 3250'. SION. 6/27 Swbd 0 BO & 4 BW. IFL 3000'. Gas broke around csg. Flwd thru tbg. Closed sliding sleeve & pld plug. Ran 2 x 1¼ x 12' pump, 1 2' x 3/4" pony rod, 119 3/4" rods, 2 6', 2 4', 1 2-3/4" pony rod. Started well pmpg. SICP 200#.
6/30/81	TOTPS// RD unit. (AFE $299,400; $299,691)

The above is correct

Signature	Date	Title
J.W. Schmidt	6/30/81	Dist. Drlg. Supt.

For form preparation and distribution see Procedures Manual Section 10, Drilling, Pages 86 and 87

Received 7/10/81 Central Files

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
ARCO EXHIBIT NO. 5
CASE NO. 7403

Number all daily well history forms consecutively as they are prepared for each well. Page no. 6

AR3B-459-2-B

ARCO Oil and Gas Company **Daily Well History—Interim**

Instructions: This form is used during drilling or workover operations. If testing, coring, or perforating, show formation name in describing work performed. Number all drill stem tests sequentially. Attach description of all cores. Work performed by Producing Section will be reported on "Interim" sheets until final completion. Report official or representative test on "Final" form. 1) Submit "Interim" sheets when filled out but not less frequently than every 30 days, or (2) on Wednesday of the week in which oil string is set. Submit weekly for workovers and following setting of oil string until completion.

District	County or Parish	State
Permian-West	Lea	New Mexico
Field	**Lease or Unit**	**Well no.**
Jalmat	E.L. Stoeler WN	5

Date and depth as of 8:00 a.m.	Complete record for each day while drilling or workover in progress
5/29/81 3898'TD 3817'PBD	Flwg well to pit to clean up// Well flwg on 50# TP thru 1" orifice plate, flwg in heads, making gas & water. (AFE $299,400; $269,177)
6/01/81	Tstg// 5/30- CP 110#, TP 40# 20/64" ck. Flare to pit. Making salt wtr. 6/01- CP 110#, TP 40# 20/64" ck. Flare to pit. Making salt wtr. Head up about ever 2 hrs. Making approx 90 MCF, 5 or 6 Bbl salt watr per 24 hrs.
6/02/81	Flow tstg well// Flow well from csg 3 hrs, quit making wtr. Hook up gas tester. Flow from csg, making 296 MCF. No wtr. TP 110#, CP 40#, Flow thru 1" plate.
6/03/81	Close sleeve & pull plug// 6/02-SITP 200#, SICP 210#. Flow well from csg. CP 40#, TP 110#. Making 296 MCF, dry gas thru 1" orifice.
6/04/81	WSI for 24 hr btm hole press test// Close sliding sleeve @ 3302'. Bled TP to 0#. Attempt to pull plug. Lost tools in hole. Plug went thru profile. Ran 1¼"OD bars thru profile. Tools left in 2-3/8" tbg @ 3309'. Ran 24 hr BHP survey. SION. 6/03/81 @ 7:00 AM CP 200#, TP 200#.
6/05/81	RU PU// SITP 100#, SICP 200#. Pld bomb, no results. BHT 83.86°F. Ran 2" x 1¼" X 12' pump, 116 3/4" rods, 1 2' sub & 1 4' sub. (AFE $299,400; $287,134)
6/08/81	Temp drop from report// Jalmat SI WO prod equip. Langlie Mattix side did not pump up.
6/24/81	Prep to trip tbg & pkr// (temp dropped 6/08/81) MIRU. Bled well off. Pld rods & pump. CP 130#. SION.

The above is correct

Signature	Date	Title
J.W. Schmidt	6/30/81	Dist. Drlg. Supt.

For form preparation and distribution see Procedures Manual Section 10, Drilling, Pages 86 and 87

Received 7/10/81 Central Files

Number all daily well history forms consecutively as they are prepared for each well. Page no. 5

AR3B-459-2-B

AtlanticRichfieldCompany

Daily Well History—Interim

Instructions: This form is used during drilling or workover operations. If testing, coring, or perforating, show formation name in describing work performed. Number all drill stem tests sequentially. Attach description of all cores. Work performed by Producing Section will be reported on "Interim" sheets until final completion. Report official or representative test on "Final" form. 1) Submit "Interim" sheets when filled out but not less frequently than every 30 days, or (2) on Wednesday of the week in which oil string is set. Submit weekly for workovers and following setting of oil string until completion.

