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

11 July 1984

EXAMINER HEARING

IN THE MATTER OF

Application of The Ronadero Company, Inc. for downhole commingling and dual completion, Lea County, New Mexico. CASE 8258

BEFORE: Richard L. Stamets, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division:

For the Applicant: Owen M. Lopez
Attorney at Law
HINKLE LAW FIRM
P. O. Box 2068
Santa Fe, New Mexico 87501

I N D E X

JOE JANICA

E X H I B I T S

MR. STAMETS: We'll call next Case 8258, application of Ronadero Company, Inc. for downhole comingling and dual completion, Lea County, New Mexico.

MR. LOPEZ: Mr. Examiner, my name is Owen Lopez with the Hinkle Law Firm in Santa Fe, New Mexico, and I have one witness to be sworn.

MR. STAMETS: Any other appearances in this case?

(Witness sworn.)

JOE JANICA,

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

DIRECT EXAMINATION

BY MR. LOPEZ:

Q Would you please state your name and where you reside?

A My name is Joe Janica and I reside in Hobbs, New Mexico.

Q What is your employment, Mr. Janica?

A I'm a consulting -- President of a consulting engineering firm, Natural Resources Engineering.

I was retained by Ronadero Company, Inc.

to represent them at this hearing.

Q Are you familiar with the application in Case Number 8258?

A Yes, I am.

Q Have you previously testified before this Commission and had your qualifications accepted as a matter of record?

A Yes, sir, I have.

MR. LOPEZ: Do you consider the witness qualified?

MR. STAMETS: Yes.

Q What is it that Ronadero seeks in Case Number 8258?

A Ronadero seeks approval of downhole commingling of production from the Pennsylvanian and Devonian formations and also at a later date Ronadero would seek administrative approval for dual completion with the tubing -- Devonian producing through tubing and the Penn producing through the casing.

Q Where is the proposed well located that we propose to dually complete?

A Okay, this well is located in Section 23, Unit Number -- Unit F, in 12 South, 32 East, Lea County, New Mexico.

Q Mr. Janica, I'd refer you to what's been marked Exhibit Number One and ask you to identify it.

A This is a letter requesting a commingling

permit and I'll start with the last page on that, if I may.

It's a land plat colored showing the Ronadero acreage in the middle in purple and all the offset operators colored in different colors. There's a legend down on the lower righthand side indicating who the offset operators are.

MR. LOPEZ: I think that's the second to last page, Mr. Examiner. Yeah, you're on it.

Q Okay.

A And then the second to the last page is a page that indicates the productive wells in the Devonian and Pennsylvanian formation within a one-mile radius of Ronadero's Rob-Clay No. 1.

We have two wells in the Pennsylvanian, one operated by Newcorp; one operated by Cities Service to the south, and a Devonian well operated by Wagner-Brown to the east, and the Ronadero Well is in Section -- in the Unit E there, or F, I'm sorry, and it's a dual completed -- it's a dual completed well.

Q Have you notified all the offset operators of this application?

A Yes, we have. Attached are certified receipts and a list of offset operators.

There is one page there, Mr. Examiner, you'll notice was sent to Newcorp Corporation, Southland Center, which was returned to us and subsequently we sent them a letter to San Antonio, which is their headquarters

now, I guess, and they received the letter Monday.

I talked to their Chief Geologist, Mr. Lloyd Towers, yesterday and he said he received the letter, but beyond that I don't have any other communication from them.

Q Okay. Mr. Janica, does the information contained in the letter discuss the test results?

A Yes, it --

Q For each zone?

A Yes, it does. Beginning on the first page, now, initial test results of the Pennsylvanian was flowing tubing pressure 820 pounds with 16 barrels of oil and 820 Mcf per day with zero barrels of water.

Devonian, flowing tubing pressure 40 with 206 barrels a day, 31 Mcf and 30 barrels of water.

Currently the Devonian produces about 15 percent water but we can probably -- it made -- it will probably come up, and at that time the Devonian would require artificial lift.

Q What about the bottom hole pressure which is --

A Okay, the bottom hole pressure in the Pennsylvanian on a 24-hour build-up at a datum of 10,328 was 40 -- correct, 1747, and a bottom hole pressure in the Devonian from a 4-hour shut-in on a drill stem test at 11,207 was 4334.

Q Is the owner, is the mineral ownership of

both the Devonian and the Pennsylvanian formations common?

A Yes, they are.

Q Or identical?

A They are.

Q I'd now ask you to refer to what's been marked Exhibit Number Two and ask you to identify it.

A That is a wellbore sketch of the Rob-Clay No. 1.

We've got 13-3/8ths casing set at 378 and cemented with 425 sacks and circulated 100 sacks to surface, and tested okay.

And then they've got 8-5/8ths set at 3650 with 1750 sacks and circulated 30 sacks to surface and tested okay.

