



P. O. Box 1416  
Roswell, New Mexico  
January 11, 1967

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WFX-254  
New Feb 2

New Mexico Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, New Mexico

Gentlemen:

Sunray DX Oil Company herewith requests administrative approval to convert their M. Dodd "B" No. 7 and M. Dodd "B" No. 8 to water injection service. These conversions will represent an expansion of the SDX Metex waterflood approved by the Commission in Case No. 3343, Order No. R-3013, dated December 3, 1965. Both wells are located in Section 14, T-17-S, R-29-E, Eddy County, New Mexico.

In compliance with State rule 701 E-5, we are submitting in triplicate the following:

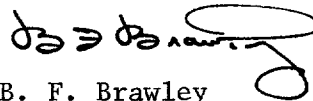
- (A) Plat of the area, showing proposed injection wells and location of other properties within the required radius of this project.
- (B) Diagramatic sketch of proposed injection well completions.
- (C) Waterflood data containing pertinent information.
- (D) Form C-116, indicating the response experienced in the pilot producing well, Dodd "A" No. 16.
- (E) Addressee list of operators in this area.
- (F) Logs are not available.

Please refer to the plat and note that the adjoining leases Dodd "A" and Dodd "B" are located in different fields. The Dodd "A" being in the Grayburg Jackson Field while the Dodd "B" is in the Square Lake Field. A pilot project for flooding the Metex zone of the Grayburg formation was approved by the Commission as noted above. Since flood response has been substantial in the pilot producing well, Dodd "A" No. 16, we propose current expansion to include an approximate 120 acre, 5 spot secondary development by converting the Dodd "B" Nos. 7 and 8 and the drilling of a producer, Dodd "B" No. 17.

Neither the Dodd "B" No. 7 or No. 8 has experienced waterflood response themselves but current production is no more than 1 BOPD for each well. We feel that it is necessary to convert these wells to water injection service in order to continue what is apparently a successful injection pattern that is resulting in a thorough and efficient sweep of the oil by waterflooding.

Yours truly,

SUNRAY DX OIL COMPANY



B. F. Brawley  
District Engineer  
Roswell District

BFB:sk

cc: State Engineer w/attachments  
U.S.G.S., Roswell, New Mexico w/attachments (in triplicate)  
Offset Operators, as per addressee list, less attachments

# ADDRESSEE LIST

## Dodd "A" & "B" Waterflood Project

| <u>OPERATOR</u>         | <u>ADDRESS</u>                          |
|-------------------------|-----------------------------------------|
| Ambassador Oil Co.      | 200 Petr. Bldg., Abilene, Texas         |
| Bassett and Birney      | 323 Carper Bldg., Artesia, N. M.        |
| Collier Oils Inc.       | P. O. Box 3988, Odessa, Texas           |
| Continental Oil Co.     | P. O. Box 460, Hobbs, N. M.             |
| El Paso Nat. Gas Prod.  | P. O. Box 3986, Odessa, Texas           |
| Fair Oil Co.            | P. O. Box 5445, Midland, Texas          |
| O. F. Featherstone      | 236 Petr. Bldg., Roswell, N. M.         |
| Gen. Amer. Oil Co.      | P. O. Box 416, Loco Hills, N. M.        |
| Gulf Oil Co.            | P. O. Box 670, Hobbs, N. M.             |
| International Oil & Gas | P. O. Box 427, Artesia, N. M.           |
| E. J. McCurdy           | 1813 Clayton, Artesia, N. M.            |
| Nearburg & Ingram       | P. O. Box 1757, Roswell, N. M.          |
| Newmont Oil Co.         | Rowley Bldg., Artesia, N. M.            |
| Sinclair Oil            | P. O. Box 1920, Hobbs, N.M.             |
| Skelly Oil Co.          | P. O. Box 730, Hobbs, N. M.             |
| Tenneco Oil Co.         | 18th Floor, Wilco Bldg., Midland, Texas |
| Texaco, Inc.            | P. O. Box 728, Hobbs, New Mexico        |
| Yates Petr. Corp.       | 309 Carper Bldg., Artesia, N. M.        |

