

|         |          |          |           |      |
|---------|----------|----------|-----------|------|
| DATE IN | SUSPENSE | ENGINEER | LOGGED BY | TYPE |
|---------|----------|----------|-----------|------|

ABOVE THIS LINE FOR DIVISION USE ONLY

## NEW MEXICO OIL CONSERVATION DIVISION

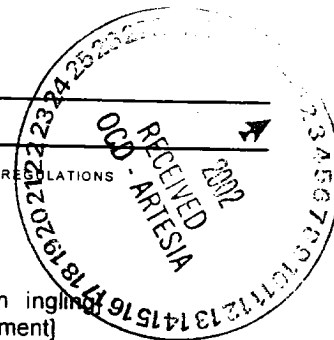
- Engineering Bureau -

### ADMINISTRATIVE APPLICATION COVERSHEET

THIS COVERSHEET IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS

#### Application Acronyms:

[NSP - Non-Standard Proration Unit] [NSL - Non-Standard Location]  
 [DD - Directional Drilling] [SD - Simultaneous Dedication]  
 [DHC - Downhole Commingling] [CTB - Lease Commingling] [PLC - Pool / Lease Commingling]  
 [PC - Pool Commingling] [OLS - Off-Lease Storage] [OLM - Off-Lease Measurement]  
 [WFX - Waterflood Expansion] [PMX - Pressure Maintenance Expansion]  
 [SWD - Salt Water Disposal] [IPI - Injection Pressure Increase]  
 [EOR - Qualified Enhanced Oil Recovery Certification] [PPR - Positive Production Response]



#### [1] TYPE OF APPLICATION - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Directional Drilling

☐ NSL ☐ NSP ☐ DD ☐ SD

Check One Only for [B] and [C]

[B] Commingling - Storage - Measurement

☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery

☒ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

#### [2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or ☒ Does Not Apply

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners

[B] ☒ Offset Operators, Leaseholders or Surface Owner

[C] ☒ Application is One Which Requires Published Legal Notice

[D] ☐ Notification and/or Concurrent Approval by BLM or SLO

U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] ☒ For all of the above, Proof of Notification or Publication is Attached, and/or,

[F] ☐ Waivers are Attached

#### [3] INFORMATION / DATA SUBMITTED IS COMPLETE - Statement of Understanding

I hereby certify that I, or personnel under my supervision, have read and complied with all applicable Rules and Regulations of the Oil Conservation Division. Further, I assert that the attached application for administrative approval is accurate and complete to the best of my knowledge and where applicable, verify that all interest (WI, RI, ORRI) is common. I understand that any omission of data, information or notification is cause to have the application package returned with no action taken.

Note: Statement must be completed by an individual with supervisory capacity.

Ann Ritchie  
 Print or Type Name

*Ann Ritchie*  
 Signature

Regulatory Agent  
 Title

1/29/02  
 Date

## APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: ☒ Secondary Recovery ☐ Pressure Maintenance  
Application qualifies for administrative approval? ☐ yes ☐ no

II. Operator: SDX Resources

Address: PO Box 5061 Midland, TX 79704

Contact party: Chuck Morgan Phone: (915) 685-1761

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-4727

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: Ann Ritchie Title: Regulatory Agent

Signature: [Signature] Date: 1/29/02

\* 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.

## 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 operator 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.

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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.

## **Application for Authorization to Inject**

### **Northwest Artesia Unit Well # 9**

Section 32, T-17-S, R-28-E

2310 FSL & 660 FWL

API # 30-015-10795

Eddy County, NM

### **Northwest Artesia Unit Well #11**

Section 31, T-17-S, R-28-E

990 FSL & 660 FEL

API # 30-015-20042

Eddy County, NM

### **Northwest Artesia Unit Well # 12**

Section 32, T-17-S, R-28-E

990 FSL & 760 FWL

API # 30-015-20043

Eddy County, NM

- I. SDX plans to commence injection into the above listed previously permitted and active Injection wells.
- II. Operator: SDX Resources  
PO Box 5061  
Midland, TX 79704  
Contact party: Chuck Morgan (915) 685-1761
- III. Well Data: See Attachments A-1 thru A-3
- IV. The NWARU # 9 & 11 wells were permitted in 1974 by Order # R4727 & the NWARU # 12 well in 1982 by Order WFX # 498. All three wells were active injection wells until 1996 when the previous operator applied to convert them to producers. The work was never completed, the wells have remained shut-in injection wells since that time and the current injection permit has expired. SDX would like to resume previously permitted injection operations.
- V. See Attachment B-1
- VI. See Attachment C

**SDX Resources Pg 2**  
**Northwest Artesia Unit Injection Application**  
**Wells # 9, 11, 12**

- VII. (1) Proposed average Daily Injection Volume: 200 BWPD  
(2) This will be a closed system  
(3) Proposed average Injection pressure: 1000#  
Proposed maximum Injection pressure: 1200#  
(4) Re-inject produced water into the same zone. Water analysis  
Attached (Attachment D)  
(5) Not applicable
- VIII. The proposed injection interval is the dolomitic sand Premier section of the Grayburg. There are limited quantities of fresh water at 150'.
- IX. No treatment is necessary.
- X. Well logs are on file at the OCD.
- XI. There are no fresh water wells within the one mile radius.
- XII. Geologic and engineering data have been examined and no evidence of open faults or any other hydrological connection between the injection zone and any fresh water aquifer has been found.
- XIII. (1) Surface Owner: Bogle LTD  
PO Box 441  
Artesia, NM 88210  
Attached please find certification and listing of notification of offset operators (Attachment E)  
(2) Affidavit of Publication (Attachment F)

APPLICATION OF DEPCO INC. TO EXPAND  
ITS WATERFLOOD PROJECT IN THE ARTESIA-QUEEN,  
GRAYBURG SAN ANDRES POOL IN EDDY COUNTY,  
NEW MEXICO.

ORDER No. WFX-498

ADMINISTRATIVE ORDER  
OF THE OIL CONSERVATION DIVISION

Under the provisions of Order No. R-4727, Depco Inc. has made application to the Division on April 5, 1982, for permission to expand its Northwest Artesia Unit Waterflood Project in the Artesia-Queen, Grayburg San Andres Pool in Eddy County, New Mexico.

NOW, on this 13th day of April, 1982, the Division Director finds:

1. That application has been filed in due form.
2. That satisfactory information has been provided that all offset operators have been duly notified of the application.
3. That no objection has been received within the waiting period as prescribed by Rule 701 B.
4. That the proposed injection well is eligible for conversion to water injection under the terms of Rule 701.
5. That the proposed expansion of the above referenced waterflood project will not cause waste nor impair correlative rights.
6. That the application should be approved.

IT IS THEREFORE ORDERED:

That the applicant, Depco Inc., be and the same is hereby authorized to inject water into Grayburg formation through plastic-lined tubing set in a packer at approximately 1875 feet in the following described well for purposes of secondary recovery to wit:

Northwest Artesia Unit Well No. 12, Unit M, Section 32,  
Township 17 South, Range 28 East, Eddy County

IT IS FURTHER ORDERED:

That the operator shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

That the casing-tubing annulus (in each well) shall be loaded with an inert fluid and equipped with a pressure gauge at the surface or left open to the atmosphere to facilitate detection of leakage in the casing, tubing, or packer.

That the injection well or system shall be equipped with a pressure limiting device which will limit the wellhead pressure to a maximum of 1250 pounds per square inch; provided however that the Division Director may administratively authorize a pressure limitation in excess of the above upon the operator's establishing that such higher pressure will not result in fracturing of the confining strata.

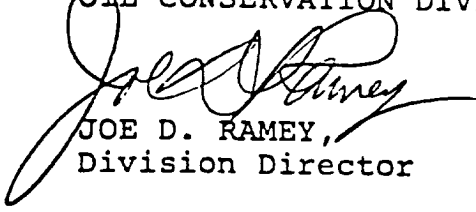
That the operator shall notify the supervisor of the Division's Artesia District Office before injection is commenced through said well.

That the operator shall immediately notify the Supervisor of the Division's Artesia District Office of the failure of the tubing, casing, or packer in said well or the leakage of water from or around said well and shall take such steps as may be timely or necessary to correct such failure or leakage.

That the subject well shall be governed by all provisions of Division Order No. R-4727 and Rules 702, 703, 704, 705 and 706 not inconsistent herewith.

