

CASE 1960: Application of GULF for
approval of the NORTH CAVERNS UNIT
AGREEMENT - EDDY COUNTY, NEW MEXICO.

Case No.

1960

Application, Transcript,
Small Exhibits, Etc.

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
May 11, 1960

EXAMINER HEARING

IN THE MATTER OF:)
)

Application of Gulf Oil Corporation for)
approval of a unit agreement. Appli-)
cant, in the above-styled cause, seeks)
approval of its North Caverns Unit)
Agreement, which unit will embrace ap-)
proximately 6,303 acres of Federal and)
State land in Townships 22 and 23 South,)
Range 24 East, Eddy County, New Mexico.)

Case 1960

BEFORE: Daniel S. Nutter, Examiner.

TRANSCRIPT OF HEARING

MR. PAYNE: "Application of Gulf Oil Corporation for
approval of a unit agreement."

MR. KASTLER: If the Commission please, I am Bill
Kastler from Roswell, New Mexico appearing on behalf of Gulf Oil
Corporation in Case 1960. Our two witnesses will be R. H. Cress
and Mr. J. P. Cavanaugh.

If the Examiner please, we are going to present through the
first witness, Mr. Cress, four exhibits which have been labeled
Exhibits A, B, C and D, but which should be stamped, and ap-
propriately, exhibits, as Exhibits No. 1, 2, 3 and 4.

(Witnesses sworn.)

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ALBUQUERQUE, NEW MEXICO



R. H. CRESS

called as a witness, having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. KASTLER:

Q Would you please state your name?

A My name is Robert Cress.

Q By whom are you employed and where are you employed?

A I'm employed by the Gulf Oil Corporation in Roswell, New Mexico.

Q What is your position?

A My present position is District Exploration Geologist.

Q Have you previously appeared before the New Mexico Oil Conservation Commission and qualified as an expert geological witness?

A No, sir.

Q Mr. Cress, would you please state what your qualifications are, where you attended school and briefly outline the nature of your experience in petroleum geology?

A I graduated from the University of Minnesota in 1949 with a Bachelor's degree in geological engineering. I was employed by the Gulf Oil Corporation as a geologist in 1950 and have worked with them in that capacity to the present time.

Q Where have you been employed by Gulf?

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A I have been employed in various areas of Texas and New Mexico, the last three years being in Roswell.

Q Are you familiar with the lands in Eddy County under lease by Gulf and in the general vicinity of Townships 22 South and 23 South, 24 East?

A Yes, I am.

Q I call your attention now to exhibit marked Exhibit No. 1 in Case No. 1960.

MR. KASTLER: Mr. Nutter, are the witness' qualifications accepted?

MR. NUTTER: Yes, sir, please proceed.

Q Would you please refer to Exhibit No. 1 and explain what is shown on there that is pertinent to Gulf's application for approval of this unit?

A Exhibit No. 1 is a regional plat that shows the proposed unit outlined with respect to geographic locations and major geologic features. You will notice that we are located approximately ten miles northwest of White City and the same distance from the outcrop of the Capitan Reef which is shown with a heavy inked line on the plat.

This reef marks the west and northwest extremity of the Delaware Basin in Capitan time. The plat further shows the location of nearby deep dry holes.

The unit area is located in an area of fairly rugged relief



with approximately 250 feet of relief across the unit outline.

Q What is the size of the proposed unit area?

A The proposed unit area is approximately 6,302 acres.

Q Is this a unit unitized for exploration?

A Yes, sir, it is.

Q Would you identify the surrounding wells that are shown on Exhibit 1?

A We might turn to Exhibit B which has the name of the well and the formation it bottomed in. To the northeast of the unit area the Guadalupe Foot Hills, the Phillips No. 1 Guadalupe Foot Hills was drilled in Section 20 to a total depth of 13,034. The test bottomed in Ellenberger and after testing water was plugged and abandoned. Very slight shows in the Pennsylvanian encouraged Phillips to reenter this in 1958. They were not successful in completing from these zones and the well was plugged.

To the north of the unit area, the Northern Natural Gas No. 1 McKittrick Hills Federal in Section 23 of 24 East, reached a total depth of 11,890 feet in sediments of Devonian age, and after testing salt water the well was plugged and abandoned.

MR. NUTTER: Salt water in the Devonian?

A Yes, sir. I might mention that a test of the Lower Pennsylvanian sands, in testing the Lower Pennsylvanian sands they tested a zone for 800,000 cubic feet of gas. This decreased to approximately 74,000 cubic feet of gas at the end of the test.



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To the west of the unit area the Humble No. 1 Bandana Point well drilled to the Ellenberger, the total depth of the well was 12,262 feet. They tested water in the Ellenberger and in the Devonian. They plugged back to 10,035 feet in the Pennsylvanian and completed through perforations around 9800 feet for a gas well of a million eight hundred thousand cubic feet of gas per day.

Q That Bandana Point well is in Section 13 of Township 23 South, Range 23 East?

A Yes, sir. The area is complicated by facies changes in the Permian as the basin sediments enter the opening and pass into the reef and back reef facies. You'll notice on our Exhibit A we have a large bulge in the Capitan Reef, and this anomalous development of the reef from its narrow linear trend suggested to us a structure on the concave side of the bulge.

Q You have referred to Exhibit A and Exhibit B and you are intending to refer to Exhibits 1 and 2 respectively?

A Yes, sir.

Q All right, proceed. Is there anything further that can be shown or can be seen or described in connection with Exhibit No. 1?

A Yes, sir. I would mention 140 feet of contour regional dip between the Phillip's Guadalupe Foot Hills well and the Northern Natural Gas No. 1 McKittrick Hills well at the Devonian level. The regional dip in the area is approximately 200 feet



to the mile to the east into the Delaware Basin. This counter regional dip and the large bulge on the reef are the primary geologic basis for the prospect.

Q One other question concerning Exhibit No. 1 or other facts that are not particularly shown, how near is the nearest known Devonian producing well?

A The nearest Devonian production is in 18-31 in the Shugart-Devonian Field, I believe the name of that field is. I don't know how far it is, but it's a fair distance.

Q Now, calling your attention back to Exhibit No. 2, would you state what is shown in the dashed lines there and describe where the proposed unit area is situated on this plat?

A Exhibit 2 shows the outline of the proposed unit area in hashed lines, and it is situated in Townships 22 South, 24 East and Townships 23 South and 24 East. The plat further shows seismic control in the area. We show it in a southwesterly direction in search of our high from the Guadalupe Foot Hills unit well and encountered a turnover that crested in Section 12, having a north-south turnover. We then shot an east-west line to determine the dip in that direction.

We developed a strong turnover cresting along the west line of Section 11. This control indicated to us a generally, a large generally north-south trending structure with 300 feet of enclosure at the Bone Springs level and 500 feet of enclosure at the Devonian

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level. The basis for the unit boundary was the minus 6100 foot contour on the Devonian map, this is on Exhibit D.

Q Or Exhibit 4.

A Yes, sir. This is the lowest closing contour on our feature.

Q At minus 6100 feet?

A Yes, sir. I might mention in connection with the seismic work, it was extremely expensive and it cost Gulf approximately \$10,000 a mile to shoot the facies changes, in the Permian the rugged topography and the dense outcropping dolomite influenced or modified the results. We thought to fully shoot it out it would take at least ten miles more work and this would cost in the neighborhood of approximately \$100,000. Our estimated cost for this test is approximately \$280,000 and we felt it was more prudent to evaluate the area by drilling the wildcat test than to attempt further exploratory work in that we had seismic evidence of this large north-south trending feature as well as geologic evidence of this structure.

Q Now, Mr. Cress, as I understand it, Exhibit 4, which is also labeled Exhibit D, is the structure on top of the Devonian that you have developed from the seismic control shown in Exhibit No. 2, is that correct?

A Yes, it is. This is at an approximate Devonian horizon.

Q The enclosure of minus 6100 feet is roughly the area

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that is enclosed by the proposed unit area?

A Yes, sir, it is.

Q Now, where is your unit test well in relation with this on Exhibit 4?

A Our unit test well is located in the northwest of the southwest corner of Section 11, Township 23 South, Range 24 East.

Q That's so indicated on Exhibit D or Exhibit No. 4?

A Yes, sir, it is.

Q Now, calling your attention briefly to Exhibit C or Exhibit No. 3. What is shown on that exhibit?

A Exhibit 3 shows contours on Bone Springs horizon, which is a Permian horizon, and shows a structure with approximately 300 feet of closures. A seismic structure with approximately 300 feet of closure at this level.

Q Has this geological information been presented to the U.S.G.S. in connection with Gulf's petition for the approval?

A Yes, sir.

Q Preliminary designation and final designation of this unit area?

A Yes, it has.

Q That has been accompanied with a confidential report?

A Yes, it has.

Q That report containing substantially the same facts and matters that you have testified to here?



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A Yes, sir, it does.

Q Has the U.S.G.S. indicated it's approval?

A Yes, I was informed by our Law Department and our Land Department that we had received final approval on May 10th by phone.

Q That's final approval?

A Yes, sir.

Q Has this same geological confidential report and this material also been presented to the Commissioner of Public Lands?

A Yes, it has.

Q Has the test well been commenced, Mr. Cress?

A Yes, sir, it has and it is presently drilling at approximately 10,500 feet.

Q And what is the objective depth of that well?

A The objective depth of the test is 11,750 feet and the objective horizon is the Devonian.

Q You are now at or below 10,500 feet?

A Yes, sir.

Q In your opinion would the unit agreement, the North Caverns Unit Agreement, as outlined, provide for, fully for exploration in this area and in the event of production would it provide adequately for the orderly development of the reservoir?

A Yes, sir, it would.

Q Were Exhibits 1, 2, 3 and 4 prepared by you or at your direction and under your supervision?



A Yes, sir, they were.

MR. KASTLER: This concludes the direct examination on direct testimony.

MR. NUTTER: Does anyone have any questions of the witness?

MR. PAYNE: Yes, sir.

MR. NUTTER: Mr. Payne.

CROSS EXAMINATION

BY MR. PAYNE:

Q Are there any wells on this unit drilled to any formation?

A No, sir, there aren't.

MR. KASTLER: Other than the one --

A Other than the one that's presently drilling.

Q Yes. Just seismic holes? A Yes, sir.

Q Is your other witness going to testify more as to what the unit agreement contains?

MR. KASTLER: Yes, he is.

MR. PAYNE: Thank you.

BY MR. NUTTER:

Q Is this considered a Pennsylvanian prospect also?

A Yes, sir. It's Pennsylvanian and Devonian prospect.

Q In your opinion, is the unit outline sufficiently large as to cover the Devonian structure and provide adequate control of the structure by the unit operator?

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A Yes, sir, in my opinion it is.

Q In your opinion is the unit outline unnecessarily large to ~~enclose~~ an undue amount of acreage?

A No, sir.

Q Other than what is on the structure?

A No, sir, in my opinion it is not.

MR. NUTTER: Any further questions of the witness? He may be excused.

(Witness excused.)

MR. KASTLER: Our next witness is Mr. J. P. Cavanaugh.

J. P. CAVANAUGH

called as a witness, having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. KASTLER:

Q For the record, will you please state your name, where you reside, by whom you are employed and what your position is?

A My name is J. P. Cavanaugh, I reside in Roswell, New Mexico, I'm employed by Gulf Oil Corporation in the Roswell District as a land man.

Q Have you previously testified before the New Mexico Oil Conservation Commission?

A No, sir, I have not.

Q What has been your experience as a land man, Mr.

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Cavanaugh?

A My experience as land man started with Humble Oil and Refining Company in the Gulf Coast Division with Warren Petroleum Corporation.

Q In what year?

A In the year of 1939, '40 and '41, prior to my war service, I returned to Humble Oil and Refining Company in 1945 and in 1950 I was employed by Warren Petroleum Corporation in the Gulf Coast Division, the Abilene District and finally the Roswell District. Three years ago I was employed by Gulf Oil Corporation in the Roswell District as a land man. With Warren in the Abilene and Roswell Districts I was District Land Man for them.

Q Mr. Cavanaugh, are you familiar with the North Caverns Unit Agreement?

A Yes, sir, I am.

Q Were you instrumental in getting the unit agreement put together, agreed to by a number of parties, and executed?

A Yes, sir, I was. Exploration units are basically my concern with Gulf Oil Corporation in the Roswell District.

(Whereupon Gulf's Exhibit No. 5 was marked for identification.)

Q Do you have a plat for introduction as an exhibit here, and may that be submitted for identification and stamping and so forth?

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A As Exhibit No. 5.

Q Calling your attention to Exhibit No. 5, does that show closure of the proposed North Caverns unit area?

A Yes, sir, it does in the hashed outline.

Q What is the status of lands there as to ownership, whether Federal, State or fee lands?

A This unit includes 5,669.99 acres of Federal land, 632.64 acres of State of New Mexico land, and it does not include any fee land.

Q Are the respective owners of working interest leases shown on this plat, which is Exhibit No. 5?

A Yes, sir, they are, on the respective tracts as owned.

Q Briefly, would you recapitulate the number or names of the working interest owners in this unit?

A Yes, sir. Gulf Oil Corporation is shown on the plat under their respective tract followed by Northern Natural Gas Producing Company, Phillips Petroleum Company, Superior Oil Company, Hondo Oil and Gas Company, Tidewater Oil Company, Texaco Seaboard, Inc. and A. C. Holder.

Q Are the lease expiration dates also shown on Exhibit No. 5?

A Yes, sir, they are.

Q And as well, does Exhibit No. 5 show lease serial numbers and whether the leases are Federal or State leases?



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A Yes, sir, it does.

Q And the respective lease ownerships?

A Yes, sir, it does.

Q Now, Mr. Cavanaugh, is this a usual type of Federal Unit Agreement following closely to the code of Federal regulations that prescribe the form of the unit agreement itself?

A Yes, sir.

Q The purpose of this unit is for exploration?

A Yes, sir, it is.

Q What are the safeguards or the provisions in the unit agreement contained for the drilling of an initial test well?

A The safeguards for the drilling of the initial test well are one, to share in the cost of development by the working interest owners; secondly, getting into the royalty ownership to form a participating area, after which the initial test well or any succeeding wells are completed.

Q In other words, as I understand it, this unit agreement provides for a fixed working interest participation, is that correct?

A Yes, it does. A fixed working interest participation on each and every well drilled under the unit operating agreement.

Q Does it also contain provisions whereby less than all parties may undertake the drilling of any wells?

A Yes, sir, it has a provision included in the unit



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operating agreement for non consent wells to be drilled.

Q Does it provide for further development after initial discovery or before initial discovery for the drilling of more wells?

A Yes, sir, it does.

Q Does it substantially accord correlative rights for the owners of all interests in the unit area?

A Yes, sir, I believe it does.

Q Does it provide for subsequent joinder of any parties who have not joined?

A Yes, sir, it does.

Q Does it provide for the subsequent joinder or the joinder of the parties who are subsequently taken in by an expansion or enlargement of the unit area?

A Yes, sir, it does.

Q Does it as well provide for the contraction of the unit area for failure to develop?

A Yes, sir, it does.

Q How many of the working interest owners have signed and committed themselves or their companies to this unit agreement?

A One hundred percent, or all of them.

Q Are there any overriding royalty ownerships?

A Yes, sir, there are overriding royalty ownerships that affect Federal land.



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Q There are no overriding royalty ownerships affecting State lands?

A No, sir.

Q In all, how many owners of record of overriding royalty or production payment interests are there?

A There are probably eleven.

Q Have all eleven parties been offered the opportunity of consenting to and ratifying this unit agreement?

A Yes, sir, by registered mail.

Q Have any of them replied?

A Yes, sir, all with the exception of three parties have replied, four have replied in the negative, four have replied in the affirmative. However, of the four that have replied in the affirmative, one instrument will have to be resubmitted for proper legal procedure.

Q Do you have copies of the consents and ratifications submitted to Gulf as unit operator by those overriding royalty or production payments owners desiring to join the unit?

A Yes, sir. If the Commission please, we would appreciate submitting photostatic copies of the originals. The originals will remain in our files.

MR. PAYNE: That's all right, Mr. Cavanaugh.

MR. KASTLER: All right, these are verifax copies.

Q In connection with the royalty participation, how is that



provided in the event of production, would the royalty owners throughout the unit share in one-eighth of the production?

A No, sir, the royalty owners within the participating area share in the production from the well that's within this participating area.

Q Does the unit agreement provide that the participating area will be agreed upon and declared as a matter of agreement between the working interest owners, representatives of the U.S.G.S., representatives of the Commissioner of Public Lands and representatives of the Oil Conservation Commission?

A Yes, sir. Within the month that the well is completed.

Q Or as soon thereafter as practical?

A Yes, sir.

Q Was Exhibit No. 5 prepared by you or under your direction and supervision?

A Yes, sir, it was.

MR. KASTLER: I have no further questions on direct testimony at this time.

MR. NUTTER: Does anyone have any questions?

MR. PAYNE: Yes.

MR. NUTTER: Mr. Payne.

CROSS EXAMINATION

BY MR. PAYNE:

Q Mr. Cavanaugh, does this unit agreement contain a



segregation clause as to the State and Federal land?

A The segregation of any Federal lease committed to this agreement is covered by fourth paragraph in 17 (b) of the act as amended by the act of July 29, 1954, (68 Statutes 583, 585.) That's on page 18 of the unit agreement.

MR. KASTLER: That would apply to Federal segregation however. Are State leases to be segregated as well?

A Yes, sir, I believe they are.

MR. NUTTER: Paragraph (i) on 18 I think.

Q (By Mr. Payne) Now, Mr. Cavanaugh, did you testify that the Oil Conservation Commission also has to approve the participating area?

A It is subject to the approval, sir.

Q Well, now, where is that in the unit agreement?

A "The parties hereto, including the State Commission, agree that all powers and authority vested in the State Commission in and by any provisions of this agreement are vested in the State Commission and shall be exercised by it pursuant to the provisions of the laws of the State of New Mexico and subject in any case to appeal or judicial review as may now or hereafter be provided by the laws of the State of New Mexico."

Q Is that provision consistent with paragraph 11 on page 11 relative to the participation after discovery?

A To what language do you refer?



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Q The language in this paragraph as to the effect that only the supervisors of the U.S.G.S. and the Commissioner of Public Lands need to approve a participating area. Let's see, the second full paragraph on page 12, the State Commission along with on supervision and the State Commissioner is given authority to impound royalties and in so establishing a participating area I believe it is our procedure to consult or submit same to the Oil Conservation Commission, is that right, Mr. Kastler?

MR. KASTLER: Well, off the record.

(Whereupon a discussion was held off the record.)

MR. KASTLER: Back on the record. Mr. Cavanaugh, in the event of the establishment of a participating area, would Gulf Oil Corporation, as the unit operator, confer with the State Oil Conservation Commission as to the participating area to be declared?

A Yes, sir, it would.

Q (By Mr. Payne) Mr. Cavanaugh, what happens here if you get production before the appropriate parties have approved your unit agreement? As I understand it, your well is at 10,500 now, is that right?

A Yes, sir, it is. However, prior to the commencement of this well we had one hundred percent agreement as to the cost.

MR. KASTLER: By the working interest owners.

A We did not run any risk in commencing this well.

Q As your participating area does that contain a



retroactive provision that it relates back to the time of first production?

A Yes, sir.

MR. KASTLER: Might I state for the record that the effective date of the entire instrument is to be the date of final approval by the U.S.G.S., and inasmuch as we have been notified by telephone that the U. S. Geological Survey Director yesterday approved our unit agreement, that any order the Oil Conservation Commission might issue would be made retroactive to be dated effective May 10 or to be dated the date that the Commissioner of U.S.G.S. finally approved the unit.

MR. PAYNE: So that would take care of the allocation of any production that might accrue prior to actual approval by all these parties?

MR. KASTLER: Yes, it would, and the agreement would as well because the effective date would have occurred prior to production.

MR. NUTTER: In other words, this clause in this unit agreement that provides that the initial participating area would be effective as of the date of completion of the well or the effective date of the unit agreement would apply as the effective day of the unit agreement is May the 10th regardless of any subsequent approvals that may come after this?

MR. KASTLER: Yes.

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MR. NUTTER: The effective date will be May 10th?

MR. KASTLER: That will be the effective date of the unit agreement, yes. The production, the allocation of production is otherwise provided for, but is, of course, provided for either within the unit agreement or the unit operating agreement.

MR. NUTTER: I think the unit agreement provides that the effective date of any revision of any participating area will be the first of the month in which is obtained the knowledge or information on which the revision is predicated?

MR. KASTLER: That is correct.

MR. NUTTER: That would take care of subsequent expansions?

MR. KASTLER: And I don't see any problems in connection with that. I would like to state further for the record that we appear to be beyond the fret or worry now of not having the unit finally approved at the time we completed our initial test well, subject of course to the approval of the Oil Conservation Commission, we do most earnestly solicit your approval. I wish to state also that the Commissioner of Public Lands has only tentatively given its approval, basing their actual approval somewhat upon the condition that you approve it.

MR. NUTTER: In other words, you have tentative approval from the Commissioner of Public Lands?

MR. KASTLER: Yes.

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MR. NUTTER: You have tentative plus final approval from the U.S.G.S. and we're having a hearing today for the third one. Mr. Cavanaugh, you stated that the Exhibit 5 showed the expiration date of the various leases. What is the expiration date of Lease OB6176?

A I improperly stated that, the OB6176, that the exhibit shows an expiration date. However, that date is November 17, 1969.

MR. NUTTER: It's not about to run out then, is it?

A That, however, is shown on Exhibit B of the Unit Operating Agreement.

MR. NUTTER: Any further questions of Mr. Cavanaugh? He may be excused.

(Witness excused.)

MR. KASTLER: I move that Exhibits Nos. 1, 2, 3, 4 and 5 be entered into evidence.

MR. NUTTER: Gulf's Exhibits 1 through 5 will be entered. Do you have anything further, Mr. Kastler?

MR. KASTLER: No, sir, I haven't.

MR. NUTTER: Does anyone have anything further for Case 1960? We will take the case under advisement and take a fifteen minute recess.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. heard by me on 19.....

....., Examiner
New Mexico Oil Conservation Commission



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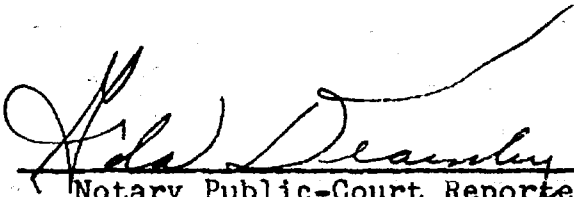
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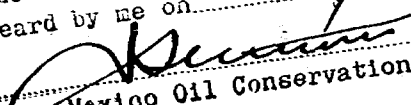
STATE OF NEW MEXICO)
: SS
COUNTY OF BERNALILLO)

I, ADA DEARNLEY, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission at Santa Fe, New Mexico, is a true and correct record to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF I have affixed my hand and notarial seal this day of May, 1960.


Notary Public-Court Reporter

My commission expires:
June 19, 1963.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 1960, heard by me on 5/11, 1960.

New Mexico Oil Conservation Commission



BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
May 11, 1960

EXAMINER HEARING

IN THE MATTER OF:

Application of Gulf Oil Corporation for approval of a unit agreement. Applicant, in the above-styled cause, seeks approval of its North Caverns Unit Agreement, which unit will embrace approximately 6,303 acres of Federal and State land in Townships 22 and 23 South, Range 24 East, Eddy County, New Mexico.

Case 1960

BEFORE: Daniel S. Nutter, Examiner.

TRANSCRIPT OF HEARING

MR. PAYNE: "Application of Gulf Oil Corporation for approval of a unit agreement."

MR. KASTLER: If the Commission please, I am Bill Kastler from Roswell, New Mexico appearing on behalf of Gulf Oil Corporation in Case 1960. Our two witnesses will be R. H. Cress and Mr. J. P. Cavanaugh.

If the Examiner please, we are going to present through the first witness, Mr. Cress, four exhibits which have been labeled Exhibits A, B, C and D, but which should be stamped, and appropriately, exhibits, as Exhibits No. 1, 2, 3 and 4.

(Witnesses sworn.)

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Inc.

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ALBUQUERQUE, NEW MEXICO



R. H. CRESS
called as a witness, having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. KASTLER:

Q Would you please state your name?

A My name is Robert Cress.

Q By whom are you employed and where are you employed?

A I'm employed by the Gulf Oil Corporation in Roswell, New Mexico.

Q What is your position?

A My present position is District Exploration Geologist.

Q Have you previously appeared before the New Mexico Oil Conservation Commission and qualified as an expert geological witness?

A No, sir.

Q Mr. Cress, would you please state what your qualifications are, where you attended school and briefly outline the nature of your experience in petroleum geology?

A I graduated from the University of Minnesota in 1949 with a Bachelor's degree in geological engineering. I was employed by the Gulf Oil Corporation as a geologist in 1950 and have worked with them in that capacity to the present time.

Q Where have you been employed by Gulf?

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A I have been employed in various areas of Texas and New Mexico, the last three years being in Roswell.

Q Are you familiar with the lands in Eddy County under lease by Gulf and in the general vicinity of Townships 22 South and 23 South, 24 East?

A Yes, I am.

Q I call your attention now to exhibit marked Exhibit No. 1 in Case No. 1960.

MR. KASTLER: Mr. Nutter, are the witness' qualifications accepted?

MR. NUTTER: Yes, sir, please proceed.

Q Would you please refer to Exhibit No. 1 and explain what is shown on there that is pertinent to Gulf's application for approval of this unit?

A Exhibit No. 1 is a regional plat that shows the proposed unit outlined with respect to geographic locations and major geologic features. You will notice that we are located approximately ten miles northwest of White City and the same distance from the outcrop of the Capitan Reef which is shown with a heavy inked line on the plat.

This reef marks the west and northwest extremity of the Delaware Basin in Capitan time. The plat further shows the location of nearby deep dry holes.

The unit area is located in an area of fairly rugged relief

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with approximately 250 feet of relief across the unit outline.

Q What is the size of the proposed unit area?

A The proposed unit area is approximately 6,302 acres.

Q Is this a unit unitized for exploration?

A Yes, sir, it is.

Q Would you identify the surrounding wells that are shown on Exhibit 1?

A We might turn to Exhibit B which has the name of the well and the formation it bottomed in. To the northeast of the unit area the Guadalupe Foot Hills, the Phillips No. 1 Guadalupe Foot Hills was drilled in Section 20 to a total depth of 13,034. The test bottomed in Ellenberger and after testing water was plugged and abandoned. Very slight shows in the Pennsylvanian encouraged Phillips to reenter this in 1958. They were not successful in completing from these zones and the well was plugged.

To the north of the unit area, the Northern Natural Gas No. 1 McKittrick Hills Federal in Section 23 of 24 East, reached a total depth of 11,890 feet in sediments of Devonian age, and after testing salt water the well was plugged and abandoned.

MR. NUTTER: Salt water in the Devonian?

A Yes, sir. I might mention that a test of the Lower Pennsylvanian sands, in testing the Lower Pennsylvanian sands they tested a zone for 800,000 cubic feet of gas. This decreased to approximately 74,000 cubic feet of gas at the end of the test.



To the west of the unit area the Humble No. 1 Bandana Point well drilled to the Ellenberger, the total depth of the well was 12,262 feet. They tested water in the Ellenberger and in the Devonian. They plugged back to 10,035 feet in the Pennsylvanian and completed through perforations around 9800 feet for a gas well of a million eight hundred thousand cubic feet of gas per day.

Q That Bandana Point well is in Section 13 of Township 23 South, Range 23 East?

A Yes, sir. The area is complicated by facies changes in the Permian as the basin sediments enter the opening and pass into the reef and back reef facies. You'll notice on our Exhibit A we have a large bulge in the Capitan Reef, and this anomalous development of the reef from its narrow linear trend suggested to us a structure on the concave side of the bulge.

Q You have referred to Exhibit A and Exhibit B and you are intending to refer to Exhibits 1 and 2 respectively?

A Yes, sir.

Q All right, proceed. Is there anything further that can be shown or can be seen or described in connection with Exhibit No. 1?

A Yes, sir. I would mention 140 feet of contour regional dip between the Phillip's Guadalupe Foot Hills well and the Northern Natural Gas No. 1 McKittrick Hills well at the Devonian level. The regional dip in the area is approximately 200 feet

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to the mile to the east into the Delaware Basin. This counter regional dip and the large bulge on the reef are the primary geologic basis for the prospect.

Q One other question concerning Exhibit No. 1 or other facts that are not particularly shown, how near is the nearest known Devonian producing well?

A The nearest Devonian production is in 18-31 in the Shugart-Devonian Field, I believe the name of that field is. I don't know how far it is, but it's a fair distance.

Q Now, calling your attention back to Exhibit No. 2, would you state what is shown in the dashed lines there and describe where the proposed unit area is situated on this plat?

A Exhibit 2 shows the outline of the proposed unit area in hashered lines, and it is situated in Townships 22 South, 24 East and Townships 23 South and 24 East. The plat further shows seismic control in the area. We show it in a southwesterly direction in search of our high from the Guadalupe Foot Hills unit well and encountered a turnover that crested in Section 12, having a north-south turnover. We then shot an east-west line to determine the dip in that direction.

We developed a strong turnover cresting along the west line of Section 11. This control indicated to us a generally, a large generally north-south trending structure with 300 feet of enclosure at the Bone Springs level and 500 feet of enclosure at the Devonian

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level. The basis for the unit boundary was the minus 6100 foot contour on the Devonian map, this is on Exhibit D.

Q Or Exhibit 4.

A Yes, sir. This is the lowest closing contour on our feature.

Q At minus 6100 feet?

A Yes, sir. I might mention in connection with the seismic work, it was extremely expensive and it cost Gulf approximately \$10,000 a mile to shoot the facies changes, in the Permian the rugged topography and the dense outcropping dolomite influenced or modified the results. We thought to fully shoot it out it would take at least ten miles more work and this would cost in the neighborhood of approximately \$100,000. Our estimated cost for this test is approximately \$280,000 and we felt it was more prudent to evaluate the area by drilling the wildcat test than to attempt further exploratory work in that we had seismic evidence of this large north-south trending feature as well as geologic evidence of this structure.

Q Now, Mr. Cress, as I understand it, Exhibit 4, which is also labeled Exhibit D, is the structure on top of the Devonian that you have developed from the seismic control shown in Exhibit No. 2, is that correct?

A Yes, it is. This is at an approximate Devonian horizon.

Q The enclosure of minus 6100 feet is roughly the area

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that is enclosed by the proposed unit area?

A Yes, sir, it is.

Q Now, where is your unit test well in relation with this on Exhibit 4?

A Our unit test well is located in the northwest of the southwest corner of Section 11, Township 23 South, Range 24 East.