DIAGRAMATIC SKETCH OF A  
WATER INJECTION WELL

SUNRAY DX OIL COMPANY

Lease: M. Dodd "B"

Well No: 7

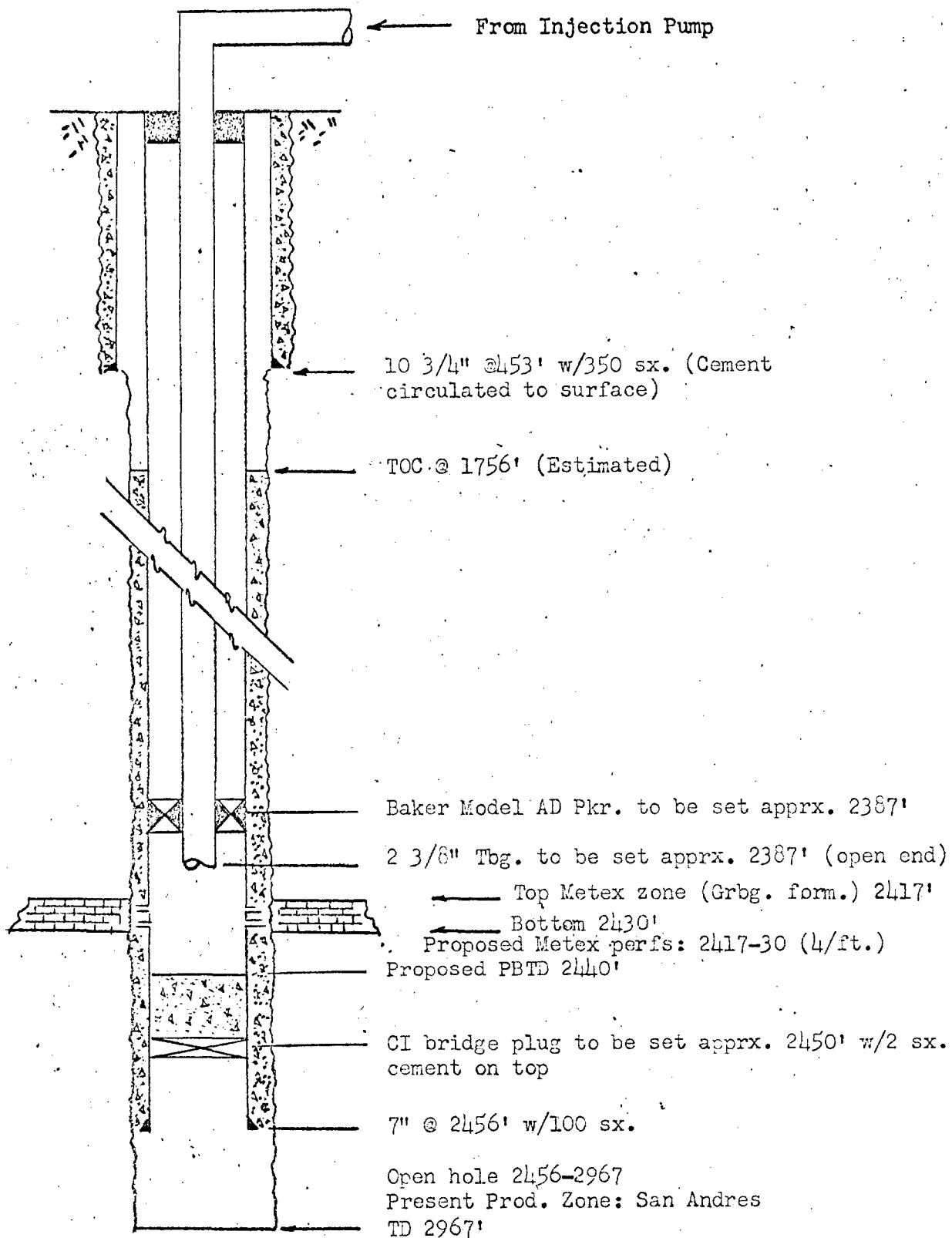
Location: 1980' TNL & 1980'