The production string is 5-1/2, 17-pound set at 11,210, cemented with 600 sacks, calculated top of -- correction, temperature surveyed top is at 8500 feet, and we have currently 2-7/8ths tubing in the hole with a packer set at 10,040 and arrangement of the tubing, plug 30 foot anchor, 7-foot perforated nipple, four joints of tubing, a packer, a Baker F nipple and 26 joints of tubing, sliding sleeve, and 334 joints of tubing.

It also shows, it shows the packer where it's set and the Baker F nipple. It shows the perforations, where the sliding sleeve is located, and also shows the proposed intervals that the gas lift valve will be situated.

Q Could you explain how these gas lift

valves are proposed to work and how the production from the two zones will be commingled?

A Okay. The production from the two zones will be commingled in the tubing.

The pressure from the Pennsylvanian gas will actuate the gas lift valves assuming that the fluid level will be 2000 feet from surface.

We have a computer program indicating where we set gas lift valves, depending on the gravity of the -- the density of the oil, and they will unload at certain intervals beginning at the top perfs and aerate enough of the Devonian oil to produce the Devonian oil with the Penn gas.

They have check valves and the gas lift valves are checked where there will be no flow back into the casing from the tubing and we propose setting a standing valve and seating nipple, or the F nipple, at 10,360 with a one way check in that where Devonian oil can come up in the tubing but Penn gas cannot go back into the Devonian formation.

So essentially what we're doing, we're commingling the Devonian oil and the Penn gas from the Penn section in the tubing.

Q Okay. I'd refer you to what's been marked Exhibit Number Three and ask you to identify and explain this.

A Okay, I think Number Three is a cost es-

timate differential, the first being a bent beam and rod pumping installation at a cost of just the material itself, would cost approximately $78,000 to install.

The gas lift system, using Penn gas, would cost approximately $17,000 and a submergible pumping system with submergible pump, conservatively estimated at $62,500.

Q Now, I think at this time it might be helpful for you to explain to the Examiner what kind of Devonian production you expect and why.

A On test, we tested twelve hours, and it flowed 106 barrels of oil, 103 barrels of oil, and we -- eventually it was lifting very little water, approximately, at that time, approximately about 10 percent, and also the Devonian is known for increasing oil -- water production, sorry.

The well to the east produces about 3 percent oil and the rest of it's water. It's operated on a submergible system.

So in all indications to us the water cut will increase and the Devonian oil, naturally the oil cut will decrease, and it would be a lot better to use this gas lift system, in our estimation, to lift this, and it would be more econmical this way.

Q Is it your opinion that your well at least temporarily is experiencing a benefit from the re-injection of the water to the north being produced by the

well to the east?

A That is a good possibility, yes.

Q And how much water is being produced by the well to the east, approximately?

A Last year I think it made 360 or 326 to a 1000 barrels.

Q Is it your testimony here today that the use of the gas lift valves to produce the Devonian oil is economically justified versus the other lift systems that might be incorporated?

A Yes, I do.

Q And is this based on the -- on your opinion that due to the water cut potential of the Devonian that that zone is not as reliable as the Pennsylvanian zone at this time?

A That's affirmative.

Q I'd ask you to refer to what's been marked Exhibit Number Four and ask you to identify and explain it.

A Okay, Exhibit Four is a cased hole neutron log of the well, abbreviated as such, with the detailed section and a condensed section.

For the detailed section first, which indicates the Devonian perforation at the bottom highlighted in green and showing the perforations at 11,188 to 205, coming up to -- up the hole to 10 -- 10,300, we see the perforations there are highlighted in yellow, perforations at that

interval in the Pennsylvanian are 10,016 to 40.

Q What is the approximate cost of this well?

A It cost between $650 and $700,000.

Q I'd now refer to you what's been marked Exhibit Number Five and Six and ask you to identify and explain those.

A Those are C-116's, tests taken on the Pennsylvanian formation and Exhibit Six is a C-116 on the Devonian formation.

Q Do you have a recommended allocation with respect to the production from the two zones?

A Yes, I do.

Q And what is it?

A Okay, that is indicated in Exhibit One.

I recommend that 94 percent of the gas produced out of this wellbore be credited to the Pennsylvanian and 6 percent of the gas being credited to the Devonian, and 5 percent of the oil being credited to the Penn and 95 percent being credited to the Devonian.

Q Okay, is this well located on a State lease?

A Yes, it is.

Q And do you by any chance know the State lease number?

A Yes, I think I do.

Q It's right there.

A Okay, it's State Lease B-9948-5.

Q And would explain the reason why at this time you would like the Commission to go ahead and grant constructively administrative approval for a possible future dual completion rather than commingling?

A Okay. Due to our limited experience in gas lift systems, where we don't have a constant pressure and volume furnished by a compressor from the surface, we're not actually sure of how long this gas lift system will work.

At the point where we're lifing too much Devonian gas -- oil, or correction, too much Devonian water, and the gas lift system won't work efficiently, there is a good reasonable chance that we would go to a rod pumping system or a submergible pump and pump the Devonian through the tubing and flow the Penn through the casing.