Q That's so indicated on Exhibit D or Exhibit No. 4?

A Yes, sir, it is.

Q Now, calling your attention briefly to Exhibit C or Exhibit No. 3. What is shown on that exhibit?

A Exhibit 3 shows contours on Bone Springs horizon, which is a Permian horizon, and shows a structure with approximately 300 feet of closures. A seismic structure with approximately 300 feet of closure at this level.

Q Has this geological information been presented to the U.S.G.S. in connection with Gulf's petition for the approval?

A Yes, sir.

Q Preliminary designation and final designation of this unit area?

A Yes, it has.

Q That has been accompanied with a confidential report?

A Yes, it has.

Q That report containing substantially the same facts and matters that you have testified to here?



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A Yes, sir, it does.

Q Has the U.S.G.S. indicated it's approval?

A Yes, I was informed by our Law Department and our Land Department that we had received final approval on May 10th by phone.

Q That's final approval? A Yes, sir.

Q Has this same geological confidential report and this material also been presented to the Commissioner of Public Lands?

A Yes, it has.

Q Has the test well been commenced, Mr. Cress?

A Yes, sir, it has and it is presently drilling at approximately 10,500 feet.

Q And what is the objective depth of that well?

A The objective depth of the test is 11,750 feet and the objective horizon is the Devonian.

Q You are now at or below 10,500 feet?

A Yes, sir.

Q In your opinion would the unit agreement, the North Caverns Unit Agreement, as outlined, provide for, fully for exploration in this area and in the event of production would it provide adequately for the orderly development of the reservoir?

A Yes, sir, it would.

Q Were Exhibits 1, 2, 3 and 4 prepared by you or at your direction and under your supervision?



A Yes, sir, they were.

MR. KASTLER: This concludes the direct examination on direct testimony.

MR. NUTTER: Does anyone have any questions of the witness?

MR. PAYNE: Yes, sir.

MR. NUTTER: Mr. Payne.

CROSS EXAMINATION

BY MR. PAYNE:

Q Are there any wells on this unit drilled to any formation?

A No, sir, there aren't.

MR. KASTLER: Other than the one --

A Other than the one that's presently drilling.

Q Yes. Just seismic holes? A Yes, sir.

Q Is your other witness going to testify more as to what the unit agreement contains?

MR. KASTLER: Yes, he is.

MR. PAYNE: Thank you.

BY MR. NUTTER:

Q Is this considered a Pennsylvanian prospect also?

A Yes, sir. It's Pennsylvanian and Devonian prospect.

Q In your opinion, is the unit outline sufficiently large as to cover the Devonian structure and provide adequate control of the structure by the unit operator?

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A Yes, sir, in my opinion it is.

Q In your opinion is the unit outline unnecessarily large to enclose an undue amount of acreage?

A No, sir.

Q Other than what is on the structure?

A No, sir, in my opinion it is not.

MR. NUTTER: Any further questions of the witness? He may be excused.

(Witness excused.)

MR. KASTLER: Our next witness is Mr. J. P. Cavanaugh.

J. P. CAVANAUGH

called as a witness, having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. KASTLER:

Q For the record, will you please state your name, where you reside, by whom you are employed and what your position is?

A My name is J. P. Cavanaugh, I reside in Roswell, New Mexico, I'm employed by Gulf Oil Corporation in the Roswell District as a land man.

Q Have you previously testified before the New Mexico Oil Conservation Commission?

A No, sir, I have not.

Q What has been your experience as a land man, Mr.

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Cavanaugh?

A My experience as land man started with Humble Oil and Refining Company in the Gulf Coast Division with Warren Petroleum Corporation.

Q In what year?

A In the year of 1939, '40 and '41, prior to my war service I returned to Humble Oil and Refining Company in 1945 and in 1950 I was employed by Warren Petroleum Corporation in the Gulf Coast Division, the Abilene District and finally the Roswell District. Three years ago I was employed by Gulf Oil Corporation in the Roswell District as a land man. With Warren in the Abilene and Roswell Districts I was District Land Man for them.

Q Mr. Cavanaugh, are you familiar with the North Caverns Unit Agreement?

A Yes, sir, I am.

Q Were you instrumental in getting the unit agreement put together, agreed to by a number of parties, and executed?

A Yes, sir, I was. Exploration units are basically my concern with Gulf Oil Corporation in the Roswell District.

(Whereupon Gulf's Exhibit No. 5 was marked for identification.)

Q Do you have a plat for introduction as an exhibit here, and may that be submitted for identification and stamping and so forth?



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A As Exhibit No. 5.

Q Calling your attention to Exhibit No. 5, does that show enclosure of the proposed North Caverns unit area?

A Yes, sir, it does in the hashed outline.

Q What is the status of lands there as to ownership, whether Federal, State or fee lands?

A This unit includes 5,669.99 acres of Federal land, 632.64 acres of State of New Mexico land, and it does not include any fee land.

Q Are the respective owners of working interest leases shown on this plat, which is Exhibit No. 5?

A Yes, sir, they are, on the respective tracts as owned.

Q Briefly, would you recapitulate the number or names of the working interest owners in this unit?

A Yes, sir. Gulf Oil Corporation is shown on the plat under their respective tract followed by Northern Natural Gas Producing Company, Phillips Petroleum Company, Superior Oil Company, Hondo Oil and Gas Company, Tidewater Oil Company, Texaco Seaboard, Inc. and A. C. Holder.

Q Are the lease expiration dates also shown on Exhibit No. 5?

A Yes, sir, they are.

Q And as well, does Exhibit No. 5 show lease serial numbers and whether the leases are Federal or State leases?



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A Yes, sir, it does.

Q And the respective lease ownerships?

A Yes, sir, it does.

Q Now, Mr. Cavanaugh, is this a usual type of Federal Unit Agreement following closely to the code of Federal regulations that prescribe the form of the unit agreement itself?

A Yes, sir.

Q The purpose of this unit is for exploration?

A Yes, sir, it is.

Q What are the safeguards or the provisions in the unit agreement contained for the drilling of an initial test well?

A The safeguards for the drilling of the initial test well are one, to share in the cost of development by the working interest owners; secondly, getting into the royalty ownership to form a participating area, after which the initial test well or any succeeding wells are completed.

Q In other words, as I understand it, this unit agreement provides for a fixed working interest participation, is that correct?

A Yes, it does. A fixed working interest participation on each and every well drilled under the unit operating agreement.

Q Does it also contain provisions whereby less than all parties may undertake the drilling of any wells?

A Yes, sir, it has a provision included in the unit



operating agreement for non consent wells to be drilled.

Q Does it provide for further development after initial discovery or before initial discovery for the drilling of more wells?

A Yes, sir, it does.

Q Does it substantially accord correlative rights for the owners of all interests in the unit area?

A Yes, sir, I believe it does.

Q Does it provide for subsequent joinder of any parties who have not joined?

A Yes, sir, it does.

Q Does it provide for the subsequent joinder or the joinder of the parties who are subsequently taken in by an expansion or enlargement of the unit area?

A Yes, sir, it does.

Q Does it as well provide for the contraction of the unit area for failure to develop?

A Yes, sir, it does.

Q How many of the working interest owners have signed and committed themselves or their companies to this unit agreement?

A One hundred percent, or all of them.

Q Are there any overriding royalty ownerships?

A Yes, sir, there are overriding royalty ownerships that affect Federal land.



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Q There are no overriding royalty ownerships affecting State lands?

A No, sir.

Q In all, how many owners of record of overriding royalty or production payment interests are there?

A There are probably eleven.

Q Have all eleven parties been offered the opportunity of consenting to and ratifying this unit agreement?

A Yes, sir, by registered mail.

Q Have any of them replied?

A Yes, sir, all with the exception of three parties have replied, four have replied in the negative, four have replied in the affirmative. However, of the four that have replied in the affirmative, one instrument will have to be resubmitted for proper legal procedure.

Q Do you have copies of the consents and ratifications submitted to Gulf as unit operator by those overriding royalty or production payments owners desiring to join the unit?

A Yes, sir. If the Commission please, we would appreciate submitting photostatic copies of the originals. The originals will remain in our files.

MR. PAYNE: That's all right, Mr. Cavanaugh.

MR. KASTLER: All right, these are verifax copies.

Q In connection with the royalty participation, how is that



provided in the event of production, would the royalty owners throughout the unit share in one-eighth of the production?

A No, sir, the royalty owners within the participating area share in the production from the well that's within this participating area.

Q Does the unit agreement provide that the participating area will be agreed upon and declared as a matter of agreement between the working interest owners, representatives of the U.S.G.S., representatives of the Commissioner of Public Lands and representatives of the Oil Conservation Commission?

A Yes, sir. Within the month that the well is completed.

Q Or as soon thereafter as practical?

A Yes, sir.

Q Was Exhibit No. 5 prepared by you or under your direction and supervision?

A Yes, sir, it was.

MR. KASTLER: I have no further questions on direct testimony at this time.

MR. NUTTER: Does anyone have any questions?

MR. PAYNE: Yes.

MR. NUTTER: Mr. Payne.

CROSS EXAMINATION

BY MR. PAYNE:

Q Mr. Cavanaugh, does this unit agreement contain a

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segregation clause as to the State and Federal land?

A The segregation of any Federal lease committed to this agreement is covered by fourth paragraph in 17 (b) of the act as amended by the act of July 29, 1954, (68 Statutes 583, 585.) That's on page 18 of the unit agreement.

MR. KASTLER: That would apply to Federal segregation however. Are State leases to be segregated as well?

A Yes, sir, I believe they are.

MR. NUTTER: Paragraph (1) on 18 I think.

Q (By Mr. Payne) Now, Mr. Cavanaugh, did you testify that the Oil Conservation Commission also has to approve the participating area?

A It is subject to the approval, sir.

Q Well, now, where is that in the unit agreement?

A "The parties hereto, including the State Commission, agree that all powers and authority vested in the State Commission in and by any provisions of this agreement are vested in the State Commission and shall be exercised by it pursuant to the provisions of the laws of the State of New Mexico and subject in any case to appeal or judicial review as may now or hereafter be provided by the laws of the State of New Mexico."

Q Is that provision consistent with paragraph 11 on page 11 relative to the participation after discovery?

A To what language do you refer?

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Q The language in this paragraph as to the effect that only the supervisors of the U.S.G.S. and the Commissioner of Public Lands need to approve a participating area. Let's see, the second full paragraph on page 12, the State Commission along with the supervision and the State Commissioner is given authority to impose royalties and in so establishing a participating area I believe it is our procedure to consult or submit same to the Oil Conservation Commission, is that right, Mr. Kastler?

MR. KASTLER: Well, off the record.

(Whereupon a discussion was held off the record.)

MR. KASTLER: Back on the record. Mr. Cavanaugh, in the event of the establishment of a participating area, would Gulf Oil Corporation, as the unit operator, confer with the State Oil Conservation Commission as to the participating area to be declared?

A Yes, sir, it would.

Q (By Mr. Payne) Mr. Cavanaugh, what happens here if you get production before the appropriate parties have approved your unit agreement? As I understand it, your well is at 10,500 now, is that right?

A Yes, sir, it is. However, prior to the commencement of this well we had one hundred percent agreement as to the cost.

MR. KASTLER: By the working interest owners.

A We did not run any risk in commencing this well.

Q As your participating area does that contain a



retroactive provision that it relates back to the time of first production?

A Yes, sir.

MR. KASTLER: Might I state for the record that the effective date of the entire instrument is to be the date of final approval by the U.S.G.S., and inasmuch as we have been notified by telephone that the U. S. Geological Survey Director yesterday approved our unit agreement, that any order the Oil Conservation Commission might issue would be made retroactive to be dated effective May 10 or to be dated the date that the Commissioner of U.S.G.S. finally approved the unit.

MR. PAYNE: So that would take care of the allocation of any production that might accrue prior to actual approval by all these parties?

MR. KASTLER: Yes, it would, and the agreement would as well because the effective date would have occurred prior to production.

MR. NUTTER: In other words, this clause in this unit agreement that provides that the initial participating area would be effective as of the date of completion of the well or the effective date of the unit agreement would apply as the effective day of the unit agreement is May the 10th regardless of any subsequent approvals that may come after this?

MR. KASTLER: Yes.

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MR. NUTTER: The effective date will be May 10th?

MR. KASTLER: That will be the effective date of the unit agreement, yes. The production, the allocation of production is otherwise provided for, but is, of course, provided for either within the unit agreement or the unit operating agreement.

MR. NUTTER: I think the unit agreement provides that the effective date of any revision of any participating area will be the first of the month in which is obtained the knowledge or information on which the revision is predicated?

MR. KASTLER: That is correct.

MR. NUTTER: That would take care of subsequent expansions?

MR. KASTLER: And I don't see any problems in connection with that. I would like to state further for the record that we appear to be beyond the fret or worry now of not having the unit finally approved at the time we completed our initial test well, subject of course to the approval of the Oil Conservation Commission, we do most earnestly solicit your approval. I wish to state also that the Commissioner of Public Lands has only tentatively given its approval, basing their actual approval somewhat upon the condition that you approve it.

MR. NUTTER: In other words, you have tentative approval from the Commissioner of Public Lands?

MR. KASTLER: Yes.

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MR. NUTTER: You have tentative plus final approval from the U.S.G.S. and we're having a hearing today for the third one. Mr. Cavanaugh, you stated that the Exhibit 5 showed the expiration date of the various leases. What is the expiration date of Lease OB6176?

A I improperly stated that, the OB6176, that the exhibit shows an expiration date. However, that date is November 17, 1969.

MR. NUTTER: It's not about to run out then, is it?

A That, however, is shown on Exhibit B of the Unit Operating Agreement.

MR. NUTTER: Any further questions of Mr. Cavanaugh? He may be excused.

(Witness excused.)

MR. KASTLER: I move that Exhibits Nos. 1, 2, 3, 4 and 5 be entered into evidence.

MR. NUTTER: Gulf's Exhibits 1 through 5 will be entered. Do you have anything further, Mr. Kastler?

MR. KASTLER: No, sir, I haven't.

MR. NUTTER: Does anyone have anything further for Case 1960? We will take the case under advisement and take a fifteen minute recess.

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STATE OF NEW MEXICO)
 : SS
 COUNTY OF BERNALILLO)

I, ADA DEARNLEY, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission at Santa Fe, New Mexico, is a true and correct record to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF I have affixed my hand and notarial seal this day of May, 1960.

Ada Dearnley
 Notary Public-Court Reporter

My commission expires:
 June 19, 1963.

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PETROLEUM AND ITS PRODUCTS

ROSWELL DISTRICT

W. A. SHELLSHEAR
District Manager

F. D. MORTLOCK
District Exploration Manager

M. I. TAYLOR
District Production Manager

G. A. PRICE
District Services Manager

GULF OIL CORPORATION

P. O. DRAWER 669 • ROSWELL, NEW MEXICO

September 21, 1960

Northern Natural Gas Producing Company
2223 Dodge Street
Omaha 1, Nebraska
Attention: Mr. D. H. McArthur

Phillips Petroleum Company
Bartlesville, Oklahoma
Attention: Mr. J. F. Kington

The Superior Oil Company
218 West Illinois Street
Midland, Texas
Attention: Mr. R. K. Patterson

Tidewater Oil Company
Post Office Box 1404
Houston 1, Texas
Attention: Mr. Everett W. Hargrave, Jr.

Texaco Seaboard, Inc.
Post Office Box 3109
Midland, Texas
Attention: Mr. R. T. Maxwell

Hondo Oil & Gas Company
Post Office Box 660
Roswell, New Mexico
Attention: Mr. H. E. Harrington

Mr. A. C. Holder
Post Office Box 1476
Lovington, New Mexico

Gentlemen:

Re: Termination of North Caverns Unit
(Federal), Eddy County, New Mexico

On or about June 13, 1960, our Mr. Cavanaugh furnished each of you the necessary instruments to complete your file in the formation of the North Caverns (Federal) Unit, and at that time Mr. Cavanaugh was in the process of having the necessary instrument executed by each of you for the termination of the North Caverns Unit.

We now enclose for the completion of your file one copy of the request for the termination of the North Caverns (Federal) Unit and two additional copies of the same instrument that has been approved by the Commissioner of Public Lands and the Director of the United States Geological Survey making the termination of the North Caverns (Federal) Unit effective as of July 1, 1960. You will note that carbon copies of this letter are being sent to the respective District Offices with one copy each of the approved termination instrument.

Case # 1960

With these instruments we trust that your file is now complete and that the unavoidable delay has not caused you too great an inconvenience.

Yours very truly,



F. E. Curtis, Jr.
District Landman

JPC:hs
Attachments

cc: Northern Natural Gas Producing Company
400 Union Building
Midland, Texas
Attention: Mr. R. Willingham, Jr.

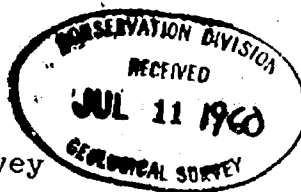
Phillips Petroleum Company
Permian Building
Midland, Texas
Attention: Mr. Worth E. Whitworth

Tidewater Oil Company
Post Office Box 1231
Midland, Texas
Attention: Mr. J. R. Creswell

Texaco Seaboard, Inc.
V & J Tower Building
Midland, Texas
Attention: Mr. R. R. Farris.

TO: The Director
United States Geological Survey
Washington 25, D. C.

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



RECEIVED

JUN 24 1960

U. S. GEOLOGICAL SURVEY
ROSWELL, NEW MEXICO

REQUEST FOR TERMINATION OF THE NORTH CAVERNS UNIT
NO. 14-08-001-6774

The undersigned, representing in excess of seventy-five per cent,
on an acreage basis, of the owners of working interests in the North Caverns
Unit Area, state as follows:

The test well required under Section 9 of the Unit Agreement
finally approved on May 10, 1960, was drilled at a location in the
NW/4 SW/4 of Section 11, Township 23 South, Range 24 East, N.M.P.M., to
total depth of 11,515 feet, the final depth being reached on May 26, 1960.
On drillstem test conducted May 26, 1960, the interval between 11,424 feet
and 11,515 feet in the Devonian formation was tested and 260 feet of mud
cut salt water and 2,000 feet salt water were recovered. Further drilling
of said well appeared to have been unwarranted and impracticable. The
well was plugged and abandoned on May 29, 1960.

By reason of the above the undersigned respectfully request
that the North Caverns Unit be terminated effective July 1, 1960.

Date Approved JUL 22 1960

ATTEST:

Assistant Secretary

Acting Director, U. S. Geological Survey

GULF OIL CORPORATION

By

Attorney-in-Fact

Law	<u>WOK</u>
Compt.	
Exp.	<u>(initials)</u>
Prod.	

ATTEST:

Assistant Secretary

By

Vice-President

NORTHERN NATURAL GAS PRODUCING COMPANY

ATTEST:

Assistant Secretary

By

Vice-President

PHILLIPS PETROLEUM COMPANY



THE SUPERIOR OIL COMPANY

THE SUPERIOR OIL
APPROVED
Lead W. A. Shears
Geological W. A. Shears
Legal W. A. Shears
Approved for Exec's

By

W. A. Shears
Vice-President

and

B. B. Shears
Assistant Secretary

TIDEWATER OIL COMPANY

ATTEST:

C. J. Shears
Assistant Secretary

By

E. B. Mullins
Vice-President

APPROVED AS TO

Terms W. A. Shears

Form W. A. Shears

TEXACO SEABOARD INC.

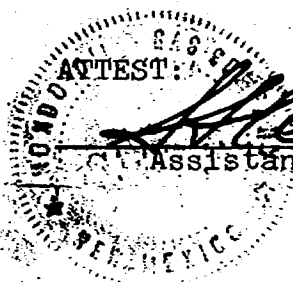
By

J. L. Sleeper
Attorney-in-Fact

HONDO OIL & GAS COMPANY

By

Joe W. L. Lundy
Vice-President



A. C. Holder
A. C. HOLDER

Ruby F. Holder
RUBY F. HOLDER

STATE OF NEW MEXICO

COUNTY OF CHAVES

The foregoing instrument was acknowledged before me this 13th

day of

June

, 1960, by

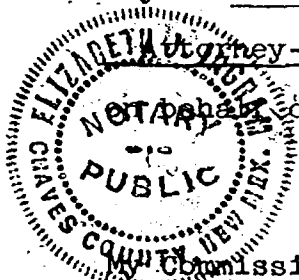
W. A. SHELLSHEAR

,

Attorney-in-Fact

for GULF OIL CORPORATION, a Pennsylvania corporation,

Notary of said corporation.



Commission Expires:

August 15, 1962

Elizabeth J. Shears
Notary Public

STATE OF NEBRASKA

COUNTY OF DOUGLAS

The foregoing instrument was acknowledged before me this 15th day of June, 1960, by John M. Hanley, Vice-President of NORTHERN NATURAL GAS PRODUCING COMPANY, a Delaware corporation, on behalf of said corporation.

M. K. Hanley
Notary Public

My Commission Expires:

April 11, 1963

STATE OF OKLAHOMA

COUNTY OF WASHINGTON

The foregoing instrument was acknowledged before me this 15th day of June, 1960, by P. L. Stark, Vice-President of PHILLIPS PETROLEUM COMPANY, a Delaware corporation, on behalf of said corporation.

Marion L. Stark
Notary Public

My Commission Expires:

March 2, 1962

STATE OF TEXAS

COUNTY OF MIDLAND

The foregoing instrument was acknowledged before me this 16 day of June, 1960, by W. Mengden, Vice-President of THE SUPERIOR OIL COMPANY, a California corporation, on behalf of said corporation.

W. Patterson
Notary Public

My Commission Expires:

June 1, 1961

STATE OF TEXAS |
COUNTY OF HARRIS |

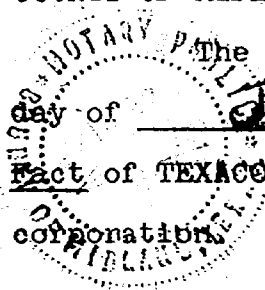
The foregoing instrument was acknowledged before me this 11th
day of June, 1960, by E. B. MILLER, JR., Vice-President
of TIDEWATER OIL COMPANY, a Delaware corporation, on behalf of said corpora-
tion.

[Signature]
Notary Public

My Commission Expires:

6-1-61

STATE OF TEXAS |
COUNTY OF MIDLAND |

The foregoing instrument was acknowledged before me this 14th
day of June, 1960, by J. L. Sleeper, Jr., Attorney-in-
Fact of TEXACO STANDARD INC., a Delaware corporation, on behalf of said
corporation.

[Signature]
Notary Public

My Commission Expires:

6-1-61

STATE OF NEW MEXICO
COUNTY OF CHAVES |

The foregoing instrument was acknowledged before me this 20th
day of June, 1960, by Joe W. Leckey, Vice-
President of HONDO OIL & GAS COMPANY, a New Mexico corporation, on behalf
of said corporation.

[Signature]
Notary Public

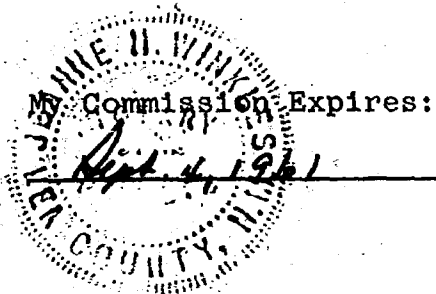
My Commission Expires:

6-1-61

STATE OF NEW MEXICO

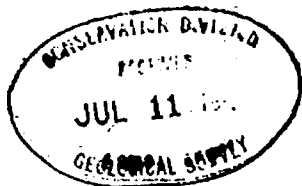
COUNTY OF LEA

The foregoing instrument was acknowledged before me this 21st
day of June, 1960, by A. C. HOLDER and RUBY F. HOLDER,
his wife.



Jeanne D. Winkler
Notary Public

WVK:ej1
6-13-60
(30)



RECEIVED

JUN 24 1960

U. S. GEOLOGICAL SURVEY
ROCKWELL, NEW YORK

**CERTIFICATE OF APPROVAL
FOR THE TERMINATION OF THE NORTH CAVERNS UNIT AGREEMENT.**

There having been presented to the Commissioner of Public Lands a request for termination of the North Caverns Unit;

this request having been signed by over seventy-five percent, on an acreage basis, of the owners of working interest in the North Cavern Unit;

this request states that the test well required to be drilled in the North Caverns Unit area under Section 9 of the Unit Agreement was drilled and was plugged and abandoned on May 29, 1960, and due to this fact the working interest owners request approval for the termination of this unit effective July 1, 1960.

THEREFORE, this Certificate of Approval for the termination of the North Caverns Unit is executed, with seal affixed, this 22nd day of June, 1960.

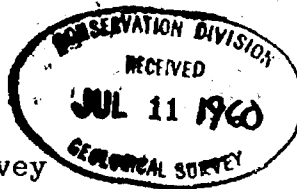
BY:

COMMISSIONER OF PUBLIC LANDS



TO: The Director
United States Geological Survey
Washington 25, D. C.

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



RECEIVED
JUN 24 1960
U. S. GEOLOGICAL SURVEY
ROSWELL, NEW MEXICO

REQUEST FOR TERMINATION OF THE NORTH CAVERNS UNIT
NO. 14-08-001-6774

The undersigned, representing in excess of seventy-five per cent,
on an acreage basis, of the owners of working interests in the North Caverns
Unit Area, state as follows:

The test well required under Section 9 of the Unit Agreement
finally approved on May 10, 1960, was drilled at a location in the
NW/4 SW/4 of Section 11, Township 23 South, Range 24 East, N.M.P.M., to
total depth of 11,515 feet, the final depth being reached on May 26, 1960.
On drillstem test conducted May 26, 1960, the interval between 11,424 feet
and 11,515 feet in the Devonian formation was tested and 260 feet of mud
cut salt water and 2,000 feet salt water were recovered. Further drilling
of said well appeared to have been unwarranted and impracticable. The
well was plugged and abandoned on May 29, 1960.

By reason of the above the undersigned respectfully request
that the North Caverns Unit be terminated effective July 1, 1960.

Date Approved JUL 22 1960

GULF OIL CORPORATION

Law	<i>W</i>
Compt.	
Exp.	<i>10/7/60</i>
Prod.	

ATTEST:

John S. Baker
Acting Director, U. S. Geological Survey

John S. Baker
Assistant Secretary

By

W. H. Shell
Attorney-in-Fact

NORTHERN NATURAL GAS PRODUCING COMPANY

ATTEST:

John M. Hanley
Assistant Secretary

By

John M. Hanley
Vice-President

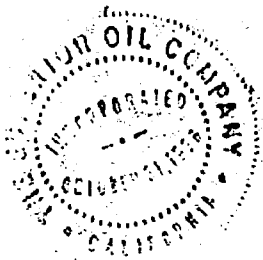
PHILLIPS PETROLEUM COMPANY

ATTEST:

John M. Hanley
Assistant Secretary

By

John M. Hanley
Vice-President



THE SUPERIOR OIL COMPANY

THE SUPERIOR OIL
APPROVED
Lead W. A. Shellshear
Geological W. A. Shellshear
Legal W. A. Shellshear
Approved for Exec'n

By W. A. Shellshear
Vice-President
and B. W. Shellshear
Assistant Secretary

TIDEWATER OIL COMPANY

ATTEST:

C. J. Shellshear
Assistant Secretary

By B. W. Shellshear
Vice-President

APPROVED AS TO

Terms W. A. Shellshear
Form W. A. Shellshear

TEXACO SEABOARD INC.

By J. L. Sleeper
Attorney-in-Fact

HONDO OIL & GAS COMPANY

ATTEST:

H. W. Shellshear
Assistant Secretary

By Joe W. Shellshear
Vice-President

A. C. Holder
A. C. HOLDER

Ruby F. Holder
RUBY F. HOLDER

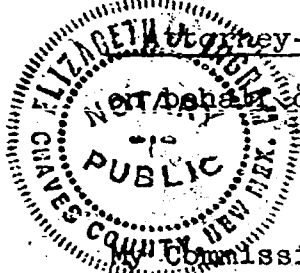
STATE OF NEW MEXICO

COUNTY OF CHAVES

The foregoing instrument was acknowledged before me this 15th

day of June, 1960, by W. A. SHELLSHEAR,

Attorney-in-Fact for GULF OIL CORPORATION, a Pennsylvania corporation,
on behalf of said corporation.



Elizabeth J. Ingram
Notary Public

STATE OF NEBRASKA
COUNTY OF DOUGLAS

The foregoing instrument was acknowledged before me this 15th
day of June, 1960, by John M. Hanley,
Vice-President of NORTHERN NATURAL GAS PRODUCING COMPANY, a Delaware
corporation, on behalf of said corporation.

M. K. Hanley
Notary Public

My Commission Expires:
April 11, 1963

STATE OF OKLAHOMA
COUNTY OF WASHINGTON

The foregoing instrument was acknowledged before me this 15th
day of June, 1960, by P. V. Starb,
Vice-President of PHILLIPS PETROLEUM COMPANY, a Delaware corporation, on
behalf of said corporation.

Marion Liabow
Notary Public

My Commission Expires:
1-1-62

STATE OF TEXAS
COUNTY OF MIDLAND

The foregoing instrument was acknowledged before me this 16
day of June, 1960, by W. Mengden,
Vice-President of THE SUPERIOR OIL COMPANY, a California corporation,
on behalf of said corporation.

W. Patterson
Notary Public

My Commission Expires:
June 1, 1961

STATE OF TEXAS

COUNTY OF HARRIS

The foregoing instrument was acknowledged before me this 11th day of June, 1960, by E. B. MILLER, JR., Vice-President of TIDEWATER OIL COMPANY, a Delaware corporation, on behalf of said corporation.

[Signature]
Notary Public

My Commission Expires:

STATE OF TEXAS

COUNTY OF MIDLAND

The foregoing instrument was acknowledged before me this 14th day of June, 1960, by J. L. Sleeper, Jr., Attorney-in-Fact of TEXACO STANDARD INC., a Delaware corporation, on behalf of said corporation.

[Signature]
Notary Public

My Commission Expires:

STATE OF NEW MEXICO

COUNTY OF CHAVES

The foregoing instrument was acknowledged before me this 20th day of June, 1960, by Joe W. Leckey, Vice-President of HONDO OIL & GAS COMPANY, a New Mexico corporation, on behalf of said corporation.

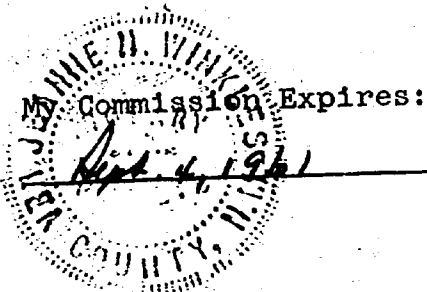
[Signature]
Notary Public

My Commission Expires:

STATE OF NEW MEXICO

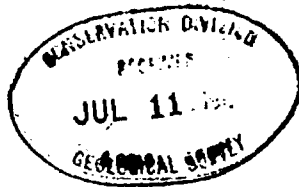
COUNTY OF LEA

The foregoing instrument was acknowledged before me this 21st
day of June, 1960, by A. C. HOLDER and RUBY F. HOLDER,
his wife.



