



PHILLIPS PETROLEUM COMPANY

ODESSA, TEXAS 79762
4001 PENBROOK

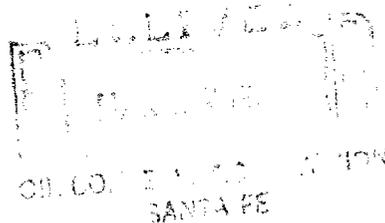
NATURAL RESOURCES GROUP
Exploration and Production

March 24, 1980

Conversion to Water Injection Service--
East Vacuum Grayburg-San Andres Unit
Tract No. 1910, Well No. 003
Vacuum Grayburg-San Andres Pool
Lea County, New Mexico

New Mexico Department of Energy and Minerals (3)
Oil Conservation Division
Post Office Box 2088
Santa Fe, New Mexico 87501

Attention: Mr. Joe D. Ramey
Division Director



Gentlemen:

We respectfully request administrative approval as provided by Order No. R5897, Rule No. 9, for the East Vacuum Unit pressure maintenance project, to convert the East Vacuum Grayburg-San Andres Unit, Tract 1910, Well No. 003, to water injection service. The following data is submitted in support of this request:

1. Unit plat reflecting the proposed injection well and injection well project area. (Well: Unit J, 19, 17-S, 35-E.)
2. Compensated sonic log of the injection well.
3. Diagramatic sketch of the proposed well, injection tubing, packer, and pressure control elements identifying the San Andres perforated injection interval.
4. The name of the injection formation is San Andres with injection to be into the interval 4608 to 4730 feet. Injection will be by gravity with an anticipated maximum of 500 barrels of produced Grayburg-San Andres water per day.

Your consideration and early advice will be appreciated.

Very truly yours,

T. Harold McLemore
Area Regulation and Proration Analyst

THM/jj
Attachments

cc: Oil Conservation Division
Hobbs, New Mexico (Attachments w/o CNFD log)

PHILLIPS PETROLEUM COMPANY

EAST VACUUM UNIT PRESSURE MAINTENANCE PROJECT
N. M. O. C. D. R-5897

VACUUM GRAYBURG - SAN ANDRES POOL, LEA COUNTY, NEW MEXICO
TRACT 2059 WELL 003

CONVERSION TO WATER INJECTION STATUS

ANNULUS PRESSURE
GAUGE

PRESSURE CONTROL TYPE: Electronic rate
pressure control

BRADENHEAD MONITOR

REDBEDS

202'

8-5/8 " O. D. @ 350 '

CEMENTED WITH 290 SXS. (334 FT³)

TOP OF CEMENT Circulated

RUSTLER

1730'

SALADO

1855'

YATES

3023'

QUEEN

3932'

ANNULUS FLUID: Inhibited brine

GRAYBURG

4350'

2-3/8 " O. D. TUBING @ 4590 '

LINING Plastic Applicator 501

PACKER @ 4590 '

TYPE Tension (Baker AD-1)

SAN ANDRES

4594'

TOP 4610 '

SAN ANDRES

PERFORATED INTERVALS

BOTTOM 4665 '

P B T D

4835'

4-1/2 " O. D. @ 4887 '

CEMENTED WITH 1585 SXS. (2959 FT³)