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

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

  
JOE D. RAMEY,  
Division Director

S E A L

Attachment A-1

III. Well Data: **Northwest Artesia Unit Well #9**

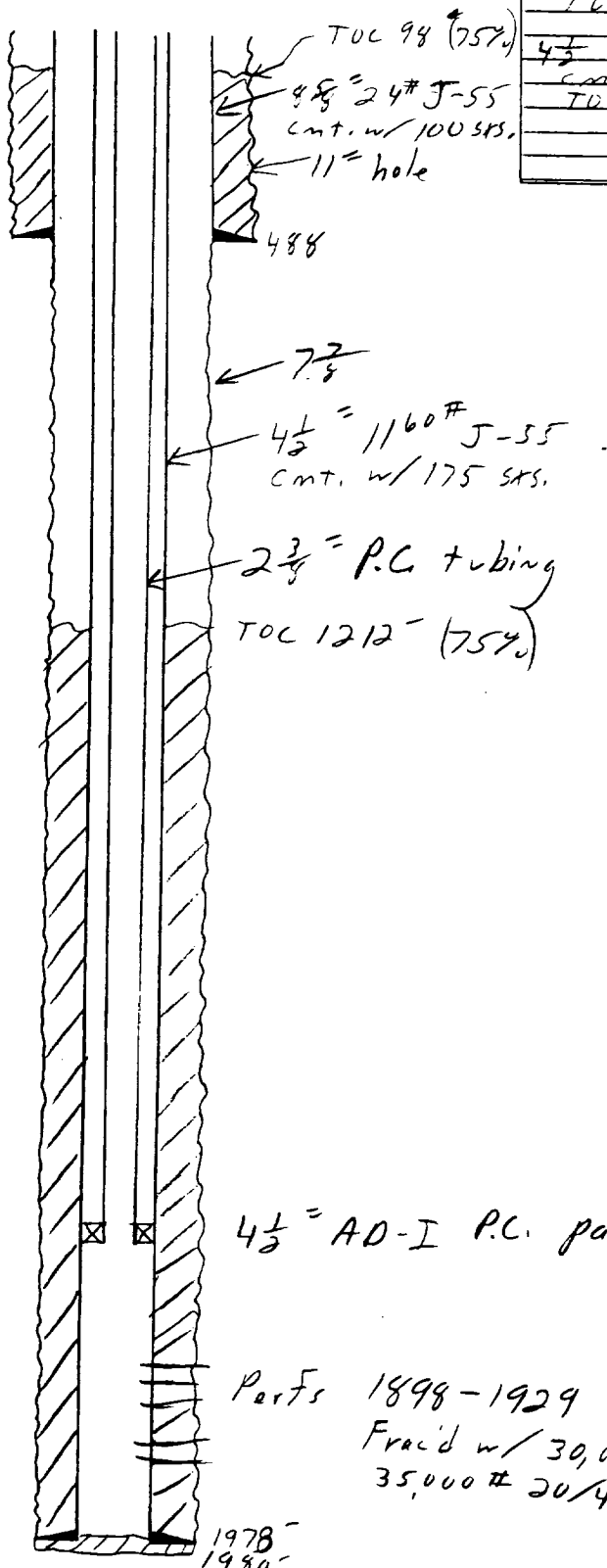
- (A) 1. Section 32, T-17-S, R-28-E  
2310 FSL & 660 FWL  
Eddy Co., NM
- 2. Casing: 8 5/8" 24# J-55 @ 488', Cmt w/100sxs TOC  
calc @ 98' (0.75% effic)  
4 1/2" 11# J-55 @ 1978', Cmt w/175 sxs TOC  
Calc @ 1212' (0.75% effic)  
2 3/8" tubing
- (B) 1. Injection formation: Premier Grayburg  
2. Injection interval will be thru perforations; 1898-1929'  
3. Well was completed as a producer and became an injection  
Well in 1974.  
4. Perforations: 1898-1929'
- (C) Next Shallow oil or gas zone: Seven Rivers  
Next Deeper oil or gas zone: San Andres



WELL NAME: NWAV # 9 FIELD AREA: Artesia  
 LOCATION: Sec. 32 T17S R28E 2310 FSL + 660 FWL Eddy Co.  
 GL: \_\_\_\_\_ ZERO: DF 3680' AGL: 5'  
 KB: \_\_\_\_\_ ORIG. DRG. COMP. DATE: 5/15/66  
 COMMENTS: \_\_\_\_\_

CASING PROGRAM:

| SIZE/WT./GR./CONN.          | DEPTH SET |
|-----------------------------|-----------|
| 8 5/8" J-55 24#             | 498       |
| CMT. W/ 100 SRS.            |           |
| TUC 98' calc. at 75% eff.   |           |
| 4 1/2" 1160# J-55           | 1978      |
| CMT. W/ 175 SRS.            |           |
| TUC 1212' calc. at 75% eff. |           |
|                             |           |
|                             |           |
|                             |           |



"Existing and Proposed"  
 Condition.  
 (Previous Injector  
 1974-1996 R 4727)

Attachment A-2

III. Well Data: **Northwest Artesia Unit Well #11**

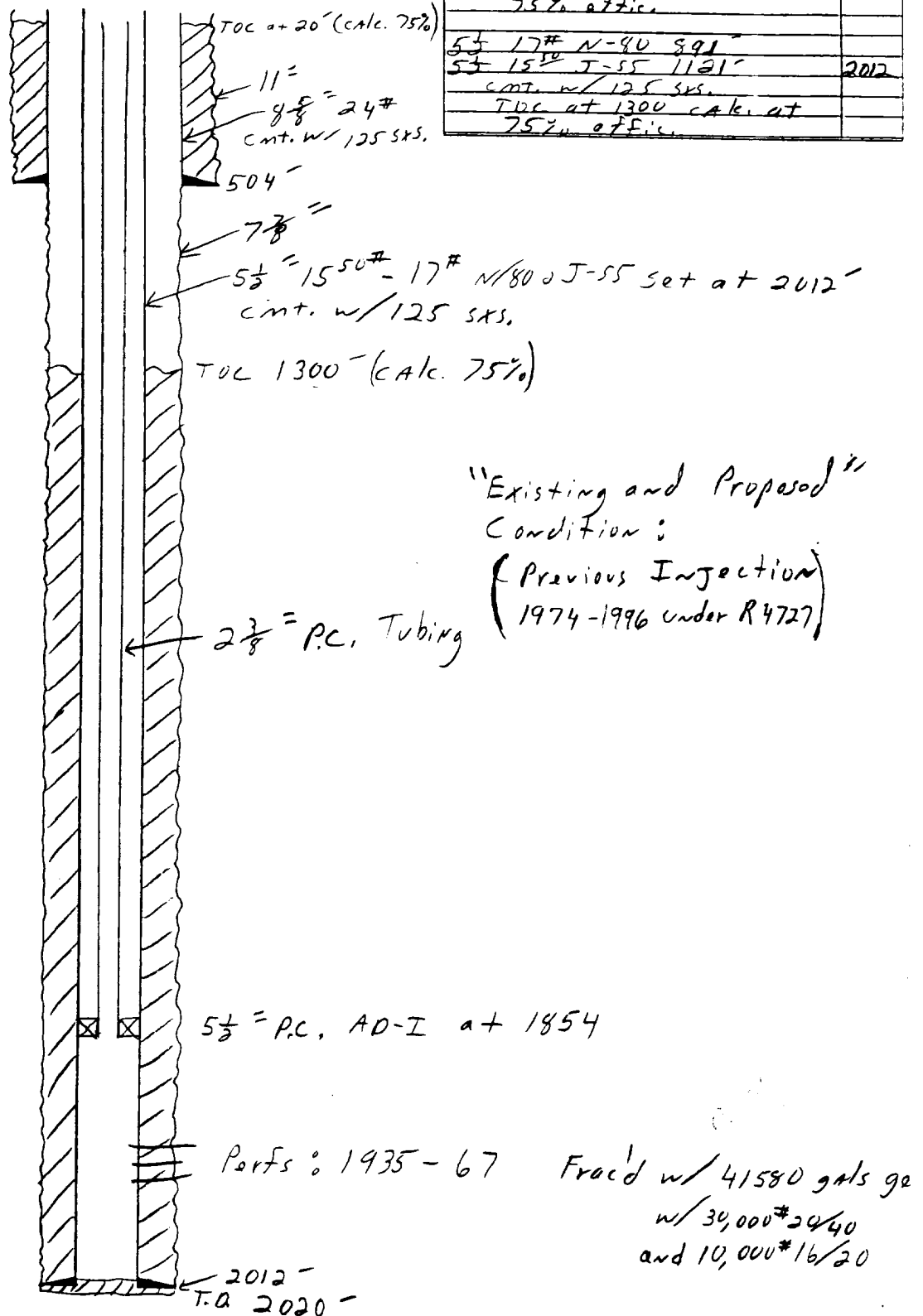
- (A)
  - 1. Section 31, T-17-S, R-28-E  
990 FSL & 660 FEL  
Eddy Co., NM
  - 2. Casing: 8 5/8" 24# J-55 @ 504', Cmt w/125sxs TOC  
calc @ 20' (0.75% effic)  
5 1/2" 15-17# N-80 & J-55 @ 2012', Cmt w/125 sxs TOC  
Calc @ 1300' (0.75% effic)  
2 3/8" tubing
- (B)
  - 1. Injection formation: Premier Grayburg
  - 2. Injection interval will be thru perforations; 1935-1967'
  - 3. Well was completed as a producer and became an injection Well in 1974.
  - 4. Perforations: 1935-1967'
- (C)
  - Next Shallow oil or gas zone: Seven Rivers
  - Next Deeper oil or gas zone: San Andres

WELL NAME: NWAV #11FIELD AREA: ArtesiaLOCATION: Sec. 31 T12S R28E 790' FSL + 660' FEL Eddy Co.GL: 3692' ZERO: \_\_\_\_\_' AGL: \_\_\_\_\_'KB: \_\_\_\_\_' ORIG. DRLG. COMPL DATE: 5/4/67

COMMENTS: \_\_\_\_\_

CASING PROGRAM:

| SIZE/WT./GR./CONN.             | DEPTH SET |
|--------------------------------|-----------|
| 8" = 24#                       | 504'      |
| cont. w/ 125 sxs.              |           |
| TOC at 20' calc. at 75% eff.   |           |
| 5 1/2" 17# N-80 891'           |           |
| 5 1/2" 15# J-55 1121'          | 2012'     |
| cont. w/ 125 sxs.              |           |
| TOC at 1300' calc. at 75% eff. |           |



