CASE NO.

6353

APPLICATION,

TRANSCRIPTS,

SMALL EXHIBITS,

ETC.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
State Land Office Building
Santa Fe, New Mexico
11 October 1978

EXAMINER HEARING

IN THE MATTER OF:

Application of Union Texas Petroleum for two unorthodox well locations, Roosevelt County, New Mexico.

CASE 6353

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Lynn Teschendorf, Esq.
Legal Counsel for the Division
State Land Office Building
Santa Fe, New Mexico 87501

For the Applicant: Conrad E. Coffield, Esq.
HINKLE, COX, EATON, COFFIELD & HENSLEY
P. O. Box 3580
Midland, Texas

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3020 Plaza Blanca (505) 471-2462
Santa Fe, New Mexico 87501

I N D E X

E X H I B I T S

MR. STAMETS: Call next Case 6353.

MS. TESCHENDORF: Case 6353. Application of Union Texas Petroleum for two unorthodox well locations, Roosevelt County, New Mexico.

MR. COFFIELD: Conrad Coffield, with the Hinkle law firm, appearing on behalf of Union Texas Petroleum Company. I have one witness.

(Witness sworn.)

ED GRUBEN

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

DIRECT EXAMINATION

BY MR. COFFIELD:

Q. Would you please state your name, address, occupation, and employer?

A. My name is Ed Gruben. I reside at 15 Kingsland Court, Odessa, Texas. My employer is Union Texas Petroleum.

Q. Mr. Gruben, are you familiar with the application of Union Texas Petroleum in this case?

A. Yes, I am.

Q. Have you previously testified beforethe Oil Conservation Division as a petroleum engineer?

A. No, I have not.

Q. Would you please state briefly or outline your educational background and your employment experience as a petroleum engineer for the Examiner?

A. Attended Texas Tech, studying for a mechanical engineering degree. I have a BS degree from the College of the Southwest in mathematics and I also have a Bachelor of Science degree in petroleum engineering from the University of Texas, the Permian Basin.

I was employed for about twenty months by Skelly Oil Company, two months for Getty through the merger of those two companies, and presently am employed with Union Texas Petroleum for approximately twenty months as a petroleum engineer.

Q. And did you say where geographically your experience has been?

A. Primarily in the Permian Basin.

MR. COFFIELD: Are the witness' qualifications acceptable to the Examiner?

MR. STAMETS: The witness is considered qualified.

Q. (Mr. Coffield continuing.) Mr. Cruben, would you please state what Union Texas Petroleum seeks by its application?

A. Union Texas Petroleum respectfully requests

approval for two unorthodox locations in Milnesand San Andres Unit in Roosevelt County, New Mexico.

Well No. 241 is to be drilled 2630 feet from the north line and 100 feet from the east line of Section 24, Township 8 South, Range 34 East, and Well No. 1901, contingent upon the success of 241, is to be drilled 1310 feet from the north and west lines of Section 19, Township 8 South, Range 35 East of Roosevelt County, New Mexico.

Q. All right, Mr. Gruben, is this then in effect requesting the Commission's approval of infill wells in connection with this Milnesand Unit?

A. Yes, it is.

Q. Okay, Mr. Gruben, please refer to what's been marked as Exhibit One, Figure One, and explain that to the Examiner.

A. Figure One represents the Milnesand San Andres Field with the unit boundaries as it was formed on August 11th, 1969, outlined in yellow with the well numbers, with the wells and their respective well numbers in the appropriate location. A legend at the bottom of the map describes each well as it is in the unit.

The blue outlined area is a 5-spot pilot and the green dots within and surrounding that area are monitor wells for the pilot area, and the two red dots indicate the proposed locations for the infill wells, the initial infill

wells.

Q. Okay, go on to Figure Two and explain what this is.

MR. STAMETS: There's one thing I'd like to ask. Are these infill wells misnumbered on the exhibit?

A. Yes, sir, they have been renamed. These are the correct names. They were renamed 521 replacing 241 and 319 replaces 1901.

MR. STAMETS: So the locations are correct but they are renumbered?

A. Correct.

MR. STAMETS: That's good. 1901 has too many digits in it, anyway.

A. Right.

MR. COFFIELD: Mr. Examiner, do you have any other questions about the --

MR. STAMETS: No, I'm in good shape now.

MR. COFFIELD: Okay.

Q. (Mr. Coffield continuing.) Go on to Figure Two, Mr. Gruben, and explain what that is.

A. Figure Two is a structure map of the top of Zone One of the producing horizons in the Milnesand San Andres Field.

Again we have the unit boundary outlined in yellow, the approximate location of the original gas/oil

contact marked in red; the pilot area highlighted with blue; and the two proposed wells spotted in red.

A legend at the bottom defines the particular well and we have the subsurface depths marked on this map, also.

Q. Okay, go to figure three and explain to the Examiner what this represents.

A. Figure Three is a structure map with the top of Zone Two. It illustrates the locations of all the wells in the field, their subsea depths for the top of Zone Two; the pilot area is highlighted in blue again; gas/oil contact originally is indicated with the red, and the oil/water contact, the original oil/water contact is indicated in blue. Again, the proposed infill wells are indicated with a red dot.

Q. Okay, go to Exhibit -- I mean Figure Four.

A. Figure Four is basically the same as One and Two, or Two and Three, except where it is the structure map of the top of Zone Three with the proposed wells spotted also.

Q. Okay, refer to Figure Five, and explain that one.

A. Figure Five shows the Milnesand San Andres Field again. The unit boundaries are outlined in yellow. We have the 5-spot pilot outlined with the -- in the blue

area in the central portion of the field. The bottom hole pressures for ten producing wells and fourteen injection wells are indicated with the yellow highlight. The proposed infill wells again are shown in red.

Q. Now Figure Six, Mr. Gruben, what does that -- what is that?

A. Figure Six is an Isocumed map for the Milnesand San Andres Field. The unit boundaries are shown again by the yellow. The red indicates the cumulative production in excess of 140,000 barrels and also the lighter shade of red indicates production in excess of 120,000 barrels. The yellow, 100,000, and the green, 80,000 barrels or better.

The wells located by the brown dot and the blue dot are discussed in the narrative of my testimony. The red dots indicate the infill wells.

Q. Okay, refer to Figure Seven.

A. Figure Seven again shows the Milnesand San Andres Unit. The blue area indicates the 5-spot pilot. The red dots indicate the proposed infill wells. The green highlighted wells indicate producers that I'll discuss in my narrative, and again the brown and blue dots also are discussed in my narrative.

This map also illustrates the daily oil and water production from the producers with their cumulatives and injection wells show the daily injection waters, their

pressures, and the cumulative injection.

Q. Okay, go to Figure Eight and explain what this represents.

A. Figure Eight is a production history with historical highlights surrounding the unit since it has been formed.

Q. Okay, now refer to both Figures Nine and Ten and explain them. These are in the center of Exhibit One.

A. Figure Nine is the Form C-102 which gives the legal location for Well No. 241 -- or excuse me, 1901, which has been renamed 319.

Q. Excuse me, Mr. Gruben, when you say a legal location, you're saying a location in which we asked for this hearing.

A. Right.

MR. STAMETS: I believe in mine Figure Nine is Well No. 521 and Figure Ten is Well 319.

A. It could well possibly be and mine may just be reversed.

And my Figure Ten shows Well No. 521, which may be your 319.

Q. All right. Now, Mr. Gruben, by general narrative, as you indicated you were going to do, and by reference to these various exhibits, which you've briefly explained to the Examiner, would you please give a general

review of the proposed project and point out the justification which in your opinion Union Texas Petroleum has for seeking the application in this case?

A. Okay. If you'd care to follow along, it's the written narrative.

The Milnesand San Adres Field was drill stem tested in the 1950s during the deeper Pennsylvanian development. By the mid-1960s the field was completely developed on 40-acre spacing with 147 wells as shown in Figure One. The Milnesand Unit was formed in August of 1969. Waterflooding was initiated on August of 1970.

Geographical description of the Milnesand Field finds that it lies on the northwestern shelf of the Permian Basin. It is a link in the chain of San Andres fields from the Cato Field in Chaves County, Mew Mexico, to the Levelland-Slaughter Fields in Hockley and Cochran Counties, Texas.

The field is on the nose of an anticline plunging to the southeast at approximately 100 feet per mile.

The field's total cumulative oil production is 5,653,000 barrels, and that's until the end of August, 1978. The unit has produced 1,380,800 barrels of oil since unitization in August, 1969.

As shown on Figure One by the blue outlined

area, Union Texas Petroleum converted five producing wells, Nos. 31, 33, 35, 182, and 192, to injection status in October of 1976.

After injection stabilization a monomer chemical treatment was performed on each injector in this area in July and August of 1977. This work was done in an effort to reduce water channeling to producing wells and improve vertical and horizontal seep efficiencies in this area. To date oil production in this area is relatively unchanged, but water production has been reduced approximately 250 barrels per day in 17 monitor wells, as shown by the green dots.