T D

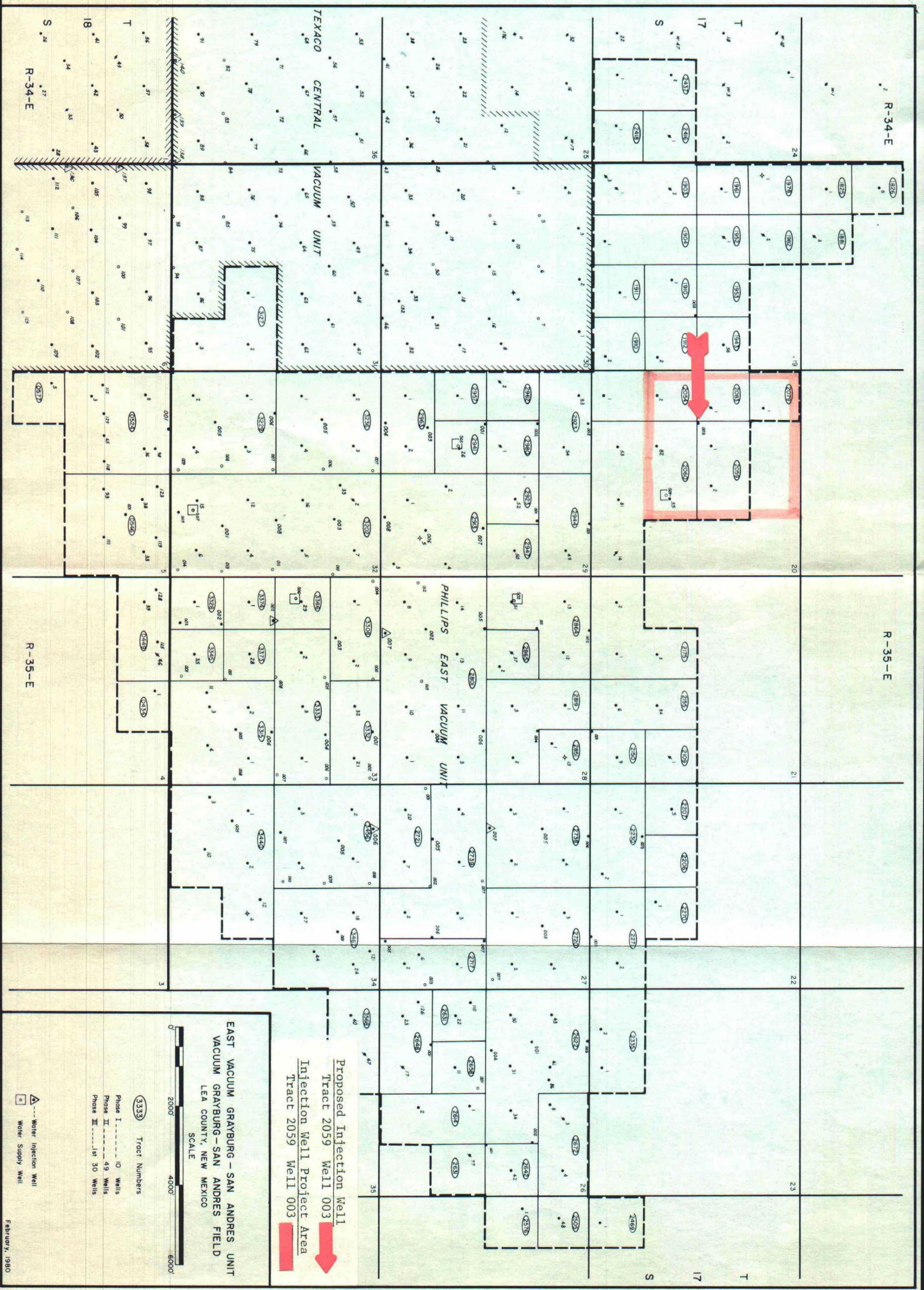
4887'

TOP OF CEMENT Circulated

WELL LOCATION

Unit F, Section 20

T- 17 - S R- 35 - E



R-34-E

R-35-E

R-34-E

R-35-E

TEXACO
CENTRAL
VACUUM
UNIT

PHILLIPS
EAST
VACUUM
UNIT

EAST VACUUM GRAYBURG-SAN ANDRES UNIT
VACUUM GRAYBURG-SAN ANDRES FIELD
LEA COUNTY, NEW MEXICO

Proposed Injection Well
Tract 2059 Well 003
Injection Well Project Area
Tract 2059 Well 003

SCALE
2000 4000 6000

3333 Tract Numbers
Phase I - - - - - 10 Wells
Phase II - - - - - 49 Wells
Phase III - - - - - 30 Wells

Water Injection Well
Water Supply Well

February, 1980

FMK-10



PHILLIPS PETROLEUM COMPANY

ODESSA, TEXAS 79762
4001 PENBROOK

NATURAL RESOURCES GROUP
Exploration and Production

March 24, 1980

Conversion to Water Injection Service--
East Vacuum Grayburg-San Andres Unit
Tract No. 2944, Well No. 001
Vacuum Grayburg-San Andres Pool
Lea County, New Mexico

New Mexico Department of Energy and Minerals (3)
Oil Conservation Division
Post Office Box 2088
Santa Fe, New Mexico 87501

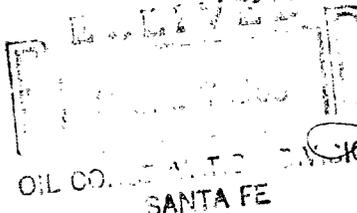
Attention: Mr. Joe D. Ramey
Division Director

Gentlemen:

We respectfully request administrative approval as provided by Order No. R5897, Rule No. 9, for the East Vacuum Unit pressure maintenance project, to convert the East Vacuum Grayburg-San Andres Unit, Tract No. 2944, Well No. 001 to water injection service. The following data is submitted in support of this request:

1. Unit plat reflecting the proposed injection well and injection well project area. (Well: Unit B, 29, 17-S, 35-E.)
2. Compensated sonic log of the injection well.
3. Diagrammatic sketch of the proposed well, injection tubing, packer, and pressure control elements identifying the San Andres perforated injection interval.
4. The name of the injection formation is San Andres with injection to be into the interval 4545 to 4680 feet. Injection will be by gravity with an anticipated maximum of 500 barrels of produced Grayburg-San Andres water per day.