- SKETCH NOT TO SCALE -

REVISED: \_\_\_\_\_

Attachment A-3

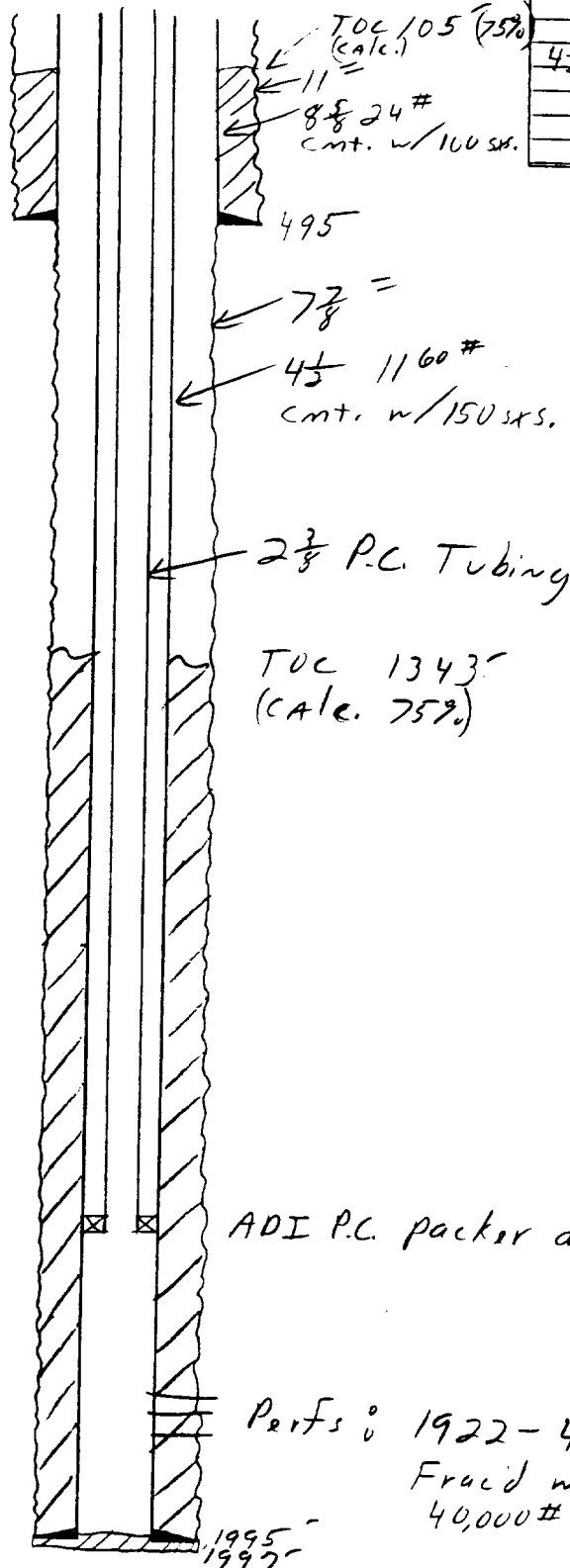
III. Well Data: **Northwest Artesia Unit Well #12**

- (A)
  - 1. Section 32, T-17-S, R-28-E  
990 FSL & 760 FWL  
Eddy Co., NM
  - 2. Casing: 8 5/8" 24# J-55 @ 495', Cmt w/100sxs TOC  
calc @ 105' (0.75% effic)  
4 1/2" 11# J-55 @ 1995', Cmt w/150 sxs TOC  
Calc @ 1343' (0.75% effic)  
2 3/8" tubing
- (B)
  - 1. Injection formation: Premier Grayburg
  - 2. Injection interval will be thru perforations; 1922-1949'
  - 3. Well was completed as a producer and became an injection Well in 1982.
  - 4. Perforations: 1922-1949'
- (C)
  - Next Shallow oil or gas zone: Seven Rivers
  - Next Deeper oil or gas zone: San Andres

WELL NAME: NWAV #12 FIELD AREA: Artesia  
 LOCATION: Sec. 32 T17S R28E 990 FSL 760' FWL Eddy Co.  
 GL: 3682' ZERO:       ' AGL:       '  
 KB:       ' ORIG. DRG. (COMPL.) DATE: 5/6/67  
 COMMENTS:       

CASING PROGRAM:

| SIZE/WT./GR./CONN.    | DEPTH SET |
|-----------------------|-----------|
| 8 5/8" 24#            | 495'      |
| cmt. w/ 100 sxs.      |           |
| TOC calc. at 105' at  |           |
| 75% eff. c.           |           |
| 4 1/2" 1160#          | 1995'     |
| cmt. w/ 150 sxs.      |           |
| TOC calc. at 1343' at |           |
| 75% eff. c.           |           |

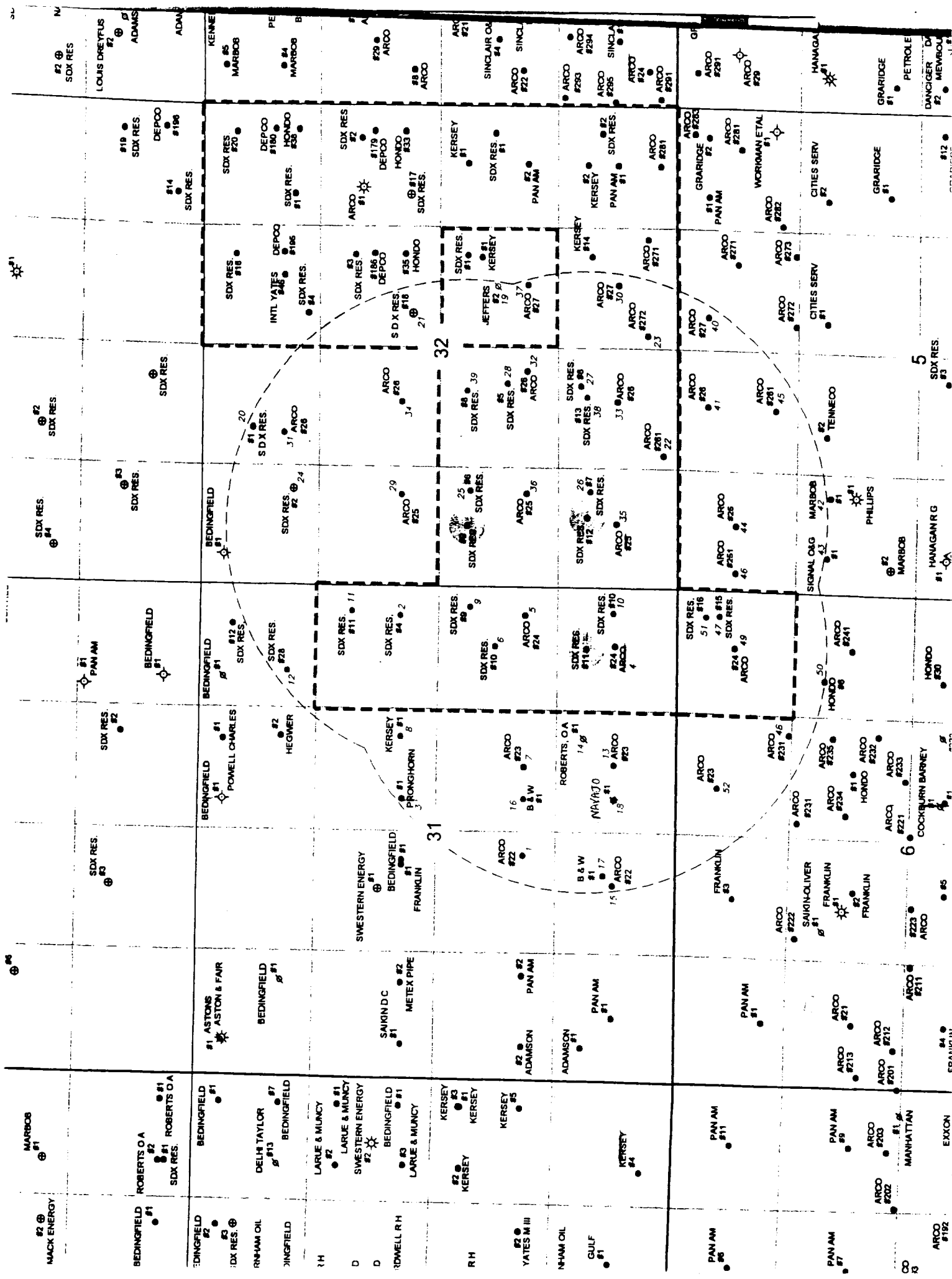


"Existing and Proposed Condition.  
 (Previous Injection)  
 1974-1996 R 4727)

Perfs: 1922-49  
 Frac'd w/ 36,000 gals. gell and  
 40,000# sand.