Reservoir discontinuity in the San Andres formation is a common problem in the Permian Basin. Comprehensive research has been done by many oil companies in an effort to define or establish drainage and injection patterns.

As a result of these discontinuities, many oil traps are left untouched under normal 40-acre development. These primary traps, as well as secondary traps formed by water injection, are the primary targets of drilling the reservoir on denser spacing.

Further justification for infilling the Milnesand Unit on 20-acre spacing is given below in the topics of bottom hole pressure work, injection-production dis-

crepancies, volumetrics, ultimate recoveries, and gathering of reservoir data.

Concerning bottom hole pressures, bottom hole pressure surveys were conducted in the Milnesand Unit during the fourth quarter of 1977 in an effort to identify potential stimulation candidates and gather data which would aid in the evaluation of an infill development program. Pressures were run on ten producing wells and fourteen injection wells, you may refer to Figure Five.

As is apparent from the drainage area pressures, P-star, large variations exist between oil producers within the unit as well as between injectors and producers. These pressures illustrate the need for infill drilling of the unit on denser spacing as consistent communication does not exist on the present 40-acre development.

Moving to injection-production discrepancies, production and injection volumes in adjacent producers and injectors illustrate reservoir heterogeneity. Although many examples can be quoted to illustrate this point, a typical discrepancy is noticed in the wells centrally located in Section 13, and you can refer to Figure Six. This is the brown dots and the blue dots.

Injection Well No. 56 was an original salt water disposal well. Cumulative water injection is over 1,500,000 barrels. Offset wells with current producing

rates and cumulative oil production are listed below, and should I for the record read off all of that?

MR. STAMETS: I don't believe that's necessary.

A. Okay. The very low production rates from each well above illustrates the poor effectiveness of water-flooding Milnesand Unit on 40-acre spacing. The average oil recovery per well in this area is 65,600 barrels.

The low cumulative volumes, at these depleted low rates, show little, if any, flood response to 88 percent of these wells.

Additionally, the measured low bottom hole pressure in Well No. 55, 241 psi, indicates it has not been affected by pressure transient from water injection in Well No.56, even after a cumulative water injection in excess of 1.5 million barrels.

Volumetric calculations for several wells offsetting the two proposed locations indicate that an average of 25 acres per well was drained under primary operations. These calculations were made assuming the ultimate primary recovery for typical San Andres production is approximately 15 percent of original oil in place. The calculated versus actual ultimate primary recoveries of four immediate offsets to the proposed locations are shown below. The calculated values are based on 25-acre drainage. Should I read that table?

MR. STAMETS: I think it's self-explanatory.

A. Very good.

It should be noted that the above calculations are made utilizing average porosity values taken from acoustic logs, which are not normally considered good secondary porosity tools.

Cores taken in the Milnesand San Andres Unit indicate fracturing and secondary porosity which has not been accounted for in the above calculations.

In the case of Well Nos. 37, 39, and 515 above, the effective porosity value due to fracturing would only have to be increased an average of one and a half percent to make the calculated and actual ultimate recoveries match more closely. This is a satisfactory explanation to the minor discrepancies noted between the calculated and actual ultimate recoveries shown above.

From the discussion, I believe at least 15 acres out of every 40 acres within the majority of the San Andres Milnesand Unit has not been adequately drained. The reasoning agrees with studies done by many of the San Andres operators in West Texas.

Concerning ultimate recoveries, the two proposed wells are to be drilled in an area in the unit which cumulative oil recoveries are high. Referring to Figure Six, which represents an Isocumulative map of the unit

with the proposed locations shown in red. The cumulative oil recoveries and current producing rates, as of August, 1978, of the four wells immediately offsetting the proposed wells are shown on this table, also, plus the prospective figure.

The two proposed wells will be drilled in an area of the unit in which cumulative oil recoveries to date are excellent and average current producing rates are highest. This will minimize the risks of obtaining an uneconomical completion.

The economics tabulated on page six were based on recovering 70,000 barrels per well of primary and secondary oil from the proposed locations; 35,000 barrels for primary, and the same for secondary.

Comparing the ultimate primary and total cumulative oil to date, it can be seen that an ultimate recovery of 70,000 barrels per well is somewhat conservative as the total oil cumulatives to date range between 98,000 and 147,000 barrels for the four offset producers analyzed.

The drilling of the proposed wells will allow valuable reservoir data to be obtained through coring and detailed logging, which will be used in determining the efficiency of the current water injection pattern, and will provide reservoir data which will be needed in the future to evaluate additional secondary or tertiary recovery tech-

niques.

The results to be gathered from the data will include PVT analysis, current saturations of oil, water, and gas, permeabilities, porosities, and relative permeability data. The detailed logging program will allow a better correlation with actual core data.

And finally, we have the economics for each of the proposed infill wells, as shown below with their correct well numbers.

Do you care to go through that?

MR. STAMETS: I don't think that's necessary.

A. Very good. Summary and conclusions.

In summary, the drilling of the two proposed locations will accomplish the following:

Increase gross oil production by approximately 110 barrels of oil per day and oil reserves by 140,000 barrels.

Verify the need for infill drilling of the majority of the Milnesand Unit on 20-acre spacing. Ultimately, 45 to 60 additional wells could be required. This would develop gross oil reserves of two and a quarter to three million barrels.

Allow valuable reservoir data to be gathered through coring, logging, and pressure work, which will be used to determine the efficiency of the primary producing

operations and secondary water injection. The data will also aid evaluation of possible future tertiary recovery techniques.

The drilling of the two proposed wells will permit all of the above to be accomplished with favorable economics.

And based upon the above discussion, it is recommended that the two wells be approved at the proposed locations.

MR. COFFIELD: Mr. Examiner, I expect in order to properly have these tabulations in the record, we will need to offer this narrative and the material in it as an exhibit. Does that sound proper to you?

MR. STAMETS: That sounds like a good idea; that will simplify everything.

So will you mark that after the hearing is over?

MR. COFFIELD: All right.

MR. STAMETS: So what will the exhibit number be?

MR. COFFIELD: Two.

MR. STAMETS: Two, okay.

Does that conclude your direct, Mr. Coffield?

MR. COFFIELD: No, I've got a couple more questions.

Q. (Mr. Coffield continuing.) In addition to the approval of these two infill wells, Mr. Gruben, which you've discussed in detail, is it also the desire of Union Texas Petroleum that the Oil Conservation Division authorize administrative approval without formal hearing subsequently for additional infill drilling which is anticipated throughout this Milnesand Unit area?

A. Yes, sir, it is, if these wells are successful.

Q. And further, does Union Texas Petroleum understand that if such administrative approval is authorized that the wells that you might subsequently drill could be no closer than 330 feet to the outside limits of the unit?

A. Yes, sir, we do realize that.

Q. Were these exhibits prepared by you or under your supervision, Mr. Gruben?

A. Yes, sir.

Q. And in your opinion is the approval of the application of Union Texas Petroleum in the interest of conservation and will it prevent waste and protect correlative rights?

A. Most certainly.

MR. COFFIELD: Move the admission of Exhibits, Mr. Examiner.

MR. STAMETS: The exhibits will be admitted.

CROSS EXAMINATION

BY MR. STAMETS:

Q. On page four of the discussion there are four wells listed. The first well is No. 34, and then in the following paragraph and one, two, three, four, five, sixth line, Well No. 37 is mentioned.

Which one of those numbers is the correct well?

A. 37.

Q. Okay.

MR. STAMETS: Any other questions of the witness? He may be excused.

Anything further in this case?

The case will be taken under advisement.

(Hearing concluded.)

REPORTER'S CERTIFICATE

I, SALLY WALTON BOYD, a Court Reporter, DO HEREBY CERTIFY that the foregoing and attaCheđ Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability, knowledge, and skill, from my notes taken at the time of the hearing.

Sally W. Boyd C.S.R.
Sally W. Boyd, C.S.R.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 6353 heard by me on 10-11 1979.

, Examiner
Oil Conservation Division

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3010 Plaza Blanca (505) 471-2462
Santa Fe, New Mexico 87501

NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING

SANTA FE, NEW MEXICO

Hearing Date OCTOBER 11, 1978 Time: 9:00 A.M.