Your consideration and early advice will be appreciated.



Very truly yours,

Louella Howell for

T. Harold McLemore
Area Regulation and Proration Analyst

THM/jj
Attachments

cc: Oil Conservation Division
Hobbs, New Mexico (Attachments w/o CNFD log)

PHILLIPS PETROLEUM COMPANY

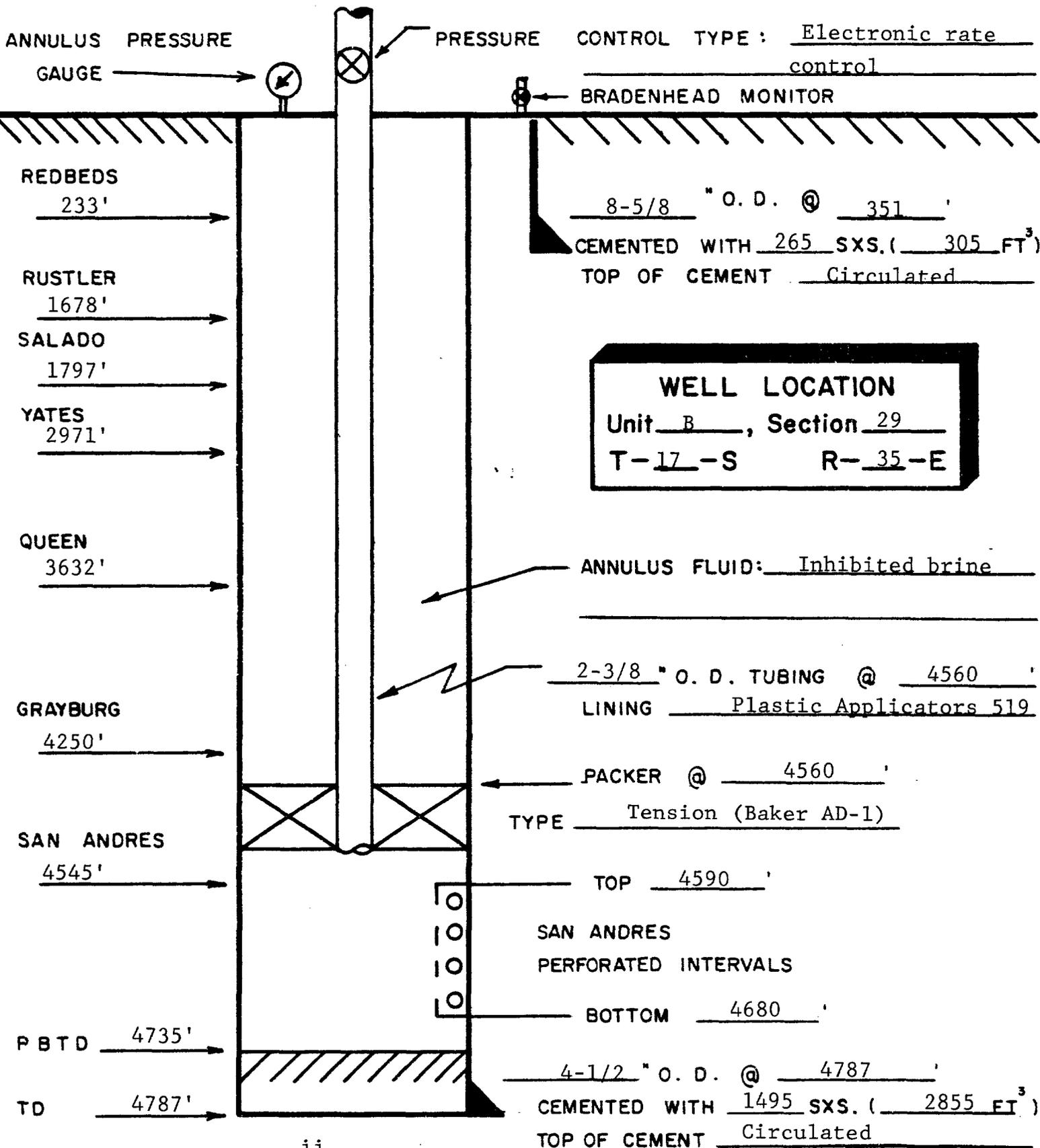