District	County or Parish	State
Permian-West	Lea	New Mexico
Field	**Lease or Unit**	**Well no.**
Jalmat	E.L. Steeler WN	5

Date and depth as of 8:00 a.m.	Complete record for each day while drilling or workover in progress
4/13/81 3898'TD 3805'PBD	Tstg// (temp dropped 3/18/81.) 4/11-In 24 hrs pmpd 7 BO & 2 BW. 4/12-In 24 hrs pmpd 13 BO, 5 BW & 40 MCFG, GOR 3077:1.
4/14/81	Tstg// In 24 hr pmpd 4 BO, 2 BW & 50 MCFG, GOR 12,500:1.
4/15/81	Pump trouble// 0 BO, 0 BW.
4/16/81	No report//
4/20/81	Pump trouble, no prod// 4/16-In 24 hrs pmpd 0 BO, 0 BW & 50 MCFG.
4/21/81	No test// Pld pump.
4/22/81	Tstg// In 24 hrs pmpd 19 BO, 2 BW & 39 MCF, GOR 2053:1.
4/23/81	Tstg// In 24 hrs pmpd 17 BO, 5 BW & 35 MCF, GOR 2059:1.
4/24/81	Tstg// In 24 hrs pmpd 6 BO, 11 BW & 40 MCF, GOR 6667:1.
4/27/81	WO prod equip, temp drop// 4/24-In 24 hrs pmpd 4 BO, 5 BW & 35 MCF.
5/15/81	On 24 hr test 5/03/81 pmpd 3 BO, 2 BW & 38 MCF, GOR 12,667:1.
5/27/81	Rel "FL" Tool, spot acid// MIRU PU. POH w/rods & pump. Tag btm for fill. POH w/2-3/8" tbg. RIH w/Baker Lok-set pkr "FL" tool (1.81 ID) & sliding sleeve (1.81 ID). Ran 3 jts of 2-3/8" tbg & 4' perf nipple below pkr, pkr set @ 3212'.
5/28/81	Test Jalmat perfs// 7:00 AM TP 175#, CP 210#. Spot 250 gal 15% acid, perfs 2913-3112'. POH w/2-3/8" tbg. Welex perf'd 1 JSPF @ 2913, 18, 24, 30, 37, 44, 50, 56, 62, 68, 73, 90, 94, 99, 3024, 36, 52, 58, 63, 68, 76, 3108, 12' (23 holes). Lost gun in hole. RIH w/ OS. POH w/perf gun. Well started flwg. Pmpd 30 bbl KCL wtr in hole. Ran 2-3/8" tbg & slide sleeve in hole. NU. Tbg plugged. Unable to swab. 5/28/81 CP 200#.

The above is correct

Signature	Date	Title
J.W. Schmidt	6/01/81	Dist. Drlg. Supt.

For form preparation and distribution see Procedures Manual Section 10, Drilling, Pages 86 and 87

Received 6/17/81 Central Sales

Number all daily well history forms consecutively as they are prepared for each well. Page no. 4

AR3B-159-2-A

ARCO Oil and Gas Company

Daily Well History—Interim

Instructions: This form is used during drilling or workover operations. If testing, coring, or perforating, show formation name in describing work performed. Number all drill stem tests sequentially. Attach description of all cores. Work performed by Producing Section will be reported on "Interim" sheets until final completion. Report official or representative test on "Final" form. 1) Submit "Interim" sheets when filled out but not less frequently than every 30 days, or (2) on Wednesday of the week in which oil string is set. Submit weekly for workovers and following setting of oil string until completion.