Q That assumes that in the event there's any oil to be produced and it is commercially feasible to do so.

A Yes, right.

Q And you won't know that until you've had some experience with producing it as you've suggested.

A That's affirmative.

Q Is it your opinion that the granting of this application is in the interest of the prevention of waste and the protection of correlative rights?

A Yes, I do.

Q Were Exhibits One through Six prepared by you or under your supervision?

A Yes, they were.

MR. LOPEZ: I'd like to offer Applicant's Exhibits One through Six.

MR. STAMETS: These exhibits will be admitted.

Q Is there any desire on your part, Mr. Janica, to the extent that you can diplomatically urge it, that this order be expedited?

A Yes. The operator would like to get started on doing it, and we would like to start this as soon as we could get permission to start it.

Q Do you have anything further in this case?

A No, I have nothing further.

MR. LOPEZ: That concludes our direct testimony.

CROSS EXAMINATION

BY MR. STAMETS:

Q Mr. Janica.

A Yes, sir.

Q In looking at the exhibit that is the wellbore --

A Yes, sir.

Q -- diagram, how are you going to produce

any Pennsylvanian oil out of this well under this arrangement?

A Under this arrangement?

Q Yes.

A The oil will come in with the gas, the amount of liquids that are there.

Q So that -- okay, so you've got gas lift valves from 2043 feet to 6769 feet.

A Yes, sir.

Q And you've got oil then which would flow up the casing-tubing annulus from 10,300 to 6700, more or less.

A Right.

Q All right.

A This will not be a pulsating, it will be a continuous flow.

Q All right. Do you have any evidence to show that that type of production will be efficient and efficiently and effectively use the reservoir energy from the Pennsylvanian?

A Yes, I think it would be used effectively in that you're using it to lift -- to produce its natural state out of the Penn.

Likewise you are using -- lifting it, once it gets in the tubing, to lift the Devonian.

You're utilizing the pressure, it will decrease your pressure at the surface by using the energy to

lift the Devonian oil.

Q Nevertheless, though, you've got a lot more friction potential there with the tubing and the casing both in contact with Pennsylvanian production that you don't normally have. Is that going to result in the efficient flow or are you going to wind up with the oil flowing more slowly and more gas being produced and oil reserves being left in the well?

A Due to the high ratio, I can't say yes or no, but I think that the high ratio of the gas would keep it in suspension.

So little fluid is produced out of that Pennsylvanian.

Q The East Caprock Pennsylvanian, is that classified as an oil well -- or an oil pool?

A Oil.

Q And what's the spacing?

A 40 acres.

Q It would be 40 acres then for both.

A Yes, sir. The Newtex well to the south produces at -- it's got a 10,000-to-1 ratio limit, and it produces about a million day, I guess, of gas and about, I don't know, 16-18 barrels oil, I think.

I stand corrected on that. I'm not sure.

Q Is this equipment in the hole now?

A The gas lift valves are not in the hole now, no.

Didn't want to push it.

Q I would still like to see some calculations to show that the Pennsylvanian can be produced efficiently through that casing/tubing annulus. That's the sort of thing we're going to have to have before we can authorize a dual completion, in any event.

Can you submit that after the hearing?

A Yes, I will.

MR. STAMETS: Are there other questions of the witness?

MR. CLEMENTS: Yes.

MR. STAMETS: Mr. Clements.

QUESTIONS BY MR. CLEMENTS:

Q Mr. Janica, are these pressure operated or (inaudible) valves?

A They're pressure operated.

Q You've going to have one open continuously, you say?

A Well, they'll -- they'll be flowing through there constantly. As the fluid comes up into it, it will pick up and each one of them is set at a different pressure. They'll be pressure operated.

Q What is your low and high pressure, Mr. Janica, can you tell me?

A Repeat that.

Q The low and high pressure span between

your low pressure valve and your high pressure valve.

A I'm not sure I have that, Mr. Clements.

Q That's all right.

MR. LOPEZ: We can provide it.

Q Yes.

MR. LOPEZ: We have a computer printout of how this will work. Is that what you want?

Q Yes. I want to see a (not understood.)

Q Essentially, yes.

MR. CLEMENTS: That's all.

MR. STAMETS: The witness may be excused.

I have a telegram here from Newcorp Energy, Inc.

Reference to Case 8258, Newcorp Energy, Inc. received notice of the application to commingle the Devonian and Pennsylvanian formations in the Ronadero Company, Inc. Rob-Clay State No. 1 on July 9, 1984.

Please be advised that Newcorp objects to the application.

Lloyd Towers, Geologist, Newcorp Energy, Inc., San Antonio, Texas.

If there is nothing further, the case will be taken under advisement.

(Hearing concluded.)

C E R T I F I C A T E

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

Sally W. Boyd CSR

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 8258 heard by me on 7-11 19 84.

Richard L. Stamets, Examiner
Oil Conservation Division

Exhibits 1 through 6
Complete Set

natural resources engineering inc.