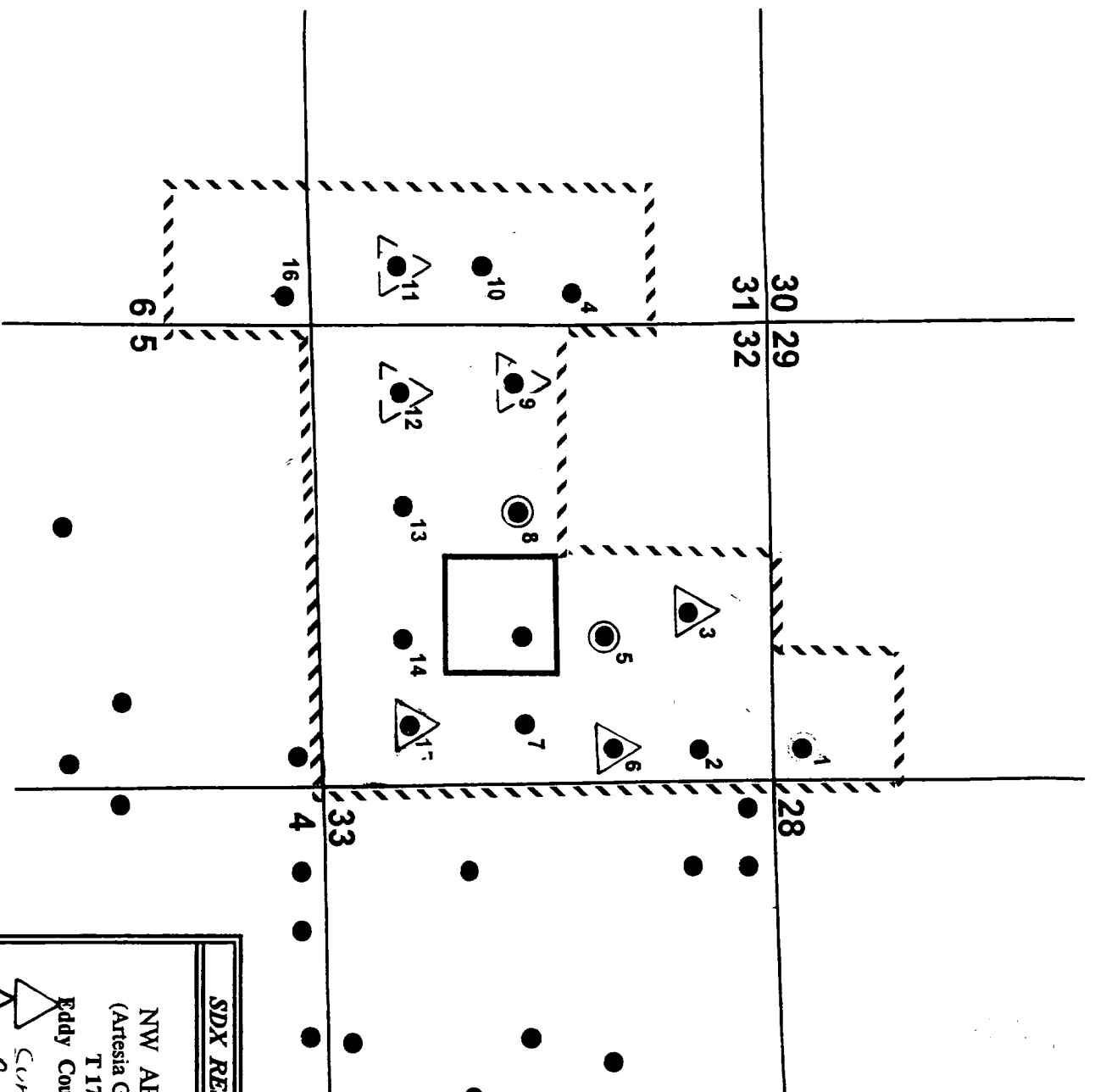
(NOTE - NO CHANGE IN CONFIGURATION, SINCE SHUT-IN)  
 - SKETCH NOT TO SCALE -

REVISED:



Map showing well locations and company names. Key locations and well numbers include:

- Top Left: MARBOB #1, DEPOCO #19, SDX RES. #2, #3, #4, #5, #6, #7, #8, #9, #10, #11, #12, #13, #14, #15, #16, #17, #18, #19, #20, #21, #22, #23, #24, #25, #26, #27, #28, #29, #30, #31, #32, #33, #34, #35, #36, #37, #38, #39, #40, #41, #42, #43, #44, #45, #46, #47, #48, #49, #50, #51, #52, #53, #54, #55, #56, #57, #58, #59, #60, #61, #62, #63, #64, #65, #66, #67, #68, #69, #70, #71, #72, #73, #74, #75, #76, #77, #78, #79, #80, #81, #82, #83, #84, #85, #86, #87, #88, #89, #90, #91, #92, #93, #94, #95, #96, #97, #98, #99, #100.
- Top Right: MARBOB #1, DEPOCO #19, SDX RES. #2, #3, #4, #5, #6, #7, #8, #9, #10, #11, #12, #13, #14, #15, #16, #17, #18, #19, #20, #21, #22, #23, #24, #25, #26, #27, #28, #29, #30, #31, #32, #33, #34, #35, #36, #37, #38, #39, #40, #41, #42, #43, #44, #45, #46, #47, #48, #49, #50, #51, #52, #53, #54, #55, #56, #57, #58, #59, #60, #61, #62, #63, #64, #65, #66, #67, #68, #69, #70, #71, #72, #73, #74, #75, #76, #77, #78, #79, #80, #81, #82, #83, #84, #85, #86, #87, #88, #89, #90, #91, #92, #93, #94, #95, #96, #97, #98, #99, #100.
- Bottom Left: MARBOB #1, DEPOCO #19, SDX RES. #2, #3, #4, #5, #6, #7, #8, #9, #10, #11, #12, #13, #14, #15, #16, #17, #18, #19, #20, #21, #22, #23, #24, #25, #26, #27, #28, #29, #30, #31, #32, #33, #34, #35, #36, #37, #38, #39, #40, #41, #42, #43, #44, #45, #46, #47, #48, #49, #50, #51, #52, #53, #54, #55, #56, #57, #58, #59, #60, #61, #62, #63, #64, #65, #66, #67, #68, #69, #70, #71, #72, #73, #74, #75, #76, #77, #78, #79, #80, #81, #82, #83, #84, #85, #86, #87, #88, #89, #90, #91, #92, #93, #94, #95, #96, #97, #98, #99, #100.
- Bottom Right: MARBOB #1, DEPOCO #19, SDX RES. #2, #3, #4, #5, #6, #7, #8, #9, #10, #11, #12, #13, #14, #15, #16, #17, #18, #19, #20, #21, #22, #23, #24, #25, #26, #27, #28, #29, #30, #31, #32, #33, #34, #35, #36, #37, #38, #39, #40, #41, #42, #43, #44, #45, #46, #47, #48, #49, #50, #51, #52, #53, #54, #55, #56, #57, #58, #59, #60, #61, #62, #63, #64, #65, #66, #67, #68, #69, #70, #71, #72, #73, #74, #75, #76, #77, #78, #79, #80, #81, #82, #83, #84, #85, #86, #87, #88, #89, #90, #91, #92, #93, #94, #95, #96, #97, #98, #99, #100.



SDX RESOURCES, INC.

NW ARTESIA UNIT  
(Artesia GREYBURG Field)  
T 17 S - R 28 E  
Eddy County, New Mexico