District	County or Parish	State
Permian - West Area	Lea	New Mexico
Field	**Lease or Unit**	**Well no.**
Jalmat	E. L. Steeler WN	5

Date and depth as of 8:00 a.m.	Complete record for each day while drilling or workover in progress
3/09/81 3898' TD 3805'PBD	- Rec load & test// 3/07- Swab Langlie Mattix fm 3418-3695', IFL 3300', no fluid rec. Frac'd 3418-3695' w/40,000 gal gel wtr, 20,000 gal CO_2, carrying 69,000# 20/40 sd & 33,000# 10/20 sd in 3 equal stages using 7/8" 1.1 gravity ball sealers to divert. 200# ball action. Min 2400#, max 2700, AIR 15 BPM, ATP 2600#, ISIP 1200#, 15 mins 900#, 3 hrs 400#. Flush in @ 10:20 AM. Started flwg back @ 1:20 PM. (-1452 BLW) Flwd back 73 BLW in 7 hrs. (-1379 BLW). 3/08- SITP 300#. Bled press off. In 10 hrs swbd 4 BNO & 37 BLW, good show of gas, IFL 1000', FFL 3300'. (+4 BO, -1342 BLW).
3/10/81	SITP 200#. Swbd Langlie Mattix fm 3418-3695', IFL 2800'. In 10 hrs swbd 10 BO & 21 BLW. Last hr rec 1 BL. FFL 3300'. (+14 BO, -1321 BLW).
3/11/81	SITP 175#. Swbd Langlie Mattix 3418-3695', IFL 2900'. In 10 hrs swbd 7 BO & 15 BLW. (+21 BO, -1306 BLW). Good show of gas.
3/12/81	- Trip sand bailer// SITP 175#. Swab Langlie Mattix fm 3418-3695', IFL 2900'. In 2 hrs swbd 1 BO & 2 BLW, FFL 3300'. (-1304 BW, +22 BO) Good show of gas. Rel pkr. Tag fill @ 3655'. POH. LD 2-7/8" tbg. PU 2-3/8" tbg & Hydrostatic bailer. RIH. CO 3655-3695'. Bailer quit loading. Pull 8 stds. SION.
3/13/81	- Trip out w/bit// POH w/ Hydrostatic bailer. RIH w/bailer. CO sd 3695-3725'. Rerun bailer to 3725' unable to make any hole. POH. Ran 4-3/4" bit to 3725'. Circ sd out 3725-3805'. Pull 6 stds.
3/16/81	3/14- POH w/bit. Test tbg in hole to 3500#, 1 jt bull plug mud anchor, perf nipple, SN, & 119 jts 2-3/8" tbg. RD BOP, Hook up WH. Swab Langlie Mattix fm 3418-3695', IFL 3100'. In 4½ hrs swbd 24 BLW, tr of oil, FFL 3650'. SION. (+22 BO, -1580 BLW). 3/16- Swbd 3418-3695', IFL 3100'. In 8 hrs swbd 35 BLW w/tr of oil, FFL 3650'. (+22 BO, -1545 BLW).
3/17/81	- TOTPS// Swab Langlie Mattix 3418-3695', IFL 3100'. In 6 hrs swbd 4 BO & 19 BLW, FFL 3650'. (+26 BO, -1526 BLW). Ran 2" x 1¼" x 12' pump, 1 2' x 3/4" pony rod, 146 3/4" rod, 1 6' x 3/4" pony rod. RR. SION.
3/18/81	WO prod equip, temp drop//

The above is correct

Signature	Date	Title
J. W. Schmidt JWS	4/15/81	Dist. Drlg. Supt.

For form preparation and distribution see Procedures Manual Section 10, Drilling, Pages 86 and 87

Received 4/24/81 Central file

Number all daily well history forms consecutively as they are prepared for each well. Page no. 3.

AR3B-459-2-B

ARCO Oil and Gas Company

Daily Well History—Interim

Instructions: This form is used during drilling or workover operations. If testing, coring, or perforating, show formation name in describing work performed. Number all drill stem tests sequentially. Attach description of all cores. Work performed by Producing Section will be reported on "Interim" sheets until final completion. Report official or representative test on "Final" form. 1) Submit "Interim" sheets when filled out but not less frequently than every 30 days, or (2) on Wednesday of the week in which oil string is set. Submit weekly for workovers and following setting of oil string until completion.