July 10, 1984

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
Ronadero EXHIBIT NO. 1
CASE NO. 8258
Submitted by V. Janica
Hearing Date 7-11-84

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

Attention: Joe D. Ramey

RE: Application to
Down hole Commingle
Ronadero Co. Inc.
Rob Clay State #1
Unit "F", S23, T12S, R32E
Lea County, New Mexico
R001-002-001

Dear Mr. Ramey:

Ronadero Company, Inc. respectfully requests the approval of an exception to Rule 303-A to permit the down hole commingling of production from the Pennsylvanian formation with the Devonian formation in the above referenced well.

1. Initial Test Results of Each Zone Are As Follows:

Pennsylvanian	FTP 820 psi	16 BOPD	820 MCFPD	0 BW
Devonian	FTP 40 psi	206 BOPD	31 MCFPD	30 BW

2. The Devonian formation on recent tests produced about 15% water and is expected to increase as oil production continues. The Pennsylvanian formation does not produce any water.

3. The Penn zone will flow, but as the water increases in the Devonian, it will require some artificial lifting means for it to continue flowing.

4. Commingling of fluids from the two formations will not reduce the value of either.

5. Ownership of minerals and working interests are the same for each reservoir.

6. Commingling of these two zones will not jeopardize the effectiveness of any future secondary recovery projects. Currently the Queen reservoir just west of the referenced well is in the final stages of secondary recovery.

7. Attached is a plat showing the offset operators and the unit in which the Rob Clay State #1 is located. Also attached is a plat showing all wells within a one mile radius that produce in the Penn and Devonian formations.

8. Bottom hole pressures from each zone and datum are as follows:

Penn	24 hr. build-up	1747 psi @ 10328'
Devonian	4 hr. shut-in DST	4334 psi @ 11207'

9. To prevent cross flow between formations, gas lift valves will have one way checks in them. A standing valve will be installed in the "F" nipple at 11040'. All commingling will be done in the tubing.

10. Allocation on production is suggested as follows:

	GAS	OIL
Penn	94%	5%
Devonian	6%	95%

Attached is a list of all offset operators and certified mail receipts to verify that they have been notified. One exception - Nucorp has been notified but no receipt has been returned due to an incorrect address on the first attempt.

Sincerely yours,

Joe T. Janica

Joe T. Janica, P.E.
NRE, Agents for
Ronadero Company, Inc.

Enclosures

cc: file
chrono
B. Hanagan

OFFSET OPERATORS
SEC. 23, T-12-S, R-32-E
LEA COUNTY, NEW MEXICO

1. Mobil Producing Texas & New Mexico, Inc.
   P. O. Box 633
   Midland, Texas 79702

2. Wagner & Brown
   P. O. Box 1714
   Midland, Texas 79701

3. Cities Service Oil & Gas Corporation
   P. O. Box 1919
   Midland, Texas 79702

4. Nucorp Energy, Inc.
   Suite 400
   1250 N. E. Loop 410
   San Antonio, Texas 78209

5. Texas American Oil Corporation
   300 West Wall, Suite 1012
   Midland, Texas 79701

PS Form 3811, July 1982

● SENDER: Complete items 1, 2, 3, and 4.
Add your address in the "RETURN TO" space on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
- [X] Show to whom and date delivered ..... .60 ¢
- [ ] Show to whom, date, and address of delivery .. ____ ¢
2. [ ] RESTRICTED DELIVERY ..... ____ ¢
(The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL $ .60

3. ARTICLE ADDRESSED TO:
Mobil Producing
P.O. Box 633
Midland, TX 79702
Attention: Lee Turrentine

4. TYPE OF SERVICE:
- [ ] REGISTERED
- [ ] INSURED
- [X] CERTIFIED
- [ ] COD
- [ ] EXPRESS MAIL

ARTICLE NUMBER: P497960833

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE [ ] Addressee [ ] Authorized agent

5. DATE OF DELIVERY — POSTMARK (may be on reverse side)

6. ADDRESSEE'S ADDRESS (Only if requested)

7. UNABLE TO DELIVER BECAUSE: — 7a. EMPLOYEE'S INITIALS

RETURN RECEIPT

★ GPO: 1982-379-593

PS Form 3811, July 1982

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Add your address in the "RETURN TO" space on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
- [X] Show to whom and date delivered ..... .60 ¢
- [ ] Show to whom, date, and address of delivery .. ____ ¢
2. [ ] RESTRICTED DELIVERY ..... ____ ¢
(The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL $ .60

3. ARTICLE ADDRESSED TO:
Texas American Oil Corp.
300 West Wall, S-1012
Midland, TX 79701
Atten: Charles Story

4. TYPE OF SERVICE:
- [ ] REGISTERED
- [ ] INSURED
- [X] CERTIFIED
- [ ] COD
- [ ] EXPRESS MAIL

ARTICLE NUMBER: P947960834

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE [ ] Addressee [ ] Authorized agent