NAME	REPRESENTING	LOCATION
CHARLES F. KALTEYER	GULF OIL	MIDLAND
TERRY I. CROSS	GULF OIL	MIDLAND
[illegible]	Hinkle, Cox, Eaton Coffield & Hensley	Midland
ED D. GRUBEN	UNION TEXAS PETROLEUM	MIDLAND
Eddie Dare	Charles Loveless	Roswell
FRED SCHLICHER	CHARLES LOVELESS	Roswell
Charles Lovelss	"	"
Tom KELLAHIN	KELLAHIN & FOX	Santa Fe
Arthur Darryl James	Southland Royalty	Midland
Wayne Newkumet	Southland Royalty	"
Dennis Eimers	Southland Royalty	Midland
C. Harvey Carr	Southland Royalty Co.	Midland
RICHARD W. PETRIE	SOUTHLAND ROYALTY CO.	MIDLAND
Carter Hoyt	Montgomery Law Firm	Santa Fe
AR Kendrick	OCD	Santa Fe
DAN [illegible]	AMERADA	MIDLAND
B.W. Griffin	"	"
Ralph Long	Amerada	Midland
William S Jameson	SUPRON ENERGY CORP	DALLAS
JERRY L. LEE	SUPRON ENERGY CORP	DALLAS

NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING

SANTA FE, NEW MEXICO

Hearing Date OCTOBER 11, 1978 Time: 9:00 A.M.

NAME	REPRESENTING	LOCATION
Hayle Shaver	Texas Oil & Gas Corps.	Midland
Jerry Ellis	Texas Oil & Gas	Midland
Joel Carson	Losee, Carson & Dickerson	Artesia

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

JERRY APODACA
GOVERNOR

NICK FRANKLIN
SECRETARY

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

November 15, 1978

Re: CASE NO. 6353
ORDER NO. R-5842-A

Mr. Conrad Coffield
Hinkle, Cox, Eaton,
Coffield & Hensley
Attorneys at Law
P. O. Box 3580
Midland, Texas 79702

Applicant:

Union Texas Petroleum

Dear Sir:

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

Yours very truly,

JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCC x
Artesia OCC x
Aztec OCC

Other

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

CASE NO. 6353
Order No. R-5842-A

APPLICATION OF UNION TEXAS PETROLEUM
FOR TWO UNORTHODOX WELL LOCATIONS,
ROOSEVELT COUNTY, NEW MEXICO.

NUNC PRO TUNC ORDER

BY THE DIVISION:

It appearing to the Division that Order No. R-5842, dated October 20, 1978, does not correctly state the intended order of the Division,

IT IS THEREFORE ORDERED:

(1) That Finding (9) on Page 2 of Order No. R-5842, Case No. 6353, be and the same is hereby corrected to read in its entirety as follows:

"(9) That approval of the subject application will afford the applicant the opportunity to produce its just and equitable share of the oil in the subject pool, will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, and will otherwise prevent waste and protect correlative rights."

(2) That Order (1) on Page 2 be and the same is hereby corrected to read in its entirety as follows:

"(1) That two unorthodox oil well locations for the San Andres formation are hereby approved for the Union Texas Petroleum Milnesand Unit Well No. 241 (to be renumbered No. 521) to be drilled 2630 feet from the North line and 100 feet from the East line of Section 24, Township 8 South, Range 34 East, and its Milnesand Unit Well No. 1901 (to be renumbered No. 319) to be drilled 1310 feet from the North line and 1310 feet from the West line of Section 19, Township 8 South, Range 35 East, Milnesand San Andres Pool, Roosevelt County, New Mexico."

(3) That the corrections set forth in this order be entered nunc pro tunc as of October 20, 1973.

DONE at Santa Fe, New Mexico, on this 14th day of November, 1978.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY
Director

S E A L

fd/

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

JERRY APODACA
GOVERNOR

NICK FRANKLIN
SECRETARY

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

October 25, 1978

Mr. Conrad Coffield
Hinkle, Cox, Eaton,
Coffield & Hensley
Attorneys at Law
P. O. Box 3580
Midland, Texas 79702

Re: CASE NO. 6353
ORDER NO. R-5342

Applicant:

Union Texas Petroleum

Dear Sir:

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

Yours very truly,

JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCC x
Artesia OCC _____
Aztec OCC _____

Other _____

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

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

CASE NO. 6353
Order No. R-5842

APPLICATION OF UNION TEXAS PETROLEUM
FOR TWO UNORTHODOX WELL LOCATIONS,
ROOSEVELT COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on October 11, 1978, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 20th day of October, 1978, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, Union Texas Petroleum, is the operator of the Milnesand (San Andres) Unit Waterflood Project authorized by Order No. R-3770, entered May 28, 1967.

(3) That the applicant seeks approval of two unorthodox well locations for its Milnesand Unit Well No. 241 (to be renumbered No. 521) to be drilled 2630 feet from the North line and 100 feet from the East line of Section 24, Township 8 South, Range 34 East, and its Milnesand Unit Well No. 1901 (to be renumbered No. 319) to be drilled 1310 feet from the North line and 1310 feet from the West line of Section 19, Township 8 South, Range 35 East, Milnesand San Andres Pool, Roosevelt County, New Mexico.

(4) That the SE/4 NE/4 of said Section 24 and the NW/4 NW/4 of said Section 19 are to be dedicated to said wells, respectively.

(5) That wells at said unorthodox locations will better enable applicant to produce the remaining secondary oil reserves underlying the proration unit.

(6) That no offset operator objected to the proposed unorthodox locations.

(7) That the applicant further seeks the establishment of an administrative procedure for said waterflood project for the approval of additional producing wells and injection wells and the conversion of existing wells to injection at both orthodox and unorthodox locations without further notice and hearing.

(8) That the establishment of such an administrative procedure would permit the more efficient operation of the project.

(9) That approval of the subject application will afford the applicant the opportunity to produce its just and equitable share of the gas in the subject pool, will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, and will otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That two unorthodox gas well locations for the San Andres formation are hereby approved for the Union Texas Petroleum Milnesand Unit Well No. 241 (to be renumbered No. 521) to be drilled 2630 feet from the North line and 100 feet from the East line of Section 24, Township 8 South, Range 34 East, and its Milnesand Unit Well No. 1901 (to be renumbered No. 319) to be drilled 1310 feet from the North line and 1310 feet from the West line of Section 19, Township 8 South, Range 35 East, Milnesand San Andres Pool, Roosevelt County, New Mexico.

(2) That the SE/4 NE/4 of said Section 24 and the NW/4 NW/4 of said Section 19 shall be dedicated to the above-described wells, respectively.

IT IS FURTHER ORDERED:

(1) That the Director of the Division is hereby authorized to approve such additional producing wells and injection wells at orthodox and unorthodox locations within the boundaries of applicant's Milnesand (San Andres) Unit Area as may be necessary to complete an efficient production and injection pattern, provided said wells are drilled no closer than 330 feet to the Unit boundary nor closer than 10 feet to any quarter-quarter section

or subdivision inner boundary. To obtain such approval, the project operator shall file proper application with the Division, which application, if it seeks authorization to convert additional wells to injection or to drill additional production or injection wells shall include the following:

(a) A plat showing the location of the proposed well, all wells within the project area, and offset operators, locating wells which offset the project area.

(b) A schematic drawing of the proposed well which fully describes the casing, tubing, perforated interval, and depth, and a demonstration that any proposed injection well will meet applicable construction, pressure and monitoring provisions.

(c) A letter stating that all offset operators to the proposed well have been furnished a complete copy of the application and the date of notification. The Director of the Division may approve the proposed well if, within 20 days after receiving the application, no objection to the proposal is received. The Director may grant immediate approval, provided waivers of objection are received from all offset operators.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY
Director

S E A L

fd/

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

FIG. TX

Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section

Operator: Union Texas Petroleum Corp.		Lease: Milnesand Unit		Well No.: 521 / 241
Unit Letter: H	Section: 24	Township: 8 South	Range: 34 East	County: Roosevelt
Actual Footage Location: 2630 feet from the North line and 100 feet from the East line				
Ground Level Elev.: 4239.1	Producing Formation: San Andres	Pool: Milnesand (San Andres)		Dedicated Acreage: 40 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