Jeanne D. Winkler
Notary Public

WVK:ej1
6-13-60
(30)



RECEIVED
JUN 24 1960
U. S. GEOLOGICAL SURVEY
ROSENBERG, NEW YORK

**CERTIFICATE OF APPROVAL
FOR THE TERMINATION OF THE NORTH CAVERNS UNIT AGREEMENT.**

There having been presented to the Commissioner of Public Lands a request for termination of the North Caverns Unit;

this request having been signed by over seventy-five percent, on an acreage basis, of the owners of working interest in the North Cavern Unit;

this request states that the test well required to be drilled in the North Caverns Unit area under Section 9 of the Unit Agreement was drilled and was plugged and abandoned on May 29, 1960, and due to this fact the working interest owners request approval for the termination of this unit effective July 1, 1960.

THEREFORE, this Certificate of Approval for the termination of the North Caverns Unit is executed, with seal affixed, this 22nd day of June, 1960.

BY:

COMMISSIONER OF PUBLIC LANDS



In reply refer to:
Unit Division

May 2, 1960

C
O
P
Y

Gulf Oil Corporation
P. O. Box 669
Law Department
Roswell, New Mexico

Re: Proposed North Caverns Unit,
Eddy County, New Mexico

Dear Mr. Kastler:

Please be advised that after consideration by the Unit Division and our attorney Mr. Leonard Levy, we are approving Gulf's North Cavern Unit as to form and context.

We have also received concurrence from Mr. Ed Buck, our geologist.

The Commissioner of Public Lands will issue certificates of approval for the North Caverns Unit Area, Eddy County, New Mexico, upon receiving a copy of the unit agreement as ratified to by the working interest owners, and a copy of the operating agreement; and further a written or oral order of approval from the Oil Conservation Commission, issued on Case No. 1960 to be heard under Examiners Hearing May 11, 1960.

Very truly yours,
MURRAY E. MORGAN
Commissioner of Public Lands

BY:
Ted Bilberry, Supervisor
Oil and Gas Division

MEM/MMR/m

cc: OCC-Santa Fe
USGS-Roswell

April 8, 1960

Case
1960

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

Re: In the Matter of the Application of
Gulf Oil Corporation for the approval
of the Unit Agreement for the develop-
ment and operation of the North Caverns
Unit Area, Eddy County, New Mexico.

Dear Sir:

Gulf Oil Corporation respectfully herein requests the Com-
mission's approval of the North Caverns Unit Agreement, copies of
which are attached hereto, on the grounds that the proposed unit
plan will in principle tend to promote the conservation of oil and
gas and the prevention of waste. In support of its application,
Gulf states as follows:

1. That the Unit Area shall be:

T-22-S, R-24-E, N.M.P.M.

Sec. 26: S/2
27: S/2
34: All
35: All

T-23-S, R-24-E, N.M.P.M.

Sec. 1: W/2
2: All
3: All
10: All
11: All
12: W/2
14: N/2, SW/4, W/2 SE/4
15: All

containing 6,302.63 acres, more or less.

2. That the Unit Area may by the terms and provisions of
the Unit Agreement be enlarged or contracted as pro-
vided but that the administrative approval for any ex-
pansion or contraction of the Unit Area must also be
obtained from the Secretary-Director of the Oil Conser-
vation Commission.
3. That the Unit Operator shall file with the Commission
an executed original or an executed counterpart of the

Secretary-Director
New Mexico Oil Conservation Commission
April 8, 1960
Page 2

North Caverns Unit Agreement within 30 days after the effective date thereof.

4. That any party owning rights in the unitized substances who does not commit such rights to said Unit Agreement before the effective date thereof may thereafter become a party thereto by subscribing to such agreement or counterpart thereof or by ratifying the same. The Unit Operator shall file with the Commission within 30 days an original of any such counterpart or ratification.
5. That the Order of the Commission should become effective upon the approval of said Unit Agreement by the Director of the United States Geological Survey and the Commissioner of Public Lands for the State of New Mexico, and shall terminate ipso facto upon the termination of said Unit Agreement. The last Unit Operator shall immediately notify the Commission in writing of such termination.

The Unit test well is located in the NW/4 of the SW/4 of Section 11-23S-24E. The well is projected to a depth adequate to test the Devonian formation, not to exceed 11,750 feet.

Gulf Oil Corporation has previously obtained a preliminary designation of Unit Area from the Acting Director of the United States Geological Survey, a verifax copy of which is attached hereto.

It is requested that this matter be set for hearing before an examiner at an early date.

Respectfully submitted,

GULF OIL CORPORATION

By William V. Kastler
William V. Kastler

WVK:ejl

Enclosures

April 8, 1960

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

Re: In the Matter of the Application of
Gulf Oil Corporation for the approval
of the Unit Agreement for the develop-
ment and operation of the North Caverns
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Dear Sir:

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2: All
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12: W/2
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pansion or contraction of the Unit Area must also be
obtained from the Secretary-Director of the Oil Conser-
vation Commission.

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Secretary-Director
New Mexico Oil Conservation Commission
April 8, 1960
Page 2

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5. That the Order of the Commission should become effective upon the approval of said Unit Agreement by the Director of the United States Geological Survey and the Commissioner of Public Lands for the State of New Mexico, and shall terminate ipso facto upon the termination of said Unit Agreement. The last Unit Operator shall immediately notify the Commission in writing of such termination.

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It is requested that this matter be set for hearing before an examiner at an early date.

Respectfully submitted,

GULF OIL CORPORATION

By William V. Kastler
William V. Kastler

WVK:ej1

Enclosures

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

May 13, 1960

Mr. Bill Kastler
Gulf Oil Corporation
Box 669
Roswell, New Mexico

Dear Mr. Kastler:

We enclose herewith two copies of Order R-1673
in Case No. 1960 issued today by the Oil Conserva-
tion Commission.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

lr/

Enclosures: (2)

cc: Hobbs
Green

C
O
P
Y

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE No. 1260
Order No. R-1673

THE APPLICATION OF GULF OIL CORPORATION
FOR APPROVAL OF ITS NORTH CAVERNS UNIT
AGREEMENT, WHICH UNIT ENCOMPASSES 6303 ACRES,
MORE OR LESS, LOCATED IN TOWNSHIPS 22 AND
23 SOUTH, RANGE 24 EAST, 18N4M, EDDY COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on
May 11, 1960, at Santa Fe, New Mexico, before Daniel S. Mutter,
Examiner duly appointed by the Oil Conservation Commission of
New Mexico, hereinafter referred to as the "Commission," in
accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 13th day of May, 1960, the Commission, a
quorum being present, having considered the application, the
evidence adduced, and the recommendations of the Examiner,
Daniel S. Mutter, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required
by law, the Commission has jurisdiction of this cause and the
subject matter thereof.
- (2) That the proposed unit plan will in principle tend to
promote the conservation of oil and gas and the prevention of
waste.

IT IS THEREFORE ORDERED:

1. That this order shall be known as the NORTH CAVERNS
UNIT AGREEMENT ORDER.
2. (a) That the project herein referred to shall be known
as the North Caverns Unit Agreement and shall hereinafter be re-
ferred to as the "Project."
- (b) That the Plan by which the project shall be opera-
ted shall be embraced in the form of a unit agreement for the

-2-
CASE No. 1960
Order No. R-1673

development and operation of the North Caverns Unit Area, referred to in the Petitioner's petition and filed with said petition, and such plan shall be known as the North Caverns Unit Agreement Plan.

3. That the North Caverns Unit Agreement Plan shall be, and hereby is, 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, duties or obligations which are now, or may hereafter, be vested in the New Mexico Oil Conservation Commission by law relative to the supervision and control of operations for exploration and development of any lands committed to said North Caverns Unit Agreement, or relative to the production of oil and gas therefrom.

4. (a) That the unit area shall be:

NEW MEXICO PRINCIPAL MERIDIAN

TOWNSHIP 22 SOUTH, RANGE 24 EAST

Section 26: S/2
Section 27: S/2
Section 34: All
Section 35: All

TOWNSHIP 23 SOUTH, RANGE 24 EAST

Section 1: W/2
Section 2: All
Section 3: All
Section 10: All
Section 11: All
Section 12: W/2
Section 14: N/2, SW/4, W/2 SE/4
Section 15: All

containing 6303 acres more or less.

(b) The unit area may be enlarged or contracted as provided in said Plan; provided, however, that administrative approval for expansion or contraction of the unit area must be obtained from the Secretary-Director of the Oil Conservation Commission. The initial participating area for any formation and any revisions thereof shall also be subject to approval by the Oil Conservation Commission.

5. That the unit operator shall file with the Commission an executed original or executed counterpart of the North Caverns Unit Agreement within 30 days after the effective date thereof.

6. That any party owning rights in the unitized substances who does not commit such rights to said unit agreement before the

-3-

CASE No. 1960
Order No. R-1673

effective date thereof may thereafter become a party thereto by subscribing to such agreement or counterpart thereof, or by ratifying the same. The ~~unit operator~~ shall file with the Commission within 30 days an original of any such counterpart or ratification.

7. That this Order shall become effective upon the approval of said unit agreement by the Director of the United States Geological Survey and the Commissioner of Public Lands for the State of New Mexico, and shall terminate ~~upon the termination~~ upon the termination of said unit agreement. The last unit operator shall immediately notify the Commission in writing of such termination.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

JOHN BURROUGHS, Chairman

MURRAY E. MORGAN, Member

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

S E A L

BSF/

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE No. 1960
Order No. R-1673

THE APPLICATION OF GULF OIL CORPORATION
FOR APPROVAL OF ITS NORTH CAVERNS UNIT
AGREEMENT, WHICH UNIT EMBRACES 6303 ACRES,
MORE OR LESS, LOCATED IN TOWNSHIPS 22 AND
23 SOUTH, RANGE 24 EAST, NMPM, EDDY COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on
May 11, 1960, at Santa Fe, New Mexico, before Daniel S. Nutter,
Examiner duly appointed by the Oil Conservation Commission of
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FINDS:

(1) That due public notice having been given as required
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(2) That the proposed unit plan will in principle tend to
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IT IS THEREFORE ORDERED:

1. That this order shall be known as the NORTH CAVERNS
UNIT AGREEMENT ORDER.

2. (a) That the project herein referred to shall be known
as the North Caverns Unit Agreement and shall hereinafter be re-
ferred to as the "Project."

(b) That the Plan by which the project shall be opera-
ted shall be embraced in the form of a unit agreement for the

-2-

CASE No. 1960
Order No. R-1673

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3. That the North Caverns Unit Agreement Plan shall be, and hereby is, 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, duties or obligations which are now, or may hereafter, be vested in the New Mexico Oil Conservation Commission by law relative to the supervision and control of operations for exploration and development of any lands committed to said North Caverns Unit Agreement, or relative to the production of oil and gas therefrom.

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Section 11: All
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containing 6303 acres more or less.

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6. That any party owning rights in the unitized substances who does not commit such rights to said unit agreement before the

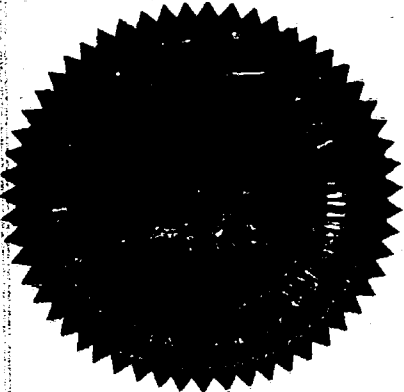
-3-
CASE No. 1960
Order No. R-1673

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7. That this Order shall become effective upon the approval of said unit agreement by the Director of the United States Geological Survey and the Commissioner of Public Lands for the State of New Mexico, and shall terminate ipso facto upon the termination of said unit agreement. The last unit operator shall immediately notify the Commission in writing of such termination.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION



John Burroughs

JOHN BURROUGHS, Chairman

Murray E. Morgan

MURRAY E. MORGAN, Member

A. L. Porter, Jr.

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

DOCKET: EXAMINER HEARING MAY 11, 1960

Oil Conservation Commission - 9 a.m., Mabry Hall, State Capitol, Santa Fe.

The following cases will be heard before Daniel S. Nutter, Examiner, or Oliver E. Payne, Attorney, as alternate examiner:

CASE 1958: Application of Texaco Inc., for approval of an automatic custody transfer system. Applicant, in the above-styled cause, seeks an order authorizing the installation of an automatic custody transfer system to handle the production from the Echol-Devonian Pool from all wells on its State "AR" Lease, consisting of the N/2 SW/4 and Lots 3 and 4 of Section 2, Township 11 South, Range 37 East, Lea County, New Mexico.

CASE 1959: Application of Sinclair Oil & Gas Company for approval of an automatic custody transfer system. Applicant, in the above-styled cause, seeks an order authorizing the installation of an automatic custody transfer system to handle the production from the Empire-Abo Pool from all wells presently completed or hereafter drilled on its M. Yates "B" Lease, consisting of the S/2, NE/4, S/2 NW/4, and NE/4 NW/4 of Section 33, Township 17 South, Range 28 East, Eddy County, New Mexico.

CASE 1960: Application of Gulf Oil Corporation for approval of a unit agreement. Applicant, in the above-styled cause, seeks approval of its North Caverns Unit Agreement, which unit will embrace approximately 6,303 acres of Federal and State land in Townships 22 and 23 South, Range 24 East, Eddy County, New Mexico.

CASE 1961: Application of Gulf Oil Corporation for permission to commingle the production from four separate pools and for approval of an automatic custody transfer system to handle said commingled production. Applicant, in the above-styled cause, seeks permission to commingle the production from the Blinebry, Drinkard, Paddock, and Penrose-Skelly Pools from all wells located on its C. L. Hardy lease comprising the SW/4 of Section 20, Township 21 South, Range 37 East, Lea County, New Mexico, after separately metering only the production from the Blinebry Pool and to allocate the Drinkard Paddock and Penrose-Skelly Pool production without prior metering or measurement but on the basis of monthly individual well tests. Applicant further seeks approval of an automatic custody transfer system to handle the said commingled production from all wells on the said C. L. Hardy lease.

- CASE 1962: Application of McGrath and Smith for a special allowable for one well in the Caprock-Queen Pool, Lea and Chaves Counties, New Mexico. Applicant, in the above-styled cause, seeks a special allowable for one well offsetting a capacity water-flood project in the Caprock-Queen Pool, Lea and Chaves Counties, New Mexico. Said well is the Tidewater-State Well No. 1, located in the NW/4 SE/4 of Section 18, Township 13 South, Range 32 East, Lea County, New Mexico.
- CASE 1963: Application of Aztec Oil & Gas Company for an unorthodox gas well location and for approval of two non-standard units. Applicant, in the above-styled cause, seeks approval of an unorthodox gas well location in the Blanco-Mesaverde Gas Pool for its Richardson Well No. 6, to be located in the SE/4 of Section 22, Township 31 North, Range 12 West, San Juan County, New Mexico. Applicant further seeks establishment of a 297-acre non-standard gas proration unit in the Blanco-Mesaverde Gas Pool and a 297-acre non-standard unit in the Dakota Producing Interval, each consisting of the E/2 of said Section 22 and to be dedicated to the said Richardson Well No. 6.
- CASE 1964: Application of Aztec Oil & Gas Company for an unorthodox gas well location and for approval of two non-standard units. Applicant, in the above-styled cause, seeks approval of an unorthodox gas well location in the Blanco-Mesaverde Gas Pool for its Richardson Well No. 7, to be located in the SE/4 of Section 15, Township 31 North, Range 12 West, San Juan County, New Mexico. Applicant further seeks establishment of a 309.55-acre non-standard gas proration unit in the Blanco-Mesaverde Gas Pool and a 309.55-acre non-standard unit in the Dakota Producing Interval, each consisting of the E/2 of said Section 15, and to be dedicated to said Richardson Well No. 7.
- CASE 1965: Application of Aztec Oil & Gas Company for approval of an unorthodox gas well location. Applicant, in the above-styled cause, seeks approval of an unorthodox location in the Blanco-Mesaverde Gas Pool for its Thompson Well No. 6, to be located in the SE/4 of Section 28, Township 31 North, Range 12 West, San Juan County, New Mexico.
- CASE 1966: Application of Texas National Petroleum Company for an oil-gas dual completion utilizing parallel strings of casing cemented in a common well bore and for an unorthodox gas well location. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of a well to be located at an unorthodox location 660 feet from the North and West

-3-

Docket No. 13-60

CASE 1966:
(Cont.)

lines of Section 1, Township 25 North, Range 9 West, San Juan County, New Mexico, in such a manner as to permit the production of oil from the Gallup formation and the production of gas from the Dakota Producing Interval through 2 7/8-inch casing and through 2-inch tubing set in 4 1/2-inch casing respectively with the casing being cemented in a common well bore.

ig/

off
Rough draft for unit agreement orders.

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

don
IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF THE STATE OF NEW
MEXICO FOR THE PURPOSE OF
CONSIDERING:

off
5/13
CASE NO. 1960
Order No. R-1673

THE APPLICATION OF GULF OIL
CORPORATION
FOR ~~THE~~ APPROVAL OF ITS NORTH
CAVERNS UNIT
AGREEMENT, ~~EMBRACING~~ WHICH UNIT EMBRACES 6303
ACRES, MORE OR LESS, LOCATED IN
TOWNSHIPS 22 AND 23 SOUTH, RANGE
24 EAST, NMPM, EDDY
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock 2 m. on
May 11 1960 at New Mexico, before
Walter

NOW, on this _____ day of _____, 19____,

FINDS:

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

(2) That the proposed unit plan will in principle tend to
promote the conservation of oil and gas and the prevention of waste.

IT IS THEREFORE ORDERED:

1. That this order shall be known as the

NORTH CAVERNS UNIT AGREEMENT ORDER

2. (a) That the project herein referred to shall be known as
the North Caverns Unit Agreement and shall hereinafter
be referred to as the "Project."

(b) That the Plan by which the project shall be operated
shall be embraced in the form of a unit agreement for the development
and operation of the North Caverns Unit Area, referred to in
the Petitioner's petition and filed with said petition, and such plan
shall be known as the North Caverns Unit Agreement Plan.

3. That the North Caverns Unit Agreement Plan
shall be, and hereby is, 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, duties or obligations
which are now, or may hereafter, be vested in the New Mexico Oil Con-
servation Commission by law relative to the supervision and control of

Use letter 'C' for 'Caverns' in all correspondence.

operations for exploration and development of any lands committed to said North Caverns Unit Agreement, or relative to the production of oil and gas therefrom.

Use 3(b) only if
no federal acreage
is included.

(b) That the unit operator periodically shall file with the Commission a Unit Statement of Progress, summarizing operations for the exploration and development of any lands committed to said Unit Agreement. This statement of progress shall be filed within 30 days after the expiration of each six-months during the term of the unit agreement, and shall contain such pertinent data as may be necessary for the Commission to determine the progress being made in the Unit Area.

4. (a) That the unit area shall be:

NEW MEXICO PRINCIPAL MERIDIAN

TOWNSHIP 22 SOUTH, RANGE 24 EAST

Section 26: $\frac{1}{2}$ ✓

Section 27: $\frac{1}{2}$ ✓

Section 34: All ✓

Section 35: All ✓

TOWNSHIP 23 SOUTH, RANGE 24 EAST

Section 1: $\frac{1}{2}$ ✓

Section 2: All ✓

containing 6303 acres more or less.

(b) The unit area may be enlarged or contracted as provided in said Plan. ~~(Unit Agreement does not so provide)~~ provided, however, that administrative approval for expansion or contraction of the unit area must be obtained from the Secretary - Director of the Oil Conservation Commission.

5. That the unit operator shall file with the Commission an executed original or executed counterpart of the North Caverns Unit Agreement within 30 days after the effective date thereof.

6. That any party owning rights in the unitized substances who does not commit such rights to said unit agreement before the effective date thereof may thereafter become a party thereto by subscribing to such agreement or counterpart thereof, or by ratifying the same. The unit operator shall file with the Commission within 30 days an original of any such counterpart or ratification.

7. That this Order shall become effective upon the approval of said unit agreement by the Director of the United States Geological Survey and the Commissioner of Public Lands for the State of New Mexico, and shall terminate ipso facto upon the termination of said unit agreement. The last unit operator shall immediately notify the Commission in writing of such termination.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

, Chairman

, Member

Member & Secretary

SEAL

Section 3: All

Section 10: All

Section 11: All

Section 12: $\frac{1}{2}$

Section 14: $\frac{1}{2}$, SW $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$

Section 15: All

The initial participating area for any unit shall be subject to approval by the Oil Conservation Commission.

CONSENT AND RATIFICATION OF
NORTH CAVERNS UNIT AGREEMENT
EMBRACING LANDS IN EDDY COUNTY, NEW MEXICO

The undersigned (whether one or more) hereby acknowledge receipt of a copy of the Unit Agreement for the development and operation of the North Caverns Unit Area embracing lands in Eddy County, New Mexico, which said Agreement is dated the 14th day of April, 1960, and acknowledge that they have read the same and are familiar with the terms and conditions thereof.

The undersigned also being the owners of overriding royalty or production payment interests in the lands or minerals embraced in said Unit Area, do hereby commit all of their said interests to the North Caverns Unit Agreement and do hereby consent thereto and ratify and agree to be bound by 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.

Callie C. McLean / widow of

M. A. McLean

STATE OF NEW MEXICO

COUNTY OF CHAVES

The foregoing instrument was acknowledged before me this 14th day of April, 1960, by Callie C. McLean, widow of M. A. of Artesia, New Mexico.



Dorothy C. [Signature]
Notary Public

CONSENT AND RATIFICATION OF
NORTH CAVERNS UNIT AGREEMENT
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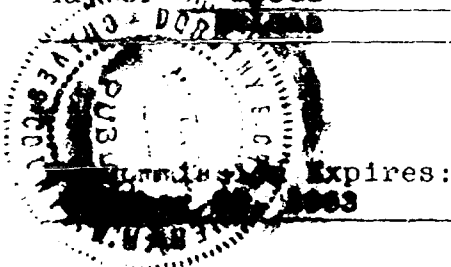
Callie C. McLean Widow of

M. A. McLean

STATE OF NEW MEXICO

COUNTY OF CHAVES

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Donthyl E. Christman
Notary Public

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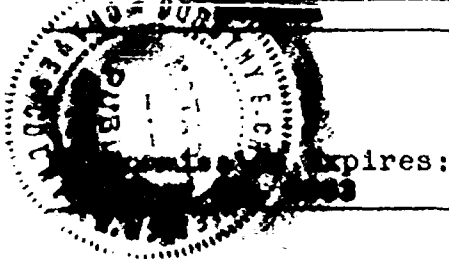
Callie C. McLean Mullen of

M. A. McLean

STATE OF NEW MEXICO

COUNTY OF CHAVES

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Dorethy E. Chremet
Notary Public

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Mrs. W. H. Milner
W. H. Milner

STATE OF NEW MEXICO 1
COUNTY OF CHAVES 1

The foregoing instrument was acknowledged before me this 13th day of APRIL, 1960, by MRS. W. H. MILNER & W. H. MILNER, HER HUSBAND of ROSWELL, NEW MEXICO

Emerson B. Lockman
Notary Public

My Commission Expires: _____



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Mrs. W. H. Milner

W. H. Milner

STATE OF NEW MEXICO I

COUNTY OF CHAVES I

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Notary Public

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W. H. Milner

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COUNTY OF CHAVES I

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Emerson B. Todhunter
Notary Public

My ~~Commission~~ ^{Notary Public} Expires: _____



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N. G. Cummings
Mrs. N. G. Cummings

STATE OF TEXAS
COUNTY OF HARRIS

The foregoing instrument was acknowledged before me this 29 day of April, 1960, by Mr. and Mrs. N. G. Cummings of Houston, Texas

Dorothy W. Hall
Notary Public

My Commission Expires:
June 1, 1961

DOROTHY W. HALL
Notary Public in and for Harris County, Texas
My Commission Expires June 1, 1961

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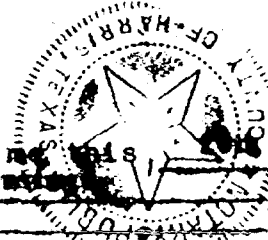
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My Commission Expires June 1, 1961

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Notary Public

My Commission Expires:
June 1, 1961

DOROTHY W. HALL
Notary Public in and for Harris County, Texas
My Commission Expires June 1, 1961

5/11
now dated
10, 5001

UNIT AGREEMENT
FOR THE DEVELOPMENT AND OPERATION OF THE
NORTH CAVERNS UNIT AREA
EDDY COUNTY, NEW MEXICO
NO. _____

Case 1966

THIS AGREEMENT, entered into as of the _____ day of _____, 1960, by and between the parties subscribing, ratifying, or consenting hereto, and herein referred to as the "parties hereto,"

new tentative
approval USGS
USGS may 10
telephoned final
approval
WITNESSETH:

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

WHEREAS the Mineral Leasing Act of February 25, 1920, 41 Stat. 437, as amended, 30 U.S.C. Secs. 181 et seq., authorizes Federal lessees and their representatives to unite with each other, or jointly or separately with others, in collectively adopting and operating a cooperative or unit plan of development or operation of any oil or gas pool, field, or like area, or any part thereof for the purpose of more properly conserving the natural resources thereof whenever determined and certified by the Secretary of the Interior to be necessary or advisable in the public interest; and

WHEREAS, the Commissioner of Public Lands of the State of New Mexico is authorized by an Act of the Legislature (Sec. 7-11-39 N.M. Statutes 1953 Annotated) to consent to or approve this agreement on behalf of the State of New Mexico, insofar as it covers and includes lands and mineral interests of the State of New Mexico; and

WHEREAS, the Oil Conservation Commission of the State of New Mexico is authorized by an act of the Legislature (Chapter 72, Laws of 1935, as amended by Chapter 193, Laws of 1937, Chapter 166, Laws of 1941, and Chapter 168, Laws of 1949) to approve this agreement and the conservation provisions hereof; and

WHEREAS the parties hereto hold sufficient interests in the North Caverns Unit Area covering the land hereinafter described 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. ENABLING ACT AND REGULATIONS. The Mineral Leasing Act of February 25, 1920, as amended, supra, and all valid pertinent regulations, including operating and unit plan regulations, heretofore issued thereunder or valid, pertinent, and reasonable regulations hereafter issued thereunder are accepted and made a part of this agreement as to Federal lands, provided such regulations are not inconsistent with the terms of this agreement; and as to State of New Mexico and privately owned lands, the oil and gas operating regulations in effect as of the effective date hereof governing drilling and producing operations, not inconsistent with the terms hereof or the laws of the State of New Mexico are hereby accepted and made a part of this agreement.

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

T-22-S, R-24-E, N.M.P.M.

Section 26: S/2
27: S/2
34: All
35: All

T-23-S, R-24-E, N.M.P.M.

Section 1: W/2
2: All
3: All
10: All
11: All
12: W/2
14: N/2, SW/4, W/2 SE/4
15: All

Containing 6,302.63 acres, more or less.

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 land 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 in said map or schedule as owned by such party. Exhibits A and B shall be revised by the Unit Operator whenever changes in the unit area render such revision necessary, or when requested by the Oil and Gas Supervisor, hereinafter referred to as "Supervisor", or when requested by the Commissioner of Public Lands of the State of New Mexico, hereinafter referred to as "State Commissioner", and not less than seven copies of the revised exhibits shall be filed with the Supervisor, and one (1) copy thereof shall be filed with the State Commissioner and one (1) copy with the New Mexico Oil Conservation Commission, hereinafter referred to as "State Commission".

The above-described unit area shall when practicable be expanded to include therein any additional tract or tracts regarded as reasonably necessary or advisable for the purposes of this agreement, or shall be contracted to exclude lands not within any participating area whenever such expansion or contraction is necessary or advisable to conform with the purposes of this agreement. Such expansion or contraction shall be effected in the following manner:

(a) Unit Operator, on its own motion or on demand of the Director of the Geological Survey, hereinafter referred to as "Director", or on demand of the State Commissioner, after preliminary concurrence by the Director, shall prepare a notice of proposed expansion or contraction describing the contemplated changes in the boundaries of the unit area, the reasons therefor, and the proposed effective date thereof, preferably the first day of a month subsequent to the date of notice.

(b) Said notice shall be delivered to the Supervisor, the State Commissioner and the State Commission and copies thereof mailed to the last known address of each working interest owner, lessee, and lessor whose interests are affected, advising that 30 days will be allowed for submission to the Unit Operator of any objections.

(c) Upon expiration of the 30-day period provided in the preceding item (b) hereof, Unit Operator shall file with the Supervisor, the

State Commissioner and the State Commission evidence of mailing of the notice of expansion or contraction and a copy of any objections thereto which have been filed with the Unit Operator, together with an application in sufficient number, for approval of such expansion or contraction and with appropriate joinders.

(d) After due consideration of all pertinent information, the expansion or contraction shall, upon approval by the Director, the State Commissioner and the State Commission, become effective as of the date prescribed in the notice thereof.

(e) All legal subdivisions of unitized lands (i.e., 40 acres by Government survey or its nearest lot or tract equivalent in instances of irregular surveys, however, unusually large lots or tracts shall be considered in multiples of 40 acres, or the nearest aliquot equivalent thereof, for the purpose of elimination under this subsection), no parts of which are entitled to be in a participating area within 5 years after the first day of the month following the effective date of the first initial participating area established under the unit agreement, shall be eliminated automatically from this agreement, effective as of the first day thereafter, and such lands shall no longer be a part of the unit area and shall no longer be subject to this agreement, unless at the expiration of said 5-year period diligent drilling operations are in progress on unitized lands not entitled to participation, in which event all such lands shall remain subject hereto for so long as such drilling operations are continued diligently, with not more than 90 days' time elapsing between the completion of one such well and the commencement of the next such well, except that the time allowed between such wells shall not expire earlier than 30 days after the expiration of any period of time during which drilling operations are prevented by a matter beyond the reasonable control of unit operator as set forth in the section hereof entitled "Unavoidable Delay"; provided that all legal subdivisions of lands not in a participating area and not entitled to become participating under the applicable provisions of this agreement within 10 years after said first day of the month following the effective date of said first initial participating area shall be eliminated as above specified. Determination of creditable

"Unavoidable Delay" time shall be made by unit operator and subject to approval of the Director and the State Commissioner. The unit operator shall, within 90 days after the effective date of any elimination hereunder, describe the area so eliminated to the satisfaction of the Director and the State Commissioner and promptly notify all parties in interest.

