

~~100-122-0000~~
OCT 8
(FAXED IN)



JERRY W. LONG
CONSULTANT

RELEASE 10-22-93
SND

2709 Resolana Dr.
Roswell, NM 88201

October 8, 1993

Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Re: Application for Permit to Convert to Water Injection
SOCORRO PETROLEUM COMPANY
H.E. West "B" Well No.55
1972'FSL and 2078'FWL (Unit K), Sec.3, T.17S., R.31E.
Keel-West Waterflood Project
Eddy County, New Mexico

Gentlemen:

Referenced well was drilled as a replacement well for water injection well No.23 H.E. West "B", which was plugged in 1982 because of casing failure. No.55 was completed as an oil producer and subsequently re-completed for salt water injection as originally proposed.

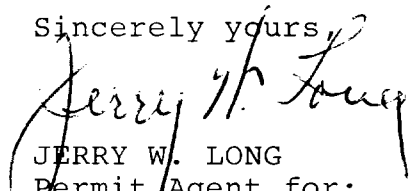
Enclosed are attachments required by NMOCD Rule 701. A copy of this Application has been furnished to your District Office at Artesia and a copy to the Bureau of Land Management, since the surface and minerals are Federal. Affidavit of publishing of Public Notice will be furnished by Carlsbad Current-Argus by separate mail.

The Area of Review is completely within the Keel-West Waterflood Project, which was approved by Order R-2268, -A, -B, and -C.

Your early approval of this Application would be appreciated, so that injection may be initiated as soon as possible.

Please contact me at 505-622-1299 if you have any questions.

Sincerely yours,


JERRY W. LONG
Permit Agent for:
SOCORRO PETROLEUM COMPANY

JWL/bl1

enclosure

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: ☒ Secondary Recovery ☒ Pressure Maintenance ☐ Disposal ☐ Storage
Application qualifies for administrative approval? ☒ yes ☐ no
- II. Operator: SOCORRO PETROLEUM COMPANY
Address: P.O. Box 37, Loco Hills, New Mexico 88255
Contact party: Robert Setzler Phone: 505-677-3223
- III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? ☒ yes ☐ no
If yes, give the Division order number authorizing the project R-2268, -A, -B, -C.
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- * VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
 2. Whether the system is open or closed;
 3. Proposed average and maximum injection pressure;
 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- *VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- * X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)
- * XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification
- I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
- Name: JERRY W. LONG Title Permit Agent
- Signature: *Jerry W. Long* Date: October 6, 1993
- * If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal. Item VIII filed with Case for Order R-2268 and

Administrative approval for No.24 H.E West "B". (WFX-597)

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division district office.

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold owner within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;
- (3) the formation name and depth with expected maximum injection rates and pressures; and
- (4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

CHECKLIST for ADMINISTRATIVE INJECTION APPLICATIONS

Operator: SOCORRO PETRO. CO. Well: H.E. WEST "B" Well No. 55

Contact: FERRY LONG Title: CONSULTANT Phone: _____

DATE IN 10-8-93 RELEASE DATE 10-22-93 DATE OUT _____

Proposed Injection Application is for: ☒ WATERFLOOD ☒ Expansion ☐ Initial

Original Order: R-P-2268A, B, C ☒ Secondary Recovery ☐ Pressure Maintenance

SENSITIVE AREAS

☒ SALT WATER DISPOSAL

☐ WIPP ☐ Capitan Reef ☐ Commercial Operation

Data is complete for proposed well(s)? ☒ Additional Data _____

AREA of REVIEW WELLS

17 Total # of AOR 1 # of Plugged Wells
☒ Tabulation Complete ☒ Schematics of P & A's
☒ Cement Tops Adequate ☒ AOR Repair Required

INJECTION INFORMATION

Injection Formation(s) _____

Source of Water _____ Compatible _____

PROOF OF NOTICE

☒ Copy of Legal Notice ☒ Information Printed Correctly
☒ Correct Operators ☒ Copies of Certified Mail Receipts
☐ Objection Received ☐ Set to Hearing _____ Date

NOTES: _____

APPLICATION QUALIFIES FOR ADMINISTRATIVE APPROVAL _____

COMMUNICATION WITH CONTACT PERSON:

1st Contact: <input checked="" type="checkbox"/> Telephoned <input type="checkbox"/> Letter <u>10-21-93</u> Date	Nature of Discussion <u>FERRY LONG CALLED TO CK. STATUS</u>
2nd Contact: <input type="checkbox"/> Telephoned <input type="checkbox"/> Letter _____ Date	Nature of Discussion _____
3rd Contact: <input type="checkbox"/> Telephoned <input type="checkbox"/> Letter _____ Date	Nature of Discussion _____

SOCORRO PETROLEUM COMPANY
APPLICATION FOR AUTHORITY TO INJECT
H.E. WEST "B" WELL NO. 55

ITEM:

III. Well Data

- A. (1) Well: H.E. West "B" No. 55
1972' FSL & 2078' FWL, Sec. 3, T. 17S., R. 31E.
Eddy County, New Mexico
- (2) Casing Data: (See Exhibit "C")
- Surface Casing:
13-3/8" csg set @ 575', cemented with 300 sxs. (Circulated)
- Production Casing:
5-1/2" csg set @ 4266', cemented with 1070 sxs. (Circulated)
- (3) Injection Tubing: (Plastic Lined):
2-3/8" set @ 3230'
- (4) Packer: (Loc-Set)
Set @ 3230' with 12,000# tension.
Annulus filled with inhibited fluid.
- B. (1) Injection Formation:
The injection formation will be the Grayburg San Andres
within the Grayburg-Jackson pool.
- (2) Injection Interval:
The injection interval will be 3314'-4206', after
treating with 15% NEFE acid.
- (3) Original Purpose of Well:
This well was originally completed in the Grayburg-San Andres
as a producer through perforations 4142'-4206'.
- (4) Added Perforated Intervals:
3314'-3552', 3825'-4101'
- (5) The top of the Seven Rivers is at +-2230' and there is
no oil zone below the San Andres. There are no known
fresh water zones.

V. Map:

See Exhibit "A" and "B"

SOCORRO PETROLEUM COMPANY
APPLICATION FOR AUTHORITY TO INJECT
H.E. WEST "B" WELL NO. 55

VI. Wells in Area of Review:

Operator: Socorro Petroleum Company

Well Name: H.E. West "A" No. 8

Location: 1980'FNL, 660'FWL, Sec.3-17S-31E

Spud Date: 8-11-63

Completion Date: 8-20-63

Surface Casing: 8-5/8" @ 769' cemented w/100 sx

Production Casing: 5-1/2" @ 3246', cemented w/200 sx

Total Depth: 3901'

Completion: Converted to water injection well by deepening and setting 4" liner 2989'-3901', cemented with 75 sx. Perforated 3360'-3795' in Grayburg and San Andres.

Operator: Socorro Petroleum Company

Well Name: H.E. West "A" No. 11

Location: 1980'FNL, 1980'FEL, Sec.3-17S-31E

Spud Date: 10-8-81

Completion Date: 11-2-81 Re-completed 8-8-89

Surface Casing: 8-5/8" @ 817' cemented w/100 sx

Production Casing: 5-1/2" @ 3500', cemented w/100 sx

Total Depth: 3986'

Completion: Re-worked by deepening and setting 4" liner 3246'-3986' and cementing with 75 sx. Re-completed as producing oil well thru perforations 3439'-3973' in Grayburg and San Andres.

SOCORRO PETROLEUM COMPANY
APPLICATION FOR AUTHORITY TO INJECT
H.E. WEST "B" WELL NO. 55

VI. Wells in Area of Review:

Operator: Socorro Petroleum Company

Well Name: H.E. West "A" No. 13

Location: 900'FNL, 2310'FWL, Sec.3-17S-31E

Spud Date: 10-11-64

Completion Date: 10-31-64 Re-completed 9-28-89

Surface Casing: 8-5/8" set @ 555', cemented w/220 sx

Production Casing: 4-1/2" set @ 3700', cemented w/320 sx

Total Depth: 3950'

Completion: Deepened and re-completed as water injection well, thru perforations 3369'-3689' and open hole 3700'-3950' in Grayburg and San Andres.

Operator: Socorro Petroleum Company

Well Name: H.E. West "A" No.16

Location: 1980'FNL, 1980'FWL, Sec.3-17S-31E

Spud Date: 12-4-88

Completion Date: 1-12-89 Re-completed 8-8-89

Surface Casing: 8-5/8" @ 644', cemented w/400 sx

Production Casing: 5-1/2" @ 4076', cemented w/1250 sx

Total Depth: 4076'

Completion: Completed as oil well, thru perforations 3415'-3953' in the Grayburg and San Andres.

SOCORRO PETROLEUM COMPANY
APPLICATION FOR AUTHORITY TO INJECT
H.E. WEST "B" WELL NO. 55

VI. Wells in Area of Review:

Operator: Socorro Petroleum Company

Well Name: H.E. West "B" No. 16

Location: 660'FSL, 660'FWL, Sec.3-17S-31E

Spud Date: 7-18-58

Completion Date: 9-4-58 Re-completed 7-19-89

Surface Casing: 10-3/4" @ 765', cemented w/100 sx

Production Casing: 5-1/2" @ 3673'
4" liner 3264'-3978', cemented w/75 sx

Total Depth: 3978'

Completion: Drilled deeper and re-completed as producing oil well, thru perforations 3333'-3961' in Grayburg and San Andres.

Operator: Socorro Petroleum Company

Well Name: H.E. West "B" No. 18

Location: 660'FSL, 1980'FEL, Sec.3-17S-31E

Spud Date: 10-22-58

Completion Date: 12-16-58 Re-completed 7-18-89

Surface Casing: 10-3/4" @ 797', cemented w/100 sx

Production Casing: 5-1/2" @ 3725', cemented w/100 sx

Total Depth: 3996'

Completion: Drilled deeper and re-completed as a water injection well, thru perforations from 3386'-3705' and open hole 3725'-3996'.

