



P. O. Box 1416
Roswell, New Mexico
March 9, 1967

W/A 258
11/11/65

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

Gentlemen:

Sunray DX Oil Company herewith requests administrative approval to convert M. Dodd "B" No. 16, M. Dodd "B" No. 18 and M. Dodd "B" No. 19 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. Well number 16 is presently producing 2 BOPD, while wells number 18 and 19 are proposed to be drilled. These proposed injection wells will be located in Sections 10, 11 and 15 all in T-17-S, R-29-E, Eddy County, New Mexico.

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 producing capacity of M. Dodd "A" No. 16 prior to waterflood response.
- (E) Form C-116, indicating the response experienced in the pilot producing well, M. Dodd "A" No. 16.
- (F) U.S.G.S. Form 9-330 indicating initial potential of M. Dodd "B" No. 17.

- (G) Form C-116 indicating recent test of M. Dodd "B" No. 17.
- (H) Logs not available
- (I) Address list of operators in this area.

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. Flood response has been substantial in the pilot producing well, Dodd "A" No. 16, as evidenced by the two Form C-116's enclosed for this well. Order No. WFX No. 254 issued on February 2, 1967, granted approval to convert to injection M. Dodd "B" No. 7 located in Unit "F" and M. Dodd "B" No. 8 located in Unit "D", both in Section 14, T-17-S, R-29-E. These conversions have been made and a producing well, M. Dodd "B" No. 17 drilled in Unit "E", Section 14, T-17-S, R-29-E. From the enclosed copy of Form C-116, it should be noted that the well is capable of producing significant volumes of oil. Due to the depleted nature of this reservoir, we feel that this is indicative that oil is being banked and that this well has in fact also received waterflood response.

We feel that it is necessary to convert the subject wells to water injection service in order to continue an orderly development of the project. The 5-spot injection pattern being utilized appears to be successful and is resulting in a thorough and efficient sweep of the oil by waterflooding.

Yours truly,
SUNRAY OIL COMPANY

J. B. Hastings
Roswell District Engineer

JBH:sk

cc: State Engineer w/attachments
U.S.G.S., Artesia, New Mexico, w/attachments
N.M.O.C.C., Artesia, New Mexico, w/attachments
Offset Operators, as per address list, less attachments