If conditions warrant extension of the 10-year period specified in this subsection 2(e), a single extension of not to exceed 2 years may be accomplished by consent of the owners of 90% of the current unitized working interests and 60% of the current unitized basic royalty interests (exclusive of the basic royalty interests of the United States), on a total-nonparticipating-acreage basis, respectively, with approval of the Director, and the State Commissioner provided such extension application is submitted to the State Commissioner and the Director not later than 60 days prior to the expiration of said 10-year period.

Any expansion of the unit area pursuant to this section which embraces lands theretofore eliminated pursuant to this subsection 2(e) shall not be considered automatic commitment or recommitment of such lands.

3. UNITIZED LAND AND UNITIZED SUBSTANCES. All land committed to this agreement shall constitute land referred to herein as "unitized land" or "land subject to this agreement". All oil and gas in any and all formations of the unitized land are unitized under the terms of this agreement and herein are called "unitized substances".

4. UNIT OPERATOR. Gulf Oil Corporation is hereby designated as Unit Operator and by signature hereto as Unit Operator commits to this agreement all interests in unitized substances vested in it and agrees and consents 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 interest 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.

5. RESIGNATION OR REMOVAL OF UNIT OPERATOR. Unit Operator shall have the right to resign at any time prior to the establishment of a participating area or areas hereunder, but such resignation shall not become

effective so as to release Unit Operator from the duties and obligations of Unit Operator and terminate Unit Operator's rights as such for a period of 6 months after notice of intention to resign has been served by Unit Operator on all working interest owners and the Director, the State Commissioner and State Commission and until all wells then drilled hereunder are placed in a satisfactory condition for suspension or abandonment which ever is required by the Supervisor as to Federal lands and the State Commission as to State and privately owned lands unless a new Unit Operator shall have been selected and approved and shall have taken over and assumed the duties and obligations of Unit Operator prior to the expiration of said period.

Unit Operator shall have the right to resign in like manner and subject to like limitations, as above provided, at any time a participating area established hereunder is in existence, but, in all instances of resignation or removal, until a successor unit operator is selected and approved as hereinafter provided, the working interest owners shall be jointly responsible for performance of the duties of unit operator, and shall not later than 30 days before such resignation or removal becomes effective appoint a common agent to represent them in any action to be taken hereunder.

The resignation of Unit Operator shall not release Unit Operator from any liability for any default by it hereunder occurring prior to the effective date of its resignation.

The 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 interests 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 Director and the State Commissioner.

The resignation or removal of Unit Operator under this agreement shall not terminate its 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 any wells.

6. SUCCESSOR UNIT OPERATOR. Whenever the Unit Operator shall tender his or its resignation as Unit Operator or shall be removed as hereinabove provided, the owners of the working interests in the participating area or areas according to their respective acreage interests in such participating area or areas, or, until a participating area shall have been established, the owners of the working interests according to their respective acreage interests in all unitized land, shall by majority vote select a successor Unit Operator: Provided, that, if a majority but less than 75 per cent of the working interests qualified to vote are owned by one party to this agreement, a concurring vote of one or more additional working interest owners 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 Director and State Commissioner. If no successor Unit Operator is selected and qualified as herein provided, the Director and State Commissioner at their election may declare this unit agreement terminated.

7. ACCOUNTING PROVISIONS AND UNIT OPERATING AGREEMENT. If the Unit Operator is not the sole owner of working interests, costs and expenses incurred by Unit Operator in conducting unit operations hereunder shall be paid and apportioned among and borne by the owners of working interests, all in accordance with the agreement or agreements entered into by and between the Unit Operator and the owners of working 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 "unit operating agreement". Such unit operating agreement shall also provide the manner in which the working interest owners shall be

diligently until the Devonian formations have been tested or until at a lesser depth unitized substances shall be discovered which can be produced in paying quantities (to-wit: quantities sufficient to repay the costs of drilling, and producing operations, with a reasonable profit) or the Unit Operator shall at any time establish to the satisfaction of the Supervisor if on Federal land, of the State Commissioner if on State land, or of the State Commission if on privately owned land, that further drilling of said well would 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 11,750 feet. Until the discovery of a deposit of unitized substances capable of being produced in paying quantities, the Unit Operator shall continue drilling diligently one well at a time, allowing not more than 6 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 said Supervisor if it be on Federal land or of the State Commissioner if on State land or the State Commission if on privately owned land or until it is reasonably proved that the unitized land is incapable of producing unitized substances in paying quantities in the formations drilled hereunder. Nothing in this section shall be deemed to limit the right of the Unit Operator to resign as provided in Section 5 hereof, or as requiring Unit Operator to commence or continue any drilling during the period pending such resignation becoming effective in order to comply with the requirements of this section. The Director and State Commissioner may modify the drilling requirements of this section by granting reasonable extensions of time when, in their opinion, such action is warranted.

Upon failure to comply with the drilling provisions of this section, the Director and State 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.

10. PLAN OF FURTHER DEVELOPMENT AND OPERATION. Within 6 months after completion of a well capable of producing unitized substances in paying quantities, the Unit Operator shall submit for the approval of the Supervisor and the State Commissioner an acceptable plan of development and operation for the unitized land which, when approved by the Supervisor

and the State Commissioner, shall constitute the further drilling and operating obligations of the Unit Operator under this agreement for the period specified therein. Thereafter, from time to time before the expiration of any existing plan, the Unit Operator shall submit for the approval of the Supervisor and the State Commissioner a plan for an additional specified period for the development and operation of the unitized land. Any plan submitted pursuant to this section shall provide for the exploration of the unitized area and for the diligent drilling necessary for determination of the area or areas thereof capable of producing unitized substances in paying quantities in each and every productive formation and shall be as complete and adequate as the Supervisor and the State Commissioner may determine to be necessary for timely development and proper conservation of the oil and gas resources of the unitized area and shall:

(a) specify the number and locations of any wells to be drilled and the proposed order and time for such drilling; and

(b) to the extent practicable specify the operating practices regarded as necessary and advisable for proper conservation of natural resources. Separate plans may be submitted for separate productive zones, subject to the approval of the Supervisor and the State Commissioner. Said plan or plans shall be modified or supplemented when necessary to meet changed conditions or to protect the interests of all parties to this agreement. Reasonable diligence shall be exercised in complying with the obligations of the approved plan of development. The Supervisor and State Commissioner are authorized to grant a reasonable extension of the 6-month period herein prescribed for submission of an initial plan of development where such action is justified because of unusual conditions or circumstances. After completion hereunder of a well capable of producing any unitized substance in paying quantities, no further wells, except such as may be necessary to afford protection against operations not under this agreement or such as may be specifically approved by the Supervisor and the State Commissioner shall be drilled except in accordance with a plan of development approved as herein provided.

11. PARTICIPATION AFTER DISCOVERY. Upon completion of a well capable of producing unitized substances in paying quantities, the Unit Operator shall, within the month of such completion, if practicable, or as soon thereafter as required by the Supervisor or the State Commissioner submit for approval by the Director and the State Commissioner a schedule, based on subdivisions of the public-land survey or aliquot parts thereof, of all unitized land then regarded as reasonably proved to be productive of unitized substances in paying quantities; all lands in said schedule on approval of the Director and the State Commissioner to constitute a participating area, effective as of the date of completion of such well or the effective date of the unit agreement, whichever is later. Said schedule also shall set forth the percentage of unitized substances to be allocated as herein provided to each unitized tract in the participating area so established, and shall govern the allocation of production from and after the date the participating area becomes effective. A separate participating area shall be established in like manner for each separate pool or deposit of unitized substances or for any group thereof produced as a single pool or zone, and any two or more participating areas so established may be combined into one with the consent of the owners of all working interests in the lands within the participating areas so to be combined, on approval of the Director and the State Commissioner. The participating area or areas so established shall be revised from time to time, subject to like approval, whenever such action appears proper as a result of further drilling operations or otherwise, to include additional land then regarded as reasonably proved to be productive in paying quantities, or to exclude land then regarded as reasonably proved not to be productive in paying quantities and the percentage of allocation shall also be revised accordingly. The effective date of any revision shall be the first of the month in which is obtained the knowledge or information on which such revision is predicated, provided, however, that a more appropriate effective date may be used if justified by the Unit Operator and approved by the Director and the State Commissioner. No land shall be excluded from a participating area on account of depletion of the unitized substances.

It is the intent of this section that a participating area shall represent the area known or reasonably estimated to be productive in paying quantities; but, regardless of any revision of the participating area, nothing herein contained shall be construed as requiring any retroactive adjustment for production obtained prior to the effective date of the revision of the participating area.

In the absence of agreement at any time between the Unit Operator and the Director and the State Commissioner as to the proper definition or redefinition of a participating area, or until a participating area has, or areas have, been established as provided herein, the portion of all payments affected thereby may be impounded in a manner mutually acceptable to the owners of working interests, except royalties due the United States and the State of New Mexico, which shall be determined by the Supervisor for Federal lands and the State Commissioner for State lands and the State Commission as to privately owned lands and the amount thereof deposited, as directed by the Supervisor and the State Commissioner respectively, to be held as unearned money until a participating area is finally approved and then applied as earned or returned in accordance with a determination of the sum due as Federal and State royalty on the basis of such approved participating area.

Whenever it is determined, subject to the approval of the Supervisor, as to wells drilled on Federal land and of the State Commissioner as to wells drilled on State land and the State Commission as to wells on privately owned lands, that a well drilled under this agreement is not capable of production in paying quantities and inclusion of the land on which it is situated in a participating area is unwarranted, production from such well shall, for the purposes of settlement among all parties other than working interest owners, be allocated to the land on which the well is located so long as such land is not within a participating area established for the pool or deposit from which such production is obtained. Settlement for working interest benefits from such a well shall be made as provided in the unit operating agreement.

12. ALLOCATION OF PRODUCTION. All unitized substances produced from each participating area established under this agreement, except any part thereof used in conformity with good operating practices within the

unitized area for drilling, operating, camp and other production or development purposes, for repressuring or recycling in accordance with a plan of development approved by the Supervisor, and State Commissioner and the State Commission, or unavoidably lost, shall be deemed to be produced equally on an acreage basis from the several tracts of unitized land of the participating area established for such production and, for the purpose of determining any benefits accruing under this agreement, each such tract of unitized land shall have allocated to it such percentage of said production as the number of acres of such tract included in said participating area bears to the total acres of unitized land in said participating area, except that allocation of production hereunder for purposes other than for settlement of the royalty, overriding royalty, or payment out of production obligations of the respective working interest owners, shall be on the basis prescribed in the unit operating agreement whether in conformity with the basis of allocation herein set forth or otherwise. It is hereby agreed that production of unitized substances from a participating area shall be allocated as provided herein regardless of whether any wells are drilled on any particular part or tract of said participating area. If any gas produced from one participating area is used for repressuring or recycling purposes in another participating area, the first gas withdrawn from such last-mentioned participating area for sale during the life of this agreement shall be considered to be the gas so transferred until an amount equal to that transferred shall be so produced for sale and such gas shall be allocated to the participating area from which initially produced as constituted at the time of such final production.

13. DEVELOPMENT OR OPERATION OF NON-PARTICIPATING LAND OR FORMATIONS. Any party or parties hereto owning or controlling the working interests in any unitized land having thereon a regular well location may with the approval of the Supervisor as to Federal land, the State Commissioner as to State land, and the State Commission as to privately owned land, and subject to the provisions of the Unit Operating Agreement, at such party's or parties' sole risk, costs, and expense drill a well at such location on such land to test any formation for which a participating area has not been established or to test any formation for which a participating area has been established if such location is not within said

participating area, or drill any well not mutually agreed to by all interested parties, unless within 90 days of receipt of notice from said party of his intention to drill the well the Unit Operator elects and commences to drill such a well in like manner as other wells are drilled by the Unit Operator under this agreement.

If any well drilled as aforesaid by a working interest owner results in production such that the land upon which it is situated may properly be included in a participating area, such participating area shall be established or enlarged as provided in this agreement and the well shall thereafter be operated by the Unit Operator in accordance with the terms of this agreement and the unit operating agreement.

If any well drilled as aforesaid by a working interest owner obtains production in quantities insufficient to justify the inclusion in a participating area of the land upon which such well is situated, such well may be operated and produced by the party drilling the same subject to the conservation requirements of this agreement. The royalties in amount or value of production from any such well shall be paid as specified in the underlying lease and agreements affected.

14. ROYALTY SETTLEMENT. The United States and any State and all royalty owners who, under existing contract, are entitled to take in kind a share of the substances now unitized hereunder produced from any tract, shall hereafter be entitled to the right to take in kind their share of the unitized substances allocated to such tract, and Unit Operator, or in case of the operation of a well by a working interest owner as herein in special cases provided for, such working interest owner, shall make deliveries of such royalty share taken in kind in conformity with the applicable contracts, laws, and regulations. Settlement for royalty interest not taken in kind shall be made by working interest owners responsible therefor under existing contracts, laws and regulations on or before the last day of each month for unitized substances produced during the preceding calendar month; provided, however, that nothing herein contained shall operate to relieve the lessees of any land from their respective lease obligations for the payment of any royalties due under their leases.

If gas obtained from lands not subject to this agreement is introduced into any participating area hereunder, for use in repressuring,

stimulation of production, or increasing ultimate recovery, which shall be in conformity with a plan first approved by the Supervisor, the State Commissioner, and the State Commission, a like amount of gas, after settlement as herein provided for any gas transferred from any other participating area and 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 the plan of operations or as may otherwise be consented to by the Supervisor, the State Commissioner and the State Commission as conforming to good petroleum engineering practice; and provided further, that such right of withdrawal shall terminate on the termination of this unit agreement.

Royalty due the United States shall be computed as provided in the operating regulations and paid in value or delivered in kind as to all unitized substances on the basis of the amounts thereof allocated to unitized Federal land as provided herein at the rates specified in the respective Federal leases, or at such lower rate or rates as may be authorized by law or regulation; provided, that for leases on which the royalty rate depends on the daily average production per well, said average production shall be determined in accordance with the operating regulations as though each participating area were a single consolidated lease.

Royalty due on account of State and privately owned lands shall be computed and paid on the basis of all unitized substances allocated to such lands.

15. RENTAL SETTLEMENT. Rental or minimum royalties due on leases committed hereto shall be paid by working interest owners responsible therefor under existing contracts, laws, and regulations, provided that nothing herein contained shall operate to relieve the lessees of any land from their respective lease obligations for the payment of any rental or minimum royalty in lieu thereof due under their leases. Rental or minimum royalty for lands of the United States subject to this agreement shall be paid at the rate specified in the respective leases from the United States unless such rental or minimum royalty is waived, suspended, or reduced by law or by approval of the Secretary or his duly authorized representative.

Rentals on State of New Mexico lands subject to this agreement shall be paid at the rates specified in the respective leases.

With respect to any lease on non-Federal land containing provisions which would terminate such lease unless drilling operations were within the time therein specified commenced upon the land covered thereby or rentals paid for the privilege of deferring such drilling operations, the rentals required thereby shall, notwithstanding any other provision of this agreement, be deemed to accrue and become payable during the term thereof as extended by this agreement and thereafter until the required drilling operations are commenced upon the land covered thereby or some portion of such land is included within a participating area.

16. 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 or Federal law or regulation.

17. DRAINAGE. The Unit Operator shall take appropriate and adequate measures to prevent drainage of unitized substances from unitized land by wells on land not subject to this agreement, or, with the consent of the Director and the State Commissioner, pursuant to applicable regulations pay a fair and reasonable compensatory royalty.

18. LEASES AND CONTRACTS CONFORMED AND EXTENDED. The terms, conditions, and provisions of all leases, subleases, and other contracts relating to exploration, drilling, development, or operation for oil or gas of lands committed to this agreement are hereby expressly modified and amended to the extent necessary to make the same conform to the provisions hereof, but otherwise to remain in full force and effect; and the parties hereto hereby consent that the Secretary as to Federal leases and the State Commissioner as to State leases shall and each by his approval hereof, or by the approval hereof by his duly authorized representative, does hereby establish, alter, change, or revoke the drilling, producing, rental, minimum royalty, and royalty requirements of Federal and State leases committed hereto and the regulations in respect thereto to conform said requirements to the provisions of this agreement, and, without limiting the generality of the foregoing, all leases, subleases, and contracts are

particularly modified in accordance with the following:

(a) The development and operation of lands subject to this agreement under the terms hereof shall be deemed full performance of all obligations for development and operation with respect to each and every part or separately owned tract subject to this agreement, regardless of whether there is any development of any particular part or tract of the unit area, notwithstanding anything to the contrary in any lease, operating agreement or other contract by and between the parties hereto, or their respective predecessors in interest, or any of them.

(b) Drilling and producing operations performed hereunder upon any tract of unitized lands will be accepted and deemed to be performed upon and for the benefit of each and every tract of unitized land, and no lease shall be deemed to expire by reason of failure to drill or produce wells situated on the land therein embraced.

(c) Suspension of drilling or producing operations on all unitized lands pursuant to direction or consent of the Secretary and the State Commissioner, or their duly authorized representative, shall be deemed to constitute such suspension pursuant to such direction or consent as to each and every tract of unitized land.

(d) Each lease, sublease or contract relating to the exploration, drilling, development or operation for oil or gas of lands, other than those of the United States and State of New Mexico, committed to this agreement, which, by its terms might expire prior to the termination of this agreement, is hereby extended beyond any such term so provided therein so that it shall be continued in full force and effect for and during the term of this agreement.

(e) Any Federal lease for a fixed term of twenty (20) years or any renewal thereof or any part of such lease which is made subject to this agreement shall continue in force beyond the term provided therein until the termination hereof. Any other Federal lease committed hereto shall continue in force beyond the term so provided therein or by law as to the land committed so long as such lease remains subject hereto, provided that production is had in paying

quantities under this unit agreement prior to the expiration date of the term of such lease.

(f) Each sublease or contract relating to the operation and development of unitized substances from lands of the United States committed to this agreement, which by its terms would expire prior to the time at which the underlying lease, as extended by the immediately preceding paragraph, will expire, is hereby extended beyond any such term so provided therein so that it shall be continued in full force and effect for and during the term of the underlying lease as such term is herein extended.

(g) Any lease embracing lands of the State of New Mexico which is made subject to this agreement, shall continue in force beyond the term provided therein as to the lands committed hereto until the termination hereof.

(h) The segregation of any Federal lease committed to this agreement is governed by the following provision in the fourth paragraph of Sec. 17(b) of the Act, as amended by the Act of July 29, 1954 (68 Stat. 583, 585): "Any (Federal) lease hereafter committed to such (unit) plan embracing lands that are in part within and in part outside of the area covered by any such plan shall be segregated into separate leases as to the lands committed and the lands not committed as of the effective date of unitization: Provided, however, that any such lease as to the nonunitized portion shall continue in force and effect for the term thereof but for not less than two years from the date of such segregation and so long thereafter as oil or gas is produced in paying quantities."

(i) 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 the portion not committed, and the terms of such lease shall apply separately to such segregated portions commencing as of the effective date hereof; provided, however, 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 or gas is discovered and is capable of being produced in paying quantities from some part of the lands embraced in such lease 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 in such lease, the same, as to all lands embraced therein, shall remain in full force and effect so long as such operations are being diligently prosecuted, and if 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 or gas in paying quantities is being produced from any portion of said lands.

19. COVENANTS RUN WITH LAND. The covenants herein shall be construed to be covenants running with the land with respect to the interest 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 by the grantee, transferee, or other successor in interest. No assignment or transfer of any working interest, royalty, or other interest subject hereto shall be binding upon Unit Operator until the first day of the calendar month after Unit Operator is furnished with the original, photostatic, or certified copy of the instrument of transfer.

20. EFFECTIVE DATE AND TERM. This agreement shall become effective upon approval by the Director and the State Commissioner or their duly authorized representatives as of the date of approval by the Director and shall terminate five (5) years from said effective date unless:

(a) such date of expiration is extended by the Director and the State Commissioner, or

(b) it is reasonably determined prior to the expiration of the fixed term or any extension thereof that the unitized land is incapable of production of unitized substances in paying quantities in the formations tested hereunder and after notice of intention to

terminate the agreement on such ground is given by the Unit Operator to all parties in interest at their last known addresses, the agreement is terminated with the approval of the Director and State Commissioner, or

(c) a valuable discovery of unitized substances has been made on unitized land during said initial term or any extension thereof, in which event the agreement shall remain in effect for such term and so long as unitized substances can be produced in paying quantities, i.e., in this particular instance in quantities sufficient to pay for the cost of producing same from wells on unitized land within any participating area established hereunder 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 can be produced as aforesaid, or

(d) it is terminated as heretofore provided in this agreement.

This agreement may be terminated at any time by not less than 75 per centum, on an acreage basis, of the owners of working interests signatory hereto, with the approval of the Director and State Commissioner; notice of any such approval to be given by the Unit Operator to all parties hereto.

21. RATE OF PROSPECTING, DEVELOPMENT, AND PRODUCTION. The Director is hereby vested with authority to alter or modify from time to time in his discretion the quantity and rate of production under this agreement when such quantity and rate is not fixed pursuant to Federal or State law or does not conform to any state-wide voluntary conservation or allocation program, which is established, recognized, and generally adhered to by the majority of operators in such State, such authority being hereby limited to alteration or modification in the public interest, the purpose thereof and the public interest to be served thereby to be stated in the order of alteration or modification. Without regard to the foregoing, the Director is also hereby vested with authority to alter or modify from time to time in his discretion the rate of prospecting and development and the quantity and rate of production under this agreement when such alteration or modification is in the interest of attaining the conservation objectives stated in this agreement and is not in violation of any

applicable Federal or State law.

Powers in this section vested in the Director shall only be exercised after notice to Unit Operator and opportunity for hearing to be held not less than 15 days from notice.

22. CONFLICT OF SUPERVISION. Neither the Unit Operator nor the working interest owners nor any of them shall be subject to any forfeiture, termination or expiration of any rights hereunder or under any leases or contracts subject hereto, or to any penalty or liability on account of delay or failure in whole or in part to comply with any applicable provision thereof to the extent that the Unit Operator, working interest owners or any of them are hindered, delayed or prevented from complying therewith by reason of failure of the Unit Operator to obtain in the exercise of due diligence, the concurrence of proper representatives of the United States and proper representatives of the State of New Mexico in and about any matters or thing concerning which it is required herein that such concurrence be obtained. The parties hereto, including the State Commission, agree that all powers and authority vested in the State Commission in and by any provisions of this agreement are vested in the State Commission and shall be exercised by it pursuant to the provisions of the laws of the State of New Mexico and subject in any case to appeal or judicial review as may now or hereafter be provided by the laws of the State of New Mexico.

23. 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 Department of the Interior, the Commissioner of Public Lands of the State of New Mexico and the New Mexico Oil Conservation Commission and to appeal from orders issued under the regulations of said Department, the State Commission or State Commissioner or to apply for relief from any of said regulations or in any proceedings relative to operations before the Department of the Interior, the State Commissioner, or State Commission or any other legally constituted authority; provided, however, that any other interested party shall also have the right at his own expense to be heard in any such proceeding.

24. 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 personally delivered to the party or sent

by postpaid registered or certified 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.

25. NO WAIVER OF CERTAIN RIGHTS. Nothing in this agreement contained shall be construed as a waiver by any party hereto of the right to assert any legal or constitutional right or defense as to the validity or invalidity of any law of the State wherein said unitized lands are located, or of the United States, or regulations issued thereunder in any way affecting such party, or as a waiver by any such party of any right beyond his or its authority to waive.

26. 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, acts of God, Federal, State, or municipal law or agencies, unavoidable accidents, uncontrollable delays in transportation, 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.

27. FAIR EMPLOYMENT. In connection with the performance of work under this agreement, the Unit Operator agrees not to discriminate against any employee or applicant for employment because of race, religion, color, or national origin. The aforesaid provision shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Unit Operator agrees to post hereafter in conspicuous places, available for employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of the non-discrimination clause.

The Unit Operator agrees to insert the foregoing provision in

all sub-contracts hereunder, except sub-contracts for standard commercial supplies or raw materials.

28. LOSS OF TITLE. In the event title to any tract of unitized land shall fail and the true owner cannot be induced to join in this unit agreement, such tract shall be automatically regarded as not committed hereto and there shall be such readjustment of future costs and benefits as may be required on account of the loss of such title. In the event of a dispute as to title as to any royalty, working interest, or other interests subject thereto, payment or delivery on account thereof may be withheld without liability for interest until the dispute is finally settled; provided, that, as to Federal and State land or leases, no payments of funds due the United States or the State of New Mexico should be withheld, but such funds of the United States shall be deposited as directed by the Supervisor and such funds of the State of New Mexico shall be deposited as directed by the State Commissioner to be held as unearned money pending final settlement of the title dispute, and then applied as earned or returned in accordance with such final settlement.

Unit Operator as such is relieved from any responsibility for any defect or failure of any title hereunder.

29. NON-JOINDER AND SUBSEQUENT JOINDER. If the owner of any substantial interest in a tract within the unit area fails or refuses to subscribe or consent to this agreement, the owner of the working interest in that tract may withdraw said tract from this agreement by written notice to the Director, the State Commissioner, and the Unit Operator prior to the approval of this agreement by the Director. Any oil or gas interests in lands within the unit area not committed hereto prior to submission of this agreement for final approval may thereafter be committed hereto by the owner or owners thereof subscribing or consenting to this agreement, and, if the interest is a working interest, by the owner of such interest also subscribing to the unit operating agreement. After operations are commenced hereunder, the subsequent joinder, as provided in this section, by a working interest owner is subject to such requirements or approvals, if any, pertaining to such joinder, as may be provided for in the unit operating agreement. After final approval hereof joinder by a non-working

interest owner must be consented to in writing by the working interest owner committed hereto and responsible for the payment of any benefits that may accrue hereunder in behalf of such non-working interest. Joinder by any owner of a non-working interest, at any time, must be accompanied by appropriate joinder by the owner of the corresponding working interest in order for the interest to be regarded as effectively committed hereto. Joinder to the unit agreement by a working-interest owner, at any time, must be accompanied by appropriate joinder to the unit operating agreement, if more than one committed working-interest owner is involved, in order for the interest to be regarded as effectively committed to this unit agreement. Except as may otherwise herein be provided subsequent joinders to this agreement shall be effective as of the first day of the month following the filing with the Supervisor, the State Commissioner and the State Commission of duly executed counterparts of all or any papers necessary to establish effective commitment of any tract to this agreement unless objection to such joinder is duly made within 60 days by the Director, State Commissioner, or State Commission.

30. 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 parties hereto have caused this agreement to be executed and set opposite their respective names the date of execution.