SOCORRO PETROLEUM COMPANY
APPLICATION FOR AUTHORITY TO INJECT
H.E. WEST "B" WELL NO. 55

VI. Wells in Area of Review:

Operator: Socorro Petroleum Company

Well Name: H.E. West "B" No. 19

Location: 660'FNL, 1980'FWL, Sec.10-17S-31E

Spud Date: 12-21-58

Completion Date: January 1959 Re-completed 8-16-89

Surface Casing: 10-3/4" @ 785', cemented w/100 sx

Production Casing: 5-1/2" @ 3501', cemented w/100 sx

Total Depth: 3955'

Completion: Drilled deeper and set 4" liner 3323'-3953',
cemented w/65 sx. Re-completed as water
injection well thru perforations 3373'-3941' in
Grayburg and San Andres

Operator: Socorro Petroleum Company

Well Name: H.E. West "B" No. 26

Location: 1980'FSL, 660'FEL, Sec.3-17S-31E

Spud Date: 1-12-61

Completion Date: 3-17-61 Re-completed 9-25-89

Surface Casing: 8-5/8" @ 845', cemented w/100 sx

Production Casing: 4-1/2" @ 3757' cemented w/100 sx

Total Depth: 3941'

Completion: Drilled deeper and re-completed as a water
injection well, thru perforations from
3401'-3744' and open hole 3757'-3941'.
After acidizing with 15% NEFE acid. Per-
forations are in Grayburg-San Andres.

SOCORRO PETROLEUM COMPANY
APPLICATION FOR AUTHORITY TO INJECT
H.E. WEST "B" WELL NO. 55

VI. Wells in Area of Review:

Operator: Socorro Petroleum Company

Well Name: H.E. West "B" No. 33

Location: 1980'FSL, 660'FWL, Sec.3-17S-31E

Spud Date: 8-2-88

Completion Date: 8-20-88

Surface Casing: 8-5/8" @ 625', cemented w/300 sx

Production Casing: 5-1/2" @ 4057', cemented w/1300 sx

Total Depth: 4057' PB 4011'

Completion: Completed as producing oil well thru perforations 3367'-3994' in Grayburg and San Andres, after acidizing with 15% NEFE acid.

Operator: Socorro Petroleum Company

Well Name: H.E. West "B" No. 37

Location: 1980'FSL, 660'FWL, Sec.3-17S-31E

Spud Date: 11-12-88

Completion Date: 12-23-88

Surface Casing: 8-5/8" @ 627', cemented w/400 sx

Production Casing: 5-1/2" @ 4082', cemented w/1350 sx

Total Depth: 4082'

Completion: Completed as producing oil well, thru perforations 3410'-4038' in Grayburg-San Andres. After acidizing with 15% NEFE acid.

SOCORRO PETROLEUM COMPANY
APPLICATION FOR AUTHORITY TO INJECT
H.E. WEST "B" WELL NO. 55

VI. Wells in Area of Review:

Operator: Socorro Petroleum Company

Well Name: H.E. West "B" No. 44

Location: 720'FSL, 1980'FWL, Sec.3-17S-31E

Spud Date: 2-9-93

Completion Date: 3-21-93

Surface Casing: 8-5/8" @ 580', cemented w/450 sx

Production Casing: 5-1/2" @ 4400', cemented w/100 sx

Total Depth: 4400'

Completion: Completed as producing oil well thru perforations 3294'-3844' in Grayburg and San Andres. Cast iron bridge plug set at 3925'.

Operator: Socorro Petroleum Company

Well Name: H.E. West "A" No. 22

Location: 1345'FSL, 35'FEL, Sec.4-17S-31E

Spud Date: 2-3-93

Completion Date: 3-31-93

Surface Casing: 13-3/8" @ 604', cemented w/350 sx.

Intermediate Casing: 8-5/8" @ 1815', cemented w/750 sx.

Production Casing: 5-1/2" @ 5022', cemented w/1225 sx

Total Depth: 5022' PBD 3560'

Completion: Producing oil well, thru perforations 3278'-3522' in Grayburg.

SOCORRO PETROLEUM COMPANY
APPLICATION FOR AUTHORITY TO INJECT
H.E. WEST "B" WELL NO. 55

VI. Wells in Area of Review:

Operator: Socorro Petroleum Company

Well Name: H.E. West "A" No. 24

Location: 2625'FNL, 15'FEL, Sec.4-17S-31E

Status: Drilling well - Waiting on completion

Operator: Socorro Petroleum Company

Well Name: H.E. West "A" No. 25

Location: 2625'FNL, 1335'FWL, Sec.3-17S-31E

Status: Drilling well - Waiting on completion

Operator: Socorro Petroleum Company

Well Name: H.E. West "B" No. 49

Location: 1305'FSL, 1305'FWL, Sec.3-17S-31E

Status: Drilling well - waiting on completion

Operator: Socorro Petroleum Company

Well Name: H.E. West "B" No. 50

Location: 50'FSL, 1400'FWL, Sec.3-17S-31E

Status: Drilling well - waiting on completion

SOCORRO PETROLEUM COMPANY
APPLICATION FOR AUTHORITY TO INJECT
H.E. WEST "B" WELL NO. 55

VI. Wells in Area of Review:

Operator: Socorro Petroleum Company

Well Name: H.E. West "B" No.23

Location: 1980'FSL, 1980'FWL, Sec.3-17S-31E

Spud Date: 7-26-59

Completion Date: 9-10-59

Surface Casing: 8-5/8" @ 797' cemented w/100 sx

Production Casing: 5" @ 3456', cemented w/100 sx

Total Depth: 3557'

Completion: Originally completed as a producing oil well in the Grayburg from perforations 3413'-3435'.