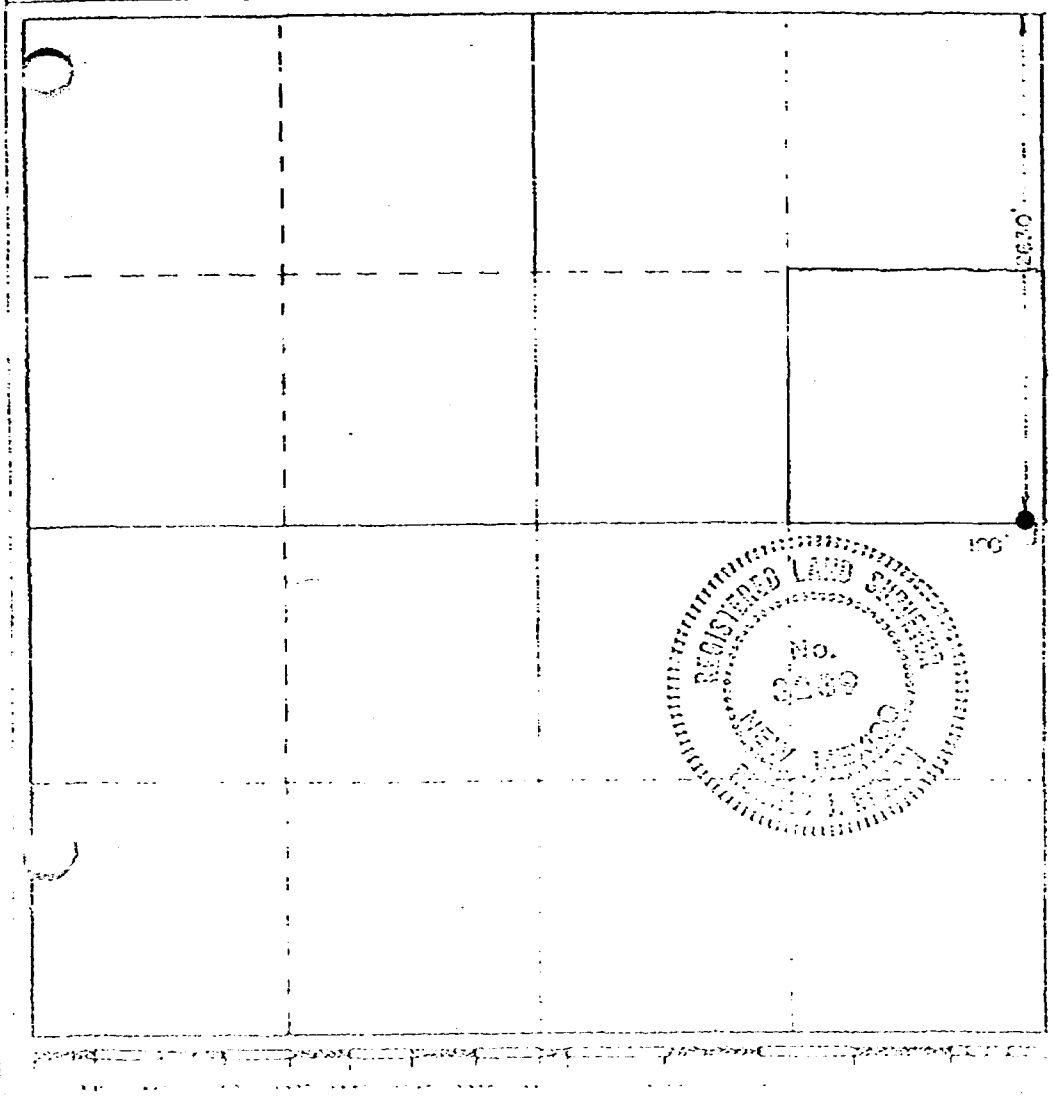
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by comaunitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

Stanley A. Post

Name: Stanley A. Post

Position: Sr. Prod. Analyst

Company: UNION TEXAS PETROLEUM CORP.

Date: August 10, 1978

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed: 5/9/78

Registered Professional Engineer and/or Land Surveyor

Ronald J. Eidson

Certificate No. John W. West 676

N MEXICO OIL CONSERVATION COMMI ON

WELL LOCATION AND ACREAGE DEDICATION PLAT FIG. X

Form C-102
Supersedes C-128
Effective 14-65

All distances must be from the outer boundaries of the Section

Operator	Lease	Well No.
Union Texas Petroleum Corp.	Milnesand Unit	~~1901~~ 319

Unit Letter	Section	Township	Range	County
D	19	8 South	35 East	Roosevelt

Actual Footage Location of Well:
1310 feet from the North line and 1310 feet from the West line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
4234.3	San Andres	Milnesand (San Andres)	40 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

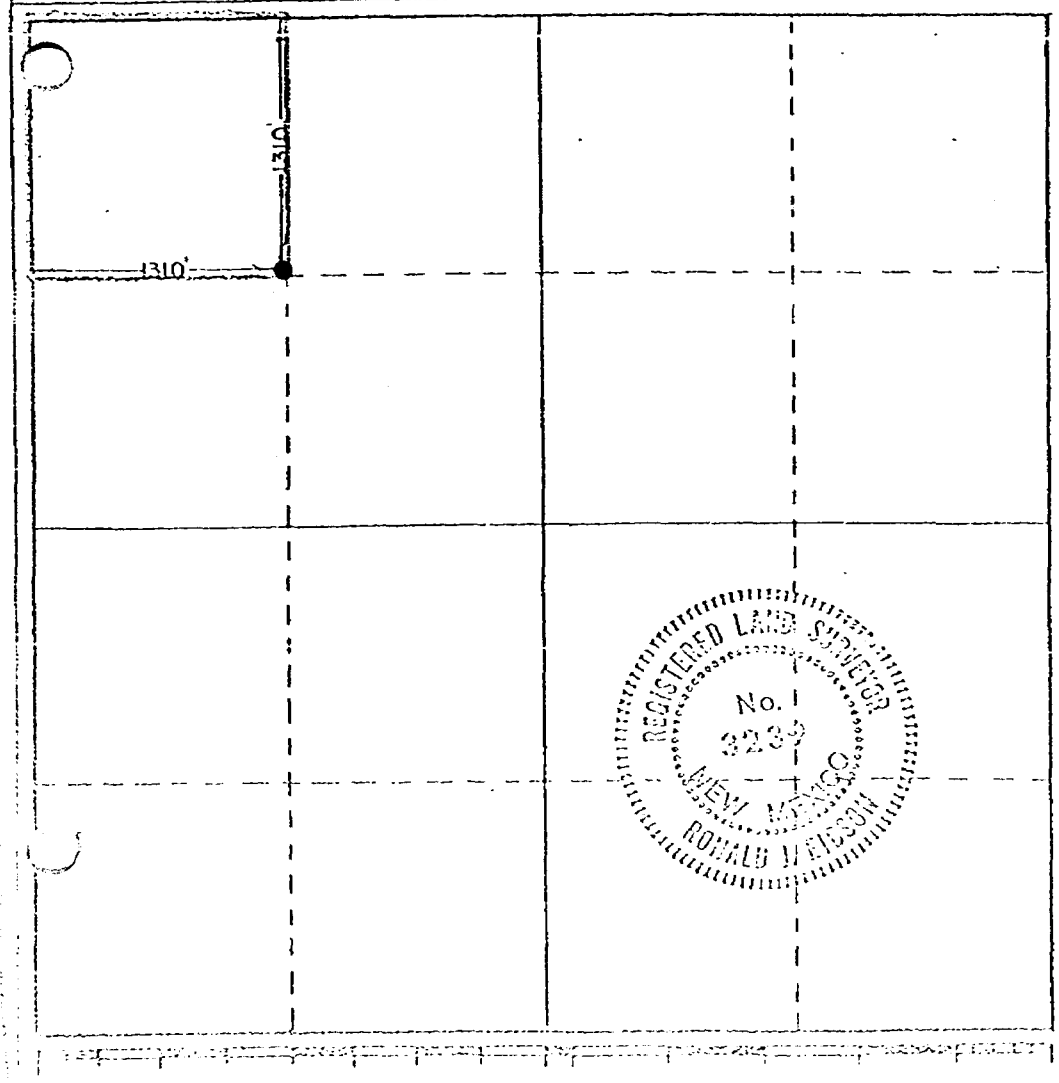
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

Name: Stanley A. Post

Position: Sr. Prod. Analyst

Company: UNION TEXAS PETROLEUM CORP.

Date: August 10, 1978

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed: 5/9/78

Registered Professional Engineer and/or Land Surveyor: Ronald J. Eidson

Certificate No. John W. West 676

Union Texas Petroleum respectfully request that this application for non-standard location be handled administratively, however if this should not be possible, please set it for hearing. Applications to drill these wells were filed with the United States Geological Survey on Form 9-331C on August 11, 1978.

If any additional information is needed, please advise.

Very truly yours,

UNION TEXAS PETROLEUM, A Division
of Allied Chemical Corporation

Floyd S. Houdyshell

Floyd S. Houdyshell
Senior Production Analyst

FSH:hb
cc: Oil Conservation Commission - Hobbs

UNION TEXAS PETROLEUM
MILNESAND (S.A.) UNIT
ROOSEVELT COUNTY, NEW MEXICO

APPLICATION FOR APPROVAL OF A
NON-STANDARD LOCATION AND ADMINISTRATIVE
APPROVAL FOR FUTURE 20-ACRE SPACED WELLS

DOCKET NO. 32-78
CASE NO. 6353

OCTOBER 11, 1978

Ex 2

MILNESAND (S.A.) UNIT
ROOSEVELT COUNTY, NEW MEXICO

HISTORY: THE MILNESAND SAN ANDRES FIELD WAS DRILL STEM TESTED IN THE 1950'S DURING THE DEEPER PENNSYLVANIAN DEVELOPMENT. BY THE MID-1960'S THE FIELD WAS COMPLETELY DEVELOPED ON 40-ACRE SPACING WITH 147 WELLS (FIGURE I). THE MILNESAND UNIT WAS FORMED IN AUGUST 1969. WATER-FLOODING WAS INITIATED ON AUGUST 1970.