EAST VACUUM UNIT PRESSURE MAINTENANCE PROJECT

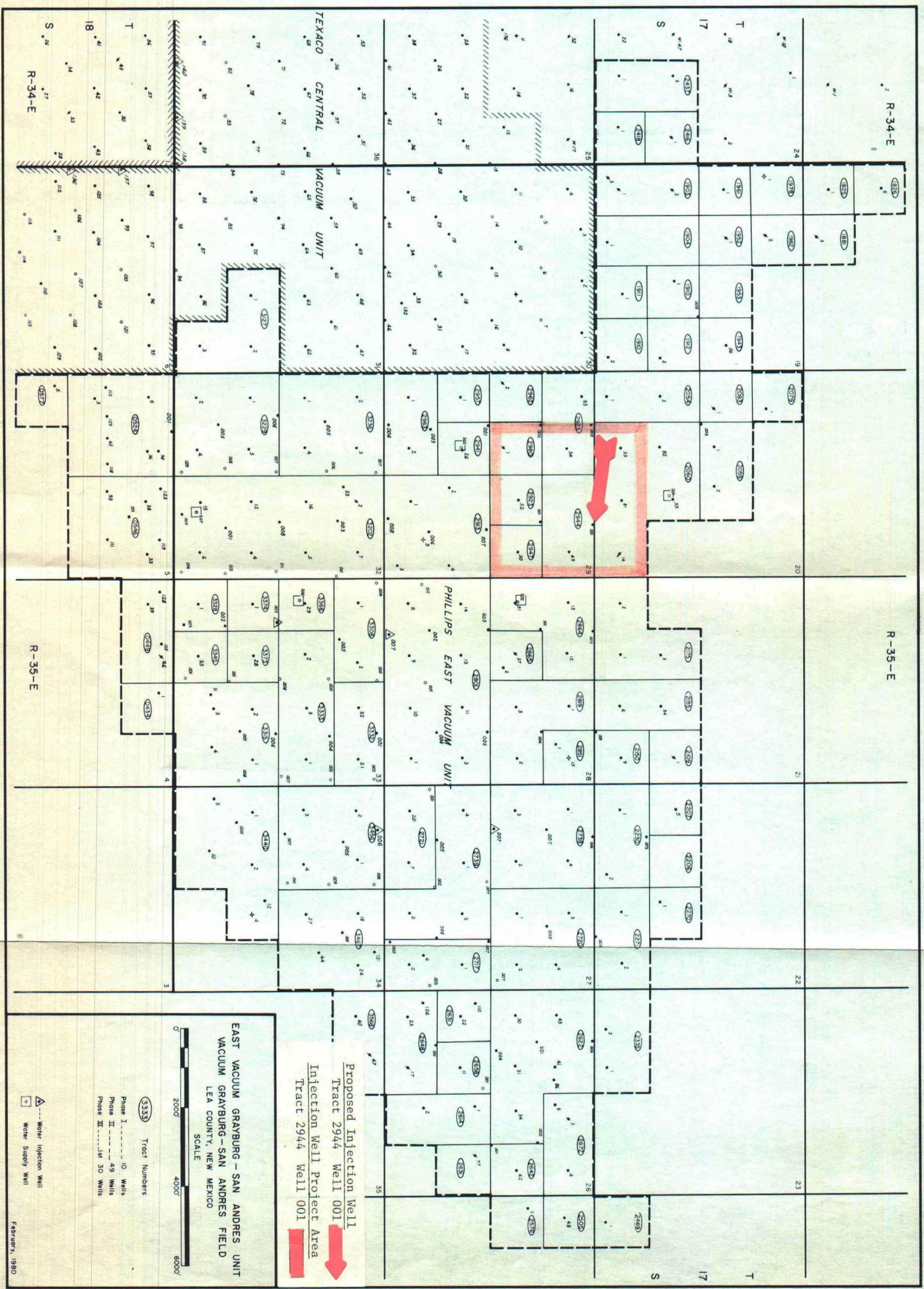
N. M. O. C. D. R- 5897

VACUUM GRAYBURG - SAN ANDRES POOL, LEA COUNTY, NEW MEXICO

TRACT 2944 WELL 001

CONVERSION TO WATER INJECTION STATUS





Proposed Injection Well
 Tract 2944 Well 001
 Injection Well Project Area
 Tract 2944 Well 001