District	County or Parish	State
Permian - West Area	Lea	New Mexico
Field	**Lease or Unit**	**Well no.**
Jalmat	E. L. Steeler WN	5

Date and depth as of 8.00 a.m.	Complete record for each day while drilling or workover in progress
2/02/81 3898'TD	- MORT. MOCU, temp drop// LD DP. Ran 5½" K-55 LTC 15.50# Jones & Laughlin Steel Corp csg as follows: 1 Howco FS @ 3898', 2 jts 5½" csg, 1 Howco FC @ 3817' & 93 jts 5½" csg. Ran 12 cent & 18 scratchers. Cmtd 5½" csg w/ 650 sx HLC w/15# salt & 250 sx Cl H thickset, didn't circ cmt. PD @ 2:45 PM CST, 1/30/81. Cut off csg & NU well head. Wait 8 hrs, ran temp survey. TOC @ 1000'. RR 6:00 PM CST, 1/30/81.
3/02/81	- Displ hole w/KCl wtr// (temp dropped 2/02/81) 2/28- MIRU PU. Inst BOP. SION. Ran 4-3/4" bit, csg scraper & 2-7/8" J-55 tbg to 3805'. Test tbg to 4000#. SION.
3/3/81	RU, tstd csg to 1500#. Displ 5½" csg w/ 2% KCl wtr. Spot 300 gal 15% NE HCl acid across perf interval 3418-3595'. POH. Welex ran cmt bond log 3802' to surf. TOC @ 1110'. Perf'd Langlie Mattix selectively 3418-3695' (29 holes). Ran pkr to 3308' on 2-7/8" tbg. BDF 500#. Acidized ~~Jalmat~~ 3418-3695' w/ 3000 gal 15% NE HCl acid, 3 ball sealers every 3.5 bbls acid. Ball off perfs @ 4000# w/33 balls on perfs. Max 4000#, min 900#, AIR 4 BPM @ 2000#, ISIP 1500#, 5 min 1000#, 1 hr 0#. Rel pkr. Ran dn thru perfs. Reset pkr @ 3308'. SION. (-130 BLW).
3/4/81	- Prep to frac// Swbd perfs 3418-3695' 10 hrs. Rec 22 BLW. Last 7 hrs rec 1 BLW, show of oil. IFL 400', FFL 3800'. (-108 BLW.)
3/5/81	Swbd 3418-3695'. Rec 2 BLW. IFL 3300'. Made 2 swab runs. FFL 3300'. Dresser frac'd Langlie Mattix fm 3418-3695' w/ 40,000 gals gel wtr, 20,000 gal CO_2 carrying 69,000# 20/40 sd & 33,000# 10/20 sd in 3 equal stages using 7/8" 1.1 gravity ball sealers, 10 following stage 1 & 10 following state 2. No apparent ball action, but trtg press were 200# higher on each consecutive stage. Min 1800#, Max 2500#, AIR 15 BPM, ATP 2000#, ISIP 1000#, 15 min 800#, 1 hr 400#, 3 hr 350#. Flush in @ 10:20 AM. Started flwg back @ 1:20 PM. (-1088 BLW). Flwd back 37 bbls in 4½ hrs on ½ to 3/4" ck. FTP 50# on 3/4" ck. (-1051 BLW). SION.
3/6/81	- Prep to re-frac// On checking frac tanks found only 40% of frac fluid vol had been pmpd. Will re-frac Langlie Mattix fm. Swbd Langlie Mattix 3418-3695', IFL 800'. In 7 hrs swbd 15 BLW, FFL 3300'. Last 2 hrs rec 1 BLW w/tr of oil. Rel pkr. Check for fill up. Tag fill @ 3745'. Re-set pkr @ 3308'. Load annulus w/ 2% KCl wtr. Resume swbg Langlie Mattix fm. (-472 BL).

The above is correct

Signature	Date	Title
J. W. Schmidt	4/15/81	Dist. Drlg. Supt.

For form preparation and distribution see Procedures Manual Section 10, Drilling, Pages 86 and 87

Received 4/24/81 Control Files

Number all daily well history forms consecutively as they are prepared for each well.

Page no. 2.

AR3B-459-2-B

ARCO Oil and Gas Company
Permian District
Post Office Box 1610
Midland, Texas 79702
Telephone 915 684 0100

Gentlemen:

RE: E.L. Steeler #5 (Unit Letter J)
Section 19, T23S, R37E
Lea County, New Mexico
Application for Downhole Commingling

ARCO Oil & Gas Company has made application to dual complete and downhole commingle the subject well. A copy of the application is attached for your information.