GEOGRAPHICAL: THE MILNESAND SAN ANDRES FIELD LIES ON THE NORTHWESTERN SHELF OF THE PERMIAN BASIN. IT IS A LINK IN THE CHAIN OF SAN ANDRES FIELDS FROM THE CATO FIELD IN CHAVES COUNTY, NEW MEXICO TO THE LEVELLAND-SLAUGHTER FIELDS IN HOCKLEY AND COCHRAN COUNTIES, TEXAS.

GEOLOGICAL: THE FIELD IS ON THE NOSE OF AN ANTICLINE PLUNGING TO THE SOUTHEAST AT 100 FEET/MILE.

PRODUCTION DATA: THE FIELD'S TOTAL CUMULATIVE OIL PRODUCTION IS 5,653,000 (AUGUST 1978). THE UNIT HAS PRODUCED 1,380,800 BBLS. OF OIL SINCE UNITIZATION IN AUGUST 1969.

MONOMER 5-SPOT PILOT AREA: AS SHOWN ON FIGURE I, BY THE BLUE OUTLINED AREA, UNION TEXAS PETROLEUM CONVERTED FIVE PRODUCING WELLS (31, 33, 35, 182, 192) TO INJECTORS IN OCTOBER, 1976. AFTER INJECTION STABILIZATION, A MONOMER CHEMICAL TREATMENT WAS PERFORMED ON EACH INJECTOR IN THIS AREA IN JULY AND AUGUST 1977. THIS WORK WAS DONE IN AN EFFORT TO REDUCE WATER CHANNELING TO PRODUCING WELLS AND IMPROVE VERTICAL AND HORIZONTAL SWEEP EFFICIENCIES IN THIS AREA. TO DATE, OIL PRO-

DUCTION IN THIS AREA IS RELATIVELY UNCHANGED, BUT WATER PRODUCTION HAS BEEN REDUCED APPROXIMATELY 250 BPD IN SEVENTEEN MONITOR WELLS (GREEN DOTS).

JUSTIFICATION FOR INFILL DRILLING:

RESERVOIR DISCONTINUITY IN THE SAN ANDRES FORMATION IS A COMMON PROBLEM IN THE PERMIAN BASIN. COMPREHENSIVE RESEARCH HAS BEEN DONE BY MANY OIL COMPANIES IN AN EFFORT TO DEFINE OR ESTABLISH DRAINAGE AND INJECTION PATTERNS. AS A RESULT OF THESE DISCONTINUITIES, MANY OIL TRAPS ARE LEFT UNTOUCHED UNDER NORMAL 40-ACRE DEVELOPMENT PATTERNS. THESE PRIMARY TRAPS, AS WELL AS SECONDARY TRAPS FORMED BY WATER INJECTION, ARE THE PRIMARY TARGETS OF DRILLING THE RESERVOIR ON DENSER SPACING.

FURTHER JUSTIFICATION FOR INFILLING THE MILNESAND UNIT ON 20-ACRE SPACING IS GIVEN BELOW IN THE TOPICS OF 1) BOTTOM-HOLE PRESSURE WORK, 2) INJECTION-PRODUCTION DISCREPANCIES, 3) VOLUMETRICS, 4) ULTIMATE RECOVERIES AND 5) GATHERING OF RESERVOIR DATA.

BOTTOM-HOLE PRESSURES:

BOTTOM-HOLE PRESSURE SURVEYS WERE CONDUCTED IN THE MILNESAND UNIT DURING THE FOURTH QUARTER OF 1977 IN AN EFFORT TO IDENTIFY POTENTIAL STIMULATION CANDIDATES AND GATHER DATA WHICH WOULD AID IN THE EVALUATION OF AN INFILL DEVELOPMENT PROGRAM. PRESSURES WERE RUN ON TEN (10) PRODUCING WELLS AND FOURTEEN (14) INJECTION WELLS (SEE FIGURE V). AS IS APPARENT FROM THE DRAINAGE AREA PRESSURES (P*), LARGE VARIATIONS EXIST BETWEEN OIL PRODUCERS WITHIN THE UNIT AS WELL AS BETWEEN INJECTORS AND PRODUCERS. THESE PRESSURES ILLUSTRATE THE NEED FOR INFILLING THE UNIT ON DENSER SPACING AS CONSISTENT COMMUNICATION DOES NOT EXIST ON THE PRESENT 40-ACRE DEVELOPMENT.

INJECTION-PRODUCTION DISCREPANCIES: PRODUCTION AND INJECTION VOLUMES IN ADJACENT PRODUCERS AND INJECTORS ILLUSTRATE RESERVOIR HETEROGENEITY. ALTHOUGH MANY EXAMPLES CAN BE QUOTED TO ILLUSTRATE THIS POINT, A TYPICAL DISCREPANCY IS NOTICED IN THE WELLS CENTRALLY LOCATED IN SECTION 13 (REFER TO FIGURE VI). INJECTION WELL NO. 56 WAS AN ORIGINAL SALT WATER DISPOSAL WELL. CUMULATIVE WATER INJECTION IS OVER 1,500,000 BARRELS. OFFSET WELLS WITH CURRENT PRODUCING RATES AND CUMULATIVE OIL PRODUCTION ARE LISTED BELOW:

WELL NO.	CURRENT TEST BOPD/BWPD	CUMULATIVE OIL PRODUCED
53	4 4	65,643
*55	6 4	91,148
59	5 5	63,986
*192	CONVERTED TO INJ.(OCT.1976)	115,497
194	2 2	35,499
197	2 2	32,069
510	5 4	75,548
511	3 2	45,938

THE VERY LOW PRODUCTION RATES FROM EACH WELL ABOVE ILLUSTRATES THE POOR EFFECTIVENESS OF WATERFLOODING MILNESAND UNIT ON 40-ACRE SPACING. THE AVERAGE OIL RECOVERY PER WELL IN THIS AREA IS 65,666 BBLS. THE LOW CUMULATIVE VOLUMES, AT THESE DEPLETED LOW RATES, SHOW LITTLE IF ANY FLOOD RESPONSE TO 88% OF THESE WELLS. ADDITIONALLY, THE MEASURED LOW B.H.P. IN WELL NO. 55 (241 PSI) INDICATES THAT IT HAS NOT BEEN AFFECTED BY A PRESSURE TRANSIENT FROM WATER INJECTION IN WELL

NO. 56, EVEN AFTER A CUMULATIVE WATER INJECTION OF 1,500,000 BBLS.

VOLUMETRICS: VOLUMETRIC CALCULATIONS FOR SEVERAL WELLS OFFSETTING THE TWO (2) PROPOSED LOCATIONS INDICATE THAT AN AVERAGE OF 25 ACRES PER WELL WAS DRAINED UNDER PRIMARY OPERATIONS. THESE CALCULATIONS WERE MADE ASSUMING THE ULTIMATE PRIMARY RECOVERY FOR TYPICAL SAN ANDRES PRODUCTION IS APPROXIMATELY 15% OF THE ORIGINAL OIL-IN-PLACE (OOIP). THE CALCULATED VS. ACTUAL ULTIMATE PRIMARY RECOVERIES OF FOUR (4) IMMEDIATE OFFSETS TO THE PROPOSED LOCATIONS ARE SHOWN BELOW. THE CALCULATED VALUES ARE BASED ON 25-ACRE DRAINAGE.

WELL NO.	AVG. Ø FROM LOGS	CALC. ULT. PRIMARY RECOVERY BBLS.	ACTUAL ULT. PRIMARY PRODUCTION, BBLS.
3437	6.3%	63,836	84,656
39	6.6%	64,909	80,074
313	6.4%	66,121	67,740
515	6.4%	53,405	63,000

IT SHOULD BE NOTED THAT THE ABOVE CALCULATIONS WERE MADE UTILIZING AVERAGE POROSITY VALUES TAKEN FROM ACOUSTIC LOGS WHICH ARE NOT NORMALLY CONSIDERED GOOD SECONDARY POROSITY TOOLS. CORES TAKEN IN THE MILNESAND SAN ANDRES UNIT INDICATE FRACTURING AND SECONDARY POROSITY WHICH HAS NOT BEEN ACCOUNTED FOR IN THE ABOVE CALCULATIONS. IN THE CASE OF WELL NOS. 37, 39 AND 515 ABOVE, THE EFFECTIVE POROSITY (DUE TO FRACTURING) WOULD ONLY HAVE TO BE INCREASED AN AVERAGE OF 1.5% TO MAKE THE CALCULATED AND ACTUAL ULTIMATE RECOVERIES MATCH MORE CLOSELY. THIS IS A SATISFACTORY EXPLANATION TO THE MINOR DISCREPANCIES NOTED BETWEEN THE CALCULATED AND ACTUAL ULTIMATE RECOVERIES SHOWN ABOVE.