EAST VACUUM GRAYBURG - SAN ANDRES UNIT
 VACUUM GRAYBURG - SAN ANDRES FIELD
 LEA COUNTY, NEW MEXICO
 SCALE

3333 Tract Numbers
 Phase I - - - - - 10 Wells
 Phase II - - - - - 49 Wells
 Phase III - - - - - 30 Wells

Water Injection Well
 Water Supply Well

February, 1980



PHILLIPS PETROLEUM COMPANY

ODESSA, TEXAS 79762
4001 PENBROOK

NATURAL RESOURCES GROUP
Exploration and Production

March 24, 1980

Conversion to Water Injection Service--
East Vacuum Grayburg-San Andres Unit
Tract No. 2230, Well No. 003
Vacuum Grayburg-San Andres Pool
Lea County, New Mexico

New Mexico Department of Energy and Minerals (3)
Oil Conservation Division
Post Office Box 2088
Santa Fe, New Mexico 87501

Attention: Mr. Joe D. Ramey
Division Director

Gentlemen:

We respectfully request administrative approval as provided by Order No. R5897, Rule No. 9, for the East Vacuum Unit pressure maintenance project, to convert the East Vacuum Grayburg-San Andres Unit, Tract 2230, Well No. 003, to water injection service. The following data is submitted in support of this request:

1. Unit plat reflecting the proposed injection well and injection well project area. (Well: Unit N, 22, 17-S, 35-E.)
2. Compensated sonic log of the injection well.
3. Diagrammatic sketch of the proposed well, injection tubing, packer, and pressure control elements identifying the San Andres perforated injection interval.
4. The name of the injection formation is San Andres with injection to be into the interval 4465 to 4610 feet. Injection will be by gravity with an anticipated maximum of 500 barrels of produced Grayburg-San Andres water per day.

Your consideration and early advice will be appreciated.

Very truly yours,

Louella Howell for

T. Harold McLemore
Area Regulation and Proration Analyst

THM/jj
Attachments

cc: Oil Conservation Division
Hobbs, New Mexico (Attachments w/o CNFD log)

PHILLIPS PETROLEUM COMPANY

EAST VACUUM UNIT PRESSURE MAINTENANCE PROJECT

N. M. O. C. D. R- 5897

VACUUM GRAYBURG - SAN ANDRES POOL, LEA COUNTY, NEW MEXICO

TRACT 2230 WELL 003

CONVERSION TO WATER INJECTION STATUS

ANNULUS PRESSURE
GAUGE

PRESSURE CONTROL TYPE: Electronic rate
pressure control

BRADENHEAD MONITOR

REDBEDS

244'

RUSTLER

1693'

SALADO

1812'

YATES

2960'

QUEEN

3806'

GRAYBURG

4180'

SAN ANDRES

4465'

P B T D

4691'

T D

4801'

8-5/8 " O. D. @ 348 '

CEMENTED WITH 290 SXS. (334 FT³)

TOP OF CEMENT Circulated

WELL LOCATION

Unit N, Section 22

T- 17 - S R- 35 - E

ANNULUS FLUID: Inhibited brine

2-3/8 " O. D. TUBING @ 4500 '

LINING Plastic Applicator 519

PACKER @ 4500 '

TYPE Tension (Baker AD-1)

TOP 4570 '