5. DATE OF DELIVERY — POSTMARK (may be on reverse side)

6. ADDRESSEE'S ADDRESS (Only if requested)

7. UNABLE TO DELIVER BECAUSE: — 7a. EMPLOYEE'S INITIALS

RETURN RECEIPT

★ GPO: 1982-379-593

PS Form 3811, July 1982

● SENDER: Complete items 1, 2, 3, and 4.
Add your address in the "RETURN TO" space on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
- [X] Show to whom and date delivered ..... .60 ¢
- [ ] Show to whom, date, and address of delivery .. ____ ¢

2. [ ] RESTRICTED DELIVERY..... ____ ¢
(The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL $ .60

3. ARTICLE ADDRESSED TO:
Wagner & Brown
P. O. Box 1714
Midland, TX 79701
Attention:
Lee McCullu

4. TYPE OF SERVICE:
- [ ] REGISTERED
- [ ] INSURED
- [X] CERTIFIED
- [ ] COD
- [ ] EXPRESS MAIL

ARTICLE NUMBER
P497960831

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE [ ] Addressee [ ] Authorized agent

5. DATE OF DELIVERY

POSTMARK (may be on reverse side)
JUN 29 1984 US

6. ADDRESSEE'S ADDRESS (Only if requested)

7. UNABLE TO DELIVER BECAUSE:

7a. EMPLOYEE'S INITIALS

RETURN RECEIPT

★ GPO: 1982-370-503

PS Form 3811, July 1982

● SENDER: Complete items 1, 2, 3, and 4.
Add your address in the "RETURN TO" space on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
- [X] Show to whom and date delivered ..... 60 ¢
- [ ] Show to whom, date, and address of delivery .. ____ ¢

2. [ ] RESTRICTED DELIVERY..... ____ ¢
(The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL $ .60

3. ARTICLE ADDRESSED TO:
Cities Service Oil & Gas Corp.
P. O. Box 1919 Attn: John L
Midland, TX 79702 McCartney

4. TYPE OF SERVICE:
- [ ] REGISTERED
- [ ] INSURED
- [X] CERTIFIED
- [ ] COD
- [ ] EXPRESS MAIL

ARTICLE NUMBER
P497960832

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE [ ] Addressee [ ] Authorized agent

5. DATE OF DELIVERY

POSTMARK (may be on reverse side)
JUN 29 1984

6. ADDRESSEE'S ADDRESS (Only if requested)

7. UNABLE TO DELIVER BECAUSE:

7a. EMPLOYEE'S INITIALS

RETURN RECEIPT

★ GPO: 1982-370-503

● SENDER: Complete items 1, 2, 3, and 4.
Add your address in the "RETURN TO" space on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
   - ☒ Show to whom and date delivered ..... .60 ¢
   - ☐ Show to whom, date, and address of delivery .. ____ ¢
2. ☐ RESTRICTED DELIVERY..... ____ ¢
   (The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL $ .60

3. ARTICLE ADDRESSED TO:
Nucorp Energy, Inc.
Southland Center, 2200 N. Tower
Dallas, TX 75201

4. TYPE OF SERVICE:
- ☐ REGISTERED ☐ INSURED
- ☒ CERTIFIED ☐ COD
- ☐ EXPRESS MAIL

ARTICLE NUMBER
P497960835

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐ Addressee ☐ Authorized agent

5. DATE OF DELIVERY

POSTMARK (may be on reverse side)

6. ADDRESSEE'S ADDRESS (Only if requested)

RETURNED TO SENDER

7. UNABLE TO DELIVER BECAUSE:
ADDRESSEE UNKNOWN

7a. EMPLOYEE'S INITIALS

* GPO: 1982-379-593

PS Form 3811, July 1982

RETURN RECEIPT

natural resources engineering inc.

p. o. box 2188 • hobbs, new mexico 88240

RETURN TO WRI

ADDRESSEE UN

To: Nucorp Energy, Inc.
Southland Center
2200 North Tower
Dallas, TX 75201

UNK.D

CERTIFIED
P 497 960 835
MAIL

FROM:

Natural Resources Engineering Inc.
P. O. Box 2188
Hobbs, NM 88240

Customer Number if any:

TO:

Nucorp Energy Inc.
Suite 400
1250 N. E. Loop 410
San Antonio, TX 78209

Attn: Richard Denman

★ U.S.G.P.O. 1983-400-104 Label 11-B, Apr. 1983

EXPRESS MAIL NEXT DAY SERVICE

POST OFFICE TO ADDRESSEE

ORIGIN:

Initials of Receiving Clerk: Max

P.O. ZIP Code: 88240

Date in: 7-6-84 Time in: 1600

Return Receipt service:
✓ To Whom & Date Delivered
☐ To Whom, Date & Address of Delivery