Current Injectors  
Proposed Injectors  
ERAM AIT - October, 1998

# Attachment C

NW Artesia Unit

| NW A Sec | TWN | RGE | N/S | Dir  | E/W | Dir  | API | Operator     | Lease          | Well #          | Status | Comp Date | TD         | Aband Date | Perf     | Csg Size  | Hole Size | Depth   | Surf/Cmt | TOC  | Source | Comments |       |
|----------|-----|-----|-----|------|-----|------|-----|--------------|----------------|-----------------|--------|-----------|------------|------------|----------|-----------|-----------|---------|----------|------|--------|----------|-------|
| 1        | 31  | 17  | 28  | 1650 | FSL | 2387 | FWL | 30-015-01851 | Arco Permian   | Empire Abo Unit | 22     | Inactive  | 4/13/1980  | 8046       |          | 5602-5634 | 8 5/8     | 12 1/4" | 1278     | 650  | Surf   | Calc     | 0.75% |
|          |     |     |     |      |     |      |     |              |                |                 |        |           |            |            |          |           | 7 7/8"    | 6046    | 750      | 2786 | Calc   | 0.75%    |       |
|          |     |     |     |      |     |      |     |              |                |                 |        |           |            |            |          |           |           |         |          |      |        |          |       |
| 2        | 31  | 17  | 28  | 2277 | FNL | 330  | FEL | 30-015-10537 | SDX            | NW Artesia Unit | 4      | Active    | 8/24/1985  | 6200       |          | 1898-1908 | 8 5/8     | 11      | 808      | 350  | Surf   | Circ     |       |
|          |     |     |     |      |     |      |     |              |                |                 |        |           |            |            |          |           | 4 1/2     | 7 7/8   | 2018     | 150  | 1368   | Calc     | 0.75% |
| 3        | 31  | 17  | 28  | 2310 | FNL | 2310 | FEL | 30-015-01837 | Pronghorn Mgmt | Malco State     | 1      | Active    | 10/22/1953 | 1850       | NOT DEEP | ENOUGH    | 10        | 409     |          |      |        |          |       |
|          |     |     |     |      |     |      |     |              |                |                 |        |           |            |            |          |           | 8 5/8     | 663     |          |      |        |          |       |
|          |     |     |     |      |     |      |     |              |                |                 |        |           |            |            |          |           | 7         | 961     |          |      |        |          |       |
| 4        | 31  | 17  | 28  | 660  | FSL | 660  | FEL | 30-015-01841 | Arco Permian   | Empire Abo Unit | 24     | Active    | 3/13/1980  | 8122       |          | 8028-8040 | 8 5/8     | 12 1/4" | 765      | 250  | 185    | Calc     | 0.75% |
|          |     |     |     |      |     |      |     |              |                |                 |        |           |            |            |          |           | 5 1/2     | 7 7/8   | 8122     | 450  | 3551   | Calc     | 0.75% |
| 5        | 31  | 17  | 28  | 1650 | FSL | 330  | FEL | 30-015-01844 | Arco Permian   | Empire Abo Unit | 24     | Inactive  | 4/30/1980  | 8106       |          | 8024-8044 | 8 5/8     | 12 1/4" | 750      | 250  | 150    | Calc     | 0.75% |
|          |     |     |     |      |     |      |     |              |                |                 |        |           |            |            |          |           | 5 1/2     | 7 7/8   | 8104     | 450  | 3533   | Calc     | 0.75% |
| 6        | 31  | 17  | 28  | 1980 | FSL | 660  | FEL | 30-015-10833 | SDX            | NW Artesia Unit | 10     | Active    | 6/18/1986  | 2000       |          | 1913-1945 | 8 5/8     | 11      | 488      | 100  | Surf   | Circ     |       |
|          |     |     |     |      |     |      |     |              |                |                 |        |           |            |            |          |           | 4 1/2     | 7 7/8   | 2000     | 175  | 1239   | Calc     | 0.75% |
| 7        | 31  | 17  | 28  | 1650 | FSL | 1958 | FEL | 30-015-01850 | Arco Permian   | Empire Abo Unit | 23     | Inactive  | 3/18/1980  | 8094       |          | 5834-6044 | 8 5/8     | 12 1/4" | 1238     | 750  | Surf   | Calc     | 0.75% |
|          |     |     |     |      |     |      |     |              |                |                 |        |           |            |            |          |           | 5 1/2     | 7 7/8   | 6094     | 650  | 2381   | Calc     | 0.75% |
| 8        | 31  | 17  | 28  | 2282 | FNL | 1825 | FEL | 30-015-01852 | Kersey Co      | Boling          | 1      | Active    | 12/20/1988 | 6075       |          | 3510-3545 | 8 5/8     | 12 1/4" | 763      | 350  | Surf   | Calc     | 0.75% |
|          |     |     |     |      |     |      |     |              |                |                 |        |           |            |            |          |           | 5 1/2     | 7 7/8   | 6025     | 750  | 1740   | Calc     | 0.75% |
| 9        | 31  | 17  | 28  | 2310 | FSL | 270  | FEL | 30-015-30849 | SDX            | NW State        | 8      | Active    | 1/31/2000  | 3195       |          | 2444-2782 | 8 5/8     | 12 1/4  | 518      | 350  | Surf   | Circ     |       |
|          |     |     |     |      |     |      |     |              |                |                 |        |           |            |            |          |           | 5 1/2     | 7 7/8   | 3188     | 600  | Surf   | Circ     |       |
| 10       | 31  | 17  | 28  | 753  | FSL | 330  | FEL | 30-015-30760 | SDX            | NW State        | 10     | Active    | 11/21/1999 | 3210       |          | 2482-2802 | 8 5/8     | 12 1/4  | 495      | 350  | Surf   | Circ     |       |
|          |     |     |     |      |     |      |     |              |                |                 |        |           |            |            |          |           | 5 1/2     | 7 7/8   | 3192     | 650  | Surf   | Circ     |       |
| 11       | 31  | 17  | 28  | 1650 | FNL | 330  | FEL | 30-015-30783 | SDX            | NW State        | 11     | Active    | 11/28/1999 | 3205       |          | 2432-2607 | 8 5/8     | 12 1/4  | 514      | 350  | Surf   | Circ     |       |
|          |     |     |     |      |     |      |     |              |                |                 |        |           |            |            |          |           | 5 1/2     | 7 7/8   | 3200     | 600  | Surf   | Circ     |       |
|          |     |     |     |      |     |      |     |              |                |                 |        |           |            |            |          |           |           |         |          |      |        |          |       |



| NW 1/4 Sec | TWN | RGE | N/S | Dir      | E/W      | API          | Operator        | Lease             | Well # | Status | Comp Date  | TD    | Abnd Date | Perf      | Csg Size | Hole Size | Depth | Sxx/Cm | TOC  | Source | Comments |  |
|------------|-----|-----|-----|----------|----------|--------------|-----------------|-------------------|--------|--------|------------|-------|-----------|-----------|----------|-----------|-------|--------|------|--------|----------|--|
| 12         | 31  | 17  | 28  | 073 FNL  | 859 FEL  | 30-015-30883 | SDX             | NW State          | 28     | Active | 10/1/2000  | 2808  |           | 2288-2548 | 8 5/8    | 12 1/4    | 452   | 325    | Surf | Circ   |          |  |
|            |     |     |     |          |          |              |                 |                   |        |        |            |       |           |           | 5 1/2    | 7 7/8     | 2802  | 600    | Surf | Circ   |          |  |
| 13         | 31  | 17  | 28  | 660 FSL  | 1939 FEL | 30-015-01649 | Arco Permian    | Empire Abo Unit   | 23     | Active | 2/24/1960  | 6094  |           | 6023-6060 | 8 5/8    | 12 1/4    | 1200  | 550    | Surf | Calc   | 0.75%    |  |
|            |     |     |     |          |          |              |                 |                   |        |        |            |       |           |           | 5 1/2    | 7 7/8     | 6094  | 750    | 1809 | Calc   | 0.75%    |  |
| 14         | 31  | 17  | 28  | 990 FSL  | 1650 FEL | 30-015-01653 | Otis Roberts    | Parker State      | 1      | D&A    | 1/19/1942  | 742   | 1/19/1942 | ENOUGH    | 8 1/4    |           | 441   |        |      |        |          |  |
|            |     |     |     |          |          |              |                 |                   |        |        |            |       | NOT DEEP  |           |          |           |       |        |      |        |          |  |
| 16         | 31  | 17  | 28  | 660 FSL  | 2082 FNL | 30-015-01646 | Arco Permian    | Empire Abo Unit   | 22     | Active | 1/28/1960  | 6050  |           | 5950-6000 | 8 5/8    | 12 1/4    | 1000  | 500    | Surf | Calc   | 0.75%    |  |
|            |     |     |     |          |          |              |                 |                   |        |        |            |       |           |           | 5 1/2    | 7 7/8     | 6050  | 750    | 1765 | Calc   | 0.74%    |  |
| 18         | 31  | 17  | 28  | 1650 FSL | 2310 FEL | 30-015-01642 | B&W Oil Co      | State FW          | 1      | Active | 12/31/1982 | 1951  |           | 1828-1934 | 8 5/8    | 11"       | 991   | 125    | 504  | Calc   | 0.75%    |  |
|            |     |     |     |          |          |              |                 |                   |        |        |            |       |           |           | 7        | 8"        | 1944  | 350    | Surf | Calc   | 0.75%    |  |
| 17         | 31  | 17  | 28  | 786 FSL  | 2188 FNL | 30-015-10118 | B&W Oil Co      | State FV          | 1      | Active | 3/12/1983  | 1957  |           | 1924-1934 | 7        | 8"        | 1949  | 375    | Surf | Calc   | 0.75%    |  |
|            |     |     |     |          |          |              |                 |                   |        |        |            |       |           |           |          |           |       |        |      |        |          |  |
| 18         | 31  | 17  | 28  | 660 FSL  | 2310 FEL | 30-015-27582 | Navajo Refining | Chalk Bluff State | 1      | WIW    | 9/9/1993   | 10200 |           |           | 13 3/8   | 17 1/2    | 390   | 525    | Surf | Calc   | 0.75%    |  |
|            |     |     |     |          |          |              |                 |                   |        |        |            |       |           |           | 9 5/8    | 12 1/4    | 2555  | 1000   | Surf | Calc   | 0.75%    |  |
| 19         | 20  | 17  | 28  | 1980 FSL | 1980 FEL | 30-015-01656 | W. E. Jeffers   | State 32          | 2      | Active | 3/2/1954   | 2038  |           | 1704-2075 | 8 5/8    | 11"       | 498   | 50     | 303  | Calc   | 0.75%    |  |
|            |     |     |     |          |          |              |                 |                   |        |        |            |       |           |           | 7        | 8"        | 1704  | 200    | Surf | Calc   | 0.75%    |  |
| 20         | 32  | 17  | 28  | 530 FNL  | 1650 FNL | 30-015-31530 | SDX             | Enron State       | 1      | Active | 7/1/2001   | 4000  |           | 3458-3534 | 8 5/8    | 12 1/4    | 390   | 325    | Surf | Circ   |          |  |
|            |     |     |     |          |          |              |                 |                   |        |        |            |       |           | 3766-3822 | 5 1/2    | 7 7/8     | 3993  | 900    | Surf | Circ   |          |  |
| 21         | 32  | 17  | 28  | 2272 FNL | 2273 FEL | 30-015-31834 | SDX             | NW State          | 18     |        |            |       | WELL NOT  | DRILLED   | YET      |           |       |        |      |        |          |  |
|            |     |     |     |          |          |              |                 |                   |        |        |            |       |           |           |          |           |       |        |      |        |          |  |
| 22         | 32  | 17  | 28  | 150 FSL  | 1400 FNL | 30-015-21539 | Arco Permian    | Empire Abo Unit   | 261    | Active | 7/25/1975  | 6222  |           | 6154-6164 | 8 5/8    | 12 1/4    | 1000  | 400    | 40   | Calc   | 0.75%    |  |
|            |     |     |     |          |          |              |                 |                   |        |        |            |       |           |           | 5 1/2    | 7 7/8     | 8222  | 1385   | Surf | Calc   | 0.75%    |  |