- 3-27-64 Set dual injector packer at 3447' and completed as a dual injection well thru perforations 3374'-3384' in Metex, 3413'-3435' in Square Lake, and open hole 3456'-3557' in Premier.
- 1-7-81 Spotted 1 sack cement on top of CIBP set at 3451'. Found TOC at 2670' with casing failure 1177'-2512'. Set CIBP @ 2978.
- 4-23-82 Spotted 25 sx cement 2978'-2678'. Set retainer at 1627' and squeezed 200 sx. Spotted 100' cement on top of retainer. Set retainer at 1155' and pumped 1000 sx Class "C". TOC @ 1070' by temperature survey. Spot 10' of cement on retainer Perforated at 800'. Set retainer at 750' and circulated 25 sx cement to surface. Pumped 100 sx cement down bradenhead. Dumped 150' of cement on retainer. Spotted 150' surface plug. P&A effective 4-27-82. This abandoned injection well will be replaced by the proposed No.55 injection well. See EXHIBIT "D" for plugging diagram.

SOCORRO PETROLEUM COMPANY
APPLICATION FOR AUTHORITY TO INJECT
H.E. WEST "B" WELL NO. 55

VII. Proposed Operations Data:

- (1) Average daily injection rate - 250 BWPD
Maximum daily injection rate - 500 BWPD
- (2) Type of system - closed
- (3) Average injection pressure - 2200 psi
Maximum injection pressure - 2500 psi
- (4) Source of injection water - water produced from the Keel-West plus make-up water from the Keel-West fresh water system. An analysis of the water has determined it is compatible and analysis is attached as EXHIBIT "E".

VIII. Geological Data:

The proposed injection zone is in the Grayburg-San Andres from 3314'-4206'. The Grayburg consists primarily of quartz sand with cementation. The San Andres formation consists primarily of dolomite with intermingled stringers of quartz sand with dolomite cementation.

Surface formation is cretaceous and has no known sources of drinking water. Also, there are no known underground sources of drinking water overlying or underlying the proposed injection zone.

IX. Stimulation Program:

Acidized 4142'-4206' with 2000 gallons 15% NEFE acid. Acidized 3825'-4003' with 4500 gallons 15% NEFE acid. Acidized 3314'-3552' with 4800 gallons 15% NEFE acid.

X. Well Logs:

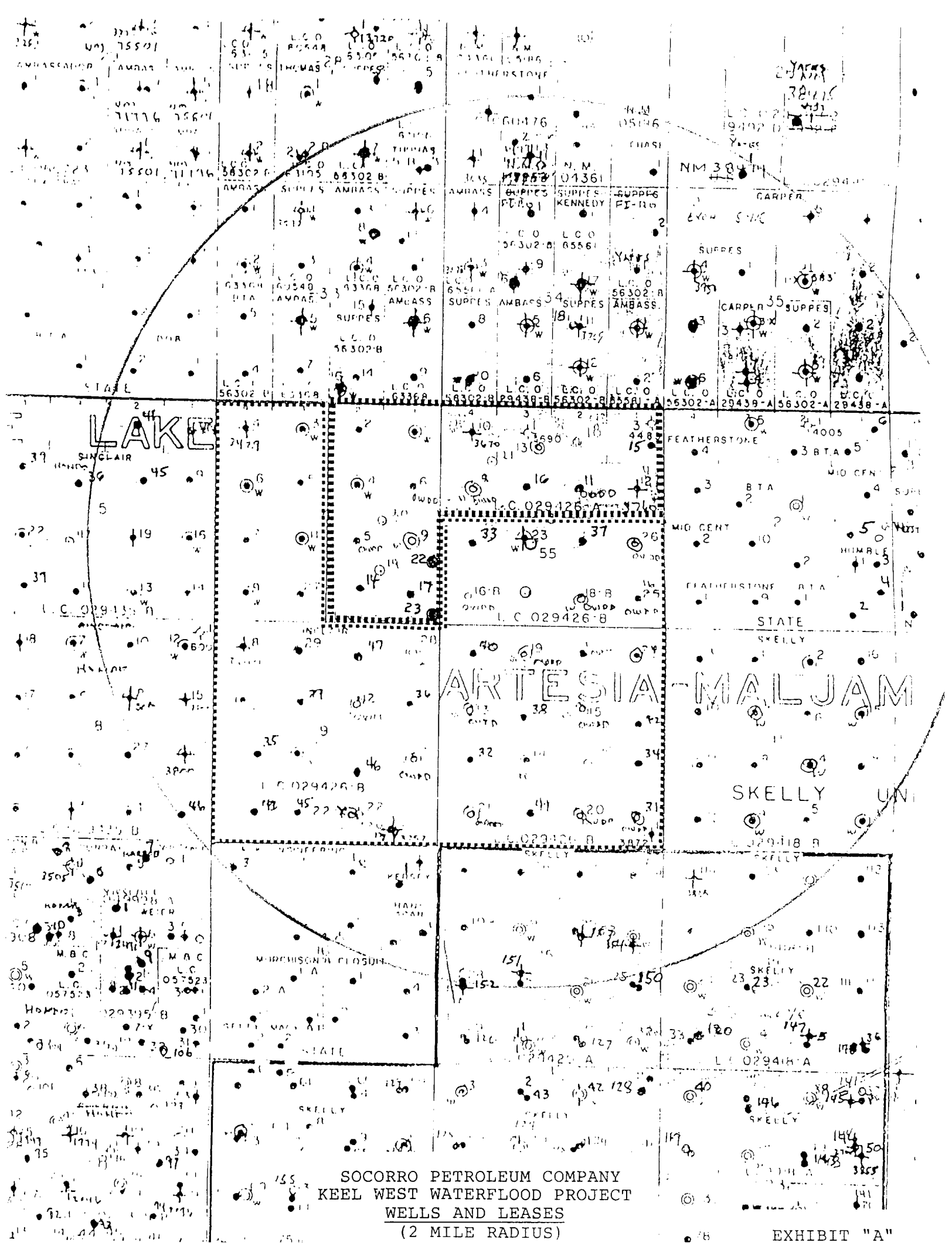
Copies of logs have been submitted.