.60

Weight: 7 Lbs

Postage & Fees $ 9.85

B 53223185

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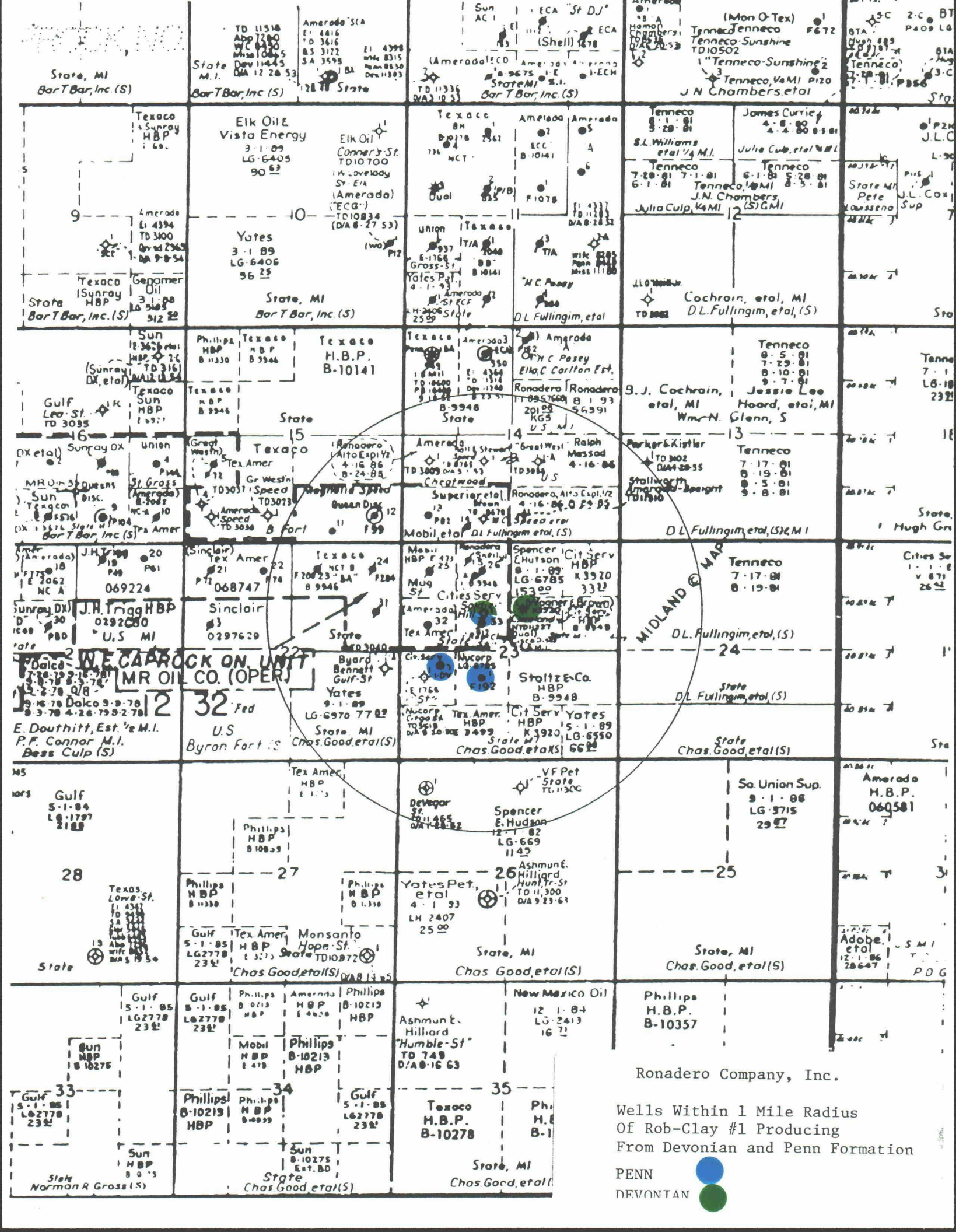
Domestic mailings under this service made at designated USPS facilities on or before a specified deposit time will be accepted for express shipment to a designated USPS delivery area having Express Mail Service for next day delivery to an addressee or agent on or before the time specified by the USPS at mailing. USPS will refund upon application to originating office the postage for any shipments mailed under this service and not meeting the service standard except for those delayed by strike or work stoppage. See USPS Notice 43 for details.