TWL, Sec. 14-17S-29E, Eddy Co

Project: SDA Metex Waterflood

Com. Order: R-3013

Surface



DIAGRAMATIC SKETCH OF A  
WATER INJECTION WELL

SUNRAY DX OIL COMPANY

Lease: M. Dodd "B"

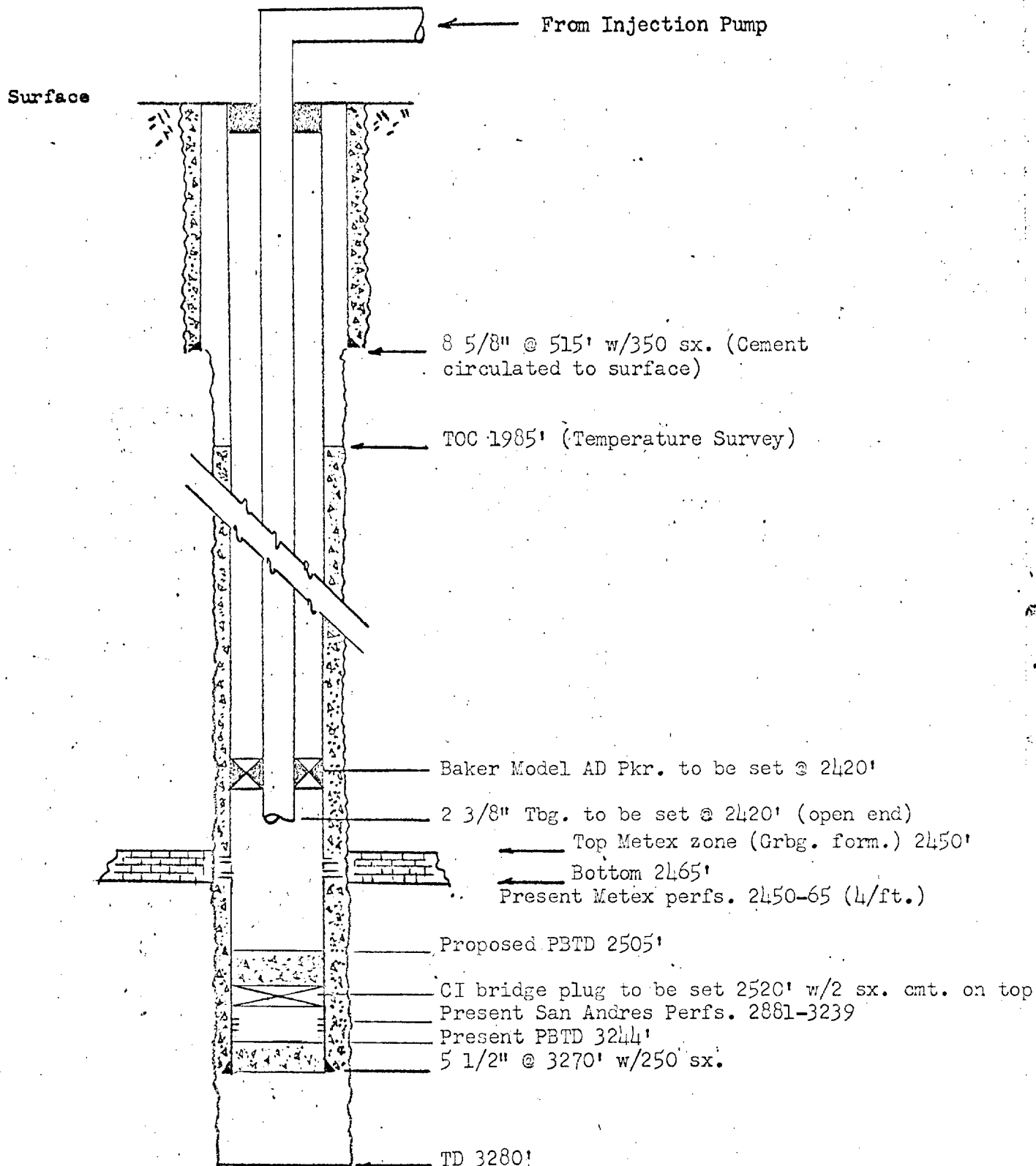
Well No: 0

Location: 660'FWL & 660'FWL

Sec. 14-T17S-R29E, Eddy Co.

Project: SDX Metex Waterflood

Com. Order R-3013



SUNRAY DX OIL COMPANY

WATERFLOOD DATA

Lease: M. Dodd "B"

Field: Square Lake

Project: SDX Metex Waterflood. Commission Order No. R-3013

Well No: 7

Location of well: 1980' FNL & 1980' FWL, Sec. 14-17S-29E, Eddy County, N. M.

Date well completed: 10-13-48

Present status of well: Producing 1 BOPD

Present producing formation: San Andres

Present producing interval: Open hole 2456-2967

Proposed status of well: Convert to water injection

Type of injection fluid: Fresh water

Formation in which water is to be injected into: Metex zone (Grayburg formation)

Top of formation: 2417

Bottom of formation: 2430

Proposed injection interval: 2417-30

Source of injection water: Purchased from Yucca Water Co., Lovington, New Mexico

Anticipated volumes to be injected: 400 BPD

Anticipated injection pressure: 1000 psig

Maximum injection pressure: 1300 psig

Mailing address of Sunray District office which is responsible for this project: Sunray DX Oil Company, P. O. Box 1416, Roswell, New Mexico.

SUNRAY DX OIL COMPANY

WATERFLOOD DATA

Lease: M. Dodd "B"

Field: Square Lake

Project: SDX Metex Waterflood. Commission Order No. R-3013

Well No: 8

Location of well: 660' FNL & 660' FWL, Sec. 14-17S-29E, Eddy County, N. M.

Date well completed: 3-22-56

Present status of well: Producing 1 BOPD

Present producing formation: Grayburg and San Andres

Present producing interval: 2550-65 (Metex); 2881-3239 (San Andres)

Proposed status of well: Convert to water injection

Type of injection fluid: Fresh water

Formation in which water is to be injected into: Metex zone (Grayburg formation)

Top of formation: 2450

Bottom of formation: 2465

Proposed injection interval: 2450-65

Source of injection water: Purchased from Yucca Water Co., Lovington, New Mexico

Anticipated volumes to be injected: 400 BPD

Anticipated injection pressure: 1000 psig

Maximum injection pressure: 1300 psig

Mailing address of Sunray District office which is responsible for  
this project: Sunray DX Oil Company, P. O. Box 1416, Roswell, New Mexico.