XI. Chemical Analysis of Fresh Water:

There are no known producing fresh water wells within one mile of the proposed injection well.

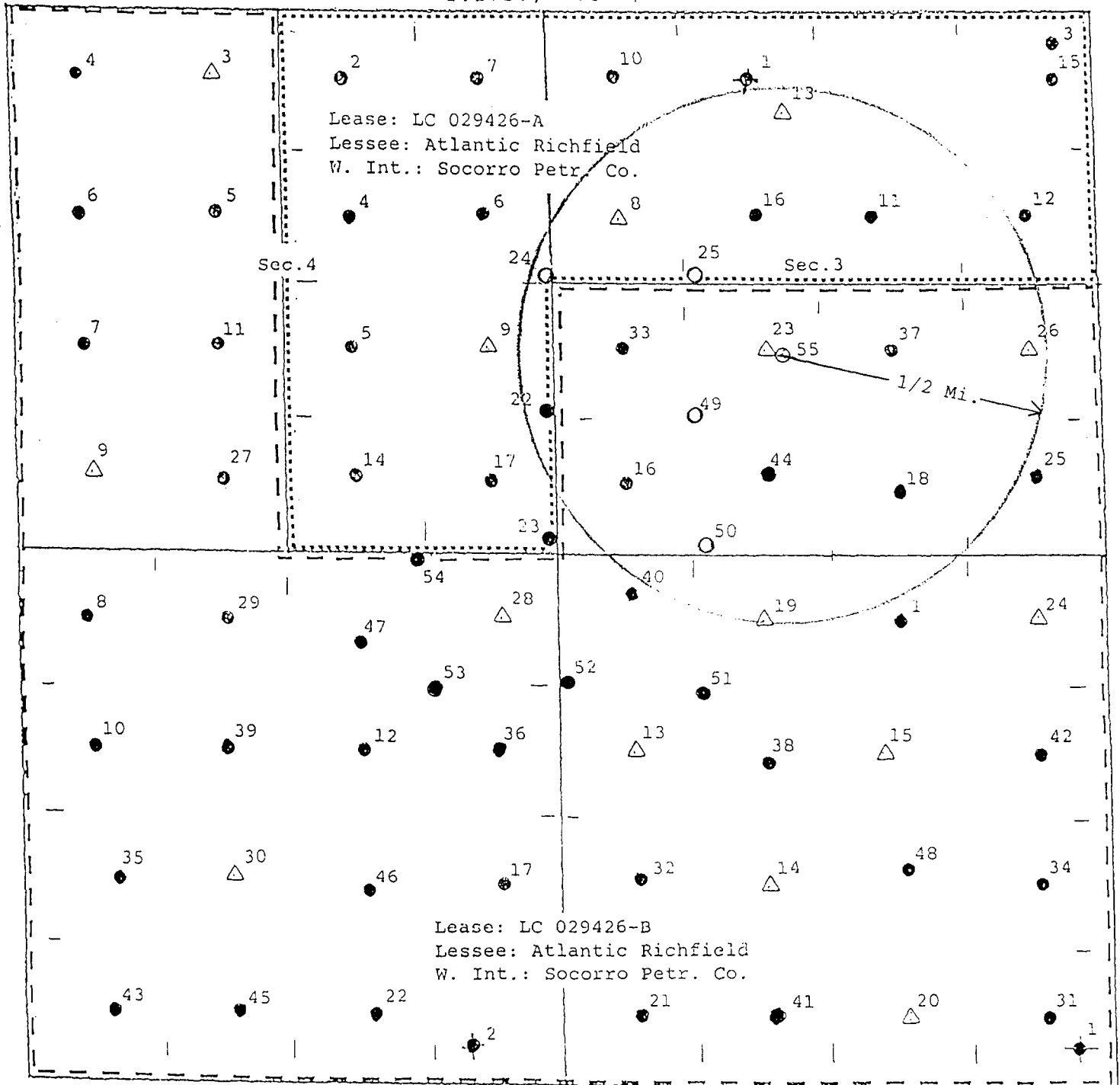
SOCORRO PETROLEUM COMPANY
APPLICATION FOR AUTHORITY TO INJECT
H.E. WEST "B" WELL NO. 55

- XII. Upon examination of the available geologic and engineering data, no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water was found.
- XIII. "Proof of Notice" affidavit from Carlsbad Current-Argus will be submitted under separate cover.