If you have no objection to this commingling, will you please sign in the space provided and forward the approved copy to our attorney, Mr. Gary Kilpatric in the enclosed stamped and addressed envelope.

If the Oil & Gas Division is unable to grant administrative approval, it is anticipated that the case will be heard at the next examiners hearing on November 4, 1981.

We trust that the attached application will provide enough information for your approval. If more information is required, please contact the writer.

Yours very truly,

B. L. Stokely

B. L. Stokely
(915) 684-0152

BLS:cn

Attachments

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
ARCO EXHIBIT NO. 6
CASE NO. 7403

APPROVED: _____

_____

E. [illegible], Steeler Lease
S/2 Section 19, T-23-S, R-37-E,
Lea County, New Mexico

Offset Operators:

Sun Texas Company
1509 West Wall
Midland, Texas 79701

Gulf Oil Company
P. O. Box 1150
Midland, Texas 79702

Coquina Oil Company
P. O. Drawer 2960 ✓
Midland, Texas 79702

Samedan Oil Company
900 Wall Towers East
Midland, Texas 79701

✓ = Waived objection

Hartman wants see gas allocated to Jalmat

Getty Oil Company
P. O. Box 1231
Midland, Texas 79702

Reserve Oil and Gas Company
312 HBF Building
Midland, Texas 79701

James L. Evans ✓
P. O. Box 1125
Eunice, New Mexico 88231

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
ARCO EXHIBIT NO. 7
CASE NO. 7403

EXHIBIT "B"

CASE 7403: Application of Arco Oil and Gas Company for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of the Jalmat and Langlie Mattix production in the wellbore of its E. L. Steeler WN Well No. 5, located in Unit J of Section 19, Township 23 South, Range 37 East.

CASE 7359: (Continued from October 7, 1981, Examiner Hearing)

Application of Energy Reserves Group for creation of a new gas pool and an unorthodox location, Roosevelt County, New Mexico.
Applicant, in the above-styled cause, seeks creation of a new Cisco gas pool for its Miller Com Well No. 1, located in Unit M of Section 12, Township 6 South, Range 33 East.

Applicant further seeks approval for an unorthodox location for its Miller "A" Well No. 1-Y, to be drilled 1800 feet from the South line and 1700 feet from the East line of Section 11 of the same township. The S/2 of said Section 11 to be dedicated to the well.

CASE 7383: (Continued from October 21, 1981, Examiner Hearing)

Application of Amoco Production Company for compulsory pooling, Eddy County, New Mexico.
Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Upper Pennsylvanian formation underlying the NW/4 of Section 19, Township 19 South, Range 25 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 7404: Application of TXO Production Corporation for an unorthodox well location, Eddy County, New Mexico.
Applicant, in the above-styled cause, seeks approval for the unorthodox location of an infill well to be drilled 2000 feet from the North line and 660 feet from the East line of Section 18, Township 21 South, Range 26 East, Catclaw Draw-Morrow gas pool.

CASE 7405: Application of Carl Schellinger for dual completion and an unorthodox location, Chaves County, New Mexico.
Applicant, in the above-styled cause, seeks approval for the dual completion of his Campbell Station Unit Well No. 1, to produce gas from the Abo and Pennsylvanian formations. Applicant further seeks approval of the unorthodox Pennsylvanian location of said well 660 feet from the South and West lines of Section 34, Township 8 South, Range 27 East, the S/2 of said Section 34 to be dedicated to the Pennsylvanian and the SW/4 to the Abo.

CASE 7406: Application of Depco, Inc. for compulsory pooling, Chaves County, New Mexico.
Applicant, in the above-styled cause, seeks an order pooling all mineral interests down through the Abo formation underlying the SE/4 of Section 23, Township 5 South, Range 24 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 7407: Application of Mesa Petroleum Company for compulsory pooling, Chaves County, New Mexico.
Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Abo formation underlying the NE/4 of Section 23, Township 5 South, Range 24 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 7408: Application of Doyle Hartman for directional drilling, a non-standard proration unit, an unorthodox well location and simultaneous dedication, Lea County, New Mexico.
Applicant, in the above-styled cause, seeks authority to directionally drill his Justis Well No. 10, the surface location of which is 1940 feet from the North line and 120 feet from the West line of Section 20, Township 25 South, Range 37 East, in such a manner as to bottom said well in the Jalmat Gas Pool at an unorthodox location 1980 feet from the North line and 330 feet from the East line of Section 19, Township 25 South, Range 37 East. Applicant further proposes to simultaneously dedicate said well and the Bettis, Boyle and Stovall Justis Well No. 1 to an 80-acre non-standard proration unit comprising the E/2 NE/4 of said Section 19.