NW Artesia Unit

| NW A Sec | TWN | RGE | N/S Dir | EW Dir   | API      | Operator     | Lease        | Well # | Status | Comp Date | TD    | Abnd Date | Perf                   | Csg Size/Hole Size | Depth       | Surf/Cmt    | TOC          | Source | Comments |
|----------|-----|-----|---------|----------|----------|--------------|--------------|--------|--------|-----------|-------|-----------|------------------------|--------------------|-------------|-------------|--------------|--------|----------|
| 23       | 32  | 17  | 28      | 330 FSL  | 2481 FEL | 30-015-22008 | Arco Permian | 272    | Active | 7/20/1977 | 6370  |           | 6032-6168              | 8 5/8<br>5 1/2     | 600<br>8370 | 275<br>870  | Surf<br>2542 | Calc   | 0.75%    |
| 24       | 32  | 17  | 28      | 980 FNL  | 990 FWL  | 30-015-31820 | SDX          | 2      |        |           | 4030  |           | 2288-2847              | 8 5/8<br>5 1/2     | 386<br>4010 | 325<br>975  | Surf<br>Surf | Circ   |          |
| 25       | 32  | 17  | 28      | 2310 FSL | 990 FWL  | 30-015-30777 | SDX          | 8      | Active | 12/2/1998 | 3204  |           | 2434-2572              | 8 5/8<br>5 1/2     | 515<br>3200 | 350<br>650  | Surf<br>Surf | Circ   |          |
| 26       | 32  | 17  | 28      | 990 FSL  | 990 FWL  | 30-015-30885 | SDX          | 7      | Active | 9/28/1999 | 3220  |           | 2472-2762              | 8 5/8<br>5 1/2     | 490<br>3215 | 450<br>850  | Surf<br>Surf | Circ   |          |
| 27       | 32  | 17  | 28      | 1090 FSL | 2128 FWL | 30-015-30815 | SDX          | 8      | Active | 1/4/2000  | 3310  |           | 2523-2859              | 8 5/8<br>5 1/2     | 481<br>3302 | 350<br>800  | Surf<br>Surf | Circ   |          |
| 28       | 32  | 17  | 28      | 1800 FSL | 2148 FWL | 30-015-30718 | SDX          | 5      | Active | 12/7/1999 | 3190  |           | 2802-2856              | 8 5/8<br>5 1/2     | 520<br>3181 | 350<br>600  | Surf<br>Surf | Circ   |          |
| 29       | 32  | 17  | 28      | 2280 FNL | 978 FWL  | 30-015-01671 | Arco Permian | 25     | Active | 9/26/1980 | 6013  |           | 5830-5964              | 8 5/8<br>5 1/2     | 990<br>6012 | 425<br>650  | Surf<br>2298 | Calc   | 0.75%    |
| 30       | 32  | 17  | 28      | 650 FSL  | 1950 FEL | 30-015-01687 | Arco Permian | 27     | Active | 1/27/1980 | 6215  |           | 6010-6070              | 8 5/8<br>4 1/2     | 985<br>6215 | 500<br>750  | Surf<br>2956 | Calc   | 0.75%    |
| 31       | 32  | 17  | 28      | 990 FNL  | 1650 FWL | 30-015-01673 | Arco Permian | 28     | Active | 12/1/1981 | 10300 |           | 5795-5907<br>6924-7410 | 13 3/8<br>9 5/8    | 554<br>250  | 350<br>1178 | 55<br>1178   | Calc   | 0.75%    |
| 32       | 32  | 17  | 28      | 1650 FSL | 2310 FWL | 30-015-01681 | Arco Permian | 28     | Active | 3/29/1980 | 6083  |           | 5966-5982              | 8 5/8<br>5 1/2     | 749<br>6083 | 225<br>350  | 209<br>4083  | Calc   | 0.75%    |

NW Artesia Unit

| NW A Sec | TWN | RGE | N/S Dir | EW Dir   | API      | Operator     | Lease        | Well # | Status | Comp Date | TD   | Abnd Date | Perf      | Csg Size | Hole Size | Depth | 9xx/Cmt | TOC  | Source | Comments |
|----------|-----|-----|---------|----------|----------|--------------|--------------|--------|--------|-----------|------|-----------|-----------|----------|-----------|-------|---------|------|--------|----------|
| 33       | 32  | 17  | 28      | 660 FSL  | 1980 FWL | 30-015-01658 | Arco Permian | 26     | Active | 7/15/1960 | 6172 |           | 5972-3998 | 8 5/8    | 12 1/4"   | 779   | 280     | 107  | Calc   | 0.75%    |
|          |     |     |         |          |          |              |              |        |        |           |      |           |           | 5 1/2    | 7 7/8"    | 6172  | 400     | 3887 | Calc   | 0.75%    |
| 34       | 32  | 17  | 28      | 2280 FNL | 1980 FWL | 30-015-01657 | Arco Permian | 26     | Active | 8/28/1960 | 6171 |           | 5844-5892 | 8 5/8    | 12 1/4"   | 1007  | 550     | Surf | Calc   | 0.75%    |
|          |     |     |         |          |          |              |              |        |        |           |      |           |           | 4 1/2    | 7 7/8"    | 6171  | 1000    | 1825 | Calc   | 0.75%    |
| 35       | 32  | 17  | 28      | 660 FSL  | 660 FWL  | 30-015-01660 | Arco Permian | 25     | Active | 3/8/1960  | 6171 |           | 6030-6030 | 8 5/8    | 12 1/4"   | 770   | 450     | Surf | Calc   | 0.75%    |
|          |     |     |         |          |          |              |              |        |        |           |      |           |           | 5 1/2    | 7 7/8"    | 6171  | 450     | 3600 | Calc   | 0.75%    |
| 36       | 32  | 17  | 28      | 1650 FSL | 990 FWL  | 30-015-01662 | Arco Permian | 25     | Active | 4/14/1960 | 6125 |           | 5986-6012 | 8 5/8    | 12 1/4"   | 740   | 225     | 200  | Calc   | 0.75%    |
|          |     |     |         |          |          |              |              |        |        |           |      |           |           | 5 1/2    | 7 7/8"    | 6125  | 375     | 3983 | Calc   | 0.75%    |
| 37       | 32  | 17  | 28      | 1650 FSL | 1961 FEL | 30-015-01670 | Arco Permian | 27     | Active | 6/21/1960 | 6165 |           | 6038-6112 | 8 5/8    | 12 1/4"   | 860   | 450     | Surf | Calc   | 0.75%    |
|          |     |     |         |          |          |              |              |        |        |           |      |           |           | 4 1/2    | 7 7/8"    | 8165  | 750     | 2905 | Calc   | 0.75%    |
| 38       | 32  | 17  | 28      | 990 FSL  | 2030 FWL | 30-015-10634 | SDX          | 13     | Active | 6/18/1966 | 2006 |           | 1921-1954 | 8 5/8    | 11        | 493   | 125     | 6    | Calc   | 0.75%    |
|          |     |     |         |          |          |              |              |        |        |           |      |           |           | 4 1/2    | 7 7/8"    | 2003  | 175     | 1243 | Calc   | 0.75%    |
| 39       | 32  | 17  | 28      | 2310 FSL | 2105 FWL | 30-015-10818 | SDX          | 8      | Active | 8/8/1966  | 2003 |           | 1898-1934 | 8 5/8    | 11        | 463   | 125     | Surf | Calc   | 0.75%    |
|          |     |     |         |          |          |              |              |        |        |           |      |           |           | 4 1/2    | 7 7/8"    | 2003  | 175     | 1242 | Calc   | 0.75%    |
| 40       | 5   | 17  | 28      | 330 FNL  | 2271 FEL | 30-015-02605 | Arco Permian | 27     | Active | 4/3/1960  | 6281 |           | 6140-6197 | 8 5/8    | 12 25"    | 1227  | 750     | Surf | Calc   | 0.75%    |
|          |     |     |         |          |          |              |              |        |        |           |      |           |           | 4 1/2    | 7 7/8"    | 6261  | 750     | 3602 | Calc   | 0.75%    |
| 41       | 5   | 17  | 28      | 330 FNL  | 1941 FWL | 30-015-02608 | Arco Permian | 26     | Active | 7/21/1960 | 6256 |           | 6060-6096 | 8 5/8    | 12 1/4"   | 755   | 450     | Surf | Calc   | 0.75%    |
|          |     |     |         |          |          |              |              |        |        |           |      |           |           | 5 1/2    | 7 7/8"    | 6256  | 750     | 1971 | Calc   | 0.75%    |
| 42       | 5   | 17  | 28      | 1650 FNL | 990 FWL  | 30-015-31086 | Marbob       | 1      | Active | 8/7/2000  | 4503 |           | 3734-3802 | 8 5/8    | 12 1/4"   | 551   | 400     | Surf | Calc   | 0.75%    |
|          |     |     |         |          |          |              |              |        |        |           |      |           |           | 4 1/2    | 7 7/8"    | 3927  | 950     | Surf | Calc   | 0.75%    |
| 43       | 5   | 17  | 28      | 1660 FNL | 330 FWL  | 30-015-02608 | Phillips     | 1      | Active | 5/15/1960 | 6265 |           | 6165-6195 | 8 5/8    | 12 1/4"   | 1149  | 550     | Surf | Calc   | 0.75%    |
|          |     |     |         |          |          |              |              |        |        |           |      |           |           | 5 1/2    | 7 7/8"    | 8265  | 2500    | Surf | Calc   | 0.75%    |