SOCORRO PETROLEUM COMPANY
KEEL-WEST WATERFLOOD PROJECT
Eddy County, New Mexico

T.17S., R.31E.



AREA OF REVIEW

EXHIBIT "B"

DATE September 23, 1993

WELL DATA SHEET

Lease West "B" Well No. 55

Location 1972 EST & 2078' FWL (K317S3LE) County Eddy State New Mexico

K.B. Elev. 3955

Date Completed 5-6-93

G.L. Elev. 3945

Formation(s) San Andres &

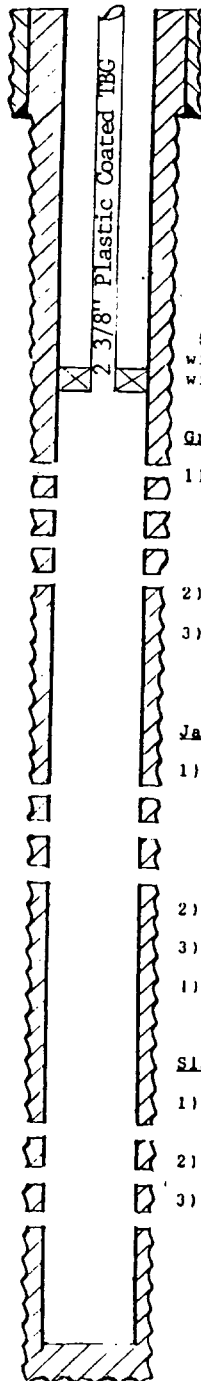
D.F. Elev. 3955

Grayburg

Well Converted

to Inj Status

Sept. 22, 1993



13 3/8" 48 #

Gr. J-55 Thd. ST&C

Set @ 575

w/ 300 Sk.

Hole Size 15"

5 1/2" Loc - Set Pkr at 3230'. Set
with 12,000# tension. Annulus filled
with pkr inhibited fluid.

Grayburg Perforations

- 1) Premier: 3552, 50, 46, 44, 41, 37, 32, 29,
27, 25, 21, 18, 15, 3489, 79
Metex: 3444, 42, 40, 28, 25, 18
Loco Hills Snd: 3395, 93, 91, 89
Grayburg: 3345, 40, 14

- 2) Acidize all perf. with 4800 gal 15%

- 3) Frac perf. 3552 - 3414 (28 holes) with
37,000 gal cross linked gel carrying
73,000# 16/30 snd. AIR 16.4 BPM, Max,
press 3830#, ISIP 3044#.

Jackson Perforations

- 1) 4088-4101; 4073-4084; 4041-4050;
3995-4003; 3982-3986; 3954-3960;
3938-3948; 3912-3920; 3885-3889;
3872-3875; 3844-3852; 3825-3830;

Total 178 holes

- 2) Acidize 4101-4041 w/2000 gal 15%

- 3) Acidize 3825-4003 w/4500 gal 15%

- 1) Frac 3825-4101 w/146,000# 16/30
snd & 46,500 gal cross linked gel
AIR 15 BPM, ISIP 1891#

Slaughter Perforation

- 1) 4206'-4202'; 4196'-4176';
4172'-4158'; 4150'-4142'; (92 holes)

- 2) Acidize all perfs w/2000 gal 15%

- 3) Acid - Frac w/10,000 gal emulsified
28% acid ISIP 1450# AIR 2-5 BPM

5 1/2" 15.50 #

Gr. J-55 Thd. JT&C

Set @ 4266

w/ 1070 Sk.

Hole Size 7 7/8"

EXHIBIT "C"

Plug Back Total Depth 4265'

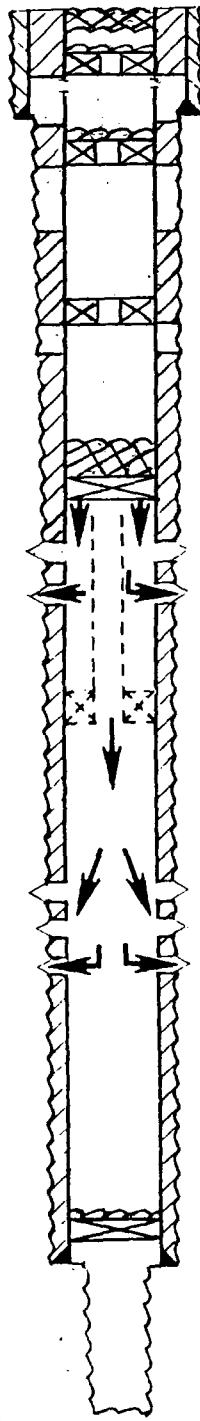
Total Depth 4300'

Well Name West "B" 55

DATE OCTOBER 1, 1993

WELL DATA SHEET

Lease SOCORRO PETROLEUM WEST "B" LEASE Well No. 23
 Location 1980' FSL AND 1980' FWL SEC 3, 17-S. 31E County EDDY State NEW MEXICO
 K.B. Elev. — Date Completed 9-10-59
 G.L. Elev. 3948' Formation(s) GRAYBURG
 D.F. Elev. 3948'



8-5/8" 24 #
 Gr. J-55 Thd. 8 RND
 Set @ 797'
 w/ 100 Sks.
 Hole Size 10"

Cement Top Unknown

Cement retainer at 1627'
 SQ csg leak w/200 sks cmt.