Dockets Nos. 36-81 and 37-81 are tentatively set for November 19 and December 4, 1981. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - NOVEMBER 4, 1981

9 A.M. - OIL CONSERVATION DIVISION CONFERENCE ROOM
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Daniel S. Nutter, Examiner or Richard L. Stamets, Alternate Examiner:

CASE 7396: In the matter of the hearing called by the Oil Conservation Division on its own motion to permit Sentry Oil Exploration Company and Lawyers Surety Corporation to appear and show cause why Farr Well No. 1, located in Unit G of Section 6, Township 31 North, Range 34 East, Union County, New Mexico, should not be ordered plugged and abandoned in accordance with a Division-approved plugging program.

CASE 7380: (Continued and Readvertised)

Application of Bird Oil Corporation for an unorthodox location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox Entrada location of a well to be drilled 2110 feet from the North line and 1120 feet from the East line of Section 10, Township 22 South, Range 9 West, the SE/4 NE/4 of said Section 10 to be dedicated to the well.

CASE 7397: Application of Belco Petroleum Corporation for downhole commingling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Atoka and Strawn production in the wellbore of its Kimbley Well No. 1, located in Unit G of Section 21, Township 23 South, Range 28 East.

CASE 7398: Application of El Paso Natural Gas Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a Wolfcamp-Penn well, to be drilled 660 feet from the South and West lines of Section 23, Township 26 South, Range 30 East, Ross Draw Area, the S/2 of said Section 23 to be dedicated to the well.

CASE 7399: Application of Texaco, Inc. for a Unit Agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the North Vacuum Abo West Unit Area, comprising 2000 acres, more or less, of state lands in Township 17 South, Range 34 East.

CASE 7400: Application of Texaco, Inc. for a pressure maintenance project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a pressure maintenance project in its North Vacuum Abo West Unit Area by the injection of water into the Abo formation through 13 wells located in Sections 15,21,22,27,28 and 34, Township 17 South, Range 34 East, North Vacuum - Abo Pool.

CASE 7401: Application of Morris R. Antwell for an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be drilled 2410 feet from the North line and 330 feet from the West line of Section 21, Township 18 South, Range 38 East, Hobbs Grayburg-San Andres Pool, the SW/4 NW/4 of said Section 21 to be dedicated to the well.

CASE 7394: (Continued from October 21, 1981, Examiner Hearing)

Application of Morris R. Antwell for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests from the surface to the base of the Abo formation underlying the NE/4 SW/4 of Section 5, Township 20 South, Range 38 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 7402: Application of MGF Oil Corporation for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Strawn formation underlying the NW/4 NW/4 of Section 5, Township 20 South, Range 39 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION

IN THE MATTER OF THE APPLICATION OF ARCO OIL AND GAS COMPANY FOR DOWNHOLE COMMINGLING OF THE JALMAT YATES 7 RIVERS AND LANGLIE MATTIX 7 RIVERS POOLS LOCATED IN UNIT J, SECTION 19, TOWNSHIP 23 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO.

Case No. 7403

APPLICATION

COMES NOW the applicant ARCO Oil and Gas Company, through its attorneys, Montgomery & Andrews, P.A., and pursuant to the provisions of Rule 303C, applies to the New Mexico Oil Conservation Division for administrative approval to commingle downhole production from the Jalmat Yates 7 Rivers and Langlie Mattix 7 Rivers pools located in Section 19, Township 23 South, Range 37 East, Lea County, New Mexico, and in support of its application states:

1. Applicant is the operator of the E. L. Steeler WN #5(J) well located in Unit J, Section 19, Township 23 South, Range 37 East, Lea County, New Mexico.