GULF OIL CORPORATION

ATTEST:

Assistant Secretary

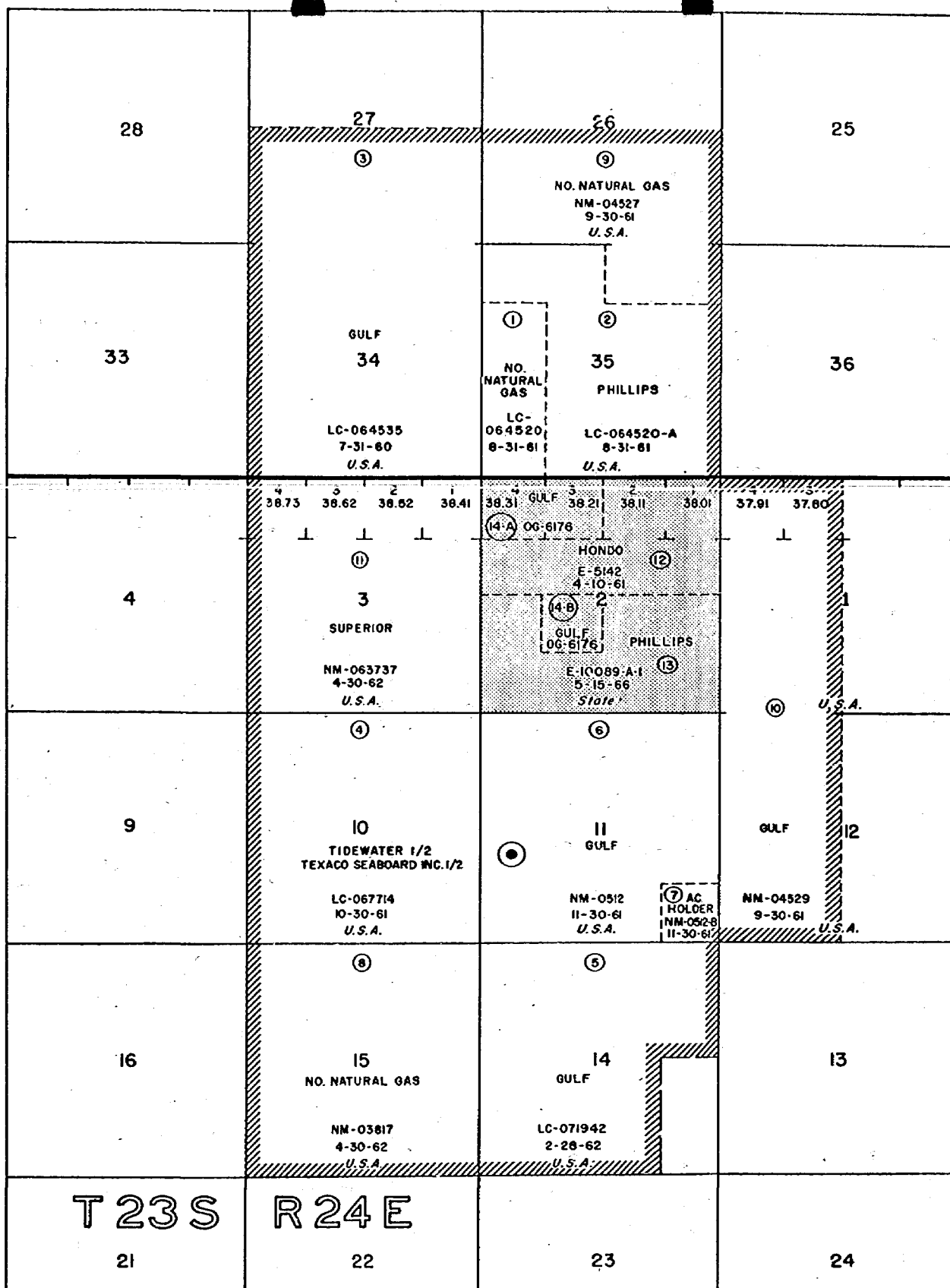
By _____
Attorney-in-Fact

UNIT OPERATOR & WORKING INTEREST OWNER

WORKING INTEREST OWNERS

T
22
S

T
23
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R - 24 - E

LEGEND



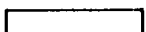
Unit Outline

⑥

Tract Number



Test Well



Federal Land

5,669.99



State of New Mexico Land

632.64

Total

6,302.63

NORTH CAVERNS UNIT AREA
Eddy County, New Mexico

EXHIBIT "A"

EXHIBIT "B"
SCHEDULE SHOWING THE PERCENTAGE AND KIND
OF OWNERSHIP OF ALL LANDS IN THE
NORTH CAVEENS UNIT AREA, EDDY COUNTY, NEW MEXICO

Tract No.	Description of Land	Number of Acres	Serial No. & Expiration Date of Lease	Basic Royalty and Percentage	Lessee of Record	Overriding Royalty or Production Payment and Percentage	Working Interest and Percentage
FEDERAL LANDS							
<u>T-22-S, R-24-E, NMPM</u>							
1	Sec. 35: W/2 SW/4 & SW/4 NW/4	120.00	LC-064520 8-31-61	U.S.A. - 12 1/2%	Northern Natural Gas Producing Company	C. A. Hobbs et ux, Hazel Hobbs (until \$60,000 is paid)	Northern Natural Gas Producing Company - 3% All
2	Sec. 35: N/2 NW/4, SE/4 NW/4, S/2 NE/4 SE/4 & E/2 SW/4	440.00	LC-064520-A 8-31-61	U.S.A. - 12 1/2%	Phillips Petroleum Company	C. A. Hobbs et ux, Hazel Hobbs (until \$132,000 is paid)	Gulf Oil Corporation Phillips Petroleum Company - 2% 50%
3	Sec. 27: S/2 Sec. 34: All	960.00	LC-064535 7-31-60	U.S.A. - 12 1/2%	Gulf Oil Corporation	Calife C. McLean et vir, M. A. McLean (until \$620,000 is paid)	Gulf Oil Corp. - 3% All
<u>T-23-S, R-24-E, NMPM</u>							
4	Sec. 10: All	640.00	LC-067714 10-30-61	U.S.A. - 12 1/2%	Tidewater Oil Co. - 1/2 Texaco Seaboard Inc. - 1/2	John W. Gates et ux, Jane W. Gates (until \$140,000 is paid)	Tidewater Oil Co. - 50% Texaco Seaboard Inc. - 50%
5	Sec. 14: W/2 NE/4 & W/2 SE/4	550.00	LC-071942 2-28-62	U.S.A. - 12 1/2%	Gulf Oil Corporation	Merrill Max Seaton et ux, Winifred T. Seaton (until \$680,000 is paid)	Gulf Oil Corp. - 3% All
6	Sec. 11: N/2, NW/4, N/2 NE/4 & SW/4 NE/4	600.00	NM-0512 11-30-61	U.S.A. - 12 1/2%	Gulf Oil Corporation	Flossie D. Barnes et vir, Arthur J. Barnes (until \$320,000 is paid)	Gulf Oil Corp. - 3% All

Tract No.	Description of Land	Number of Acres	Serial No. & Expiration Date of Lease	Basic Royalty and Percentage	Lessee of Record	Overriding Royalty or Production Payment and Percentage	Working Interest and Percentage
<u>FEDERAL LANDS (Continued)</u>							
<u>T-23-S, R-24-E, NMPM</u>							
7	Sec. 11: SE/4 SE/4	40.00	NM-0512-B 11-30-61	U.S.A. - 12 $\frac{1}{2}$ %	A. C. Holder	Flossie D. Barnes et vir. Arthur J. Barnes (Until \$320,000 is paid) *same reservation as Tract 6	A. C. Holder Gulf Oil Corporation 50%
8	Sec. 15: All	640.00	NM-03817 4-30-62	U.S.A. - 12 $\frac{1}{2}$ %	Northern Natural Gas Producing Company	Peggy P. Jennings et vir Howard W. Jennings	Northern Natural Gas Producing Company All
<u>T-22-S, R-24-E, NMPM</u>							
9	Sec. 26: S/2 Sec. 35: N/2 NE/4	400.00	NM-04527 9-30-61	U.S.A. - 12 $\frac{1}{2}$ %	Northern Natural Gas Producing Company	June C. Deason et vir, T. J. Deason, Jr. (Until \$348,000 is paid)	Northern Natural Gas Producing Company 50% Phillips Petroleum Company 25% Gulf Oil Corporation 25%
<u>T-23-S, R-24-E, NMPM</u>							
10	Sec. 1: Lots 3, 4, S/2 SW/4, Sec. 12: W/2	635.71	NM-04529 9-30-61	U.S.A. - 12 $\frac{1}{2}$ %	Gulf Oil Corporation	Ruth McPherson et vir, Leslie A. McPherson (Until \$1,017,890 is paid)	Gulf Oil Corporation All
11	Sec. 3: All	634.28	NM-063737 4-30-62	U.S.A. - 12 $\frac{1}{2}$ %	The Superior Oil Company	Mrs. W. H. Milner et vir, W. H. Milner (Until \$1,884,130 is paid) Heirs or devisees of Reed Bralnard, deceased & Mary R. Bralnard, a widow	The Superior Oil Co. 50% Gulf Oil Corp. 50%
11 Federal Tracts		5,665.99 or 89.96% of Unit Area					
							N. G. Cummings $\frac{1}{2}$ of 1%

Tract No.	Description of Land	Number of Acres	Serial No. & Expiration Date of Lease	Basic Royalty and Percentage	Lessee of Record	Overriding Royalty or Production Payment and Percentage	Working Interest and Percentage
<u>STATE LANDS</u>							
<u>T-23-S, R-24-E, MMPM</u>							
12	Section 2: NE/4 and S/2 NW/4	236.12	E-5142 4-9-61	State - 12 $\frac{1}{2}$ %	Hondo Oil and Gas Company	None	Hondo Oil and Gas Company All
13	Section 2: SE/4, S/2 SW/4 & NW/4 SW/4	280.00	E-10089-A-1 5-15-66	State - 12 $\frac{1}{2}$ %	Phillips Petroleum Co.	None	Phillips Petroleum Company Gulf Oil Corp. 50%
14-A 14-B	Section 2: Lots 3, 4, NE/4 SW/4	116.52	OG-6176 11-17-59	State - 12 $\frac{1}{2}$ %	Gulf Oil Corporation	None	Gulf Oil Corp. All
3 State Tracts		632.64 or 10.04% of Unit Area					
TOTAL: 14 Tracts		6,302.63 in Entire Unit Area					



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

WASHINGTON 25, D. C.

FEB 16 1960

IN REPLY REFER TO:

3173

Gulf Oil Corporation
P. O. Drawer 669
Roswell, New Mexico

Attention: Mr. W. A. Shellshear



Gentlemen:

Your application of January 22, 1960, filed with the Regional Oil and Gas Supervisor, Roswell, New Mexico requests the designation of 6,302.63 acres, more or less, in Eddy County, New Mexico, as logically subject to exploration and development under the unitization provisions of the Mineral Leasing Act, as amended.

Pursuant to the unit plan regulations of December 22, 1950, (30 CFR 226.3), the land outlined in your plat marked North Caverns Unit Area, Eddy County, New Mexico, is hereby designated as a logical unit area.

Your proposed form of unit agreement, which substantially follows the June 1957 reprint of the standard form and contains modifications required by the State of New Mexico, is acceptable. The description of the unit area in Section 2 of the agreement may be made by reference to official Bureau of Land Management survey, or by reference to Exhibit "A". The proposed initial exploratory well to test formations of Devonian age or to a depth of 11,750 feet, is acceptable.

In the absence of any other type of land requiring special provisions or any other objections not now apparent, a duly executed unit agreement will be approved if submitted in approvable status within a reasonable period of time. When the executed agreement is transmitted to the Supervisor for approval, include the latest status of all acreage showing the current owners of all interests involved. If ownership of any interest in a tract is divided, show in Exhibit "B" the percentage of each such owner. Notice is hereby given that the right is reserved to deny approval of any executed agreement submitted which, in our opinion, does not have the full commitment of sufficient lands to afford effective control of unit operations.

Very truly yours,

Acting Director

UNIT AGREEMENT
FOR THE DEVELOPMENT AND OPERATION OF THE
NORTH CAVERNS UNIT AREA
EDDY COUNTY, NEW MEXICO
NO. _____

Case 1960

THIS AGREEMENT, entered into as of the _____ day of _____, 1960, by and between the parties subscribing, ratifying, or consenting hereto, and herein referred to as the "parties hereto,"

W I T N E S S E T H :

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

WHEREAS the Mineral Leasing Act of February 25, 1920, 41 Stat. 437, as amended, 30 U.S.C. Secs. 181 et seq., authorizes Federal lessees and their representatives to unite with each other, or jointly or separately with others, in collectively adopting and operating a cooperative or unit plan of development or operation of any oil or gas pool, field, or like area, or any part thereof for the purpose of more properly conserving the natural resources thereof whenever determined and certified by the Secretary of the Interior to be necessary or advisable in the public interest; and

WHEREAS, the Commissioner of Public Lands of the State of New Mexico is authorized by an Act of the Legislature (Sec. 7-11-39 N.M. Statutes 1953 Annotated) to consent to or approve this agreement on behalf of the State of New Mexico, insofar as it covers and includes lands and mineral interests of the State of New Mexico; and

WHEREAS, the Oil Conservation Commission of the State of New Mexico is authorized by an act of the Legislature (Chapter 72, Laws of 1935, as amended by Chapter 193, Laws of 1937, Chapter 166, Laws of 1941, and Chapter 168, Laws of 1949) to approve this agreement and the conservation provisions hereof; and

*Robert
M. Hulet
4-28-66*

WHEREAS the parties hereto hold sufficient interests in the North Caverns Unit Area covering the land hereinafter described 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. ENABLING ACT AND REGULATIONS. The Mineral Leasing Act of February 25, 1920, as amended, supra, and all valid pertinent regulations, including operating and unit plan regulations, heretofore issued thereunder or valid, pertinent, and reasonable regulations hereafter issued thereunder are accepted and made a part of this agreement as to Federal lands, provided such regulations are not inconsistent with the terms of this agreement; and as to State of New Mexico and privately owned lands, the oil and gas operating regulations in effect as of the effective date hereof governing drilling and producing operations, not inconsistent with the terms hereof or the laws of the State of New Mexico are hereby accepted and made a part of this agreement.

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

T-22-S, R-24-E, N.M.P.M.

Section 26: S/2
27: S/2
34: All
35: All

T-23-S, R-24-E, N.M.P.M.

Section 1: W/2
2: All
3: All
10: All
11: All
12: W/2
14: N/2, SW/4, W/2 SE/4
15: All

Containing 6,302.63 acres, more or less.

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 land 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 in said map or schedule as owned by such party. Exhibits A and B shall be revised by the Unit Operator whenever changes in the unit area render such revision necessary, or when requested by the Oil and Gas Supervisor, hereinafter referred to as "Supervisor", or when requested by the Commissioner of Public Lands of the State of New Mexico, hereinafter referred to as "State Commissioner", and not less than seven copies of the revised exhibits shall be filed with the Supervisor, and one (1) copy thereof shall be filed with the State Commissioner and one (1) copy with the New Mexico Oil Conservation Commission, hereinafter referred to as "State Commission".

The above-described unit area shall when practicable be expanded to include therein any additional tract or tracts regarded as reasonably necessary or advisable for the purposes of this agreement, or shall be contracted to exclude lands not within any participating area whenever such expansion or contraction is necessary or advisable to conform with the purposes of this agreement. Such expansion or contraction shall be effected in the following manner:

(a) Unit Operator, on its own motion or on demand of the Director of the Geological Survey, hereinafter referred to as "Director", or on demand of the State Commissioner, after preliminary concurrence by the Director, shall prepare a notice of proposed expansion or contraction describing the contemplated changes in the boundaries of the unit area, the reasons therefor, and the proposed effective date thereof, preferably the first day of a month subsequent to the date of notice.

(b) Said notice shall be delivered to the Supervisor, the State Commissioner and the State Commission and copies thereof mailed to the last known address of each working interest owner, lessee, and lessor whose interests are affected, advising that 30 days will be allowed for submission to the Unit Operator of any objections.

(c) Upon expiration of the 30-day period provided in the preceding item (b) hereof, Unit Operator shall file with the Supervisor, the

State Commissioner and the State Commission evidence of mailing of the notice of expansion or contraction and a copy of any objections thereto which have been filed with the Unit Operator, together with an application in sufficient number, for approval of such expansion or contraction and with appropriate joinders.

(d) After due consideration of all pertinent information, the expansion or contraction shall, upon approval by the Director, the State Commissioner and the State Commission, become effective as of the date prescribed in the notice thereof.

(e) All legal subdivisions of unitized lands (i.e., 40 acres by Government survey or its nearest lot or tract equivalent in instances of irregular surveys, however, unusually large lots or tracts shall be considered in multiples of 40 acres, or the nearest aliquot equivalent thereof, for the purpose of elimination under this subsection), no parts of which are entitled to be in a participating area within 5 years after the first day of the month following the effective date of the first initial participating area established under the unit agreement, shall be eliminated automatically from this agreement, effective as of the first day thereafter, and such lands shall no longer be a part of the unit area and shall no longer be subject to this agreement, unless at the expiration of said 5-year period diligent drilling operations are in progress on unitized lands not entitled to participation, in which event all such lands shall remain subject hereto for so long as such drilling operations are continued diligently, with not more than 90 days' time elapsing between the completion of one such well and the commencement of the next such well, except that the time allowed between such wells shall not expire earlier than 30 days after the expiration of any period of time during which drilling operations are prevented by a matter beyond the reasonable control of unit operator as set forth in the section hereof entitled "Unavoidable Delay"; provided that all legal subdivisions of lands not in a participating area and not entitled to become participating under the applicable provisions of this agreement within 10 years after said first day of the month following the effective date of said first initial participating area shall be eliminated as above specified. Determination of creditable

"Unavoidable Delay" time shall be made by unit operator and subject to approval of the Director and the State Commissioner. The unit operator shall, within 90 days after the effective date of any elimination hereunder, describe the area so eliminated to the satisfaction of the Director and the State Commissioner and promptly notify all parties in interest.

If conditions warrant extension of the 10-year period specified in this subsection 2(e), a single extension of not to exceed 2 years may be accomplished by consent of the owners of 90% of the current unitized working interests and 60% of the current unitized basic royalty interests (exclusive of the basic royalty interests of the United States), on a total-nonparticipating-acreage basis, respectively, with approval of the Director, and the State Commissioner provided such extension application is submitted to the State Commissioner and the Director not later than 60 days prior to the expiration of said 10-year period.

Any expansion of the unit area pursuant to this section which embraces lands theretofore eliminated pursuant to this subsection 2(e) shall not be considered automatic commitment or recommitment of such lands.

3. UNITIZED LAND AND UNITIZED SUBSTANCES. All land committed to this agreement shall constitute land referred to herein as "unitized land" or "land subject to this agreement". All oil and gas in any and all formations of the unitized land are unitized under the terms of this agreement and herein are called "unitized substances".

4. UNIT OPERATOR. Gulf Oil Corporation is hereby designated as Unit Operator and by signature hereto as Unit Operator commits to this agreement all interests in unitized substances vested in it and agrees and consents 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 interest 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.

5. RESIGNATION OR REMOVAL OF UNIT OPERATOR. Unit Operator shall have the right to resign at any time prior to the establishment of a participating area or areas hereunder, but such resignation shall not become

effective so as to release Unit Operator from the duties and obligations of Unit Operator and terminate Unit Operator's rights as such for a period of 6 months after notice of intention to resign has been served by Unit Operator on all working interest owners and the Director, the State Commissioner and State Commission and until all wells then drilled hereunder are placed in a satisfactory condition for suspension or abandonment whichever is required by the Supervisor as to Federal lands and the State Commission as to State and privately owned lands unless a new Unit Operator shall have been selected and approved and shall have taken over and assumed the duties and obligations of Unit Operator prior to the expiration of said period.

Unit Operator shall have the right to resign in like manner and subject to like limitations, as above provided, at any time a participating area established hereunder is in existence, but, in all instances of resignation or removal, until a successor unit operator is selected and approved as hereinafter provided, the working interest owners shall be jointly responsible for performance of the duties of unit operator, and shall not later than 30 days before such resignation or removal becomes effective appoint a common agent to represent them in any action to be taken hereunder.

The resignation of Unit Operator shall not release Unit Operator from any liability for any default by it hereunder occurring prior to the effective date of its resignation.

The 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 interests 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 Director and the State Commissioner.

The resignation or removal of Unit Operator under this agreement shall not terminate its 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 any wells.

6. SUCCESSOR UNIT OPERATOR. Whenever the Unit Operator shall tender his or its resignation as Unit Operator or shall be removed as hereinabove provided, the owners of the working interests in the participating area or areas according to their respective acreage interests in such participating area or areas, or, until a participating area shall have been established, the owners of the working interests according to their respective acreage interests in all unitized land, shall by majority vote select a successor Unit Operator: Provided, that, if a majority but less than 75 per cent of the working interests qualified to vote are owned by one party to this agreement, a concurring vote of one or more additional working interest owners 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 Director and State Commissioner. If no successor Unit Operator is selected and qualified as herein provided, the Director and State Commissioner at their election may declare this unit agreement terminated.

7. ACCOUNTING PROVISIONS AND UNIT OPERATING AGREEMENT. If the Unit Operator is not the sole owner of working interests, costs and expenses incurred by Unit Operator in conducting unit operations hereunder shall be paid and apportioned among and borne by the owners of working interests, all in accordance with the agreement or agreements entered into by and between the Unit Operator and the owners of working 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 "unit operating agreement". Such unit operating agreement shall also provide the manner in which the working interest owners shall be

entitled to receive their respective proportionate and allocated share of the benefits accruing hereto in conformity with their underlying operating agreements, leases, or other independent contracts, and such other rights and obligations as between Unit Operator and the working interest owners as may be agreed upon by Unit Operator and the working interest owners; however, no such unit operating 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 inconsistency or conflict between the unit agreement and the unit operating agreement, this unit agreement shall prevail. Three (3) true copies of any unit operating agreement executed pursuant to this section should be filed with the Supervisor and one (1) true copy with the Commissioner, prior to approval of this unit agreement by the Director.

8. 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 unitized 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.

9. DRILLING TO DISCOVERY. Within 6 months after the effective date hereof, the Unit Operator shall begin to drill an adequate test well at a location approved by the Supervisor if on Federal land or by the State Commissioner if on State Land, or by the State Commission if on privately owned land, unless on such effective date a well is being drilled conformably with the terms hereof, and thereafter continue such drilling

diligently until the Devonian formations have been tested or until at a lesser depth unitized substances shall be discovered which can be produced in paying quantities (to-wit: quantities sufficient to repay the costs of drilling, and producing operations, with a reasonable profit) or the Unit Operator shall at any time establish to the satisfaction of the Supervisor if on Federal land, of the State Commissioner if on State land, or of the State Commission if on privately owned land, that further drilling of said well would 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 11,750 feet. Until the discovery of a deposit of unitized substances capable of being produced in paying quantities, the Unit Operator shall continue drilling diligently one well at a time, allowing not more than 6 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 said Supervisor if it be on Federal land or of the State Commissioner if on State land or the State Commission if on privately owned land or until it is reasonably proved that the unitized land is incapable of producing unitized substances in paying quantities in the formations drilled hereunder. Nothing in this section shall be deemed to limit the right of the Unit Operator to resign as provided in Section 5 hereof, or as requiring Unit Operator to commence or continue any drilling during the period pending such resignation becoming effective in order to comply with the requirements of this section. The Director and State Commissioner may modify the drilling requirements of this section by granting reasonable extensions of time when, in their opinion, such action is warranted.

Upon failure to comply with the drilling provisions of this section, the Director and State 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.

10. PLAN OF FURTHER DEVELOPMENT AND OPERATION. Within 6 months after completion of a well capable of producing unitized substances in paying quantities, the Unit Operator shall submit for the approval of the Supervisor and the State Commissioner an acceptable plan of development and operation for the unitized land which, when approved by the Supervisor

and the State Commissioner, shall constitute the further drilling and operating obligations of the Unit Operator under this agreement for the period specified therein. Thereafter, from time to time before the expiration of any existing plan, the Unit Operator shall submit for the approval of the Supervisor and the State Commissioner a plan for an additional specified period for the development and operation of the unitized land. Any plan submitted pursuant to this section shall provide for the exploration of the unitized area and for the diligent drilling necessary for determination of the area or areas thereof capable of producing unitized substances in paying quantities in each and every productive formation and shall be as complete and adequate as the Supervisor and the State Commissioner may determine to be necessary for timely development and proper conservation of the oil and gas resources of the unitized area and shall:

(a) specify the number and locations of any wells to be drilled and the proposed order and time for such drilling; and

(b) to the extent practicable specify the operating practices regarded as necessary and advisable for proper conservation of natural resources. Separate plans may be submitted for separate productive zones, subject to the approval of the Supervisor and the State Commissioner. Said plan or plans shall be modified or supplemented when necessary to meet changed conditions or to protect the interests of all parties to this agreement. Reasonable diligence shall be exercised in complying with the obligations of the approved plan of development. The Supervisor and State Commissioner are authorized to grant a reasonable extension of the 6-month period herein prescribed for submission of an initial plan of development where such action is justified because of unusual conditions or circumstances. After completion hereunder of a well capable of producing any unitized substance in paying quantities, no further wells, except such as may be necessary to afford protection against operations not under this agreement or such as may be specifically approved by the Supervisor and the State Commissioner shall be drilled except in accordance with a plan of development approved as herein provided.

11. PARTICIPATION AFTER DISCOVERY. Upon completion of a well capable of producing unitized substances in paying quantities, the Unit Operator shall, within the month of such completion, if practicable, or as soon thereafter as required by the Supervisor or the State Commissioner submit for approval by the Director and the State Commissioner a schedule, based on subdivisions of the public-land survey or aliquot parts thereof, of all unitized land then regarded as reasonably proved to be productive of unitized substances in paying quantities; all lands in said schedule on approval of the Director and the State Commissioner to constitute a participating area, effective as of the date of completion of such well or the effective date of the unit agreement, whichever is later. Said schedule also shall set forth the percentage of unitized substances to be allocated as herein provided to each unitized tract in the participating area so established, and shall govern the allocation of production from and after the date the participating area becomes effective. A separate participating area shall be established in like manner for each separate pool or deposit of unitized substances or for any group thereof produced as a single pool or zone, and any two or more participating areas so established may be combined into one with the consent of the owners of all working interests in the lands within the participating areas so to be combined, on approval of the Director and the State Commissioner. The participating area or areas so established shall be revised from time to time, subject to like approval, whenever such action appears proper as a result of further drilling operations or otherwise, to include additional land then regarded as reasonably proved to be productive in paying quantities, or to exclude land then regarded as reasonably proved not to be productive in paying quantities and the percentage of allocation shall also be revised accordingly. The effective date of any revision shall be the first of the month in which is obtained the knowledge or information on which such revision is predicated, provided, however, that a more appropriate effective date may be used if justified by the Unit Operator and approved by the Director and the State Commissioner. No land shall be excluded from a participating area on account of depletion of the unitized substances.

It is the intent of this section that a participating area shall represent the area known or reasonably estimated to be productive in paying quantities; but, regardless of any revision of the participating area, nothing herein contained shall be construed as requiring any retroactive adjustment for production obtained prior to the effective date of the revision of the participating area.

In the absence of agreement at any time between the Unit Operator and the Director and the State Commissioner as to the proper definition or redefinition of a participating area, or until a participating area has, or areas have, been established as provided herein, the portion of all payments affected thereby may be impounded in a manner mutually acceptable to the owners of working interests, except royalties due the United States and the State of New Mexico, which shall be determined by the Supervisor for Federal lands and the State Commissioner for State lands and the State Commission as to privately owned lands and the amount thereof deposited, as directed by the Supervisor and the State Commissioner respectively, to be held as unearned money until a participating area is finally approved and then applied as earned or returned in accordance with a determination of the sum due as Federal and State royalty on the basis of such approved participating area.

Whenever it is determined, subject to the approval of the Supervisor, as to wells drilled on Federal land and of the State Commissioner as to wells drilled on State land and the State Commission as to wells on privately owned lands, that a well drilled under this agreement is not capable of production in paying quantities and inclusion of the land on which it is situated in a participating area is unwarranted, production from such well shall, for the purposes of settlement among all parties other than working interest owners, be allocated to the land on which the well is located so long as such land is not within a participating area established for the pool or deposit from which such production is obtained. Settlement for working interest benefits from such a well shall be made as provided in the unit operating agreement.

12. ALLOCATION OF PRODUCTION. All unitized substances produced from each participating area established under this agreement, except any part thereof used in conformity with good operating practices within the

unitized area for drilling, operating, camp and other production or development purposes, for repressuring or recycling in accordance with a plan of development approved by the Supervisor, and State Commissioner and the State Commission, or unavoidably lost, shall be deemed to be produced equally on an acreage basis from the several tracts of unitized land of the participating area established for such production and, for the purpose of determining any benefits accruing under this agreement, each such tract of unitized land shall have allocated to it such percentage of said production as the number of acres of such tract included in said participating area bears to the total acres of unitized land in said participating area, except that allocation of production hereunder for purposes other than for settlement of the royalty, overriding royalty, or payment out of production obligations of the respective working interest owners, shall be on the basis prescribed in the unit operating agreement whether in conformity with the basis of allocation herein set forth or otherwise. It is hereby agreed that production of unitized substances from a participating area shall be allocated as provided herein regardless of whether any wells are drilled on any particular part or tract of said participating area. If any gas produced from one participating area is used for repressuring or recycling purposes in another participating area, the first gas withdrawn from such last-mentioned participating area for sale during the life of this agreement shall be considered to be the gas so transferred until an amount equal to that transferred shall be so produced for sale and such gas shall be allocated to the participating area from which initially produced as constituted at the time of such final production.

13. DEVELOPMENT OR OPERATION OF NON-PARTICIPATING LAND OR FORMATIONS. Any party or parties hereto owning or controlling the working interests in any unitized land having thereon a regular well location may with the approval of the Supervisor as to Federal land, the State Commissioner as to State land, and the State Commission as to privately owned land, and subject to the provisions of the Unit Operating Agreement, at such party's or parties' sole risk, costs, and expense drill a well at such location on such land to test any formation for which a participating area has not been established or to test any formation for which a participating area has been established if such location is not within said

participating area, or drill any well not mutually agreed to by all interested parties, unless within 90 days of receipt of notice from said party of his intention to drill the well the Unit Operator elects and commences to drill such a well in like manner as other wells are drilled by the Unit Operator under this agreement.

If any well drilled as aforesaid by a working interest owner results in production such that the land upon which it is situated may properly be included in a participating area, such participating area shall be established or enlarged as provided in this agreement and the well shall thereafter be operated by the Unit Operator in accordance with the terms of this agreement and the unit operating agreement.

If any well drilled as aforesaid by a working interest owner obtains production in quantities insufficient to justify the inclusion in a participating area of the land upon which such well is situated, such well may be operated and produced by the party drilling the same subject to the conservation requirements of this agreement. The royalties in amount or value of production from any such well shall be paid as specified in the underlying lease and agreements affected.

14. ROYALTY SETTLEMENT. The United States and any State and all royalty owners who, under existing contract, are entitled to take in kind a share of the substances now unitized hereunder produced from any tract, shall hereafter be entitled to the right to take in kind their share of the unitized substances allocated to such tract, and Unit Operator, or in case of the operation of a well by a working interest owner as herein in special cases provided for, such working interest owner, shall make deliveries of such royalty share taken in kind in conformity with the applicable contracts, laws, and regulations. Settlement for royalty interest not taken in kind shall be made by working interest owners responsible therefor under existing contracts, laws and regulations on or before the last day of each month for unitized substances produced during the preceding calendar month; provided, however, that nothing herein contained shall operate to relieve the lessees of any land from their respective lease obligations for the payment of any royalties due under their leases.

If gas obtained from lands not subject to this agreement is introduced into any participating area hereunder, for use in repressuring,

stimulation of production, or increasing ultimate recovery, which shall be in conformity with a plan first approved by the Supervisor, the State Commissioner, and the State Commission, a like amount of gas, after settlement as herein provided for any gas transferred from any other participating area and 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 the plan of operations or as may otherwise be consented to by the Supervisor, the State Commissioner and the State Commission as conforming to good petroleum engineering practice; and provided further, that such right of withdrawal shall terminate on the termination of this unit agreement.

Royalty due the United States shall be computed as provided in the operating regulations and paid in value or delivered in kind as to all unitized substances on the basis of the amounts thereof allocated to unitized Federal land as provided herein at the rates specified in the respective Federal leases, or at such lower rate or rates as may be authorized by law or regulation; provided, that for leases on which the royalty rate depends on the daily average production per well, said average production shall be determined in accordance with the operating regulations as though each participating area were a single consolidated lease.

Royalty due on account of State and privately owned lands shall be computed and paid on the basis of all unitized substances allocated to such lands.

15. RENTAL SETTLEMENT. Rental or minimum royalties due on leases committed hereto shall be paid by working interest owners responsible therefor under existing contracts, laws, and regulations, provided that nothing herein contained shall operate to relieve the lessees of any land from their respective lease obligations for the payment of any rental or minimum royalty in lieu thereof due under their leases. Rental or minimum royalty for lands of the United States subject to this agreement shall be paid at the rate specified in the respective leases from the United States unless such rental or minimum royalty is waived, suspended, or reduced by law or by approval of the Secretary or his duly authorized representative.

Rentals on State of New Mexico lands subject to this agreement shall be paid at the rates specified in the respective leases.

With respect to any lease on non-Federal land containing provisions which would terminate such lease unless drilling operations were within the time therein specified commenced upon the land covered thereby or rentals paid for the privilege of deferring such drilling operations, the rentals required thereby shall, notwithstanding any other provision of this agreement, be deemed to accrue and become payable during the term thereof as extended by this agreement and thereafter until the required drilling operations are commenced upon the land covered thereby or some portion of such land is included within a participating area.

16. 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 or Federal law or regulation.

17. DRAINAGE. The Unit Operator shall take appropriate and adequate measures to prevent drainage of unitized substances from unitized land by wells on land not subject to this agreement, or, with the consent of the Director and the State Commissioner, pursuant to applicable regulations pay a fair and reasonable compensatory royalty.