Top of cmt @ 2670'

25 sks cmt

CIBP at 2978' with
 Junk on top.

Loco Hills Sand
 3374'-3384'

When well was a dual
 injector pkr was set
 at 3447'.

Metex Sand
 3429'-3435' &
 3413'-3421'

CIBP at 3451' with
 1 sk cmt on top

Premier open hole
 3456'-3557'

5 " 11.5 #
 Gr. J-55 Thd. 8 RND
 Set @ 3456'
 w/ 100 Sks.
 Hole Size 8"

3557'
 4-3/4" Open
 Hole

Cmt retainer at 750
 SQ thru SQ perf at 800'
 w/260 sks. Circ 25 SKS.
 Pump 100 sks down bdradenhead.

Cmt retainer at 1155'.
 SQ with 1000 sks cmt. Did
 not circ to surface. Left
 10' cmt on top of the retainer.
 TOC 1070'.

WELL HISTORY

- 9-7-59 Run Gamma Ray Neutron Log. Perforated Metex and, f/3413-21 & 3429-35 w/4 jet shots per ft.
- 9-7-59 Sand oil fractured Metex w/20,000 gal oil & 20,000 gal sand. Max press 4200#. Min 2500#. Injection rate 16.4 bbls per min. ISIP 2750#. 5 min 2600#.
- 9-10-59 On potential test well flowed 49 bbls new oil 35.6 scv. in 7 hrs thru 1/2" choke. Csg press 390#. Tbg 40. COR 1280.
- 3-1-61 1) Deepen well to 3557' in Premier formation open hole 3456'-3557', acidized w/250 gal acid.
 2) Perforated Loco Hills Snd formation 3374'-3384' and treated w/250 gal acid. Treated Premier formation 3456'-3557'. Open hole w/250 gal acid.
 3) Run 2-3/8" tubing w/tension packer to 3447'.
 4) Injected 75 bbls fresh water thru tubing below packer into open hole 3454'-3457' in 3 hrs @ pressure of 620#.
 5) Injected 75 bbls fresh water down annulus into Loco Hills Snd perforation 3374'-3384' and 75 bbls into Metex Snd perforations 3429'-3435' and 3413'-3421' in 3 hrs @ pressure of 370#.
 6) Completed testing 3-27-64 as dual water injection well.
- 2-22-65 Acidized Premier openhole section 3456' to 3557' w/2000 gal 15% regular acid. Max press 3100#, min 2900# @ rate of 0.5 RPM. 5 min ISIP 2200#. Injection rate was increased from 4 BWPD to 300 BWPD.
- 1-7-81 Installed BOP. POH w/ injection assembly. RIM w/bit to 3454'. RIM w/CIBP, set @ 3451' just above 5" csg above at 3456'. Run Ventilog, indicated possible holes 1177' to 2512'. Spot 1 sk cmt on top of CIBP. RIM w/RBP and set @ 2978', pkr @ 2963'. Had 1" water flow out tbg, no flow out csg. POH w/pkr & RBP. RIM w/CIBP, set @ 2978' above all perf. Ran CBL/VOL/CCL/GR. Indicated TOC @ 2670'. Removed BOP, nipped up wellhead, TA off 4-20-81. Final Report.
- 4-23-82 1) RI installed BOP, POH w/injection assembly. Pushed junk from 1600' to 2978'. Spot 25 sk Class "C" cmt 2975'-2978'.
 2) Set pkr @ 1627', established injection @ 2 BPM. Set cmt retr @ 1627'. Squeezed w/200 sk Class "C" cmt. final squeeze press 2000#. Spot 100' cmt on top of retainer.
 3) RIM set pkr in 5" csg @ 1150', established circ between 8-5/8" x 5" csg. Set cmt retr @ 1155'. Pumped 1000 sk Class "C" cmt, circ water to surface, cmt did not circ. Spot 10' cmt on top of retainer. Ran temp survey, indicated TOC @ 1070' TS.
 4) Perf'd 2 JS @ 800'. Set cmt retainer @ 750'. Pumped 260 sk CL "C" cmt, circ 25 sk cmt to surface. Closed bradenhead & squeezed 100 sk cmt into formation at/1000#. Dumped 150' cmt on top of retainer.
 5) Spot 150' cmt surface plug. Installed regulation dry hole marker. P & A off 4-27-82. Final Report.

Plug Back Total Depth 3557'
 Total Depth 3557'
 Well Name WEST "B" 23

EXHIBIT "D"

UNICHEM INTERNATIONAL
P.O. BOX 1499 707 NORTH LEECH STREET
HOBBS, NEW MEXICO 88240

Socorro Petroleum
P. O. Box 38
Loco Hills NM 88255

Report Date: October 26, 1992
Lab In Date: October 19, 1992
Sample Date: October 19, 1992

Dear Robert Setzler

Listed below please find our water analysis report from Keel West , IPD :

Specific Gravity: 1.100
Total Dissolved Solids: 139413
PH: 6.20
Ionic Strength: 2.539

CATIONS:

		mg/liter
Calcium:	(Ca++)	3040
Magnesium:	(Mg++)	923
Sodium:	(Na+)	49673
Iron (Total)	(Fe++)	2.50
Barium	(Ba++)	.10
Manganese:	(Mn++)	.17
Resistivity:		