2. The above well was originally completed in the Langlie Mattix 7 Rivers Queen and was dually completed in the Jalmat Yates 7 Rivers Queen formation. The Division Order number authorizing the dual completion will be supplied before the hearing requested herein.

3. A current 24-hour productivity test on Division Form C-116 showing the amount of oil, gas and water produced from each

zone is attached hereto as Exhibit "A" and incorporated by reference.

4. This is a newly completed well with no production history.

(A) The well was completed in the Langlie Mattix 7 Rivers Queen zone 3-3-81 through perforations 3418'-3695'. These perforations were acidized with 3000 gallons 15% acid & fraced with 40,000 gelled water plus 20,000 gallons CO_2 and 102,000# sand. On pumping test, the well produced 5 BO, 5 BW, and 40 MCF gas in 24 hours.

(B) The well was dually completed in the Jalmat Yates 7 Rivers formation through perforations 2913'-3012'. The well was completed with natural flow of 296 MCF per day from the Jalmat perforations, flowing through the casing annulus with 40# casing pressure through a 20/64" choke.

5. Measured bottom hole pressure for the Langlie Mattix zone is 195 psig. Shut in casing pressure for the Jalmat is 200 psig. This corrects to a bottom hole pressure of 215 psig at 3500', the measurement depth for the Langlie Mattix.

6. The Jalmat formation in this well produces no oil or water, so it is not expected to be damaged by the small amount of water produced from the Langlie Mattix zone (5 BWPD). Since there is no commingling of oil, the 5 BOPD produced from the Langlie Mattix should not damage the Jalmat. In the event scale becomes a problem, the two zones can be separated for production if necessary.

7. There is no change or commingling of oil, so there will be no change in value of the product. The gas will be sold to the same purchaser (El Paso Natural Gas Co.) who would have

bought the separate streams, and the price will not change on commingling.

8. Ownership of the two zones to be commingled is common, including working interest, royalty and overriding royalty.

9. A list of the offset operators is attached hereto as Exhibit "B" and incorporated by reference. The offset operators will be notified of the proposed commingling and a statement to that effect will be submitted by the Applicant prior to the hearing requested herein.

10. The granting of this Application is in the interest of the prevention of waste and the protection of correlative rights.

WHEREFORE, Applicant prays for administrative approval of this Application pursuant to Rule 303C.3, or in the alternative, if administrative approval cannot be granted, that this Application be set for hearing at the next regularly scheduled Examiner Hearing of the Oil Conservation Division.

Dated October 15, 1981.

Respectfully submitted,

MONTGOMERY & ANDREWS, P.A.

By Gary R. Kilpatric

Gary R. Kilpatric
Post Office Box 2307
Santa Fe, New Mexico 87504-2307
(505) 982-3873

Attorneys for Applicant

NEW MEXICO OIL CONSERVATION COMMISSION

GAS-OIL RATIO TESTS

C-116
Revised 1-1-65

Operator	Pool	County
ARCO Oil & Gas Company	Langley Mattix 7 Rivers Queen	Lea

Address: P. O. Box 1610, Midland, Texas 79701

TYPE OF TEST - (X): Scheduled [ ] Completion [ ] Special [X]

LEASE NAME	WELL NO.	LOCATION U	LOCATION S	LOCATION T	LOCATION R	DATE OF TEST	STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST WATER BBLS.	PROD. DURING TEST GRAV. OIL	PROD. DURING TEST OIL BBLS.	PROD. DURING TEST GAS M.C.F.	GAS - OIL RATIO CU.FT/BBL
E. L. Steeler WM	5 -	J	19	23S	37E	9-25-81	P	0	25#	20	24	5	36°	5	40	8000

EXHIBIT "A" - page 1

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

I hereby certify that the above information is true and complete to the best of my knowledge and belief.