18. LEASES AND CONTRACTS CONFORMED AND EXTENDED. The terms, conditions, and provisions of all leases, subleases, and other contracts relating to exploration, drilling, development, or operation for oil or gas of lands committed to this agreement are hereby expressly modified and amended to the extent necessary to make the same conform to the provisions hereof, but otherwise to remain in full force and effect; and the parties hereto hereby consent that the Secretary as to Federal leases and the State Commissioner as to State leases shall and each by his approval hereof, or by the approval hereof by his duly authorized representative, does hereby establish, alter, change, or revoke the drilling, producing, rental, minimum royalty, and royalty requirements of Federal and State leases committed hereto and the regulations in respect thereto to conform said requirements to the provisions of this agreement, and, without limiting the generality of the foregoing, all leases, subleases, and contracts are

particularly modified in accordance with the following:

(a) The development and operation of lands subject to this agreement under the terms hereof shall be deemed full performance of all obligations for development and operation with respect to each and every part or separately owned tract subject to this agreement, regardless of whether there is any development of any particular part or tract of the unit area, notwithstanding anything to the contrary in any lease, operating agreement or other contract by and between the parties hereto, or their respective predecessors in interest, or any of them.

(b) Drilling and producing operations performed hereunder upon any tract of unitized lands will be accepted and deemed to be performed upon and for the benefit of each and every tract of unitized land, and no lease shall be deemed to expire by reason of failure to drill or produce wells situated on the land therein embraced.

(c) Suspension of drilling or producing operations on all unitized lands pursuant to direction or consent of the Secretary and the State Commissioner, or their duly authorized representative, shall be deemed to constitute such suspension pursuant to such direction or consent as to each and every tract of unitized land.

(d) Each lease, sublease or contract relating to the exploration, drilling, development or operation for oil or gas of lands, other than those of the United States and State of New Mexico, committed to this agreement, which, by its terms might expire prior to the termination of this agreement, is hereby extended beyond any such term so provided therein so that it shall be continued in full force and effect for and during the term of this agreement.

(e) Any Federal lease for a fixed term of twenty (20) years or any renewal thereof or any part of such lease which is made subject to this agreement shall continue in force beyond the term provided therein until the termination hereof. Any other Federal lease committed hereto shall continue in force beyond the term so provided therein or by law as to the land committed so long as such lease remains subject hereto, provided that production is had in paying

quantities under this unit agreement prior to the expiration date of the term of such lease.

(f) Each sublease or contract relating to the operation and development of unitized substances from lands of the United States committed to this agreement, which by its terms would expire prior to the time at which the underlying lease, as extended by the immediately preceding paragraph, will expire, is hereby extended beyond any such term so provided therein so that it shall be continued in full force and effect for and during the term of the underlying lease as such term is herein extended.

(g) Any lease embracing lands of the State of New Mexico which is made subject to this agreement, shall continue in force beyond the term provided therein as to the lands committed hereto until the termination hereof.

(h) The segregation of any Federal lease committed to this agreement is governed by the following provision in the fourth paragraph of Sec. 17(b) of the Act, as amended by the Act of July 29, 1954 (68 Stat. 583, 585): "Any (Federal) lease hereafter committed to such (unit) plan embracing lands that are in part within and in part outside of the area covered by any such plan shall be segregated into separate leases as to the lands committed and the lands not committed as of the effective date of unitization: Provided, however, that any such lease as to the nonunitized portion shall continue in force and effect for the term thereof but for not less than two years from the date of such segregation and so long thereafter as oil or gas is produced in paying quantities."

(i) 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 the portion not committed, and the terms of such lease shall apply separately to such segregated portions commencing as of the effective date hereof; provided, however, 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 or gas is discovered and is capable of being produced in paying quantities from some part of the lands embraced in such lease 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 in such lease, the same, as to all lands embraced therein, shall remain in full force and effect so long as such operations are being diligently prosecuted, and if 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 or gas in paying quantities is being produced from any portion of said lands.

19. COVENANTS RUN WITH LAND. The covenants herein shall be construed to be covenants running with the land with respect to the interest 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 by the grantee, transferee, or other successor in interest. No assignment or transfer of any working interest, royalty, or other interest subject hereto shall be binding upon Unit Operator until the first day of the calendar month after Unit Operator is furnished with the original, photostatic, or certified copy of the instrument of transfer.

20. EFFECTIVE DATE AND TERM. This agreement shall become effective upon approval by the Director and the State Commissioner or their duly authorized representatives as of the date of approval by the Director and shall terminate five (5) years from said effective date unless:

(a) such date of expiration is extended by the Director and the State Commissioner, or

(b) it is reasonably determined prior to the expiration of the fixed term or any extension thereof that the unitized land is incapable of production of unitized substances in paying quantities in the formations tested hereunder and after notice of intention to

terminate the agreement on such ground is given by the Unit Operator to all parties in interest at their last known addresses, the agreement is terminated with the approval of the Director and State Commissioner, or

(c) a valuable discovery of unitized substances has been made on unitized land during said initial term or any extension thereof, in which event the agreement shall remain in effect for such term and so long as unitized substances can be produced in paying quantities, i.e., in this particular instance in quantities sufficient to pay for the cost of producing same from wells on unitized land within any participating area established hereunder 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 can be produced as aforesaid, or

(d) it is terminated as heretofore provided in this agreement.

This agreement may be terminated at any time by not less than 75 per centum, on an acreage basis, of the owners of working interests signatory hereto, with the approval of the Director and State Commissioner; notice of any such approval to be given by the Unit Operator to all parties hereto.

21. RATE OF PROSPECTING, DEVELOPMENT, AND PRODUCTION. The Director is hereby vested with authority to alter or modify from time to time in his discretion the quantity and rate of production under this agreement when such quantity and rate is not fixed pursuant to Federal or State law or does not conform to any state-wide voluntary conservation or allocation program, which is established, recognized, and generally adhered to by the majority of operators in such State, such authority being hereby limited to alteration or modification in the public interest, the purpose thereof and the public interest to be served thereby to be stated in the order of alteration or modification. Without regard to the foregoing, the Director is also hereby vested with authority to alter or modify from time to time in his discretion the rate of prospecting and development and the quantity and rate of production under this agreement when such alteration or modification is in the interest of attaining the conservation objectives stated in this agreement and is not in violation of any

applicable Federal or State law.

Powers in this section vested in the Director shall only be exercised after notice to Unit Operator and opportunity for hearing to be held not less than 15 days from notice.

22. CONFLICT OF SUPERVISION. Neither the Unit Operator nor the working interest owners nor any of them shall be subject to any forfeiture, termination or expiration of any rights hereunder or under any leases or contracts subject hereto, or to any penalty or liability on account of delay or failure in whole or in part to comply with any applicable provision thereof to the extent that the Unit Operator, working interest owners or any of them are hindered, delayed or prevented from complying therewith by reason of failure of the Unit Operator to obtain in the exercise of due diligence, the concurrence of proper representatives of the United States and proper representatives of the State of New Mexico in and about any matters or thing concerning which it is required herein that such concurrence be obtained. The parties hereto, including the State Commission, agree that all powers and authority vested in the State Commission in and by any provisions of this agreement are vested in the State Commission and shall be exercised by it pursuant to the provisions of the laws of the State of New Mexico and subject in any case to appeal or judicial review as may now or hereafter be provided by the laws of the State of New Mexico.

23. 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 Department of the Interior, the Commissioner of Public Lands of the State of New Mexico and the New Mexico Oil Conservation Commission and to appeal from orders issued under the regulations of said Department, the State Commission or State Commissioner or to apply for relief from any of said regulations or in any proceedings relative to operations before the Department of the Interior, the State Commissioner, or State Commission or any other legally constituted authority; provided, however, that any other interested party shall also have the right at his own expense to be heard in any such proceeding.

24. 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 personally delivered to the party or sent

by postpaid registered or certified 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.

25. NO WAIVER OF CERTAIN RIGHTS. Nothing in this agreement contained shall be construed as a waiver by any party hereto of the right to assert any legal or constitutional right or defense as to the validity or invalidity of any law of the State wherein said unitized lands are located, or of the United States, or regulations issued thereunder in any way affecting such party, or as a waiver by any such party of any right beyond his or its authority to waive.

26. 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, acts of God, Federal, State, or municipal law or agencies, unavoidable accidents, uncontrollable delays in transportation, 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.

27. FAIR EMPLOYMENT. In connection with the performance of work under this agreement, the Unit Operator agrees not to discriminate against any employee or applicant for employment because of race, religion, color, or national origin. The aforesaid provision shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Unit Operator agrees to post hereafter in conspicuous places, available for employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of the non-discrimination clause.

The Unit Operator agrees to insert the foregoing provision in

all sub-contracts hereunder, except sub-contracts for standard commercial supplies or raw materials.

28. LOSS OF TITLE. In the event title to any tract of unitized land shall fail and the true owner cannot be induced to join in this unit agreement, such tract shall be automatically regarded as not committed hereto and there shall be such readjustment of future costs and benefits as may be required on account of the loss of such title. In the event of a dispute as to title as to any royalty, working interest, or other interests subject thereto, payment or delivery on account thereof may be withheld without liability for interest until the dispute is finally settled; provided, that, as to Federal and State land or leases, no payments of funds due the United States or the State of New Mexico should be withheld, but such funds of the United States shall be deposited as directed by the Supervisor and such funds of the State of New Mexico shall be deposited as directed by the State Commissioner to be held as unearned money pending final settlement of the title dispute, and then applied as earned or returned in accordance with such final settlement.

Unit Operator as such is relieved from any responsibility for any defect or failure of any title hereunder.

29. NON-JOINDER AND SUBSEQUENT JOINDER. If the owner of any substantial interest in a tract within the unit area fails or refuses to subscribe or consent to this agreement, the owner of the working interest in that tract may withdraw said tract from this agreement by written notice to the Director, the State Commissioner, and the Unit Operator prior to the approval of this agreement by the Director. Any oil or gas interests in lands within the unit area not committed hereto prior to submission of this agreement for final approval may thereafter be committed hereto by the owner or owners thereof subscribing or consenting to this agreement, and, if the interest is a working interest, by the owner of such interest also subscribing to the unit operating agreement. After operations are commenced hereunder, the subsequent joinder, as provided in this section, by a working interest owner is subject to such requirements or approvals, if any, pertaining to such joinder, as may be provided for in the unit operating agreement. After final approval hereof joinder by a non-working

interest owner must be consented to in writing by the working interest owner committed hereto and responsible for the payment of any benefits that may accrue hereunder in behalf of such non-working interest. Joinder by any owner of a non-working interest, at any time, must be accompanied by appropriate joinder by the owner of the corresponding working interest in order for the interest to be regarded as effectively committed hereto. Joinder to the unit agreement by a working-interest owner, at any time, must be accompanied by appropriate joinder to the unit operating agreement, if more than one committed working-interest owner is involved, in order for the interest to be regarded as effectively committed to this unit agreement. Except as may otherwise herein be provided subsequent joinders to this agreement shall be effective as of the first day of the month following the filing with the Supervisor, the State Commissioner and the State Commission of duly executed counterparts of all or any papers necessary to establish effective commitment of any tract to this agreement unless objection to such joinder is duly made within 60 days by the Director, State Commissioner, or State Commission.

30. 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 parties hereto have caused this agreement to be executed and set opposite their respective names the date of execution.

GULF OIL CORPORATION

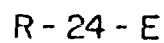
ATTEST:

Assistant Secretary

By _____
Attorney-in-Fact

UNIT OPERATOR & WORKING INTEREST OWNER

WORKING INTEREST OWNERS



////

⑥

①

██████████

Total

6,302.63

EXHIBIT "A"

EXHIBIT "B"
SCHEDULE SHOWING THE PERCENTAGE AND KIND
OF OWNERSHIP OF ALL LANDS IN THE
NORTH CAVERNS UNIT AREA, EDDY COUNTY, NEW MEXICO

Tract No.	Description of Land	Number of Acres	Serial No. & Expiration Date of Lease	Basic Royalty and Percentage	Lessee of Record	Overriding Royalty or Production Payment and Percentage	Working Interest and Percentage
FEDERAL LANDS							
<u>T-22-S, R-24-E, NMPM</u>							
1	Sec. 35: W/2 SW/4 & SW/4 NW/4	120.00	LC-064520 8-31-61	U.S.A. - 12½%	Northern Natural Gas Producing Company	C. A. Hobbs et ux, Hazel Hobbs (until \$60,000 is paid)	Northern Natural Gas Producing Company - All
2	Sec. 35: N/2 NW/4, SE/4 NW/4, S/2 NE/4 SE/4 & E/2 SW/4	440.00	LC-064520-A 8-31-61	U.S.A. - 12½%	Phillips Petroleum Company	C. A. Hobbs et ux, Hazel Hobbs (until \$132,000 is paid)	Gulf Oil Corporation Phillips Petroleum Company - 50%
3	Sec. 27: S/2 Sec. 34: All	950.00	LC-064535 7-31-60	U.S.A. - 12½%	Gulf Oil Corporation	Callie C. McLean et vir, M. A. McLean (until \$620,000 is paid)	Gulf Oil Corp. - All
<u>T-23-S, R-24-E, NMPM</u>							
4	Sec. 10: All	640.00	LC-067714 10-30-61	U.S.A. - 12½%	Tidewater Oil Co. - 1/2 Texaco Seaboard Inc. - 1/2	John W. Gates et ux, Jane M. Gates (until \$440,000 is paid)	Tidewater Oil Co. - 50% Texaco Seaboard Inc. - 50%
5	Sec. 14: W/2 NE/4 & W/2 SE/4	560.00	LC-071942 2-28-62	U.S.A. - 12½%	Gulf Oil Corporation	Merrill Max Seaton et ux, Winifred T. Seaton (until \$680,000 is paid)	Gulf Oil Corp. - All
6	Sec. 11: N/2, NW/4, N/2 NE/4 & SW/4 NE/4	600.00	NM-0512 11-30-61	U.S.A. - 12½%	Gulf Oil Corporation	Flossie D. Barnes et vir, Arthur J. Barnes (until \$320,000 is paid)	Gulf Oil Corp. - All

Tract No.	Description of Land	Number of Acres	Serial No. & Expiration Date of Lease	Basic Royalty and Percentage	Lessee of Record	Overriding Royalty or Production Payment and Percentage	Working Interest and Percentage
<u>FEDERAL LANDS (Continued)</u>							
<u>T-23-S, R-24-E, NMPM</u>							
7	Sec. 11: SE/4 SE/4	40.00	NM-0512-B 11-30-61	U.S.A. - 12 $\frac{1}{2}$ %	A. C. Holder	Flossie D. Barnes et vir. Arthur J. Barnes (Until \$320,000 is paid) *same reservation as Tract 6	A. C. Holder Gulf Oil Corporation 50%
8	Sec. 15: All	640.00	NM-03817 4-30-62	U.S.A. - 12 $\frac{1}{2}$ %	Northern Natural Gas Producing Company	Peggy P. Jennings et vir Howard W. Jennings	Northern Natural Gas Producing Company All
<u>T-22-S, R-24-E, NMPM</u>							
9	Sec. 26: S/2 Sec. 35: N/2 NE/4	400.00	NM-04527 9-30-61	U.S.A. - 12 $\frac{1}{2}$ %	Northern Natural Gas Producing Company	June C. Deason et vir, T. J. Deason, Jr. (Until \$348,000 is paid)	Northern Natural Gas Producing Company 50% Phillips Petroleum Company 25% Gulf Oil Corporation 25%
<u>T-23-S, R-24-E, NMPM</u>							
10	Sec. 1: Lots 3, 4, S/2 SW/4, Sec. 12: W/2	635.71	NM-04529 9-30-61	U.S.A. - 12 $\frac{1}{2}$ %	Gulf Oil Corporation	Ruth McPherson et vir, Leslie A. McPherson (Until \$1,017,890 is paid)	Gulf Oil Corporation All
11	Sec. 3: All	634.28	NM-063737 4-30-62	U.S.A. - 12 $\frac{1}{2}$ %	The Superior Oil Company	Mrs. W. H. Milner et vir, W. H. Milner (Until \$1,884,130 is paid) Heirs or devisees of Reed Brainerd, deceased & Mary R. Brainerd, a widow N. G. Cummings $\frac{1}{2}$ of 1%	The Superior Oil Co. 50% Gulf Oil Corp. 50%
11 Federal Tracts		5,669.59 or 89.96% of Unit Area					

Tract No.	Description of Land	Number of Acres	Serial No. & Expiration Date of Lease	Basic Royalty and Percentage	Lessee of Record	Overriding Royalty or Production Payment and Percentage	Working Interest and Percentage
<u>STATE LANDS</u>							
<u>T-23-S, R-24-E, NMPM</u>							
12	Section 2: NE/4 and S/2 NW/4	236.12	E-5142 4-9-61	State - 12 $\frac{1}{2}$ %	Hondo Oil and Gas Company	None	Hondo Oil and Gas Company All
13	Section 2: SE/4, S/2 SW/4 & NW/4 SW/4	280.00	E-10089-A-1 5-15-66	State - 12 $\frac{1}{2}$ %	Phillips Petroleum Co.	None	Phillips Petroleum Company Gulf Oil Corp. 50%
14-A 14-B	Section 2: Lots 3, 4, NE/4 SW/4	116.52	OG-6176 11-17-59	State - 12 $\frac{1}{2}$ %	Gulf Oil Corporation	None	Gulf Oil Corp. All
3 State Tracts		632.64 or 10.04% of Unit Area					
TOTAL: 14 Tracts		6,302.63 in Entire Unit Area					

Case 1960

GULF OIL CORPORATION

LAW DEPARTMENT

DAVID T. SEARLS
GENERAL COUNSEL
PITTSBURGH, PA.
DAVID W. STEPHENS
DIVISIONAL ATTORNEY
FORT WORTH, TEXAS
WILLIAM V. KASTLER

ROSWELL, NEW MEXICO

ADDRESS ALL CORRESPONDENCE IN CARE OF
P. O. BOX 669, LAW DEPARTMENT

April 8, 1960

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

Re: In the Matter of the Application of
Gulf Oil Corporation for the approval
of the Unit Agreement for the develop-
ment and operation of the North Caverns
Unit Area, Eddy County, New Mexico.

Dear Sir:

Gulf Oil Corporation respectfully herein requests the Com-
mission's approval of the North Caverns Unit Agreement, copies of
which are attached hereto, on the grounds that the proposed unit
plan will in principle tend to promote the conservation of oil and
gas and the prevention of waste. In support of its application,
Gulf states as follows:

1. That the Unit Area shall be:

T-22-S, R-24-E, N.M.P.M.

Sec. 26: S/2
27: S/2
34: All
35: All

T-23-S, R-24-E, N.M.P.M.

Sec. 1: W/2
2: All
3: All
10: All
11: All
12: W/2
14: N/2, SW/4, W/2 SE/4
15: All

6,303

containing 6,302.63 acres, more or less.

2. That the Unit Area may by the terms and provisions of
the Unit Agreement be enlarged or contracted as pro-
vided but that the administrative approval for any ex-
pansion or contraction of the Unit Area must also be
obtained from the Secretary-Director of the Oil Conser-
vation Commission.
3. That the Unit Operator shall file with the Commission
an executed original or an executed counterpart of the

Handwritten:
4-28-60
Filed

Secretary-Director
New Mexico Oil Conservation Commission
April 8, 1960
Page 2

North Caverns Unit Agreement within 30 days after the effective date thereof.

4. That any party owning rights in the unitized substances who does not commit such rights to said Unit Agreement before the effective date thereof may thereafter become a party thereto by subscribing to such agreement or counterpart thereof or by ratifying the same. The Unit Operator shall file with the Commission within 30 days an original of any such counterpart or ratification.
5. That the Order of the Commission should become effective upon the approval of said Unit Agreement by the Director of the United States Geological Survey and the Commissioner of Public Lands for the State of New Mexico, and shall terminate ipso facto upon the termination of said Unit Agreement. The last Unit Operator shall immediately notify the Commission in writing of such termination.

The Unit test well is located in the NW/4 of the SW/4 of Section 11-23S-24E. The well is projected to a depth adequate to test the Devonian formation, not to exceed 11,750 feet.

Gulf Oil Corporation has previously obtained a preliminary designation of Unit Area from the Acting Director of the United States Geological Survey, a verifax copy of which is attached hereto.

It is requested that this matter be set for hearing before an examiner at an early date.

Respectfully submitted,

GULF OIL CORPORATION

By


William V. Kastler

WVK:ejl

Enclosures



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

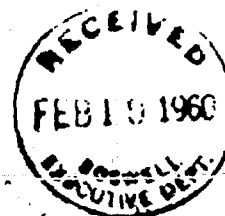
WASHINGTON 25, D.C.

FEB 16 1960

IN REPLY REFER TO:

3473

Gulf Oil Corporation
P. O. Drawer 669
Roswell, New Mexico



Attention: Mr. W. A. Shellishear

Gentlemen:

Your application of January 22, 1960, filed with the Regional Oil and Gas Supervisor, Roswell, New Mexico requests the designation of 6,302.63 acres, more or less, in Eddy County, New Mexico, as logically subject to exploration and development under the unitization provisions of the Mineral Leasing Act, as amended.

Pursuant to the unit plan regulations of December 22, 1950, (30 CFR 226.3), the land outlined in your plat marked North Caverns Unit Area, Eddy County, New Mexico, is hereby designated as a logical unit area.

Your proposed form of unit agreement, which substantially follows the June 1957 reprint of the standard form and contains modifications required by the State of New Mexico, is acceptable. The description of the unit area in Section 2 of the agreement may be made by reference to official Bureau of Land Management survey, or by reference to Exhibit "A". The proposed initial exploratory well to test formations of Devonian age or to a depth of 11,750 feet, is acceptable.

In the absence of any other type of land requiring special provisions or any other objections not now apparent, a duly executed unit agreement will be approved if submitted in approvable status within a reasonable period of time. When the executed agreement is transmitted to the Supervisor for approval, include the latest status of all acreage showing the current owners of all interests involved. If ownership of any interest in a tract is divided, show in Exhibit "B" the percentage of each such owner. Notice is hereby given that the right is reserved to deny approval of any executed agreement submitted which, in our opinion, does not have the full commitment of sufficient lands to afford effective control of unit operations.

Very truly yours,

Acting Director



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

FEB 1 1960

Gulf Oil Corporation
P. O. Drawer 669
Roswell, New Mexico

Attention: Mr. W. A. Shellshear



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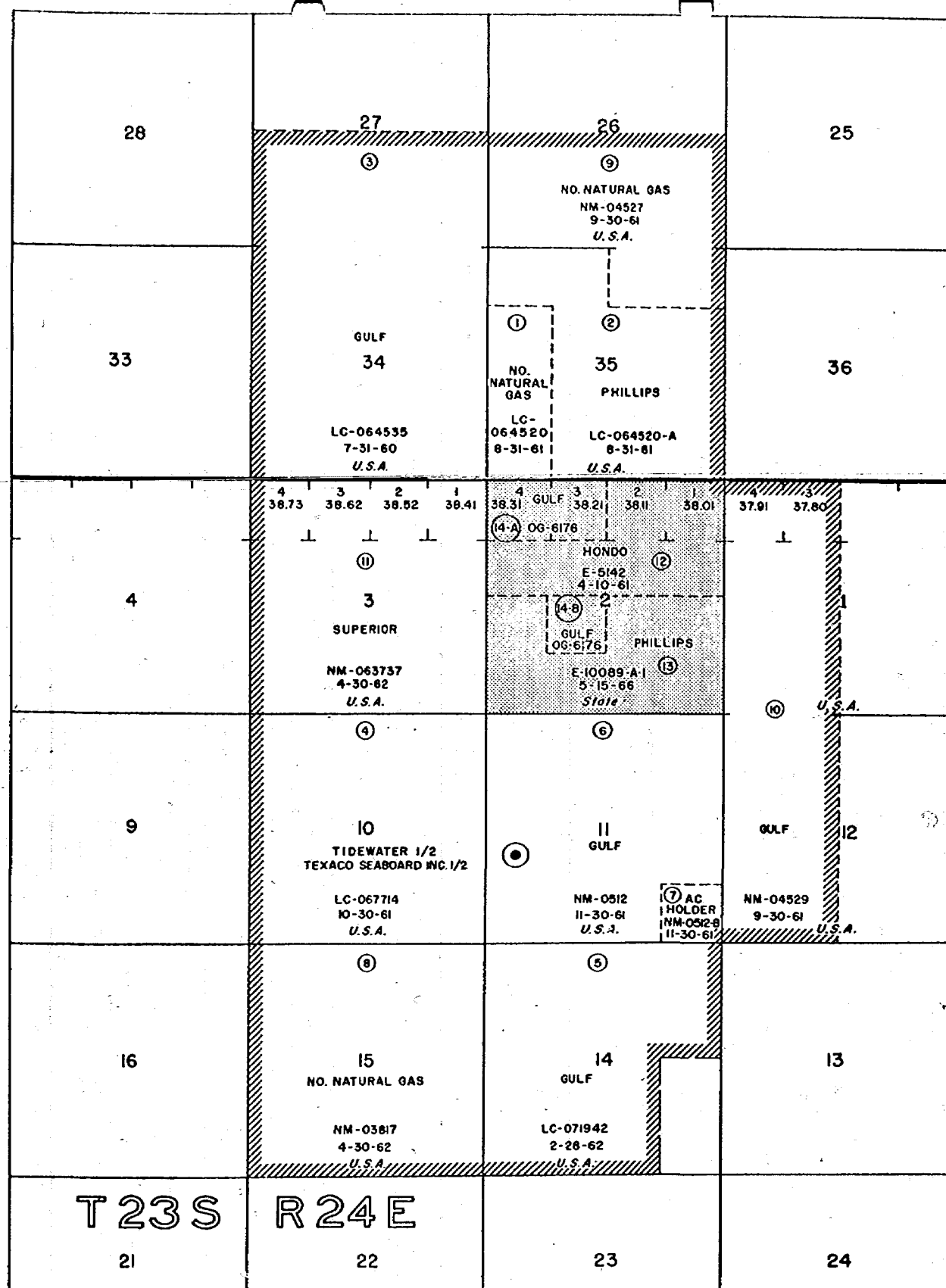
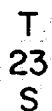
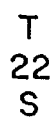
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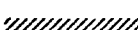


Very truly yours,

Acting Director



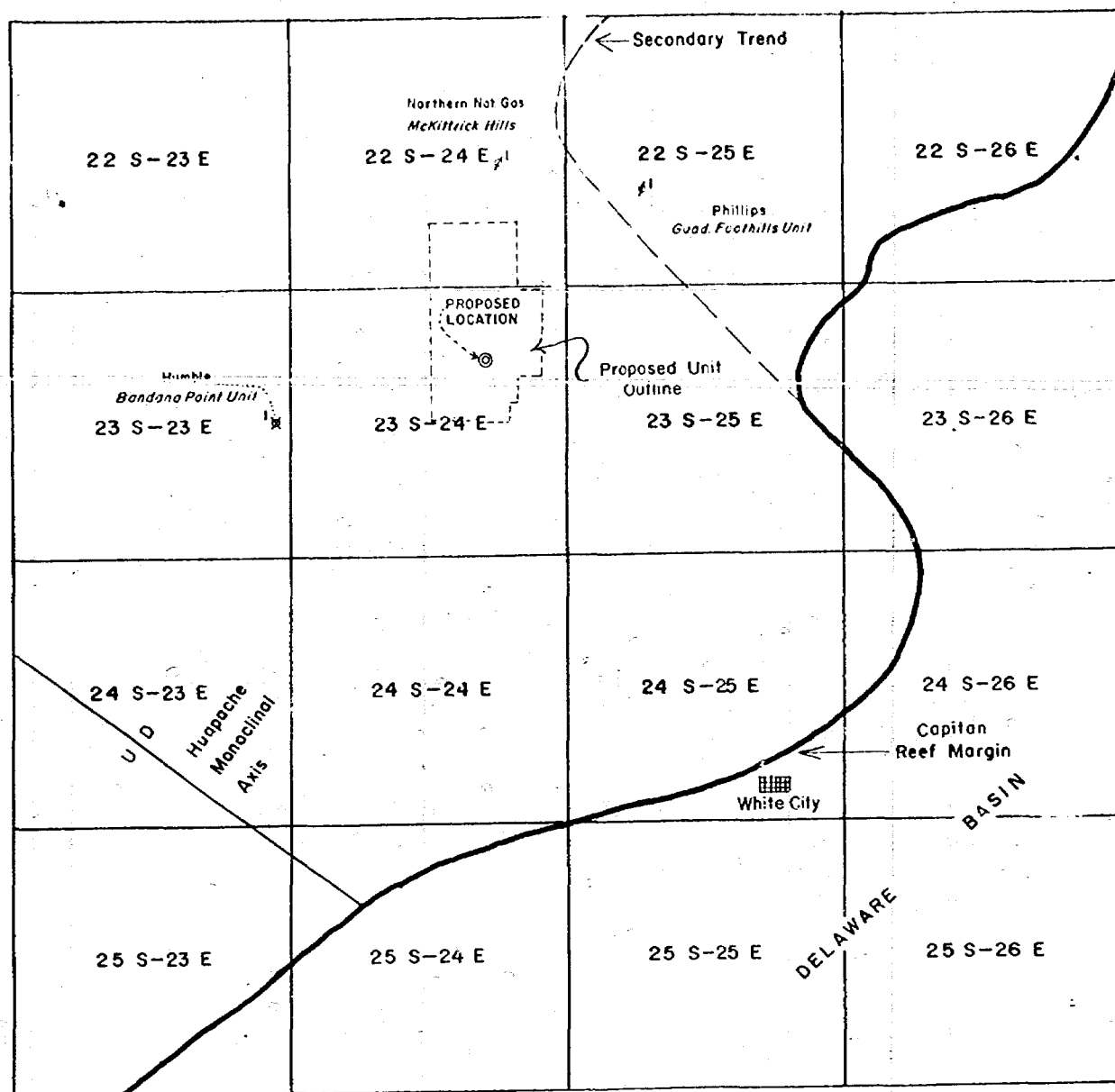
R - 24 - E

LEGÉND

	Unit Outline	
⑥	Tract Number	App. 1960
●	Test Well	
	Federal Land	5,669.99
	State of New Mexico Land	632.64
	Total	6,302.63

NORTH CAVERNS UNIT AREA
Eddy County, New Mexico

EXHIBIT "A"