NEW MEXICO OIL CONSERVATION COMMISSION  
GAS-OIL RATIO TESTS

C-1116  
Revised 1-1-65

| Operator<br><b>SUNRAY DX OIL COMPANY</b>                                                                                                                                                                                                                                              |          | Pool<br><b>Grayburg Jackson San Andres</b> |    | County<br><b>Eddy</b>                                                                                              |              |            |             |                  |                      |                   |             |           |                            |           |            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------------------------------------|----|--------------------------------------------------------------------------------------------------------------------|--------------|------------|-------------|------------------|----------------------|-------------------|-------------|-----------|----------------------------|-----------|------------|
| Address<br><b>P. C. Box 1416, Roswell, New Mexico</b>                                                                                                                                                                                                                                 |          | TYPE OF TEST - (X)                         |    | Completion <input type="checkbox"/> Scheduled <input type="checkbox"/> Special <input checked="" type="checkbox"/> |              |            |             |                  |                      |                   |             |           |                            |           |            |
| LEASE NAME                                                                                                                                                                                                                                                                            | WELL NO. | LOCATION                                   |    |                                                                                                                    | DATE OF TEST | CHOKE SIZE | TBG. PRESS. | DAILY ALLOW-ABLE | LENGTH OF TEST HOURS | PROD. DURING TEST |             |           | GAS - OIL RATIO CU.FT./BBL |           |            |
|                                                                                                                                                                                                                                                                                       |          | U                                          | S  | T                                                                                                                  |              |            |             |                  |                      | R                 | WATER BBLs. | GRAV. OIL |                            | OIL BBLs. | GAS M.C.F. |
| M. Dodd "A"                                                                                                                                                                                                                                                                           | 16       | A                                          | 15 | 17S                                                                                                                | 29E          | 3-3-65     | P           | -                | 3                    | 24                | 0           | 36        | 3                          | 5.2       | 1733       |
| <p><u>NOTE:</u></p> <p>The above test was taken prior to waterflood response on this well. This well is the center pilbt producing well in the SDX Metex waterflood, Commission Order No. R-3013.</p> <p>This is a reproduction of the test data.</p> <p>FOR USE AS EXHIBIT ONLY.</p> |          |                                            |    |                                                                                                                    |              |            |             |                  |                      |                   |             |           |                            |           |            |

No well will be assigned an allowable greater than the amount of oil produced on the official test.

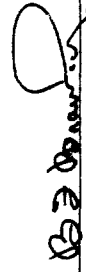
During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15,025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

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

 B. F. Brawley  
(Signature)

District Engineer

(Title)

January 11, 1967

(Date)

NEW MEXICO OIL CONSERVATION COMMISSION  
GAS - OIL RATIO TESTS

C-116  
Revised 1-1-65

| Operator<br><b>SUNRAY DX OIL COMPANY</b>                                                                                                                                                                                                                                           |          | Pool<br><b>Grayburg Jackson San Andres</b> |    | County<br><b>Eddy</b>                                                                                              |              |            |             |                  |                      |                   |              |           |                             |            |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------------------------------------|----|--------------------------------------------------------------------------------------------------------------------|--------------|------------|-------------|------------------|----------------------|-------------------|--------------|-----------|-----------------------------|------------|------------|
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| LEASE NAME                                                                                                                                                                                                                                                                         | WELL NO. | LOCATION                                   |    |                                                                                                                    | DATE OF TEST | CHOKE SIZE | TBG. PRESS. | DAILY ALLOW-ABLE | LENGTH OF TEST HOURS | PROD. DURING TEST |              |           | GAS - OIL RATIO CU.FT./BBL. |            |            |
|                                                                                                                                                                                                                                                                                    |          | U                                          | S  | T                                                                                                                  |              |            |             |                  |                      | R                 | WATER BBL'S. | GRAV. OIL |                             | OIL BBL'S. | GAS M.C.F. |
| M. Dodd "A"                                                                                                                                                                                                                                                                        | 16       | A                                          | 15 | 17S                                                                                                                | 29E          | 12-2-67    | P           | -                | 37                   | 24                | 0            | 36        | 35                          | 52.9       | 1511       |
| <p><b>NOTE:</b></p> <p>The above test was taken after waterflood response on this well. This well is the center pilot producing well in the SDX Metex Waterflood, Commission Order No. R-3013.</p> <p>This is a reproduction of the test data.</p> <p>FOR USE AS EXHIBIT ONLY.</p> |          |                                            |    |                                                                                                                    |              |            |             |                  |                      |                   |              |           |                             |            |            |

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

 B. F. Brawley  
(Signature)  
District Engineer

(Title)  
January 11, 1967

(Date)