**NW Artesia Unit**

| NW A Sec | TWN | RGE | N/S Dir     | E/W Dir  | API          | Operator     | Lease           | Well # | Status | Comp Date  | TD   | Abnd Dtb | Perf                   | Csg Size/Hole Size | Depth             | Sus/Cmt      | TOC         | Source       | Comments     |                |
|----------|-----|-----|-------------|----------|--------------|--------------|-----------------|--------|--------|------------|------|----------|------------------------|--------------------|-------------------|--------------|-------------|--------------|--------------|----------------|
|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
| 44       | 5   | 17  | 28 680 FNL  | 680 FWL  | 30-015-02807 | Arco Permian | Empire Abo Unit | 25     | Active | 3/30/1960  | 6273 |          | 6122-6168              | 8 5/8<br>5 1/2     | 12 1/4"<br>7 7/8" | 1198<br>6273 | 750<br>750  | Surf<br>1988 | Surf<br>Calc | 0.75%<br>0.75% |
|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
| 48       | 5   | 17  | 28 1080 FNL | 1914 FWL | 30-015-22897 | Arco Permian | Empire Abo Unit | 261    | Active | 1/7/1979   | 6350 |          | 6174-6204              | 8 5/8<br>5 1/2     | 12 1/4"<br>7 7/8" | 550<br>8345  | 400<br>1500 | Surf<br>Surf | Calc<br>Calc | 0.75%<br>0.75% |
|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
| 48       | 5   | 17  | 28 660 FNL  | 150 FWL  | 30-015-22750 | Arco Permian | Empire Abo Unit | 251    | Active | 1/14/1979  | 6250 |          | 6012-6034              | 8 5/8<br>5 1/2     | 12 1/4"<br>7 7/8" | 745<br>8245  | 400<br>1550 | Surf<br>Surf | Calc<br>Calc | 0.75%<br>0.75% |
|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
| 47       | 6   | 17  | 28 430 FNL  | 330 FEL  | 30-015-30785 | SDX          | NW State        | 15     | Active | 2/8/2000   | 3225 |          | 2581-2805              | 8 5/8<br>5 1/2     | 12 1/4"<br>7 7/8" | 501<br>3223  | 350<br>600  | Surf<br>Surf | Circ<br>Calc | 0.75%          |
|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
| 48       | 6   | 17  | 28 1260 FNL | 1580 FEL | 30-015-21542 | Arco Permian | Empire Abo Unit | 231    | Active | 3/2/1980   | 6261 |          | 6109-6200              | 8 5/8<br>5 1/2     | 12 1/4"<br>7 7/8" | 1002<br>6261 | 350<br>1173 | 162<br>Surf  | Calc<br>Calc | 0.75%<br>0.75% |
|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
| 49       | 6   | 17  | 28 660 FNL  | 680 FEL  | 30-015-02815 | Arco Permian | Empire Abo Unit | 24     | Active | 3/2/1960   | 6241 |          | 6103-6118              | 8 5/8<br>5 1/2     | 12 1/4"<br>7 7/8" | 833<br>6241  | 250<br>450  | 33<br>3670   | Calc<br>Calc | 0.75%<br>0.75% |
|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
| 60       | 8   | 17  | 28 1650 FNL | 990 FEL  | 30-015-02816 | Arco Permian | Empire Abo Unit | 24     | Active | 3/29/1960  | 6253 |          | 6101-6109<br>6228-6248 | 8 5/8<br>5 1/2     | 12 1/4"<br>7 7/8" | 730<br>8253  | 250<br>900  | 130<br>1112  | Calc<br>Calc | 0.75%<br>0.75% |
|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
| 61       | 8   | 17  | 28 330 FNL  | 330 FEL  | 30-015-20019 | SDX          | NW Artesia Unit | 16     | Active | 3/14/1987  | 3278 |          | 1962-1994<br>2563-3237 | 8 5/8<br>4 1/2     | 11<br>7 7/8       | 502<br>3278  | 100<br>285  | 112<br>1320  | Calc<br>TS   | 0.75%          |
|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
| 62       | 6   | 17  | 28 470 FNL  | 2170 FEL | 30-015-02825 | Arco Permian | Empire Abo Unit | 23     | Active | 12/26/1959 | 6194 |          | 6070-6120              | 8 5/8<br>5 1/2     | 12 1/4"<br>7 7/8" | 507<br>6194  | 450<br>350  | Surf<br>4195 | Calc<br>Calc | 0.75%<br>0.75% |
|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
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|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
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|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
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|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
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|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |
|          |     |     |             |          |              |              |                 |        |        |            |      |          |                        |                    |                   |              |             |              |              |                |

# Pro-Kem, Inc.

## WATER ANALYSIS REPORT

### SAMPLE

JUL 14 1999

Oil Co. : SDX Resources

Lease : N.W. St.

Well No. : # 1

Lab No. : F:\ANALYSES\Jul0999.001

Sample Loc. :

Date Analyzed: 09-July-1999

Date Sampled : 01-July-1999

### ANALYSIS

1. pH 5.950
2. Specific Gravity 60/60 F. 1.118
3. CaCO<sub>3</sub> Saturation Index @ 80 F. -0.029  
@ 140 F. +0.871

#### Dissolved Gasses

|                     | MG/L           | EQ. WT. | *MEQ/L |
|---------------------|----------------|---------|--------|
| 4. Hydrogen Sulfide | 10             |         |        |
| 5. Carbon Dioxide   | 160            |         |        |
| 6. Dissolved Oxygen | Not Determined |         |        |

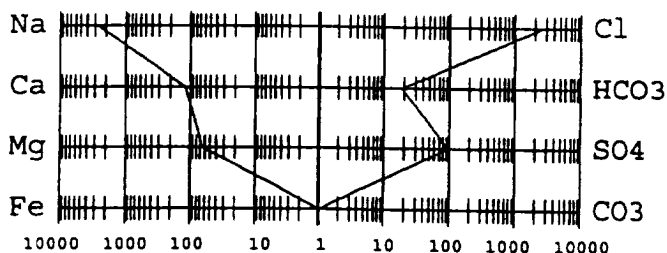
#### Cations

|                                  |                |          |          |
|----------------------------------|----------------|----------|----------|
| 7. Calcium (Ca <sup>++</sup> )   | 2,341          | / 20.1 = | 116.47   |
| 8. Magnesium (Mg <sup>++</sup> ) | 741            | / 12.2 = | 60.74    |
| 9. Sodium (Na <sup>+</sup> )     | 60,071         | / 23.0 = | 2,611.78 |
| 10. Barium (Ba <sup>++</sup> )   | Not Determined |          |          |

#### Anions

|                                                  |            |          |          |
|--------------------------------------------------|------------|----------|----------|
| 11. Hydroxyl (OH <sup>-</sup> )                  | 0          | / 17.0 = | 0.00     |
| 12. Carbonate (CO <sub>3</sub> <sup>=</sup> )    | 0          | / 30.0 = | 0.00     |
| 13. Bicarbonate (HCO <sub>3</sub> <sup>-</sup> ) | 1,098      | / 61.1 = | 17.97    |
| 14. Sulfate (SO <sub>4</sub> <sup>=</sup> )      | 4,500      | / 48.8 = | 92.21    |
| 15. Chloride (Cl <sup>-</sup> )                  | 94,979     | / 35.5 = | 2,675.46 |
| 16. Total Dissolved Solids                       | 163,730    |          |          |
| 17. Total Iron (Fe)                              | 7          | / 18.2 = | 0.38     |
| 18. Total Hardness As CaCO <sub>3</sub>          | 8,898      |          |          |
| 19. Resistivity @ 75 F. (Calculated)             | 0.028 /cm. |          |          |

#### LOGARITHMIC WATER PATTERN \*meq/L.

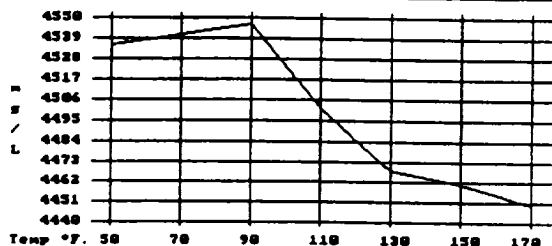


#### PROBABLE MINERAL COMPOSITION COMPOUND EQ. WT. X \*meq/L = mg/L.

|                                     |       |          |         |
|-------------------------------------|-------|----------|---------|
| Ca (HCO <sub>3</sub> ) <sub>2</sub> | 81.04 | 17.97    | 1,456   |
| CaSO <sub>4</sub>                   | 68.07 | 92.21    | 6,277   |
| CaCl <sub>2</sub>                   | 55.50 | 6.28     | 349     |
| Mg (HCO <sub>3</sub> ) <sub>2</sub> | 73.17 | 0.00     | 0       |
| MgSO <sub>4</sub>                   | 60.19 | 0.00     | 0       |
| MgCl <sub>2</sub>                   | 47.62 | 60.74    | 2,892   |
| NaHCO <sub>3</sub>                  | 84.00 | 0.00     | 0       |
| NaSO <sub>4</sub>                   | 71.03 | 0.00     | 0       |
| NaCl                                | 58.46 | 2,608.44 | 152,490 |

\*Milli Equivalents per Liter

#### Calcium Sulfate Solubility Profile



This water is somewhat corrosive due to the pH observed on analysis.  
The corrosivity is increased by the content of mineral salts, and the presence of H<sub>2</sub>S, CO<sub>2</sub> in solution.