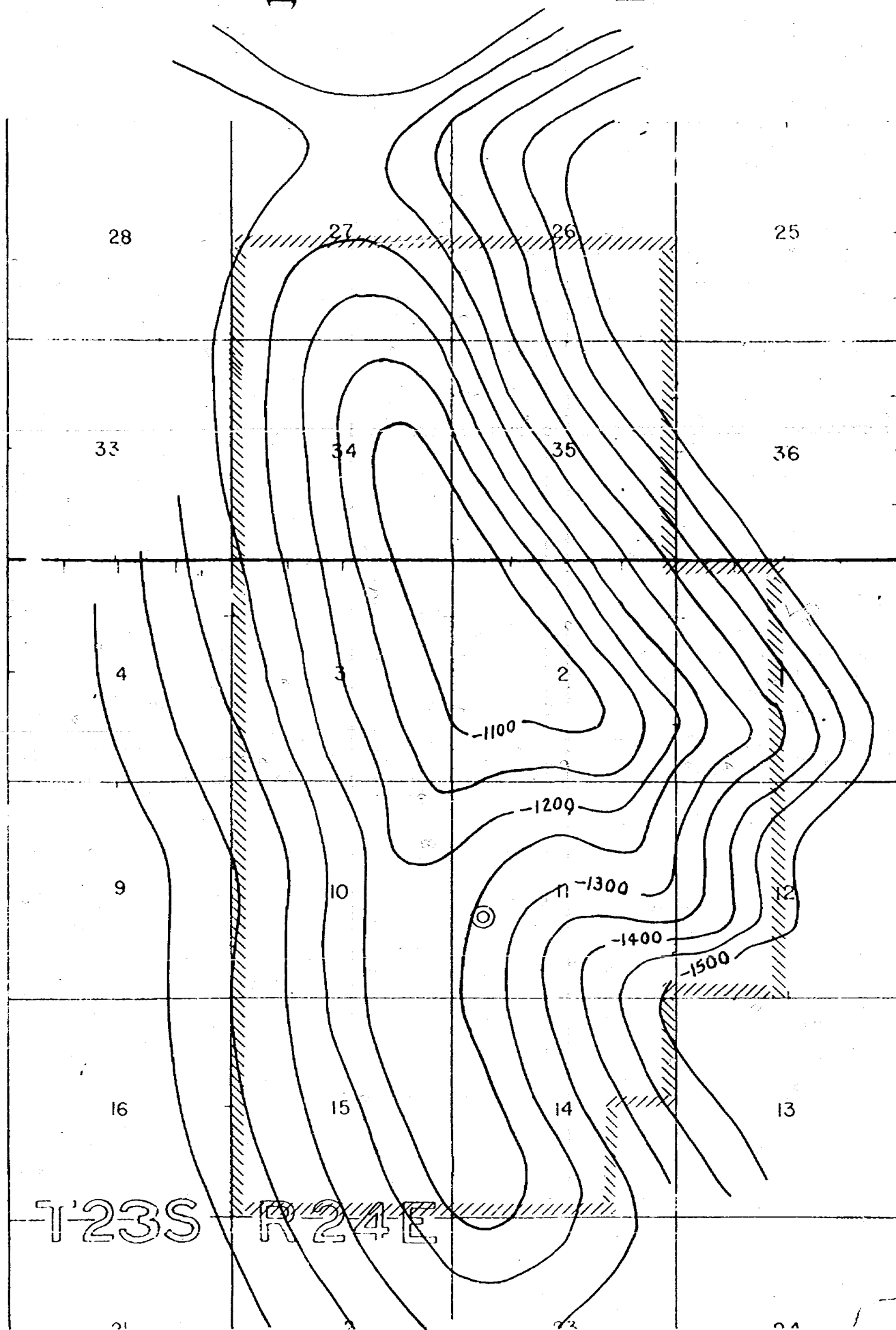


NORTH CAVERNS UNIT
 Eddy County, New Mexico, Township 23 South, Range 24 East
 Proposed 11,750' Test

Regional Plat
 January 21, 1960

EXHIBIT "A"

BEFORE EXAMINER NUTTER	
OIL CONSERVATION COMMISSION	
EXHIBIT NO.	_____
CASE NO.	_____



NORTH CAVERNS PROSPECT
 Township 23 South, Range 24 East
 Eddy County, New Mexico
 Proposed 11,750' Test

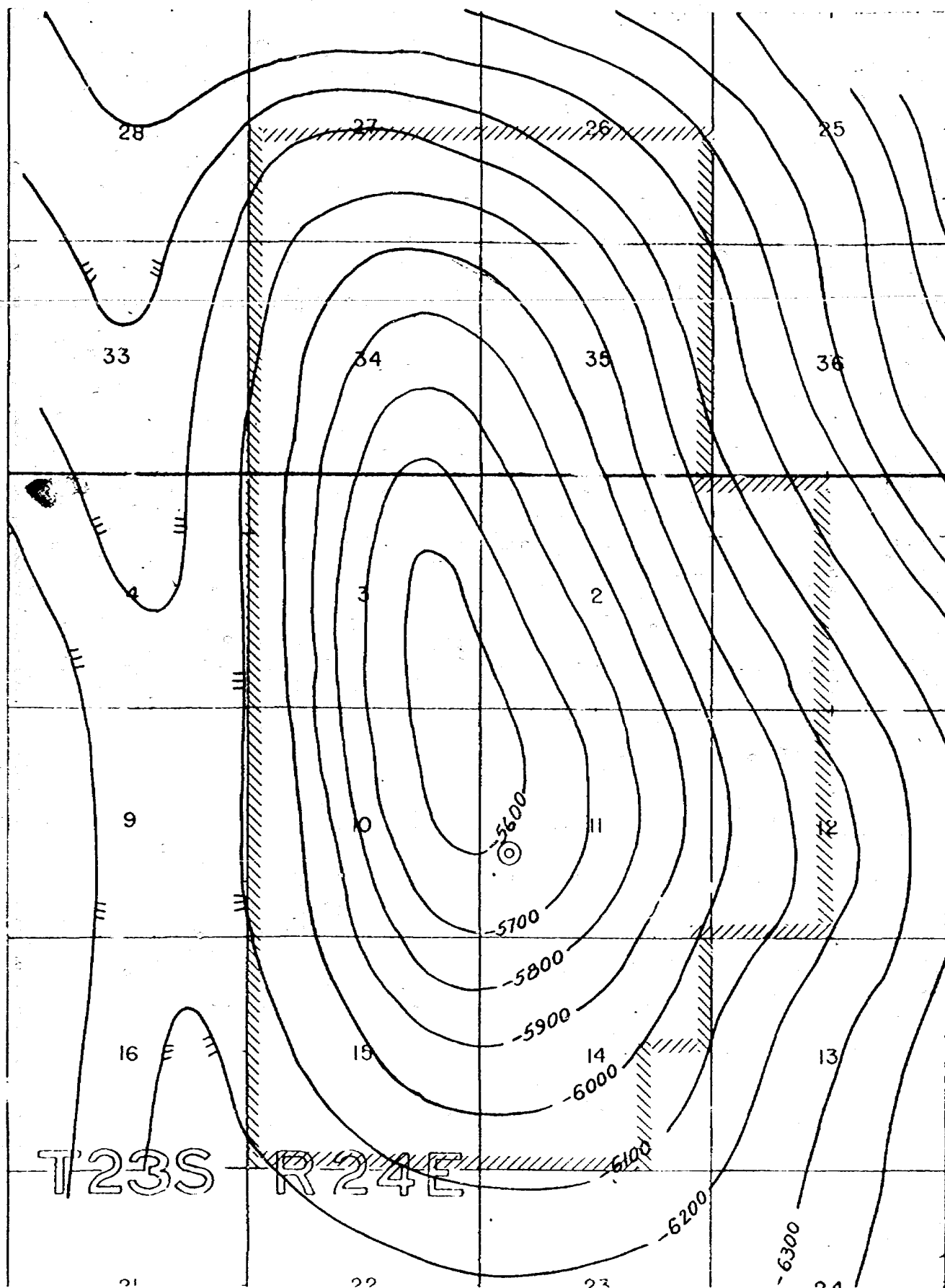
Bone Spring Horizon
 Roswell District Progress Map No. 1
 Carlsbad Project

APPROVED FOR THE
 COMMISSION
 1960
 3

C. I. - 50'

10-7-59

EXHIBIT "C"



NORTH CAVERNS PROSPECT
 Township 23 South, Range 24 East
 Eddy County, New Mexico
 Proposed 11,750' Test

Approximate Devonian Horizon
 Roswell District Progress
 Map

Carlsbad Project

BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSION

App. EXHIBIT NO. 4
 1960

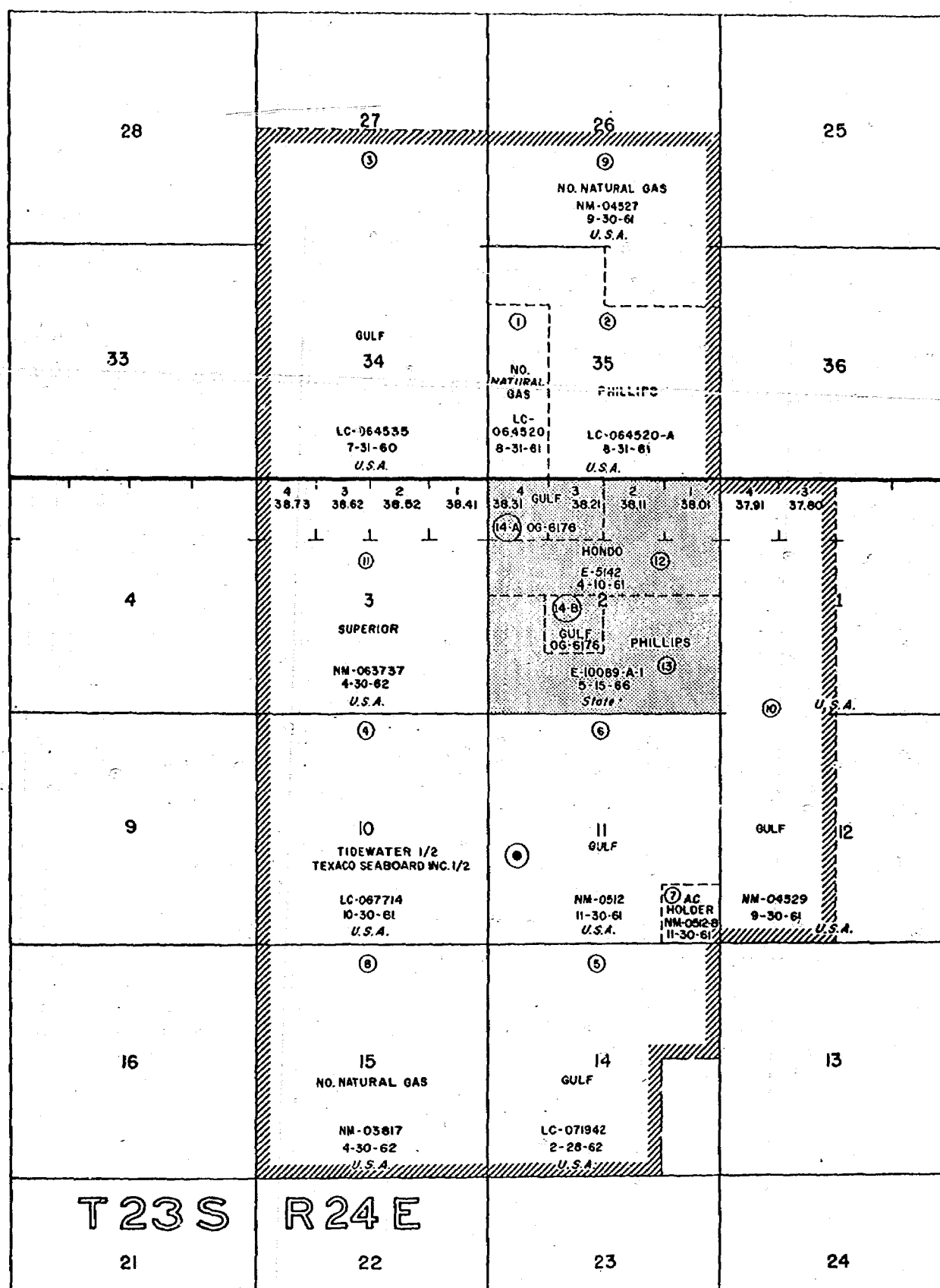
C. I. - 100'

9-22-59

EXHIBIT "D"

T
22
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T
23
S



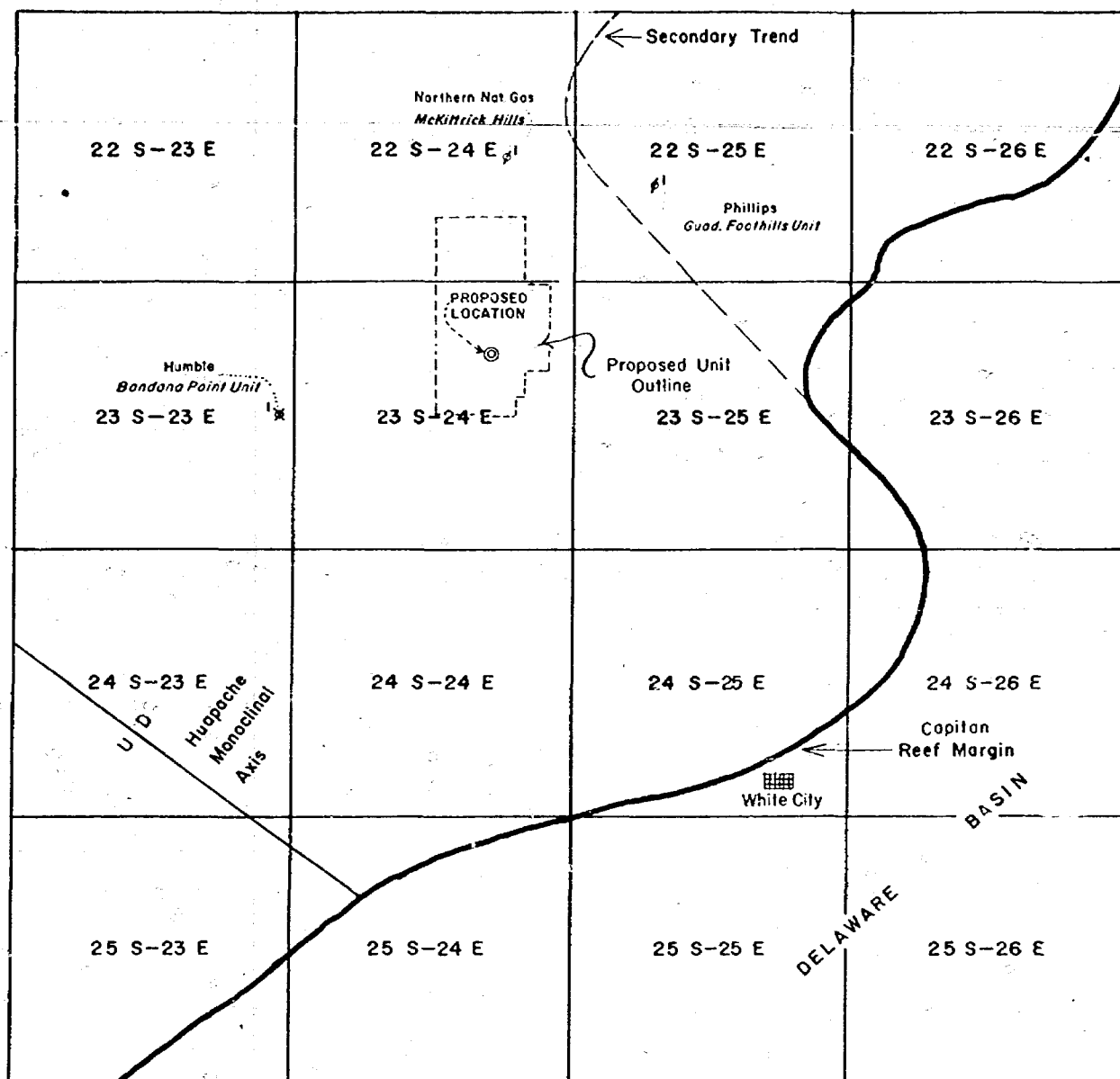
R - 24 - E

LEGEND

	Unit Outline	
	Tract Number	
	Test Well	
	Federal Land	5,669.99
	State of New Mexico Land	632.64
	Total	6,302.63

NORTH CAVERNS UNIT AREA
Eddy County, New Mexico

EXHIBIT "A"



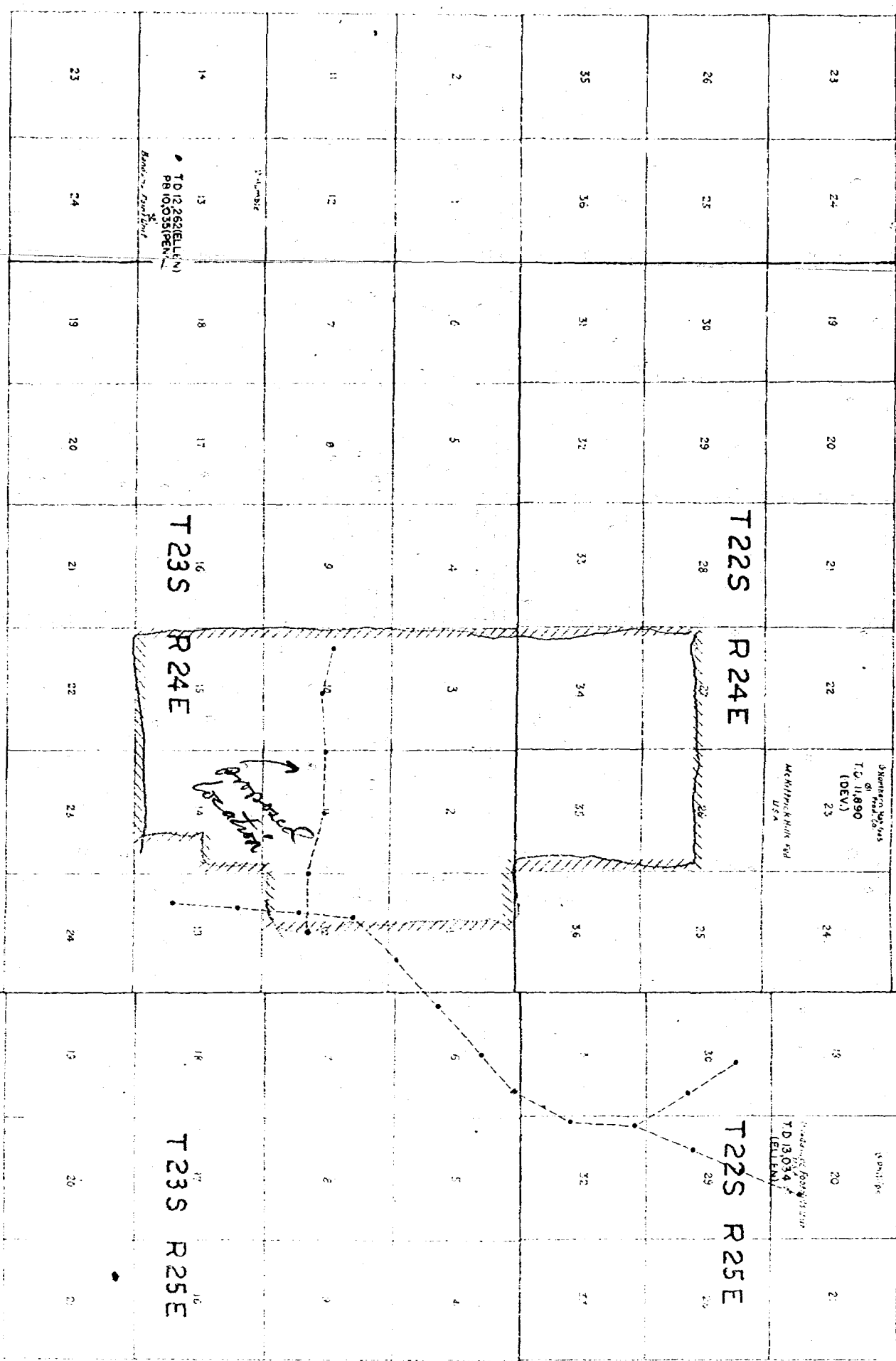
NORTH CAVERNS UNIT
 Eddy County, New Mexico, Township 23 South, Range 24 East
 Proposed 11,750' Test

Cave 1960
 Ex 1

Regional Plat
 January 21, 1960

EXHIBIT "A"

Clear 1960
 Ex 2

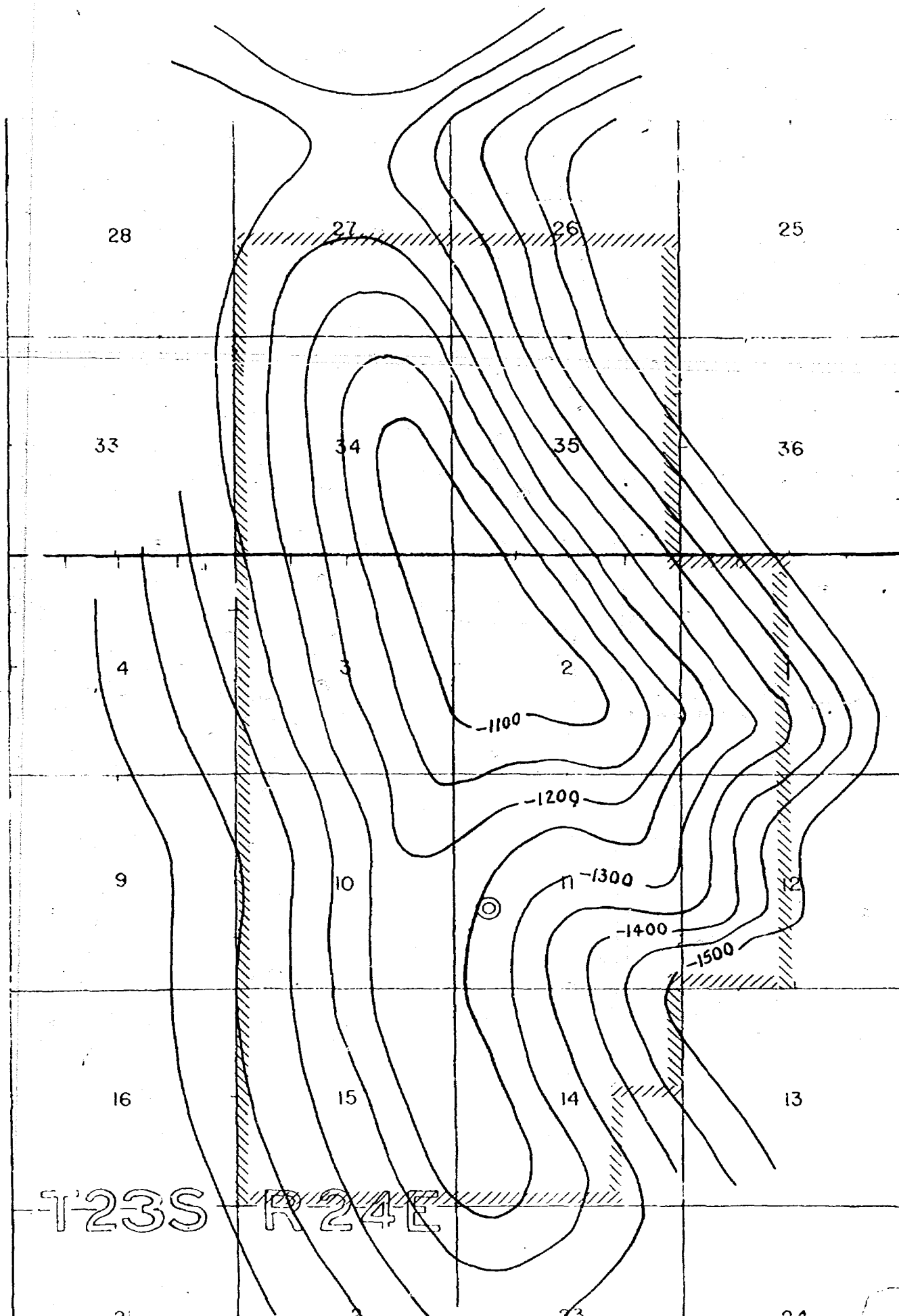


[NORTH CAVERNS UNIT]
 Township 23 South, Range 24 East
 Badu County, New Mexico
 Proposed 11,750' Devonian Test
 Seismic Control Plat

January 21, 1960

EXHIBIT "B"

Ex. 2



Case 960
Ex 3

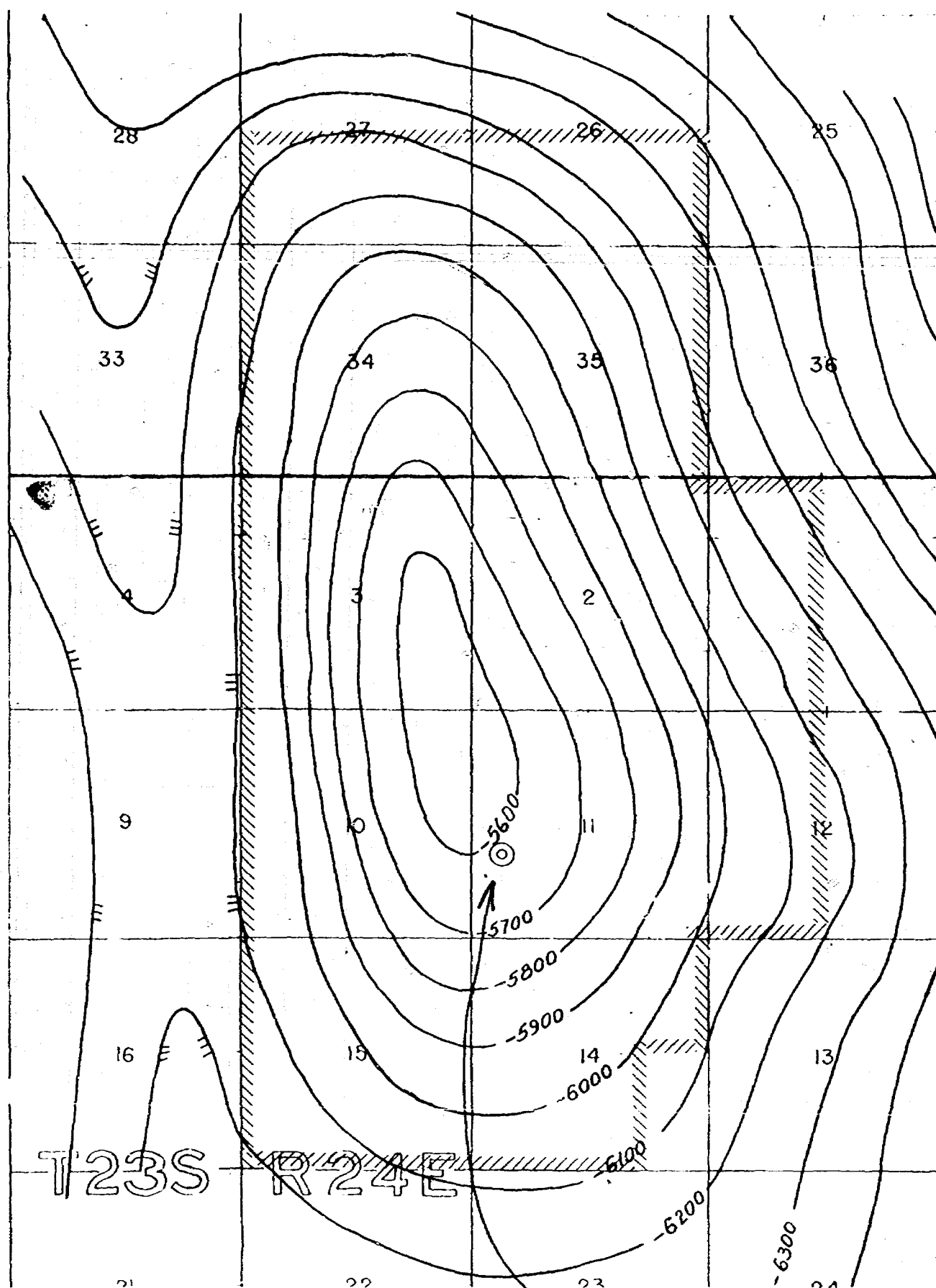
NORTH CAVERNS PROSPECT
Township 23 South, Range 24 East
Eddy County, New Mexico
Proposed 11,750' Test

Bone Spring Horizon
Roswell District Progress Map No. 1
Carlsbad Project

C. I. - 50'

10-7-59

EXHIBIT "C"



Co. 1960
Ex 4

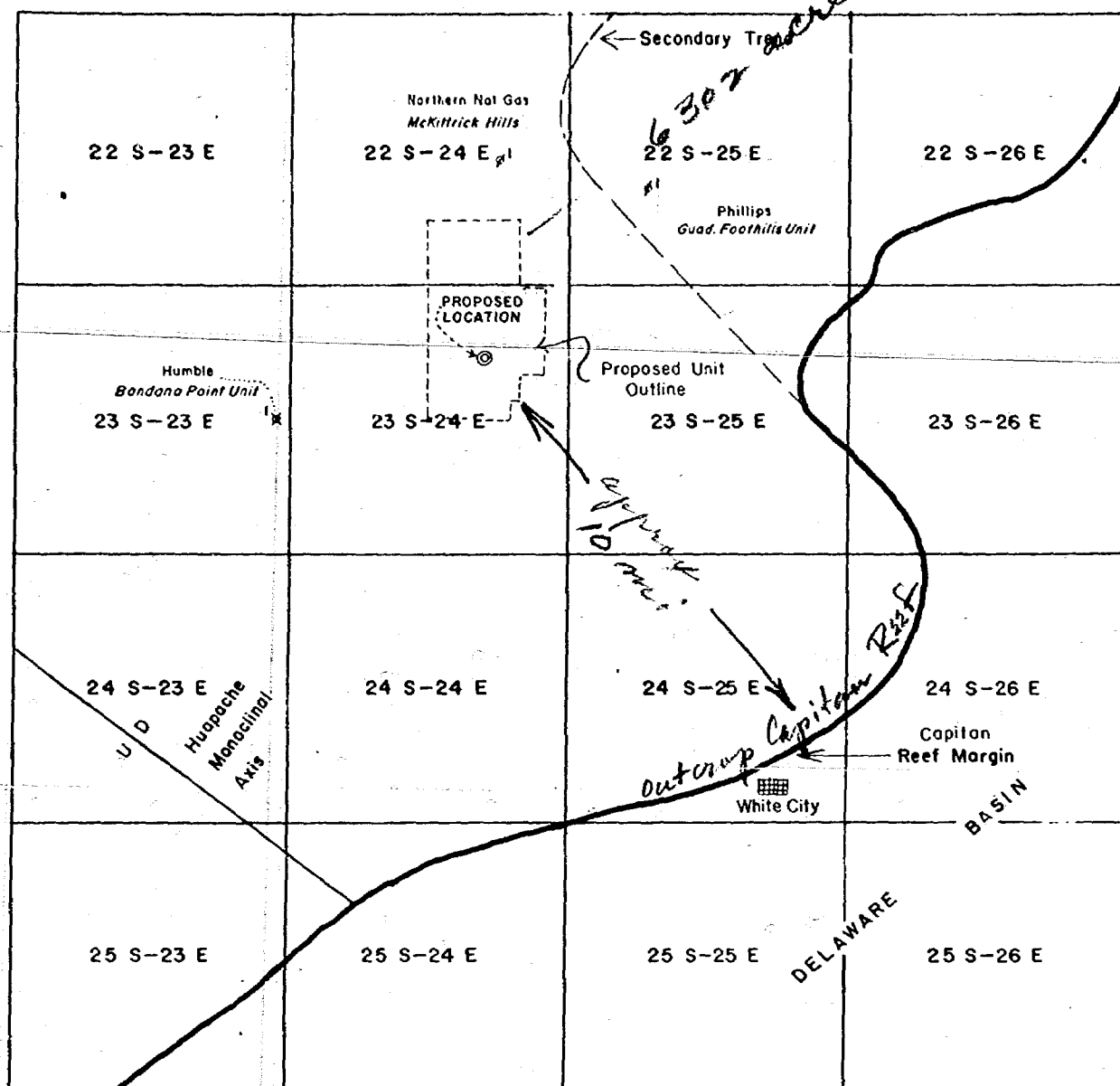
NORTH CAVERNS PROSPECT
Township 23 South, Range 24 East
Eddy County, New Mexico
Proposed 11,750' Test