SAN ANDRES

PERFORATED INTERVALS

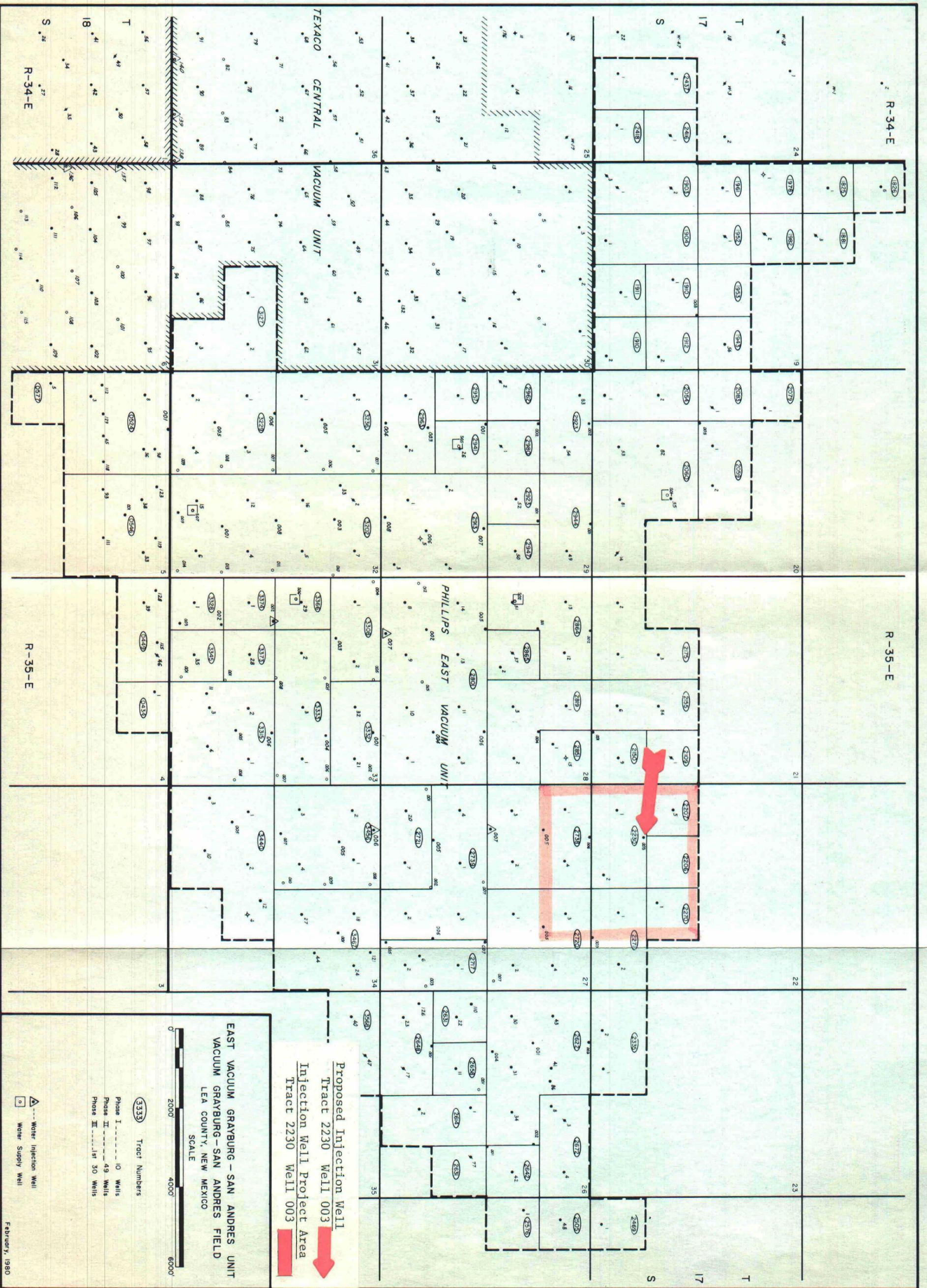
BOTTOM 4610 '

4-1/2 " O. D. @ 4801 '

CEMENTED WITH 1420 SXS. (2781 FT³)

TOP OF CEMENT Circulated

jj



Proposed Injection Well
 Tract 2230 Well 003
 Injection Well Project Area
 Tract 2230 Well 003

EAST VACUUM GRAYBURG - SAN ANDRES UNIT
 VACUUM GRAYBURG - SAN ANDRES FIELD
 LEA COUNTY, NEW MEXICO
 SCALE

3333 Tract Numbers
 Phase I - - - - - 10 Wells
 Phase II - - - - - 49 Wells
 Phase III - - - - - 30 Wells

▲ Water Injection Well
 □ Water Supply Well

February, 1980



PHILLIPS PETROLEUM COMPANY

ODESSA, TEXAS 79762
4001 PENBROOK

NATURAL RESOURCES GROUP
Exploration and Production

March 24, 1980

Conversion to Water Injection Service--
East Vacuum Grayburg-San Andres Unit
Tract No. 2864, Well No. 002
Vacuum Grayburg-San Andres Pool
Lea County, New Mexico

New Mexico Department of Energy and Minerals (3)
Oil Conservation Division
Post Office Box 2088
Santa Fe, New Mexico 87501

Attention: Mr. Joe D. Ramey
Division Director

Gentlemen:

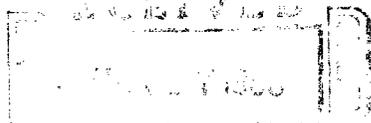
We respectfully request administrative approval as provided by Order No. R5897, Rule No. 9, for the East Vacuum Unit pressure maintenance project, to convert the East Vacuum Grayburg-San Andres Unit, Tract 2864, Well No. 002, to water injection service. The following data is submitted in support of this request:

1. Unit plat reflecting the proposed injection well and injection well project area. (Well: Unit C, 28, 17-S, 35-E.)
2. Compensated sonic log of the injection well.
3. Diagramatic sketch of the proposed well, injection tubing, packer, and pressure control elements identifying the San Andres perforated injection interval.
4. The name of the injection formation is San Andres with injection to be into the interval 4492 to 4630 feet. Injection will be by gravity with an anticipated maximum of 500 barrels of produced Grayburg-San Andres water per day.

Your consideration and early advice will be appreciated.

Very truly yours,

T. Harold McLemore
Area Regulation and Proration Analyst



THM/jj OIL CONSERVATION DIVISION
Attachments SANTA FE

cc: Oil Conservation Division
Hobbs, New Mexico (Attachments w/o CNFD log)

PHILLIPS PETROLEUM COMPANY

EAST VACUUM UNIT PRESSURE MAINTENANCE PROJECT

N. M. O. C. D. R- 5897

VACUUM GRAYBURG - SAN ANDRES POOL, LEA COUNTY, NEW MEXICO

TRACT 2864 WELL 002

CONVERSION TO WATER INJECTION STATUS

ANNULUS PRESSURE
GAUGE

PRESSURE CONTROL TYPE: Electronic rate
pressure control

BRADENHEAD MONITOR

REDBEDS

235'

RUSTLER

1671'

SALADO

1790'

YATES

2962'

QUEEN

3825'

GRAYBURG

4208'

SAN ANDRES

4492'

P B T D

4770'

TD

4801'

8-5/8 " O. D. @ 364 '

CEMENTED WITH 310 SXS. (357 FT³)

TOP OF CEMENT Circulated

WELL LOCATION

Unit C, Section 28

T- 17-S R- 35-E

ANNULUS FLUID: Inhibited brine

2-3/8 " O. D. TUBING @ 4500 '

LINING Plastic Applicators 519

PACKER @ 4500 '

TYPE Tension (Baker AD-1)

TOP 4540 '