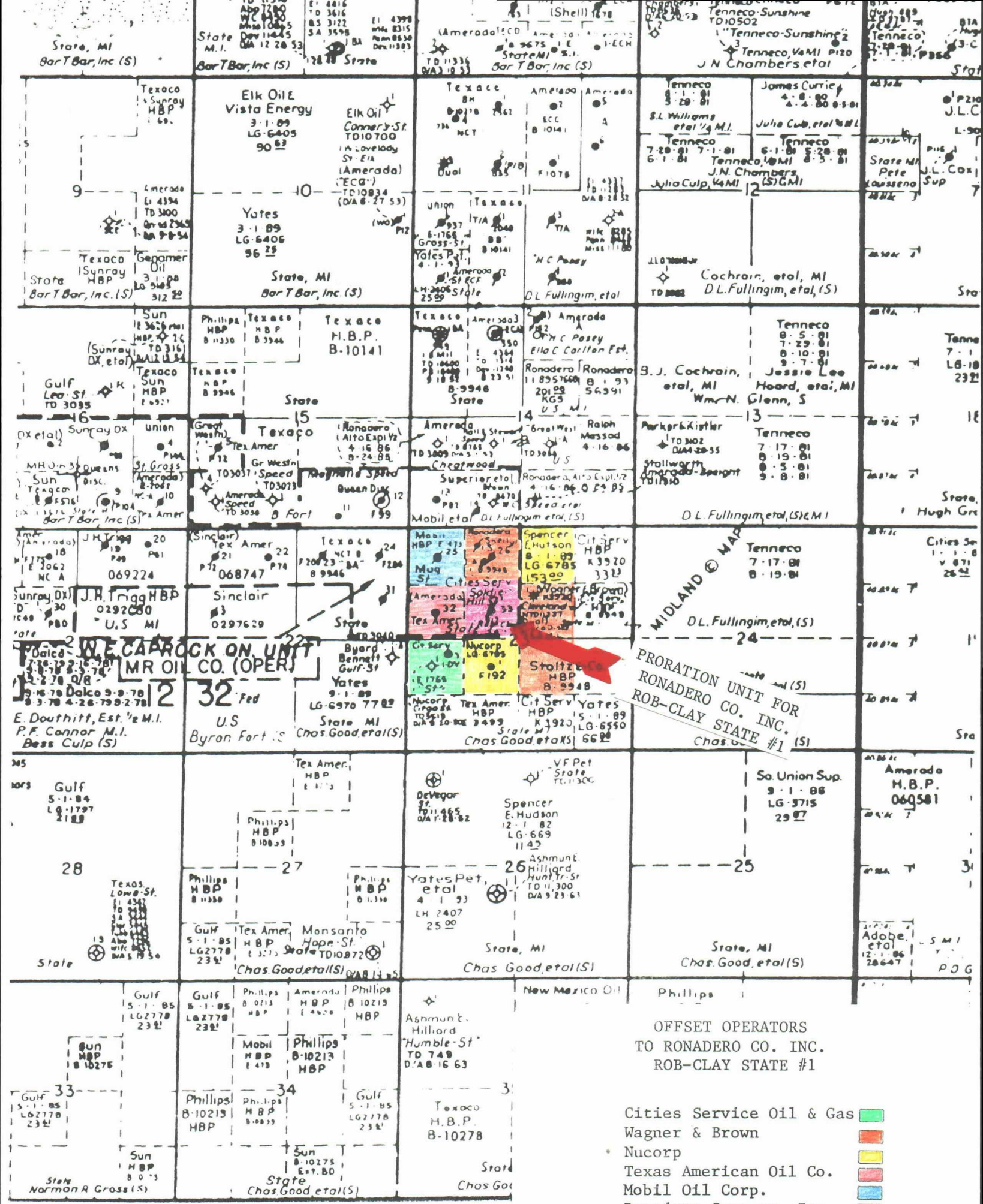
INSURANCE COVERAGE:
See USPS Notice 7 or Notice 53 for exclusions of coverage.
(1) *Document Reconstruction Insurance*. Non-negotiable documents are insured against loss, damage or rifling up to $50,000 per piece, subject to a limit of $500,000 per occurrence.
(2) *Merchandise Insurance*. Parcels are insured against loss, damage or rifling up to a maximum of $500.

- Signature is required upon delivery.
- Claims for delay, loss, damage or rifling must be made within 90 days. Claim forms may be obtained at the post office of mailing.
- This receipt must be presented when a claim is filed.

EXPRESS MAIL SERVICE

Customer Receipt


MIDLAND MAP
W.E. CAPROCK ON. UNIT
MR OIL CO. (OPER.)
32 Fed
U.S
Byron Fort
E. Douthitt, Est. ½ M.I.
P.F. Connor M.I.
Bess Culp (S)
Ronadero Company, Inc.
Wells Within 1 Mile Radius
Of Rob-Clay #1 Producing
From Devonian and Penn Formation
PENN
DEVONIAN


W.E. CAPROCK ON UNIT
MR OIL CO. (OPER)
MIDLAND © MAP
PRORATION UNIT FOR
RONADERO CO. INC.
ROB-CLAY STATE #1
OFFSET OPERATORS
TO RONADERO CO. INC.
ROB-CLAY STATE #1
Cities Service Oil & Gas
Wagner & Brown
Nucorp
Texas American Oil Co.
Mobil Oil Corp.
Ronadero Company, Inc.