Approximate Devonian Horizon
Roswell District Progress
Map
Carlsbad Project

C. I. - 100'

9-22-59

EXHIBIT "D"

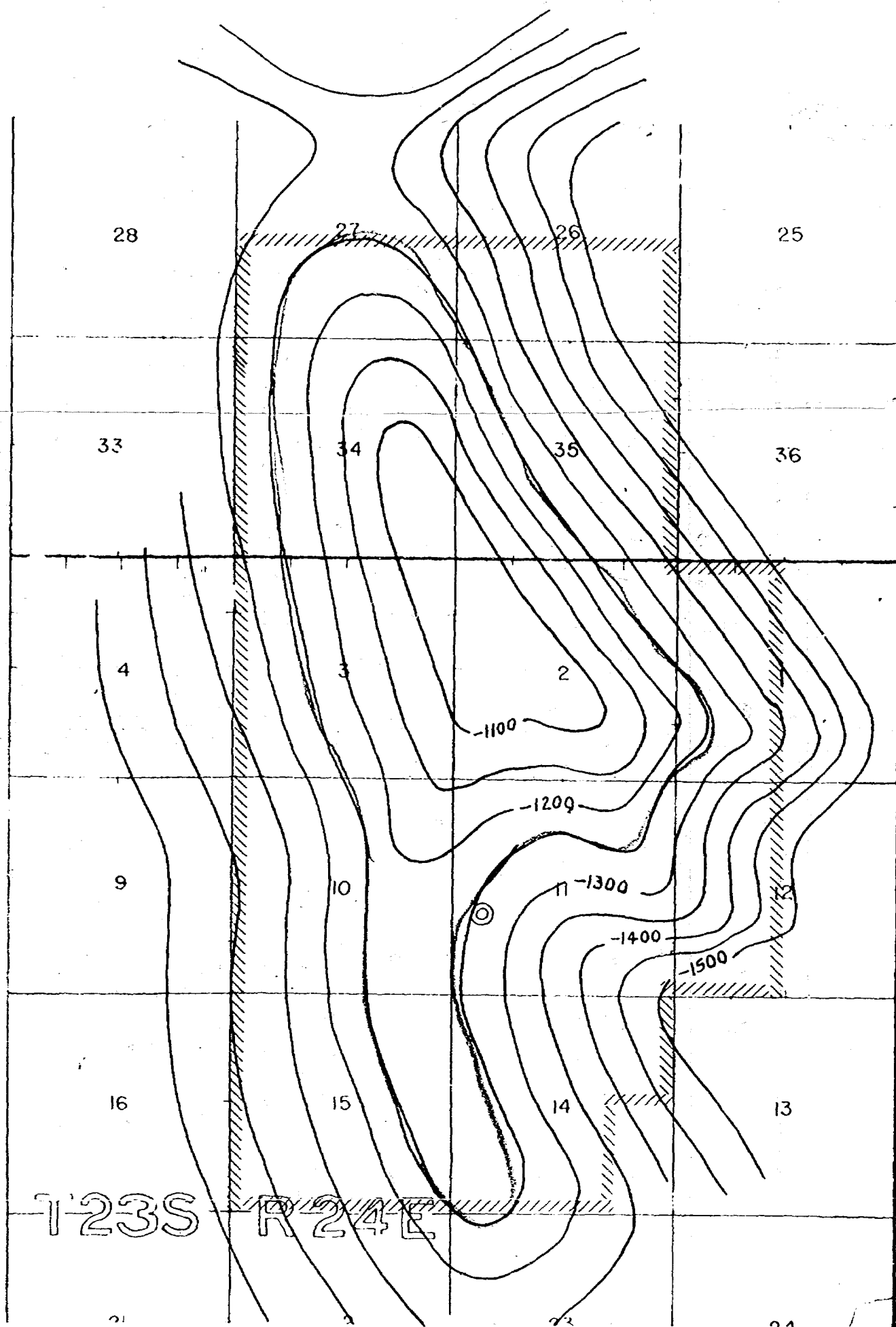


NORTH CAVERNS UNIT
 Eddy County, New Mexico, Township 23 South, Range 24 East
 Proposed 11,750' Test

Regional Plat
 January 21, 1960

EXHIBIT "A"

Handwritten:
 11,750' test
 in 18-31; Shugart Dr.

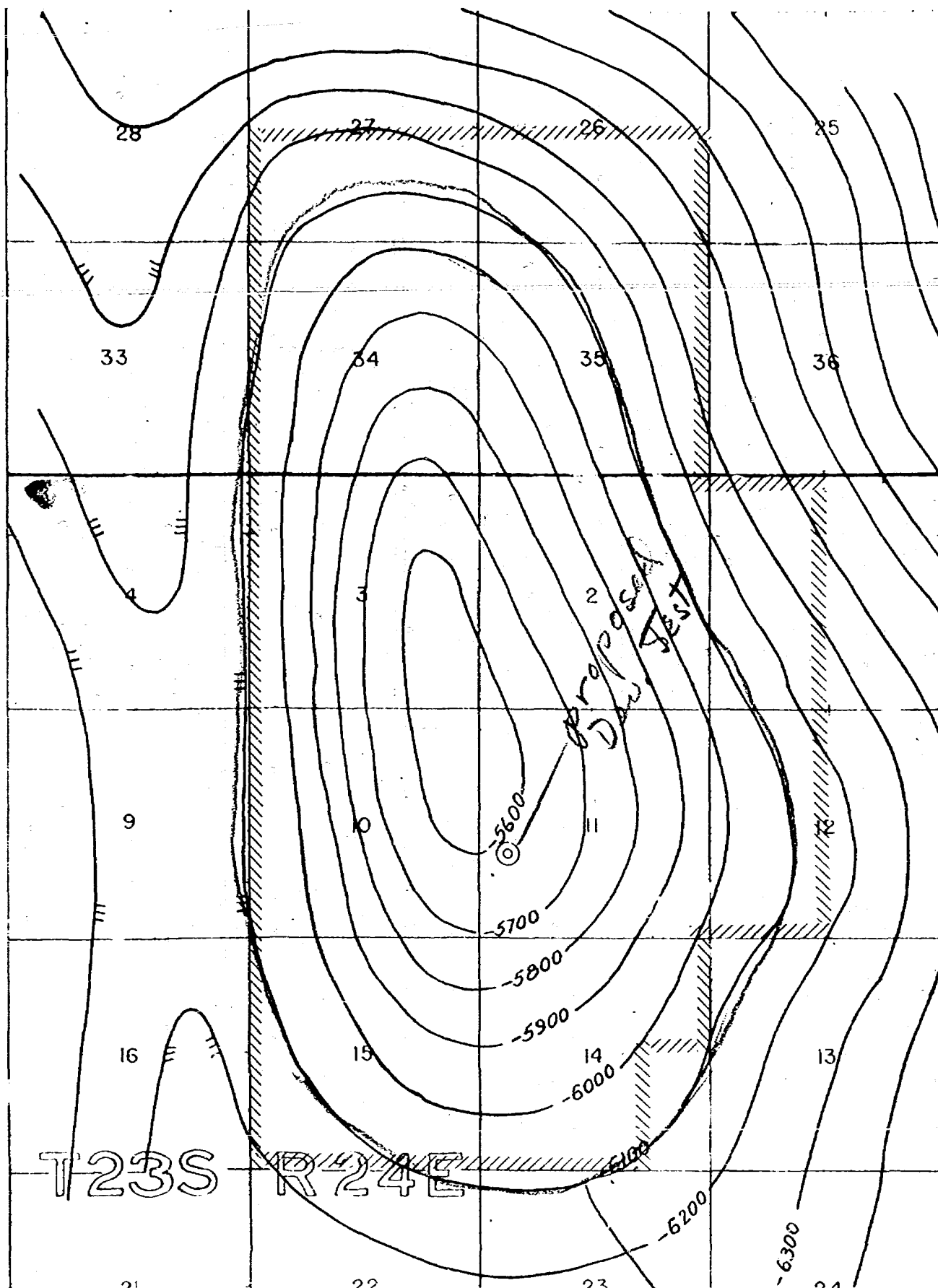


NORTH CAVERNS PROSPECT
 Township 23 South, Range 24 East
 Eddy County, New Mexico
 Proposed 11,750' Test

Bone Spring Horizon
 Roswell District Progress Map No. 1
 Carlsbad Project

C. I. - 50'

10-7-59 EXHIBIT "C"



NORTH CAVERNS PROSPECT
 Township 23 South, Range 24 East
 Eddy County, New Mexico
 Proposed 11,750' Test

Approximate Devonian Horizon
 Roswell District Progress
 Map
 Carlsbad Project

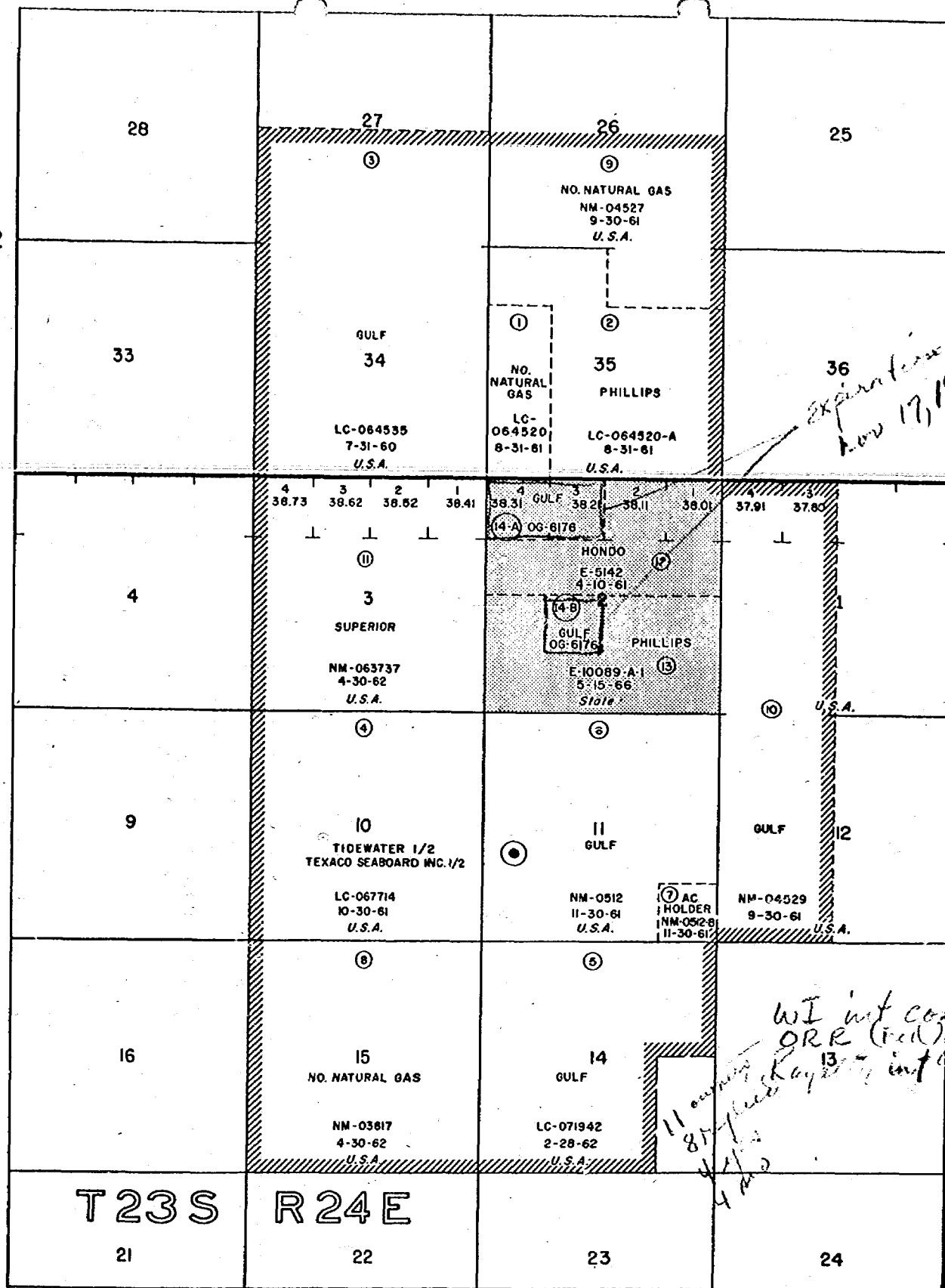
C. I. - 100'

9-22-59

EXHIBIT "D"

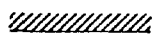
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R - 24 - E

LEGEND



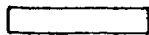
Unit Outline



Tract Number



Test Well



Federal Land



State of New Mexico Land

Total

5,669.99

632.64

6,302.63

NORTH CAVERNS UNIT AREA
Eddy County, New Mexico

EXHIBIT "A"

Handwritten notes:
Gulf
Rail
VPCO
Hill
Tex
Tex & oil
a C. Hill

Handwritten notes:
1960
Ex 5

Handwritten signature:
[Signature]

HUMBLE OIL & REFINING COMPANY

MAIL ROOM DEPARTMENT

P. O. BOX 1287

1960 JUN 22 PM 1:20
ROSWELL, NEW MEXICO

June 21, 1960

Mrs. Ida Rodriguez
Oil Conservation Commission
Capitol Building
Santa Fe, New Mexico

Dear Ida:

Enclosed is the North Cavern Unit as promised. Thanks
very much. See you in a week or so.

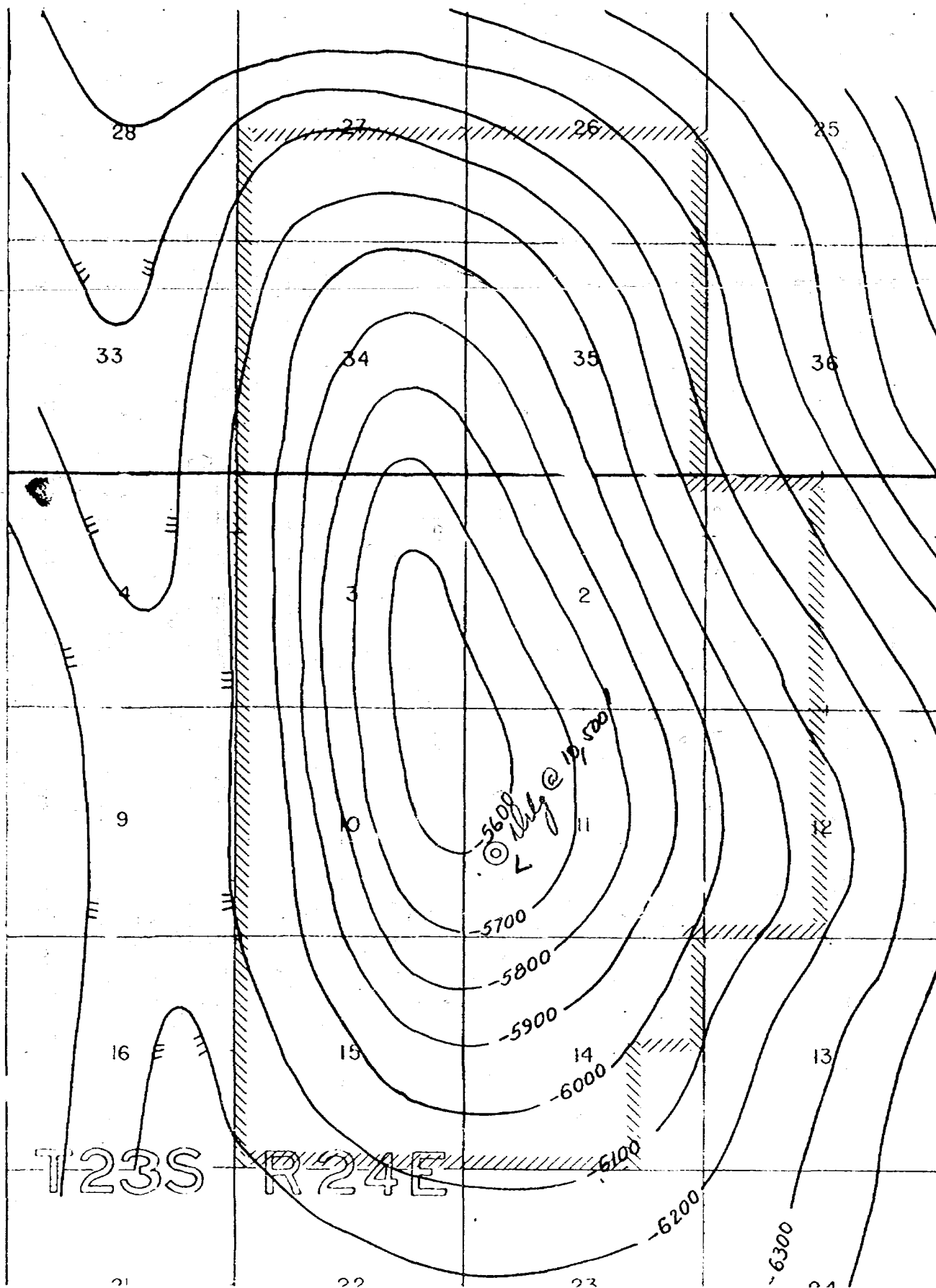
Best regards,

Bob

R. F. Matthews

RFM:eh

Enclosure



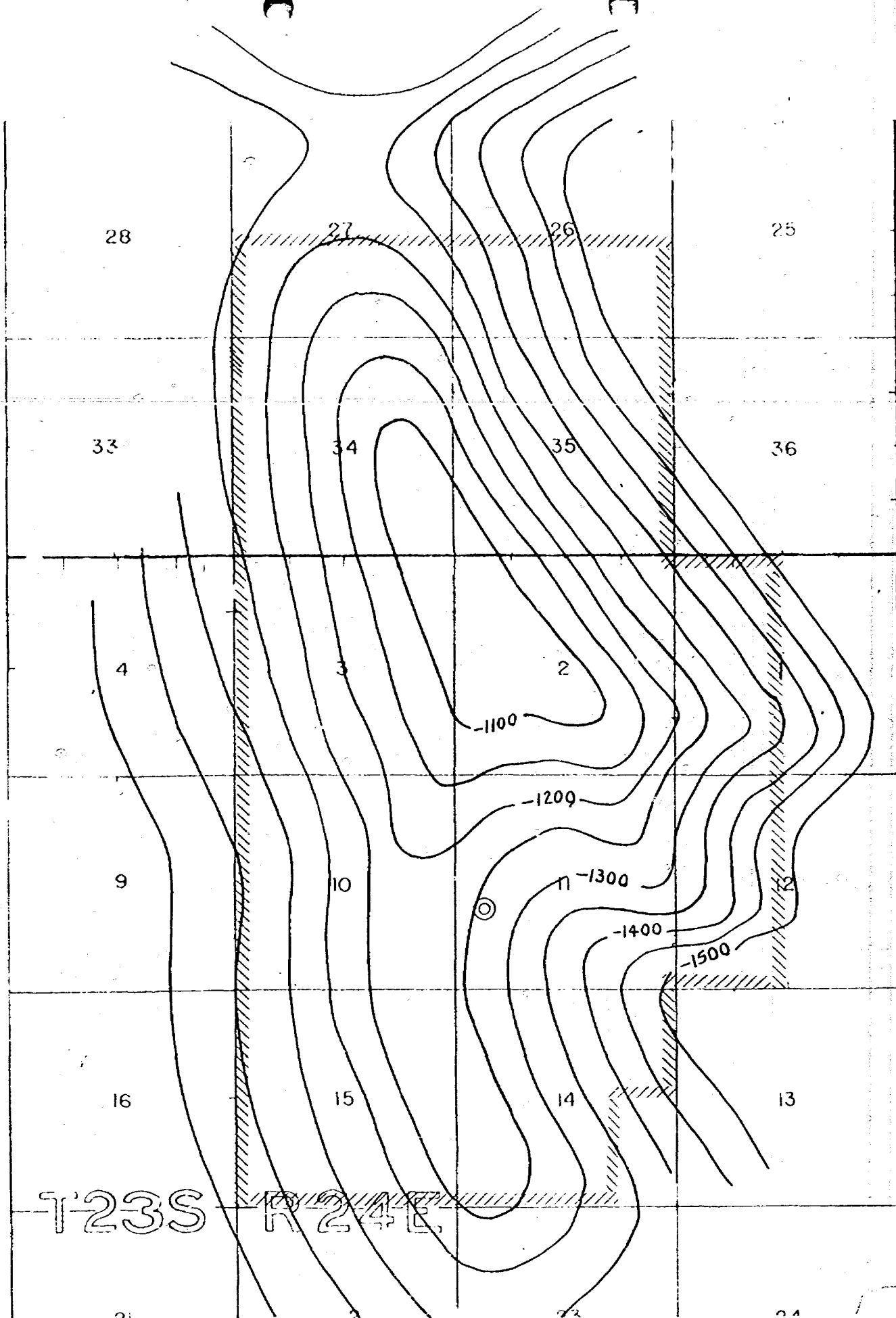
NORTH CAVERNS PROSPECT
 Township 23 South, Range 24 East
 Eddy County, New Mexico
 Proposed 11,750' Test

Approximate Devonian Horizon
 Roswell District Progress
 Map
 Carlsbad Project

C. I. - 100'

9-22-59

EXHIBIT "D"



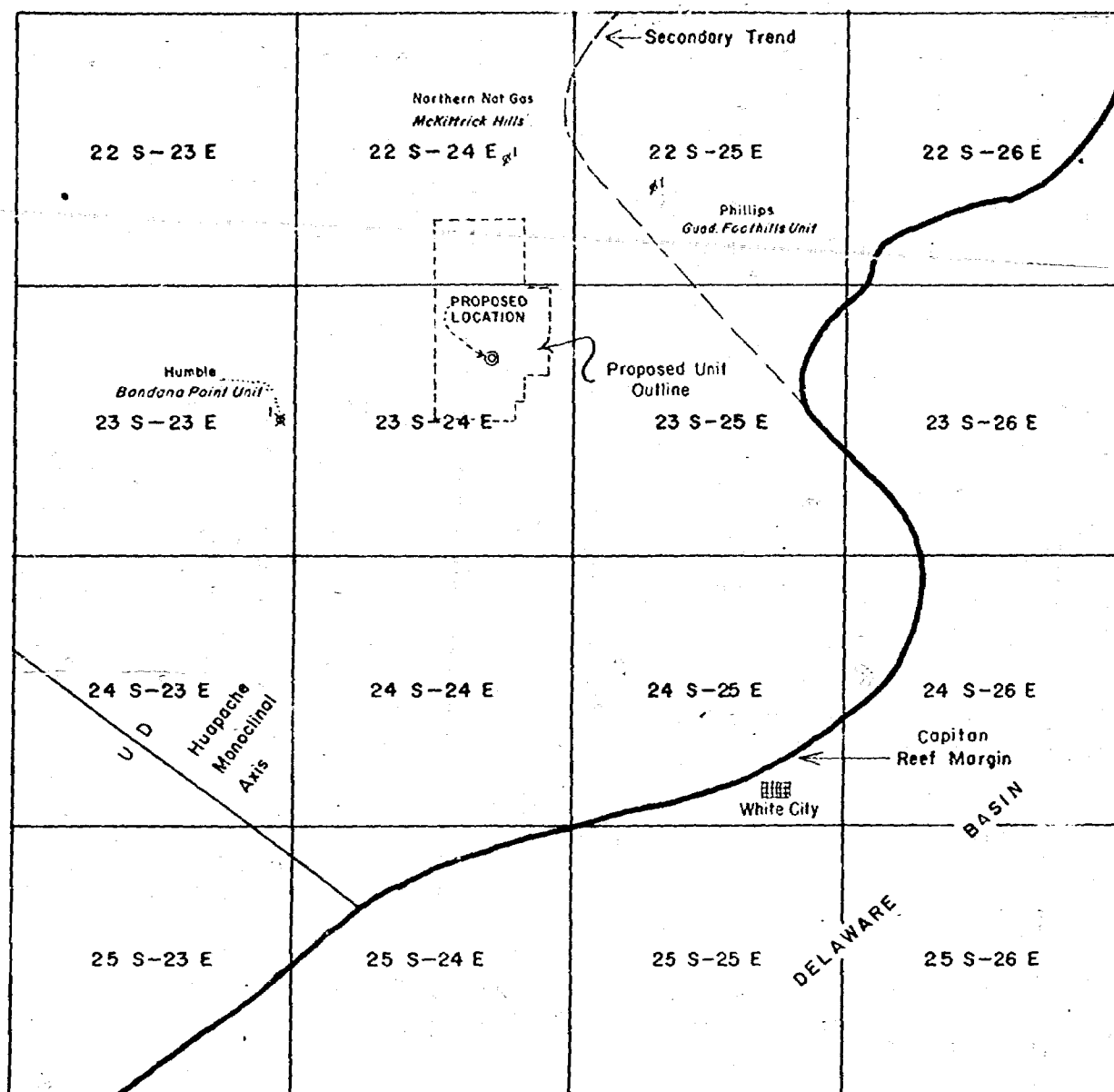
Co 1960
Ex 3

NORTH CAVERNS PROSPECT
Township 23 South, Range 24 East
Eddy County, New Mexico
Proposed 11,750' Test

Bone Spring Horizon
Roswell District Progress Map No. 1
Carlsbad Project

C. I. - 50'

10-7-59 EXHIBIT "C"



NORTH CAVERNS UNIT
Eddy County, New Mexico, Township 23 South, Range 24 East
Proposed 11,750' Test

Regional Plat
January 21, 1960

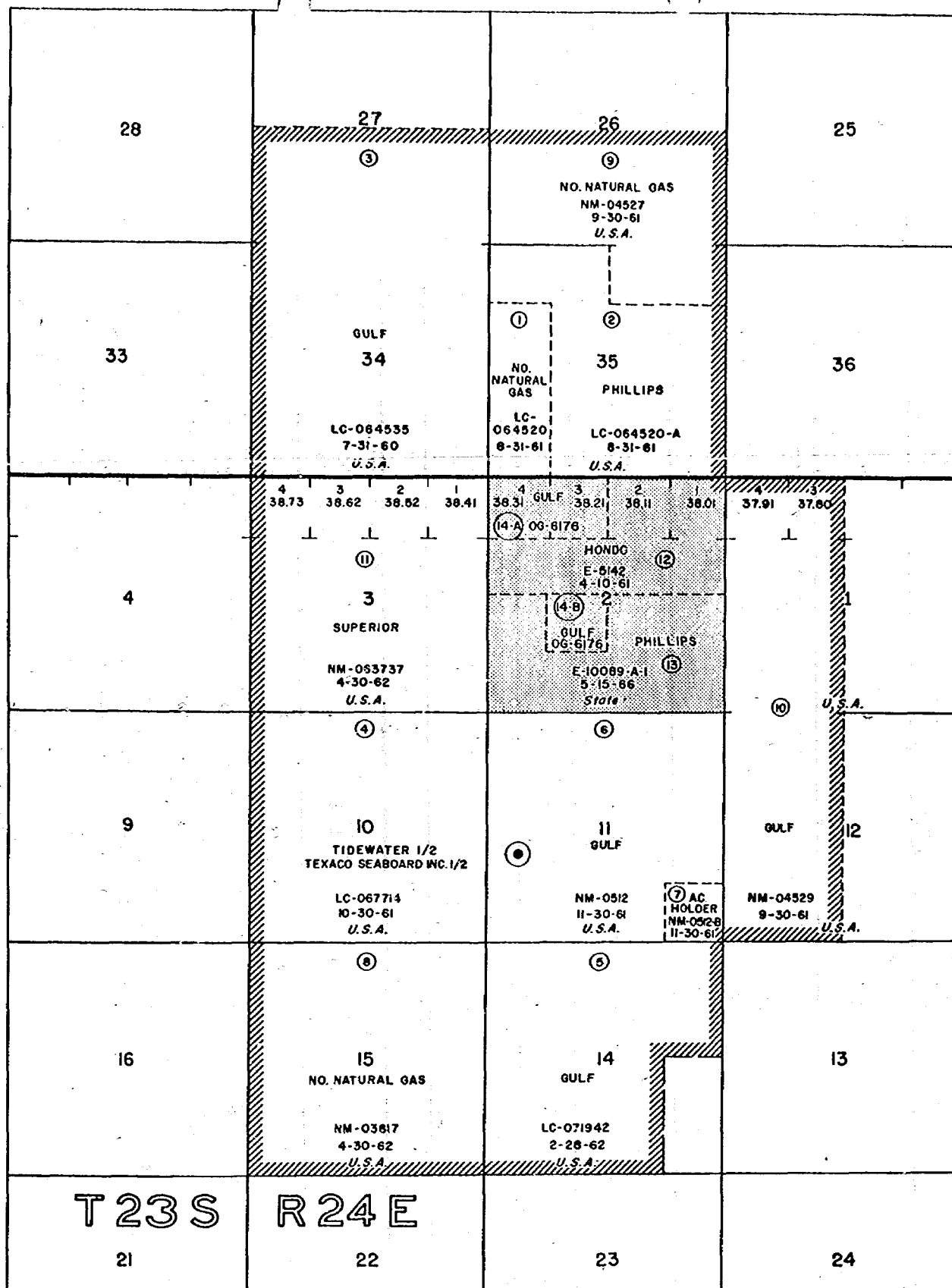
EXHIBIT "A"

Case 1960

EX 1

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R - 24 - E

LEGEND



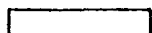
Unit Outline



Tract Number



Test Well



Federal Land



State of New Mexico Land

Total

5,669.99

632.64

6,302.63

NORTH CAVERNS UNIT AREA
Eddy County, New Mexico

EXHIBIT "A"

6x 5