ANIONS:

Bicarbonate:	(HCO3-)	659
Carbonate:	(CO3--)	0
Hydroxide:	(OH-)	0
Sulfate:	(SO4--)	3118
Chloride:	(Cl-)	82000

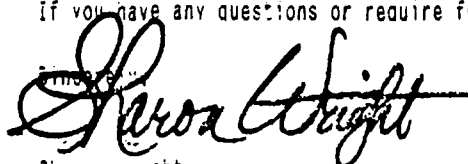
GASES:

Carbon Dioxide:	(CO2)	110.0
Oxygen:	(O2)	.30
Hydrogen Sulfide:	(H2S)	51.0

SCALE INDEX (Positive Value Indicates Scale Tendency) * indicates tests were not run.

Temperature	CaCO3 SI	CaSO4 SI
86F 30.0C	.50	-9.88
104F 40.0C	.21	-9.54
122F 50.0C	.48	-8.52
140F 60.0C	.79	-7.83
168F 70.0C	1.12	-7.56
176F 80.0C	1.49	-7.90

If you have any questions or require further information, please contact us.



Sharon Wright
Laboratory Technician

cc: Audrey
Bob Anthony

cc:

EXHIBIT "E"

PUBLIC NOTICE

PROPOSED SALT WATER INJECTION

SOCORRO PETROLEUM COMPANY, Applicant
P.O. Box 37, Loco Hills, NM 88255
CONTACT: Robert G. Setzler
Ph.505-667-3223

Applicant proposes conversion of No.55 West "B" well, located 1972'FSL, 2078'FWL Sec.3-17S-31E, to a salt water injection well to provide expansion of the Keel-West Waterflood Project. Water will be injected into the Grayburg and San Andres Formations in the interval 3314' to 4206'. Expected maximum injection rate and pressure will be 500 B/D at 2000 PSI.

Objection to administrative approval of the Application, or request for Hearing, must be filed with the OIL CONSERVATION DIVISION, P.O. Box 2088, Santa Fe, NM 87504 within 15 days after the Application is filed with that Agency.

* Affidavit of above "Notice" will be furnished by Carlsbad Current-Argus.

Ph. 505-622-1299

OIL CONSERVATION DIVISION
RECEIVED

'93 OCT 18 AM 9 00



JERRY W. LONG
CONSULTANT

2709 Resolana Dr.
Roswell, NM 88201

October 14, 1993

STATE OF NEW MEXICO
Energy and Minerals Department
Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Attn: Mr. David Catanach

Re: Application for Permit to Convert to Water Injection
SOCORRO PETROLEUM COMPANY
H.E. West "B" Well No.55
1972'FSL, 2078'FWL (UNIT K), Sec.3, T.17S., R.31E.
Keel-West Waterflood Project
Eddy County, New Mexico

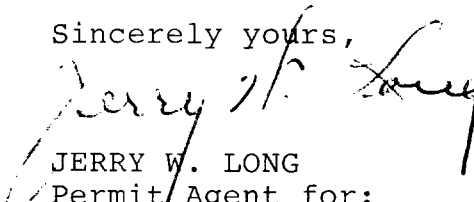
Gentlemen:

Referenced Application was filed with your office on October 8, 1993. Please accept attached Affidavit of Publication from the Carlsbad Current-Argus to complete the requirements of Rule 701.

Socorro Petroleum Company is urgently awaiting your administrative approval so that injection may be initiated at an early date.

Please contact me at 505-622-1299 if you have any questions.

Sincerely yours,


JERRY W. LONG
Permit Agent for:
SOCORRO PETROLUM COMPANY

JWL/b11

Affidavit of Publication

State of New Mexico,
County of Eddy, ss.

Arella Taylor
~~By _____~~, being first duly sworn, on
oath says:

That he is ~~publisher~~ business manager of the Carlsbad Current-Argus, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the state wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

OCTOBER 8, 19 93
_____, 19____
_____, 19____
_____, 19____

That the cost of publication is \$ 21.61,
and that payment thereof has been made and will
be assessed as court costs.

Arella Taylor

Subscribed and sworn to before me this

8 day of OCTOBER, 19 93
Pinda K. Marten

My commission expires 7/22/96
Notary Public

October 8, 1993

PUBLIC NOTICE

PROPOSED SALT WATER INJECTION

SOCORRO PETROLEUM
COMPANY, Applicant
P.O. Box 37, Loco Hills,
NM 88255
CONTACT: Robert G. Setzler
Ph. 505-667-3223

Applicant proposes conversion
of No.55 West "B" well, lo-
cated 1972'FSL, 2078'FWL
Sec.3-17S-31E, to a salt water
injection well to provide ex-
pansion of the Keel-West Wa-
terflood Project. Water will be
injected into the Grayburg and
San Andres Formations in the
interval 3314' to 4206'. Ex-
pected maximum injection rate
and pressure will be 500 B/D
at 2000 PSI.

Objection to administrative ap-
proval of the Application, or
request for Hearing, must be
filed with the OIL CONSER-
VATION DIVISION, P.O. Box
2088, Santa Fe, NM 87504
within 15 days after the Appli-
cation is filed with that
Agency.