FROM THE ABOVE DISCUSSION, I BELIEVE AT LEAST 15 ACRES OUT OF EVERY 40 ACRES WITHIN THE MAJORITY OF THE MILNESAND UNIT HAS NOT BEEN ADEQUATELY DRAINED. THIS REASONING AGREES WITH STUDIES DONE BY MANY OF THE SAN ANDRES OPERATORS IN WEST TEXAS.

ULTIMATE RECOVERIES: THE TWO (2) PROPOSED WELLS ARE TO BE DRILLED IN AN AREA OF THE UNIT IN WHICH CUMULATIVE OIL RECOVERIES ARE HIGH. FIGURE VI REPRESENTS AN ISO-CUMULATIVE MAP OF THE UNIT WITH THE PROPOSED LOCATIONS SHOWN IN RED. THE CUMULATIVE OIL RECOVERIES AND CURRENT PRODUCING RATES (AS OF AUGUST 1978) OF THE FOUR (4) WELLS IMMEDIATELY OFFSETTING THE PROPOSED WELLS ARE SHOWN BELOW:

WELL NO.	CURRENT PRODUCING RATE BOPD/BWPD	CUMULATIVE OIL RECOVERY (AUG. 1978) BBLS.
39	10/130	98,000±
313	47/110	107,200±
315	5/133	98,000±
515	47/212	147,200±

THE TWO (2) PROPOSED WELLS WILL BE DRILLED IN AN AREA OF THE UNIT IN WHICH CUMULATIVE OIL RECOVERIES TO DATE ARE EXCELLENT AND AVERAGE CURRENT PRODUCING RATES ARE HIGHEST. THIS WILL MINIMIZE THE RISKS OF OBTAINING AN UNECONOMIC COMPLETION.

THE ECONOMICS TABULATED ON PAGE 6 WERE BASED ON RECOVERING 70,000 BBLS./WELL OF PRIMARY AND SECONDARY OIL FROM THE PROPOSED LOCATIONS (35,000 BBLS. PRIMARY AND 35,000 BBLS. SECONDARY). COMPARING THE ULTIMATE PRIMARY AND TOTAL CUMULATIVE OIL TO DATE, IT CAN BE SEEN THAT AN ULTIMATE RECOVERY OF 70,000 BBLS/WELL IS SOMEWHAT CONSERVATIVE AS THE TOTAL OIL CUMULATIVES TO DATE RANGE BETWEEN 98.0 AND 147.2 Thousand BARRELS FOR THE FOUR OFFSET PRODUCERS ANALYZED.

RESERVOIR DATA: THE DRILLING OF THE PROPOSED WELLS WILL ALLOW VALUABLE RESERVOIR DATA TO BE OBTAINED THROUGH CORING AND DETAILED LOGGING WHICH WILL BE USED IN DETERMINING THE EFFICIENCY OF THE CURRENT WATER INJECTION PATTERN AND WILL PROVIDE RESERVOIR DATA WHICH WILL BE NEEDED IN THE FUTURE TO EVALUATE ADDITIONAL SECONDARY OR TERTIARY RECOVERY TECHNIQUES. RESULTS TO BE GATHERED FROM THE DATA WILL INCLUDE PVT ANALYSIS, CURRENT SATURATIONS OF OIL, WATER AND GAS, PERMEABILITIES, POROSITIES AND RELATIVE PERMEABILITY DATA. THE DETAILED LOGGING PROGRAM WILL ALLOW A BETTER CORRELATION WITH ACTUAL CORE DATA.

ECONOMICS: THE ECONOMICS FOR EACH OF THE PROPOSED INFILL WELLS ARE SHOWN BELOW:

MILNESAND (S.A.) UNIT WELL NO. 521

ESTIMATED COST	$245,100
GROSS RECOVERABLE OIL	70,000 BBLS.
INITIAL PRODUCING RATE	55 BOPD
OIL PRICE	$13.56/BBL.
UNDISC. FUTURE CASH FLOW	$135,400
PRESENT WORTH @ 8%	$51,900
DISC. CASH FLOW ROR	55%
RETURN ON INVESTMENT	2.1:1
PAYOUT	1.4 YEARS

MILNESAND (S.A.) UNIT WELL NO. 319

ESTIMATED COST	$229,600
GROSS RECOVERABLE OIL	70,000 BBLS.
INITIAL PRODUCING RATES	55 BOPD
OIL PRICE	$13.56/BBL.
UNDISC. FUTURE CASH FLOW	$133,300
PRESENT WORTH @ 8%	$53,900
DISC. CASH FLOW ROR	58%
RETURN ON INVESTMENT	2.2:1
PAYOUT	1.3 YEARS

SUMMARY AND CONCLUSIONS

IN SUMMARY, THE DRILLING OF THE TWO PROPOSED LOCATIONS WILL ACCOMPLISH THE FOLLOWING:

1. INCREASE GROSS OIL PRODUCTION BY 110 BOPD AND OIL RESERVES BY 140,000 BARRELS.
2. VERIFY THE NEED FOR INFILL DRILLING THE MAJORITY OF THE MILNE-SAND UNIT ON 20-ACRE SPACING. ULTIMATELY, 45-60 ADDITIONAL WELLS COULD BE REQUIRED. THIS WOULD DEVELOP GROSS OIL RESERVES OF 2,250,000 - 3,000,000 BARRELS.
3. ALLOW VALUABLE RESERVOIR DATA TO BE GATHERED THROUGH CORING, LOGGING AND PRESSURE WORK WHICH WILL BE USED TO DETERMINE THE EFFICIENCY OF THE PRIMARY PRODUCING OPERATIONS AND SECONDARY WATER INJECTION. THE DATA WILL ALSO AID EVALUATION OF POSSIBLE FUTURE TERTIARY RECOVERY TECHNIQUES.
4. THE DRILLING OF THE TWO PROPOSED WELLS WILL PERMIT ALL OF THE ABOVE TO BE ACCOMPLISHED WITH FAVORABLE ECONOMICS.

BASED ON THE ABOVE DISCUSSION, IT IS RECOMMENDED THAT THE TWO WELLS BE APPROVED AT THE PROPOSED LOCATIONS.

E.D. Gruben

Dockets Nos. 34-78 and 35-78 are tentatively set for hearing on October 25 and November 8, 1978. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - OCTOBER 11, 1978

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

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

CASE 6338: Application of Charles C. Loveless for an unorthodox well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be drilled 660 feet from the South line and 1980 feet from the East line of Section 23, Township 17 South, Range 26 East, Kennedy Farms Field, Eddy County, New Mexico, the E/2 of said Section 23 to be dedicated to the well.

CASE 6040: (Reopened and Readvertised)

In the matter of Case 6040 being reopened pursuant to the provisions of Order No. R-5552 which order created the North Teague-Devonian Pool, Lea County, New Mexico, with a special gas-oil ratio limitation of 4000 to 1. All interested parties may appear and show cause why the limiting gas-oil ratio for said pool should not revert to 2000 to 1.

CASE 6339: Application of Amoco Production Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formation underlying the S/2 of Section 22, Township 23 South, Range 28 East, Eddy County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6321: (Continued and Readvertised)

Application of Texas Oil & Gas Corporation for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Shugart State Com. Well No. 1 to be drilled 714 feet from the South line and 2062 feet from the West line of Section 16, Township 18 South, Range 31 East, Eddy County, New Mexico, the W/2 of said Section 16 to be dedicated to the well.

CASE 6320: (Continued and Readvertised)

Application of Texas Oil & Gas Corporation for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Coquina Federal Com Well No. 1 to be drilled 710 feet from the North line and 2330 feet from the West line of Section 32, Township 18 South, Range 27 East, Eddy County, New Mexico, the W/2 of said Section 32 to be dedicated to the well.

CASE 6340: Application of Supron Energy Corporation for downhole commingling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Atoka and Strawn production in the wellbore of its Shelby Federal Well No. 1 located in the NE/4 of Section 13, Township 22 South, Range 24 East, Eddy County, New Mexico.

CASE 6341: Application of Supron Energy Corporation for dual completions and downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks the dual completion of its Jicarilla A Well No. 8 located in the NW/4 of Section 23; its Jicarilla E Well No. 7 located in the SE/4 of Section 15; and its Jicarilla E Well No. 8 located in the NW/4 of Section 15, all in Township 26 North, Range 4 West, Rio Arriba County, New Mexico, to produce gas from the Mesaverde formation through a separate string of tubing and to commingle Gallup and Dakota production in the wellbores of said wells.

CASE 6342: Application of Supron Energy Corporation for a dual completion and downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Jicarilla J Well No. 10 located in the SE/4 of Section 26, Township 26 North, Range 5 West, Rio Arriba County, New Mexico, to produce gas from the Pictured Cliffs formation through a separate string of tubing and to commingle Tocito and Dakota production in the wellbore of said well.

CASE 6343: Application of Supron Energy Corporation for a dual completion and downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Jicarilla H Well No. 8 located in the SE/4 of Section 11, Township 26 North, Range 4 West, Rio Arriba County, New Mexico, to produce gas from the Pictured Cliffs formation through a separate string of tubing and to commingle Gallup and Dakota production in the wellbore of said well.