STOCC  
Jim Kapteina

Sunray DX Oil Company



District Office

P. O. Box 1416  
Roswell, New Mexico  
January 11, 1967

RECEIVED

JAN 23 1967

D. D. C.  
ARTESIA, OFFICE

New Mexico Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, New Mexico

Gentlemen:

Sunray DX Oil Company herewith requests administrative approval to convert their M. Dodd "B" No. 7 and M. Dodd "B" No. 8 to water injection service. These conversions will represent an expansion of the SDX Metex waterflood approved by the Commission in Case No. 3343, Order No. R-3013, dated December 3, 1965. Both wells are located in Section 14, T-17-S, R-29-E, Eddy County, New Mexico.

In compliance with State rule 701 E-5, we are submitting in triplicate the following:

- (A) Plat of the area, showing proposed injection wells and location of other properties within the required radius of this project.
- (B) Diagramatic sketch of proposed injection well completions.
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- (D) Form C-116, indicating the response experienced in the pilot producing well, Dodd "A" No. 16.
- (E) Addressee list of operators in this area.
- (F) Logs are not available.

We can find no objection  
to this application.  
Dick



**STATE OF NEW MEXICO**

**STATE ENGINEER OFFICE**

**SANTA FE**

**S. E. REYNOLDS**  
**STATE ENGINEER**

January 26, 1967

ADDRESS CORRESPONDENCE TO:  
STATE CAPITOL  
SANTA FE, NEW MEXICO 87501

Mr. A. L. Porter, Jr.  
Secretary-Director  
Oil Conservation Commission  
Santa Fe, New Mexico

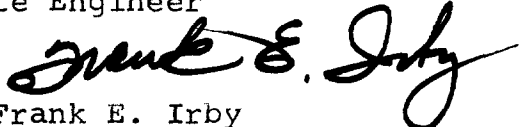
Dear Mr. Porter:

Reference is made to the application of Sunray DX Oil Company dated January 11, 1967 which seeks administrative approval to convert their M. Dodd "B" #7 and M. Dodd "B" #8 to water injection service in the expansion of their SDX Metex waterflood authorized by Commission Order No. R-3013. The application and the attachments thereto indicate that no threat of contamination to any fresh waters which may exist in the area will occur, provided the packer on the end of the tubing is set well below the top of the cement surrounding the production casing. Therefore, this office offers no objection to the granting of the application provided the packer on the end of the tubing is set well below the top of the cement surrounding the production casing.

FEI/ma  
cc-Sunray DX Oil Co.  
F. H. Hennighausen

Yours truly,

S. E. Reynolds  
State Engineer

By:   
Frank E. Irby  
Chief  
Water Rights Div.



STATE OF NEW MEXICO

STATE ENGINEER OFFICE

SANTA FE

S. E. REYNOLDS  
STATE ENGINEER

March 27, 1967

ADDRESS CORRESPONDENCE TO:  
STATE CAPITOL  
SANTA FE, NEW MEXICO 87501

254

Mr. A. L. Porter, Jr.  
Secretary-Director  
Oil Conservation Commission  
Santa Fe, New Mexico

Dear Mr. Porter:

Reference is made to the application of Sunray DX Oil Company seeking administrative approval to expand their SDX Metex Waterflood by converting or drilling the following 3 wells for injection service:

M Dodd "B" No. 16 in Sec. 15;  
M Dodd "B" No. 18 in Sec. 10;  
M Dodd "B" No. 19 in Sec. 11;

All in T. 17 S., R. 29 E.

From the information given, it appears that no contamination will result if the packers on the end of the tubing are set below the top of the cement surrounding the production string.

FEI:ma  
cc-Sunray DX Oil Co.  
F. H. Hennighausen

Yours truly,

S. E. Reynolds  
State Engineer

By *Frank E. Irby*  
Frank E. Irby  
Chief  
Water Rights Div.

LARGE FORMAT  
EXHIBIT HAS  
BEEN REMOVED  
AND IS LOCATED  
IN THE NEXT FILE