Attachment E

**OFFSET OPERATORS NOTIFICATION**

Navajo Refining Co.  
PO Box 159  
Artesia, NM 88211-0159

Arco Permian  
PO Box 1610  
Midland, TX 79702-1610

B&W Oil Co.  
5944 Luther Lane STE 709  
Dallas, TX 75225-5919

Kersey & Co.  
808 W. Grand Ave.  
Artesia, NM 88210-1937

Marbob Energy Co.  
PO Box 227  
Artesia, NM 88211-0227

W.E. Jeffers  
C/O Georgie Johnson  
PO Box 65  
Artesia, NM 88210

Surface Owner: Bogle Ltd  
PO Box 441  
Artesia, NM 88210

The above listed parties have been sent by certified mail a copy of the C-108 Application For Injection submitted by SDX Resources for their Northwest Artesia Unit wells # 9, 11, & 12. Please see attached evidence.

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

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF RETURN ADDRESS. FOLD AT DOTTED LINE.

**CERTIFIED MAIL**

7000 0520 0020 7967 5033  
7000 0520 0020 7967 5033

Postage \$  
Certified Fee \$  
Return Receipt Fee (Endorsement Required)  
Restricted Delivery Fee (Endorsement Required)  
Total Postage & Fees \$

Recipient's Name (Please Print Clearly) (To be completed by mailer)  
Nava jo Refining  
Street, Apt. No., or PO Box No.  
PO Box 159  
City, State, ZIP+4  
Ariesia Nm 88211-0159

Postmark Here

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF RETURN ADDRESS. FOLD AT DOTTED LINE.

**CERTIFIED MAIL**

7000 0520 0020 7967 5040  
7000 0520 0020 7967 5040

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF RETURN ADDRESS. FOLD AT DOTTED LINE.

**CERTIFIED MAIL**

7000 0520 0020 7967 5049  
7000 0520 0020 7967 5049

Postage \$  
Certified Fee \$  
Return Receipt Fee (Endorsement Required)  
Restricted Delivery Fee (Endorsement Required)  
Total Postage & Fees \$

Recipient's Name (Please Print Clearly) (To be completed by mailer)  
Nico Permain  
Street, Apt. No., or PO Box No.  
PO Box 1610  
City, State, ZIP+4  
Middland, TX 79701

Postmark Here

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF RETURN ADDRESS. FOLD AT DOTTED LINE.

**CERTIFIED MAIL**

7000 0520 0020 7967 5040  
7000 0520 0020 7967 5040

Postage \$  
Certified Fee \$  
Return Receipt Fee (Endorsement Required)  
Restricted Delivery Fee (Endorsement Required)  
Total Postage & Fees \$

Recipient's Name (Please Print Clearly) (To be completed by mailer)  
Boyle Ltd  
Street, Apt. No., or PO Box No.  
PO Box 441  
City, State, ZIP+4  
Ariesia Nm 88210

PS Form 3800, February 2000  
See Reverse for Instructions

**CERTIFIED MAIL RECEIPT**  
(Domestic Mail Only: No Insurance Coverage Provided)

7000 0520 0020 7967 5545  
7000 0520 0020 7967 5545

Postage \$  
Certified Fee \$  
Return Receipt Fee (Endorsement Required)  
Restricted Delivery Fee (Endorsement Required)  
Total Postage & Fees \$

Recipient's Name (Please Print Clearly) (To be completed by mailer)  
W.E. Jeffers  
Street, Apt. No., or PO Box No.  
PO Box 65  
City, State, ZIP+4  
Ariesia Nm 88210

PS Form 3800, February 2000  
See Reverse for Instructions

**CERTIFIED MAIL RECEIPT**  
(Domestic Mail Only: No Insurance Coverage Provided)

7000 0520 0020 7967 5552  
7000 0520 0020 7967 5552

Postage \$  
Certified Fee \$  
Return Receipt Fee (Endorsement Required)  
Restricted Delivery Fee (Endorsement Required)  
Total Postage & Fees \$

Recipient's Name (Please Print Clearly) (To be completed by mailer)  
Kelsey G  
Street, Apt. No., or PO Box No.  
808 W Grand Ave  
City, State, ZIP+4  
Ariesia Nm 88210-1935

PS Form 3800, February 2000  
See Reverse for Instructions

**CERTIFIED MAIL RECEIPT**  
(Domestic Mail Only: No Insurance Coverage Provided)

7000 0520 0020 7967 5057  
7000 0520 0020 7967 5057

**Affidavit of Publication**

NO. 17445

STATE OF NEW MEXICO

County of Eddy:

Gary D. Scott being duly

sworn, says: That he is the Publisher of The  
 Artesia Daily Press, a daily newspaper of general  
 circulation, published in English at Artesia, said county  
 and county and state, and that the here to attached

**Legal Notice**

was published in a regular and entire issue of the said  
 Artesia Daily Press, a daily newspaper duly qualified  
 for that purpose within the meaning of Chapter 167 of  
 the 1937 Session Laws of the state of New Mexico for  
1 consecutive weeks/days on the same

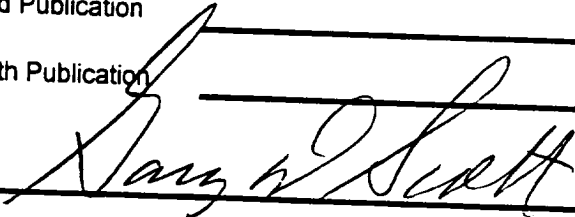
day as follows:

First Publication August 14 2001

Second Publication

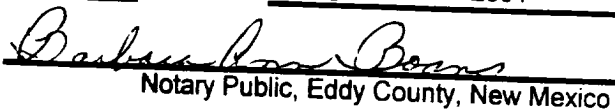
Third Publication

Fourth Publication



Subscribed and sworn to before me this

15th day of August 2001

  
 Notary Public, Eddy County, New Mexico

My Commission expires September 23, 2003

**Copy of Publication:****LEGAL NOTICE****NOTICE OF APPLICATION  
FOR FLUID INJECTION  
SITE WELL PERMIT**

SDX Resources, Inc., 511  
 W. Ohio St., Suite 601, P.O.  
 Box 5061, Midland, TX  
 79704, contact: Chuck  
 Morgan (915) 685-1761 is  
 seeking administrative  
 approval from the New  
 Mexico Oil Conservation  
 Division to complete the NW  
 Artesia Unit Well No. 12,  
 section 32, T-17-S, R-28-E,  
 990' FSL & 760' FWL for  
 fluid injection with  
 perforations from 1922'-  
 1949' (San Andres).  
 Maximum daily injection  
 volume of 400 bbls and  
 maximum injection pressure  
 of 385 psi. Eddy County,  
 New Mexico.  
 Interested parties must file  
 objections or request for  
 hearing with the New  
 Mexico Oil Conservation  
 Division, 2040 S. Pacheco,  
 Santa Fe, New Mexico,  
 87505 within 15 days of this  
 notice.   
 Published in the Artesia  
 Daily Press, Artesia, N.M.  
 August 14, 2001.

Legal 17445

000  
 1966  
 1967



# Affidavit of Publication

NO. 17459

STATE OF NEW MEXICO

County of Eddy:

Gary D. Scott being duly

sworn, says: That he is the Publisher of The

Artesia Daily Press, a daily newspaper of general circulation, published in English at Artesia, said county and county and state, and that the here to attached

## Legal Notice

was published in a regular and entire issue of the said Artesia Daily Press, a daily newspaper duly qualified for that purpose within the meaning of Chapter 167 of the 1937 Session Laws of the state of New Mexico for 1 consecutive weeks/days on the same day as follows:

First Publication August 24 2001

Second Publication

Third Publication

Fourth Publication

Subscribed and sworn to before me this

25th day of August 2001

Burke L. Beams  
Notary Public, Eddy County, New Mexico

My Commission expires September 23, 2003

## LEGAL NOTICE

NOTICE OF APPLICATION  
FOR FLUID INJECTION  
WELL PERMIT

# Copy of Publication:

## The Artesia (NM) Daily Press

SDX Resources, Inc., 511 W. Ohio St., Suite 601, P.O. Box 5061, Midland, TX 79704, contact: Chuck Morgan (915) 685-1761 is seeking administrative approval from the New Mexico Oil Conservation Division to complete the following four wells for fluid injection: 1) East Millman Unit, Well #212, located in Section 15, T19S, R28E, 1310' FSL & 1310' FEL, Eddy County, proposed injection interval is the Queen-Grayburg formation with perforations from 1920'-2283' with a maximum daily injection volume of produced formation water at 300 bbls per day with a maximum injection pressure of 1200#. 2) East Millman Unit, Well #203, located in Section 22, T19S, R28E, 10' FNL & 1310' FEL, Eddy County, proposed injection interval is the Queen-Grayburg formation with perforations from 1840'-2180' with a maximum daily injection volume of produced formation water at 300 bbls per day with a maximum injection pressure of 1200#. 3) NW Artesia Unit, Well #11, located in Section 31, T17S, R28E, 990' FSL & 660' FEL, Eddy County, proposed injection interval is the San Andres formation with perforations from 1922'-1949' with a maximum daily injection volume of produced formation water at 400 bbls per day with a maximum injection pressure of 385#. 4) NW Artesia Unit, Well #9, located in section 32, T17S, R28E, 2310' FSL & 660' FWL, Eddy County, proposed injection interval is the San Andres formation with perforations from 1922'-1949' with a maximum daily injection volume of produced formation water at 400 bbls per day with a maximum

injection pressure of 385#. Interested parties must file objections or request for hearing with the New Mexico Oil Conservation Division, 2040 S. Pacheco, Santa Fe, New Mexico, 87505 within 15 days of this notice. Published in the Artesia Daily Press, Artesia, N.M. August 24, 2001. Legal 17459

① 2700  
② "  
③ 3900  
④ "