CASE 6344: Application of Supron Energy Corporation for a dual completion and downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Jicarilla F Well No. 1 located in the SW/4 of Section 27, Township 26 North, Range 4 West, Rio Arriba County, New Mexico, to produce gas from the Pictured Cliffs formation through a separate string of tubing and to commingle Mesaverde and Dakota production in the wellbore of said well.

CASE 6345: Application of Supron Energy Corporation for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Gallup and Dakota production in the wellbore of its Jicarilla H Well No. 7 located in the SW/4 of Section 19, Township 26 North, Range 4 West, Rio Arriba County, New Mexico.

CASE 6346: Application of Supron Energy Corporation for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Pictured Cliffs and Chacra production in the wellbore of its Jicarilla K Well No. 14 located in the SE/4 of Section 11, Township 25 North, Range 5 West, Rio Arriba County, New Mexico.

CASE 6347: Application of Supron Energy Corporation for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Chacra and Dakota production in the wellbore of its Jicarilla K Well No. 17 located in the SW/4 of Section 12, Township 25 North, Range 5 West, Rio Arriba County, New Mexico.

CASE 6348: Application of Supron Energy Corporation for downhole commingling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Mesaverde and Dakota production in the wellbore of its Starr Well No. 3 located in the NE/4 of Section 5, Township 26 North, Range 8 West, San Juan County, New Mexico.

CASE 6349: Application of Consolidated Oil & Gas, Inc. for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of B.S. Mesa-Gallup and Basin-Dakota production in the wellbore of its Hoyt Well No. 1-5 located in Unit H of Section 5, Township 26 North, Range 4 West, Rio Arriba County, New Mexico.

CASE 6350: Application of Petro-Lewis Corporation for an unorthodox well location, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval of the unorthodox location in the Mesaverde formation for its Florance Well No. 7 located 2028 feet from the North line and 1040 feet from the West line of Section 4, Township 25 North, Range 3 West, Tapacito Field, Rio Arriba County, New Mexico, the NW/4 of said Section 4 to be dedicated to the well.

CASE 6351: Application of Southland Royalty Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formation underlying the N/2 of Section 16, Township 19 South, Range 29 East, Eddy County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6352: Application of Southland Royalty Company for three dual completions, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Decker Well No. 2A located in Unit I of Section 26, Township 32 North, Range 12 West, and its Grenier "A" Well No. 1A in Unit C of Section 26, Township 30 North, Range 10 West, to produce gas from the Blanco-Pictured Cliffs and the Blanco Mesaverde pools and its Patterson "B" Com Well No. 1R in Unit C of Section 2, Township 31 North, Range 12 West, to produce gas from the Aztec-Pictured Cliffs and Blanco Mesaverde pools, all in San Juan County, New Mexico, with separation of the zones in each of the above wells to be achieved by means of a polished bore receptacle and mandrel.

CASE 6353: Application of Union Texas Petroleum for two unorthodox well locations, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox locations of its Milnesand Unit Well No. 241 to be drilled 2630 feet from the North line and 100 feet from the East line of Section 24, Township 8 South, Range 34 East, and its Milnesand Unit Well No. 1901 to be drilled 1310 feet from the North and West lines of Section 19, Township 8 South, Range 35 East, Milnesand San Andres Pool, Roosevelt County, New Mexico.

CASE 6354: In the matter of the hearing called by the Oil Conservation Division on its own motion for an order creating and extending vertical and horizontal limits of certain pools in Chaves, Eddy, Lea, and Roosevelt Counties, New Mexico:

(a) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Bone Springs production and designated as the Ross Draw-Bone Springs Gas Pool. The discovery well is D. B. Baxter Ross Draw Unit Well No. 5 located in Unit K of Section 27, Township 26 South, Range 30 East, NMPM. Said pool would comprise:

TOWNSHIP 26 SOUTH, RANGE 30 EAST, NMPM
Section 27: SW/4

(b) CREATE a new pool in Chaves County, New Mexico, classified as a gas pool for Atoka production and designated as the South Sand Ranch-Atoka Gas Pool. The discovery well is Depco, Inc. Beall Federal Well No. 1 located in Unit G of Section 17, Township 11 South, Range 30 East, NMPM. Said pool would comprise:

TOWNSHIP 11 SOUTH, RANGE 30 EAST, NMPM
Section 17: E/2

(c) EXTEND the Angell Ranch-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 27 EAST, NMPM
Section 25: All
Section 36: N/2

TOWNSHIP 20 SOUTH, RANGE 27 EAST, NMPM
Section 1: E/2

(d) EXTEND the Bluitt-San Andres Associated Pool in Roosevelt County, New Mexico, to include therein:

TOWNSHIP 8 SOUTH, RANGE 38 EAST, NMPM
Section 16: N/2
Section 17: NE/4

(e) EXTEND the Buckeye-Abo Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 35 EAST, NMPM
Section 3: W/2

(f) EXTEND the East Burton Flat-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 29 EAST, NMPM
Section 5: E/2

(g) EXTEND the East Chisum-San Andres Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 11 SOUTH, RANGE 28 EAST, NMPM
Section 9: NW/4 SE/4
Section 10: W/2 SW/4
Section 21: NE/4 NW/4

(h) EXTEND the vertical limits of the Comanche Stateline-Yates Pool in Lea County, New Mexico, to include the Tansill formation and redesignate said Comanche Stateline-Yates Pool as the Comanche Stateline Tansill-Yates Pool.

(i) EXTEND the Corbin-Queen Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 33 EAST, NMPM
Section 35: NW/4

(j) EXTEND the Crooked Creek-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 24 EAST, NMPM
Section 16: N/2

(k) EXTEND the South Empire-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 28 EAST, NMPM
Section 25: S/2

TOWNSHIP 17 SOUTH, RANGE 29 EAST, NMPM
Section 30: N/2

TOWNSHIP 18 SOUTH, RANGE 28 EAST, NMPM
Section 13: N/2

TOWNSHIP 18 SOUTH, RANGE 29 EAST, NMPM
Section 7: S/2
Section 18: All

(l) EXTEND the West Four Mile Draw-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 26 EAST, NMPM
Section 6: S/2

(m) EXTEND the Gladiola-Wolfcamp Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 12 SOUTH, RANGE 38 EAST, NMPM
Section 5: NW/4

(n) EXTEND the Herradura Bend-Delaware Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 28 EAST, NMPM
Section 31: W/2 E/2
Section 32: NE/4 NE/4

TOWNSHIP 23 SOUTH, RANGE 28 EAST, NMPM
Section 5: W/2 NW/4

(o) EXTEND the Hume-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 34 EAST, NMPM
Section 5: S/2
Section 8: E/2

(p) EXTEND the Indian Flats-Delaware Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 28 EAST, NMPM
Section 35: S/2 SW/4

TOWNSHIP 22 SOUTH, RANGE 28 EAST, NMPM
Section 2: N/2 NW/4

(q) EXTEND the South Kemnitz-Upper Wolfcamp Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 34 EAST, NMPM
Section 33: SW/4

(r) EXTEND the Kennedy Farms-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 26 EAST, NMPM
Section 33: E/2

(s) EXTEND the East Lusk-Wolfcamp Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 32 EAST, NMPM
Section 16: NE/4

(t) EXTEND the Many Gates-Morrow Gas Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 30 EAST, NMPM
Section 31: All

(u) EXTEND the North Mescalero-Cisco Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 10 SOUTH, RANGE 32 EAST, NMPM
Section 11: NW/4

(v) EXTEND the Millman-Strawn Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 28 EAST, NMPM
Section 18: All

(w) EXTEND the Monument-Paddock Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 37 EAST, NMPM
Section 21: NE/4

(x) EXTEND the South Peterson-Fusselman Pool in Roosevelt County, New Mexico, to include therein:

TOWNSHIP 5 SOUTH, RANGE 33 EAST, NMPM
Section 31: E/2

(y) EXTEND the Quail Ridge-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 34 EAST, NMPM
Section 16: S/2

(z) EXTEND the Red Lake-Pennsylvanian Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 27 EAST, NMPM
Section 19: E/2
Section 20: W/2

(aa) EXTEND the Sand Dunes-Cherry Canyon Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 23 SOUTH, RANGE 31 EAST, NMPM
Section 23: E/2 SE/4 and NW/4 SE/4

(bb) EXTEND the Sand Ranch-Atoka Gas Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 10 SOUTH, RANGE 29 EAST, NMPM
Section 23: N/2

(cc) EXTEND the North Shugart-Atoka Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 31 EAST, NMPM
Section 21: W/2

(dd) EXTEND the North Shugart-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 31 EAST, NMPM
Section 21: W/2

(ee) EXTEND the Tomahawk-San Andres Pool in Roosevelt County, New Mexico, to include therein:

TOWNSHIP 7 SOUTH, RANGE 32 EAST, NMPM
Section 30: NE/4
Section 31: SE/4
Section 32: NW/4

(ff) EXTEND the Tubb Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM
Section 6: NW/4

TOWNSHIP 22 SOUTH, RANGE 38 EAST, NMPM
Section 31: SW/4

(gg) EXTEND the North Turkey Track-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 28 EAST, NMPM
Section 25: W/2

TOWNSHIP 18 SOUTH, RANGE 29 EAST, NMPM
Section 29: N/2
Section 31: S/2

(hh) EXTEND the Twin Lakes-San Andres Associated Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 8 SOUTH, RANGE 28 EAST, NMPM
Section 25: S/2 SW/4

TOWNSHIP 9 SOUTH, RANGE 28 EAST, NMPM
Section 1: SW/4 NE/4, NW/4 SE/4, SW/4 NW/4 and NW/4 SW/4

(ii) EXTEND the Vacuum Grayburg-San Andres Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 36 EAST, NMPM
Section 19: NW/4

Docket No. 33-78

DOCKET: EXAMINER HEARING - WEDNESDAY - OCTOBER 18, 1978

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

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

ALLOWABLE: (1) Consideration of the allowable production of gas for November, 1978, from fifteen prorated pools in Lea, Eddy, and Chaves Counties, New Mexico.