B. L. Stokely (Signature)

B. L. Stokely
Senior Engineer
(Title)

September 25, 1981

NEW MEXICO OIL CONSERVATION COMMISSION
GAS-OIL RATIO TESTS

C-116
Revised 1-1-65

Operator: ARCO Oil & Gas Co.
Pool: Jalmat Yates 7 Rivers
County: Lea
Address: P. O. Box 1610, Midland, Texas 79701
TYPE OF TEST - (X): Scheduled [ ] Completion [ ] Special [X]

LEASE NAME	WELL NO.	LOCATION U	LOCATION S	LOCATION T	LOCATION R	DATE OF TEST	STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST WATER BBLS.	PROD. DURING TEST GRAV. OIL	PROD. DURING TEST OIL BBLS.	PROD. DURING TEST GAS M.C.F.	GAS - OIL RATIO CU.FT/BBL
E. E. Steeler WN	5	J	19	23S	37E	9-20-81	F	20/64	40	-	24	0	-	0	296	8

EXHIBIT "A" - page 2

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

I hereby certify that the above information is true and complete to the best of my knowledge and belief.

B. L. Stokely (Signature)
Senior Engineer (Title)
September 25, 1981

E. L. Steeler Lease
S/2 Section 19, T-23-S, R-37-E,
Lea County, New Mexico

Offset Operators:

Sun Texas Company
1509 West Wall
Midland, Texas 79701

Gulf Oil Company
P. O. Box 1150
Midland, Texas 79702

Coquina Oil Company
P. O. Drawer 2960
Midland, Texas 79702

Samedan Oil Company
900 Wall Towers East
Midland, Texas 79701

Getty Oil Company
P. O. Box 1231
Midland, Texas 79702

Reserve Oil and Gas Company
312 HBF Building
Midland, Texas 79701

James L. Evans
P. O. Box 1125
Eunice, New Mexico 88231

EXHIBIT "B"

dr/

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

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

CASE NO. 7403

Order No. R-6817

APPLICATION OF ARCO OIL AND GAS COMPANY

FOR DOWNHOLE COMMINGLING, LEA

COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on November 4, 19 81, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this _____ day of November, 19 81, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, ARCO Oil and Gas Company, is the owner and operator of the E. L. Steeler WN Well No. 5, located in Unit J of Section 19, Township 23 South, Range 37 East, NMPM, Lea County, New Mexico.

(3) That the applicant seeks authority to commingle Jalmat Gas Pool and Langlie Mattix Oil Pool production within the wellbore of the above-described well.

(4) That from the Jalmat gas zone, the subject well is capable of low marginal production only.

(5) That from the Langlie Mattix oil zone, the subject well is capable of low marginal production only.

(6) That the proposed commingling may result in the recovery of additional hydrocarbons from each of the subject pools, thereby preventing waste, and will not violate correlative rights.

(7) That the reservoir characteristics of each of the subject zones are such that underground waste would not be caused by the proposed commingling provided that the well is not shut-in for an extended period.

(8) That to afford the Division the opportunity to assess the potential for waste and to expeditiously order appropriate remedial action, the operator should notify the Hobbs district office of the Division any time the subject well is shut-in for 7 consecutive days.

(9) That in order to allocate the commingled production to each of the commingled zones in the subject well, all of ~~percent of~~ the commingled gas production should be allocated to the Jalmat zone, and all of the ~~percent of the~~ commingled oil production to the Langlie Mattix zone.

(ALTERNATE)

(9) That in order to allocate the commingled production to each of the commingled zones in the wells, applicant should consult with the supervisor of the Hobbs district office of the Division and determine an allocation formula for each of the production zones.

IT IS THEREFORE ORDERED:

(1) That the applicant, ARCO Oil and Gas Company, is hereby authorized to commingle Jalmat and Langlie Mattix production within the wellbore of the E. L. Steeler WN Well No. 5, located in Unit J of Section 19, Township 23 South, Range 37 East, NMPM, Lea County, New Mexico.

(2) ~~That the applicant shall consult with the Supervisor of the Hobbs district office of the Division and determine an allocation formula for the allocation of production to each zone in each of the subject wells.~~

~~(ALTERNATE)~~

(2) That all ~~percent~~ of the commingled gas production shall be allocated to the Jalmat Gas Pool ~~zone~~ and all ~~percent~~ of the commingled oil production shall be allocated to the Langlie Mattix Pool. ~~zone.~~

(3) That the operator of the subject well shall immediately notify the Division's Hobbs district office any time the well has been shut-in for 7 consecutive days and shall concurrently present, to the Division, a plan for remedial action.

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

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