SAN ANDRES

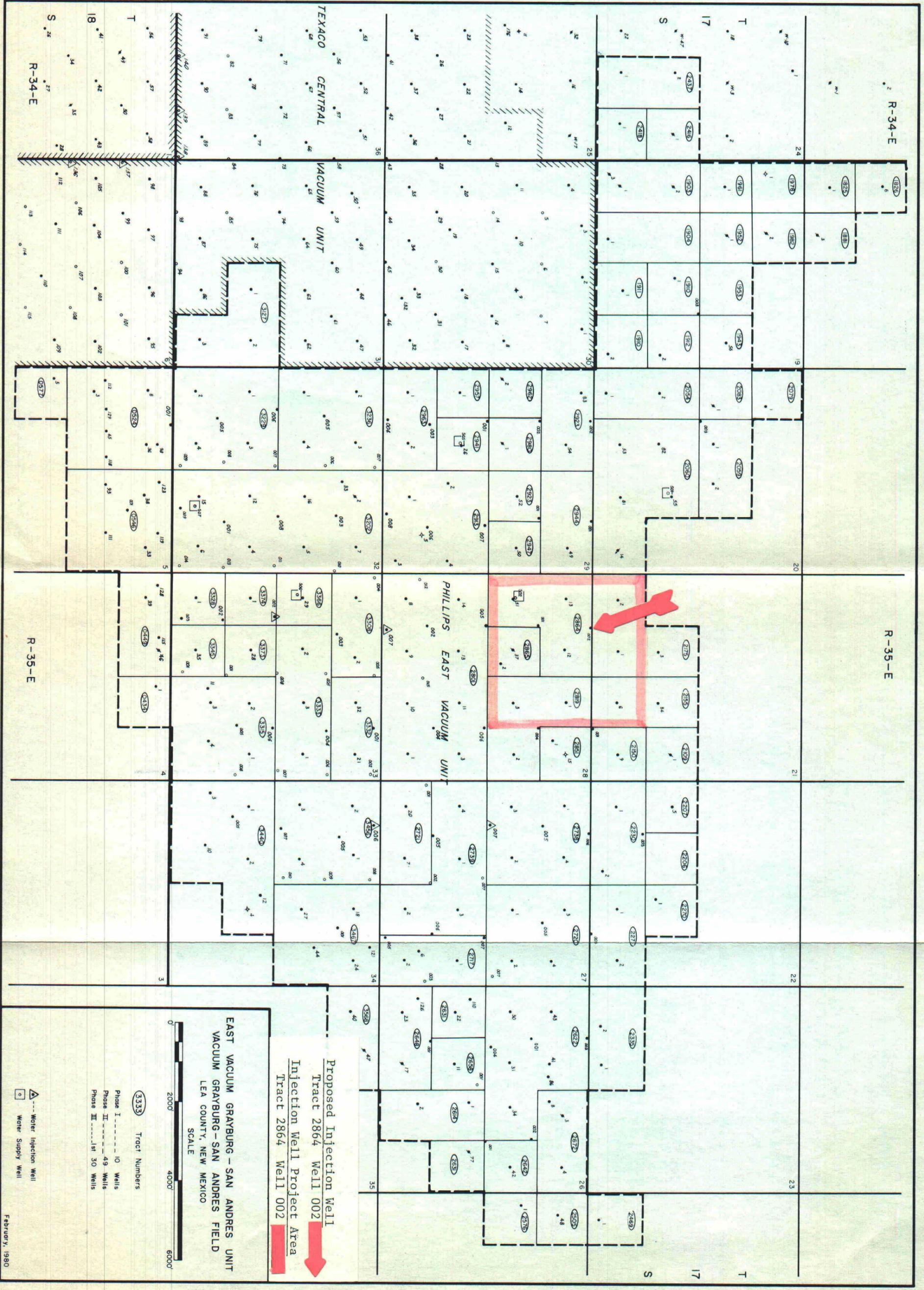
PERFORATED INTERVALS

BOTTOM 4630 '

4-1/2 " O. D. @ 4801 '

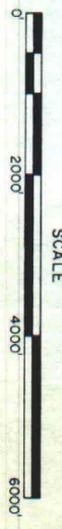
CEMENTED WITH 1844 SXS. (3538 FT³)

TOP OF CEMENT Circulated



Proposed Injection Well
 Tract 2864 Well 002
 Injection Well Project Area
 Tract 2864 Well 002

EAST VACUUM GRAYBURG - SAN ANDRES UNIT
 VACUUM GRAYBURG - SAN ANDRES FIELD
 LEA COUNTY, NEW MEXICO



- (3333) Tract Numbers
- Phase I - - - - - 10 Wells
- Phase II - - - - - 49 Wells
- Phase III - - - - - 30 Wells

- ▲ Water Injection Well
- Water Supply Well



PHILLIPS PETROLEUM COMPANY

ODESSA, TEXAS 79762
4001 PENBROOK

NATURAL RESOURCES GROUP
Exploration and Production

March 24, 1980

Conversion to Water Injection Service--
East Vacuum Grayburg-San Andres Unit
Tract No. 2059, Well No. 003
Vacuum Grayburg-San Andres Pool
Lea County, New Mexico

New Mexico Department of Energy and Minerals (3)
Oil Conservation Division
Post Office Box 2088
Santa Fe, New Mexico 87501

Attention: Mr. Joe D. Ramey
Division Director

Gentlemen:

We respectfully request administrative approval as provided by Order No. R5897, Rule No. 9, for the East Vacuum Unit pressure maintenance project, to convert the East Vacuum Grayburg-San Andres Unit, Tract 2059, Well No. 003, to water injection service. The following data is submitted in support of this request:

1. Unit plat reflecting the proposes injection well and injection well project area. (Well: Unit F, 20, 17-S, 35-E.)
2. Compensated sonic log of the injection well.
3. Diagramatic sketch of the proposed well, injection tubing, packer, and pressure control elements identifying the San Andres perforated injection interval.
4. The name of the injection formation is San Andres with injection to be into the interval 4594 to 4665 feet. Injection will be by gravity with an anticipated maximum of 500 barrels of produced Grayburg-San Andres water per day.

Your consideration and early advice will be appreciated.

Yours very truly,

T. Harold McLemore
Area Regulation and Proration Analyst



THM/jjoh
Attachments

cc: Oil Conservation Division
Hobbs, New Mexico (Attachments w/o CNFD log)

PHILLIPS PETROLEUM COMPANY

EAST VACUUM UNIT PRESSURE MAINTENANCE PROJECT

N. M. O. C. D. R-5897

VACUUM GRAYBURG - SAN ANDRES POOL, LEA COUNTY, NEW MEXICO

TRACT 1910 WELL 003

CONVERSION TO WATER INJECTION STATUS