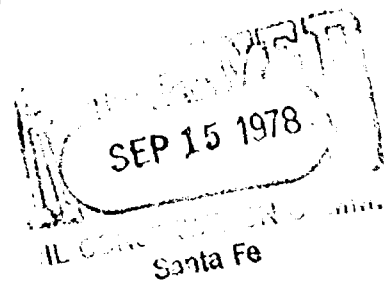
(2) Consideration of the allowable production of gas for November, 1978, from four prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico.

Allied Chemical

Union Texas Petroleum Division
1300 Wilco Building
Midland, Texas 79701

Application for Hearing for NSL

September 13, 1978



Case 6353

State of New Mexico
Energy and Minerals Department
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Attention: Mr. Stamnets

Re: Drilling Permits
Milnesand Unit #241
Milnesand Unit #1901
Roosevelt County, New Mexico

Gentlemen:

Union Texas Petroleum respectfully request permission to drill the following infill wells as exceptions under the provisions of Rule 104-C as non-standard locations:

Milnesand Unit #241
Lease #LC-062178
2630' FNL & 100' FEL
Section 24, T-8-S, R-34-E
Roosevelt County, New Mexico

Milnesand Unit #1901
Lease #LC-060978
1310' FNL & 1310' FWL
Section 19, T-8-S, R-35-E
Roosevelt County, New Mexico

Milnesand Unit #241 will be located 10' FSL & 100' FEL of the SE/4 of the NE/4, Section 24. Milnesand Unit #1901 will be located 10' FSL & 10' FEL of the NW/4 of the NW/4, Section 19. Union Texas Petroleum feels these wells should be drilled at these locations to properly drain the reserves that would remain unswept from existing waterflood operations. Both of these 40 acre quarter sections are surrounded by acreage belonging to the Milnesand San Andres Unit, which Union Texas Petroleum operates. Therefore, there was no notification to offset operators.

ROUGH

dr/

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

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

CASE NO. 6353

Order No. R-5842

APPLICATION OF UNION TEXAS PETROLEUM FOR TWO UNORTHODOX WELL LOCATIONS, ROOSEVELT COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on October 11, 1978, at Santa Fe, New Mexico, before Examiner Richard L. Stamets

NOW, on this _____ day of October, 1978, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, Union Texas Petroleum, is the operator of the Milnesand (San Andres) Unit Waterflood Project authorized by Order No. R-3770, entered May 28, 1967.

(3) That the applicant ~~Union Texas Petroleum~~ seeks approval of two unorthodox well locations for its Milnesand

(to be renumbered No. 521)

Unit Well No. 241 to be drilled 2630 feet from the North line and 100 feet from the East line of Section 24, Township 8 South, Range 34 East, and its Milnesand Unit Well No. 1901 (to be renumbered 319) to be drilled 1310 feet from the North line and 1310 feet from the West line of Section 19, Township 8 South, Range 35 East, Milnesand San Andres Pool, Roosevelt County, New Mexico.

(4) That the SE/4 NE/4 of said Section 24 and the NW/4 NW/4 of said Section 19 are to be dedicated to ~~the~~ said wells, respectively.

(5) That wells at said unorthodox locations will better enable applicant to produce the remaining secondary oil reserves ~~gas~~ underlying the proration unit.

(6) That no offset operator objected to the proposed unorthodox locations.

(7) ~~(8)~~ That the applicant further seeks approval of additional producing wells and an administrative procedure for the ~~addition of~~ injection wells and the conversion of existing wells to injection at both orthodox and unorthodox locations without further notice and hearing for said waterflood project.

(8) ~~(14)~~ That the establishment of such an administrative procedure would permit the more efficient operation of the ~~proposed~~ project.

(7) That approval of the subject application will afford the applicant the opportunity to produce its just and equitable share of the gas in the subject pool, will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, and will otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That two unorthodox gas well locations for the San Andres formation are hereby approved for the Union Texas Petroleum Milnesand Unit Well No. 241 ~~to be~~ (to be renumbered No 521) to be drilled 2630 feet from the North line and 100 feet from the East line of Section 24, Township 8 South, Range 34 East, and its Milnesand Unit Well No. 1901 (to be renumbered No 819) to be drilled 1310 feet from the North line and 1310 feet from the West line of Section 19, Township 8 South, Range 35 East, Milnesand San Andres Pool, Roosevelt County, New Mexico.

(2) That the SE/4 NE/4 of said Section 24 and the NW/4 NW/4 of said Section 19 shall be dedicated to the above-described wells, respectively.

IT IS FURTHER ORDERED:

(1) ~~(II)~~ The ~~Secretary~~-Director of the ~~Commission~~ Division is hereby authorized to approve such additional producing wells and injection wells at orthodox and unorthodox locations within the boundaries of applicant's Milnesand (San Andres) Unit Area as may be necessary to complete an efficient production and injection pattern, provided said wells are drilled no closer than 330 feet to the Unit boundary nor closer than 10 feet to any quarter-quarter section or subdivision inner boundary. To obtain such approval, the project operator shall file proper application with the Division ~~the Commission~~, which application, if it seeks authorization to convert additional wells to injection or to drill additional production or injection wells shall include the following:

(a) A plat showing the location of the proposed well, all wells within the project area, and offset operators, locating wells which offset the project area.

(b) A schematic drawing of the proposed well which fully describes the casing, tubing, perforated interval, and depth, and a demonstration that any proposed injection well will meet applicable construction, pressure and monitoring provisions. ~~of Orders Nos. (2), (3), (4), (6), and (7) of this Order or the equivalent~~.

(c) A letter stating that all offset operators to the proposed well have been furnished a complete copy of the application and the date of notification.

The ~~Secretary~~ Director of the ~~Commission~~ Division may approve the proposed well if, within 20 days after receiving the application, no objection to the proposal is received. The ~~Secretary~~ Director may grant immediate approval, provided waivers of objection are received from all offset operators.

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

DONE at Santa Fe, New Mexico, on the day and year herein-

DRAFT

dr/

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

CASE NO. 6353

Order No. R- 5842-A

APPLICATION OF UNION TEXAS PETROLEUM FOR TWO UNORTHODOX WELL LOCATIONS, ROOSEVELT COUNTY, NEW MEXICO.

NUNC PRO TUNC ORDER

BY THE DIVISION:

It appearing to the Division that Order No. R-5842, dated October 20, 19 78, does not correctly state the intended order of the Division,

IT IS THEREFORE ORDERED:

(1) That ~~Paragraph~~ Finding (9) on Page 2 of Order No. R-5842, Case No. 6353, be and the same is hereby corrected to read in its entirety as follows:

"(9) That approval of the subject application will afford the applicant the opportunity to produce it just and equitable share of the oil in the subject pool, will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, and will otherwise prevent waste and protect correlative rights."

(2) That ~~Paragraph~~ Order (1) on Page 2 be and the same is hereby corrected to read in its entirety as follows:

"(1) That two unorthodox oil well locations for the San Andres formation are hereby approved for the Union Texas Petroleum Milnesand Unit Well No. 241 (to be renumbered No. 521) to be drilled 2630 feet from the North line and 100 feet from the East line of Section 24, Township 8 South, Range 34 East, and its Milnesand Unit Well No. 1901 (to be renumbered No. 319) to be drilled 1310 feet from the North line and 1310 feet from the West line of Section 19, Township 8 South, Range 35 East, Milnesand San Andres Pool, Roosevelt County, New Mexico."

(3) That the corrections set forth in this order be entered nunc pro tunc as of October 20, 1978.

DONE at Santa Fe, New Mexico, on this _____day of November, 1978.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY,
Director