NATURAL RESOURCES ENGINEERING INC.
P. O. Box 2188 / 201 E. Sanger
Phone (505) 397-6319
Hobbs, New Mexico 88240

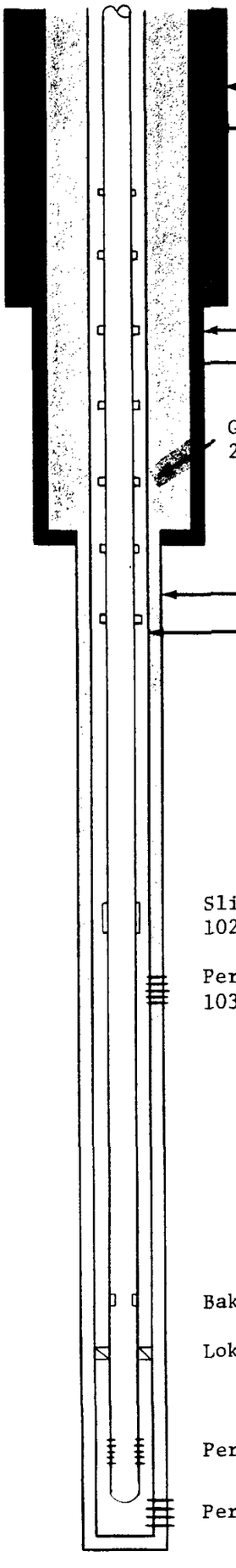
WELL BORE SKETCH

OPERATOR/LEASE/WELL Ronadero Company/Rob Clay State #1 DATE July 9, 1984

NRE JOB NUMBER R001-002-001

FIELD/POOL East Caprock / Devonian

PLUG BACK DEPTH 11210' KB 17' ELEVATION 4335.9'



Hole Size 17-1/2"

SURFACE CASING:
Size 13-3/8" Weight 61# Grade J-55
Set at 378' with 425 Sacks Cement
Circulate 100 Sacks to Surface
Remarks: Tested O.K.

Hole Size 12-1/4"

INTERMEDIATE CASING:
Size 8-5/8" Weight 32# Grade J-55
Set at 3650' with 1750 Sacks Cement
Circulate 30 Sacks to Surface
Cement Top: Calculated _____ Temperature Survey _____
Remarks: Tested O.K. Centralized 3620' to 3500'

Hole Size 7-7/8"

PRODUCTION CASING:
Size 5-1/2" Weight 17# Grade N-80
Set at 11210' with 600 Sacks Cement
Cement Top: Calculated _____ Temperature Survey 8500'
Remarks: Centralizers on casing 11180-11048', 10400-10238', 9660-9577', 8925-8760', 8596-8430'

TUBING:
Size 2-7/8 Weight 6.5# Grade N-80
Number of Joints 365 Set at 11200'
Packer Set at 11040'
Bottom Arrangement: Bull Plug, 30' Mud Anchor, 7' Perf Nipple, 4 jnts. Tubing, Packer, Baker "F" Nipple, 26 jnts. Tubing Sliding Sleeve, 334 jnts. Tubing

RODS:
Size _____ Number _____
Gas Anchor Set at _____
Pump Set at _____
Arrangement: _____

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
Ronadero EXHIBIT NO. 2
CASE NO. 8259
Submitted by Jamica
Hearing Date 7-11-84

Schlumberger

COMPENSATED NEUTRON LOG

CASED HOLE

COMPANY RONADERO COMPANY, INC.

WELL ROB-CLAY STATE #1

FIELD EAST CAPROCK DEVONIAN

COUNTY LEA STATE NEW MEXICO

LOCATION 1980' FWL 1650' FNL

API SERIAL NO.	SEC.	TWP	RANGE
	23	12-S	32-E

Other Services:

PERF.

COUNTY LEA, N.M.
FIELD E. CAPROCK DEV.
LOCATION ROB-CLAY STATE #1
WELL
COMPANY RONADERO CO., INC.

Permanent Datum: G.L. ; Elev.: 4336
Log Measured From K.B. 17.0 Ft. Above Perm. Datum
Drilling Measured From K.B.

Elev.: K.B. 4353
D.F.
G.L. 4336

Date	5-25-84			
Run No.	ONE			
Depth—Driller	11212			
Depth—Logger (Schl.)				
Btm. Log Interval	11202			
Top Log Interval	8000			
Type fluid in hole				
Salinity ppm Na Cl.				
Density				
Fluid level				
Max. rec. temp., deg F.				
Operating rig time	153			
Truck no. / D Truck no.	5891			
Location	HOBBS-PSD			
Recorded by	SCROGGS			
Witnessed by	JANICA			

RUN No.	BORE-HOLE RECORD Bit	From	To	CASING & TUBING RECORD Size	Wgt.	Remarks	From	To
1	7 7/8			8 5/8			SURF	3650
				5 1/2			SURF	11210

The well name, location and borehole references data were furnished by the customer

FOLD HERE

RONADERO COMPANY, INC.
ROB CLAY STATE #1
COST ESTIMATES FOR DIFFERENT
ARTIFICIAL LIFT SYSTEMS

1.	Beam and Rod Pumping Installation	$78,000
2.	Gas Lift System Using Penn Gas	$17,000
3.	Submergible Pumping System	$62,500

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
Ronadero EXHIBIT NO. 3
CASE NO. 8258
Submitted by J. Janica
Hearing Date 7-11-84