Diagrammatic Sketch of Injection Well

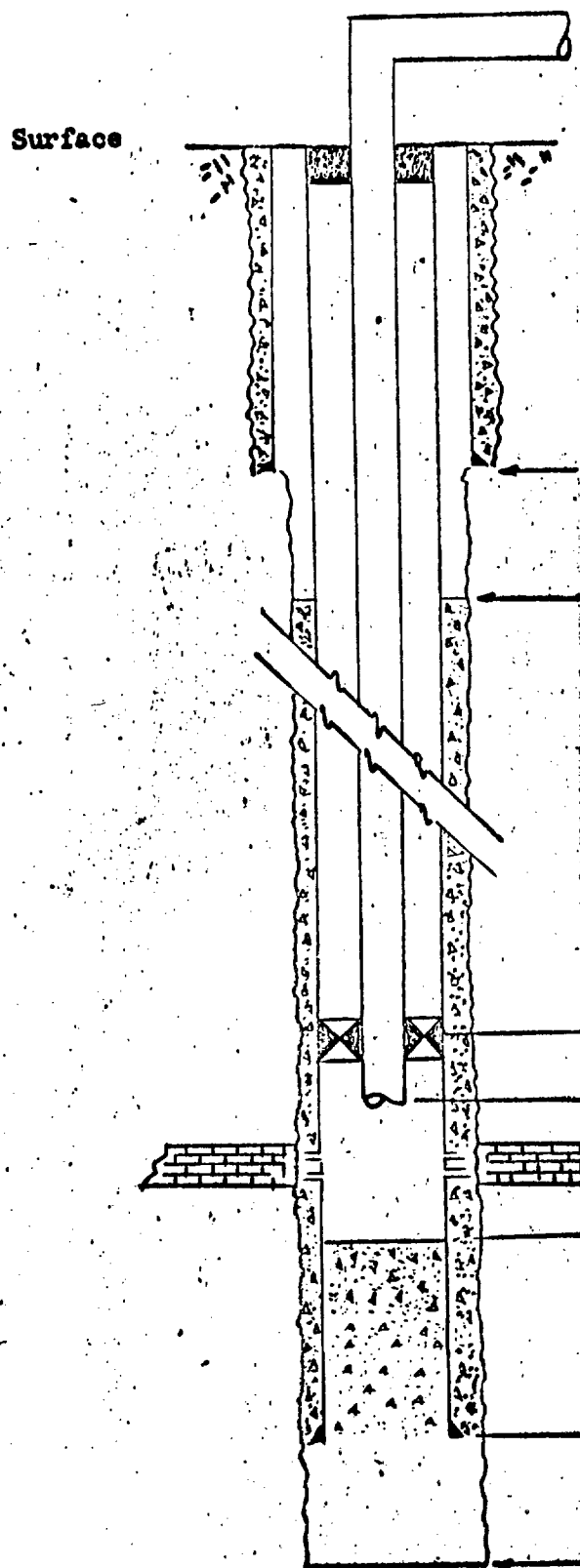
Sunray DX Oil Company

Lease: M. Dodd "B"

Well No.: 16

Location: Unit "B", Sec. 15, T-17-S, R-29-E

Eddy County, New Mexico



From Injection Pump

8 5/8" csg to 417' w/300 sx, circulated

Top of cement at 1700'

Baker Model AD Pkr to be set at approx 2385'

2 3/8" tbg to set approx 2385'

Metex top 2407'

Metex bottom 2432'

Present PBTD 2458

5 1/2" to 2485' cmt w/150 sx

Original TD 2490'

Diagrammatic Sketch of Injection Well

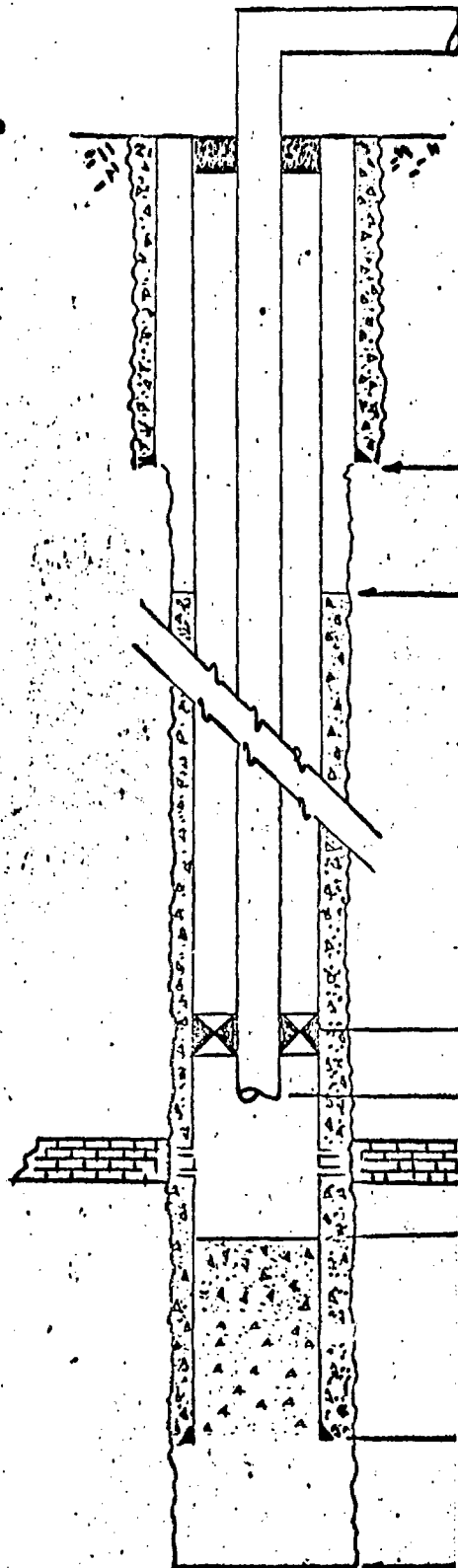
Sunray DX Oil Company

Lease: M. Dodd "B"

Well No.: 18

Location: Unit "P", Sec. (15), T-17-S, R-29-E
Eddy County, New Mexico

Surface



From Injection Pump

8 5/8" at 500' w/250 sx to surface.

TOC est 1600'

Baker Model "AD" Packer at approx 2400'

2 3/8" tbg at approx 2400'.

Top of perforated Metex interval 2435' (est)

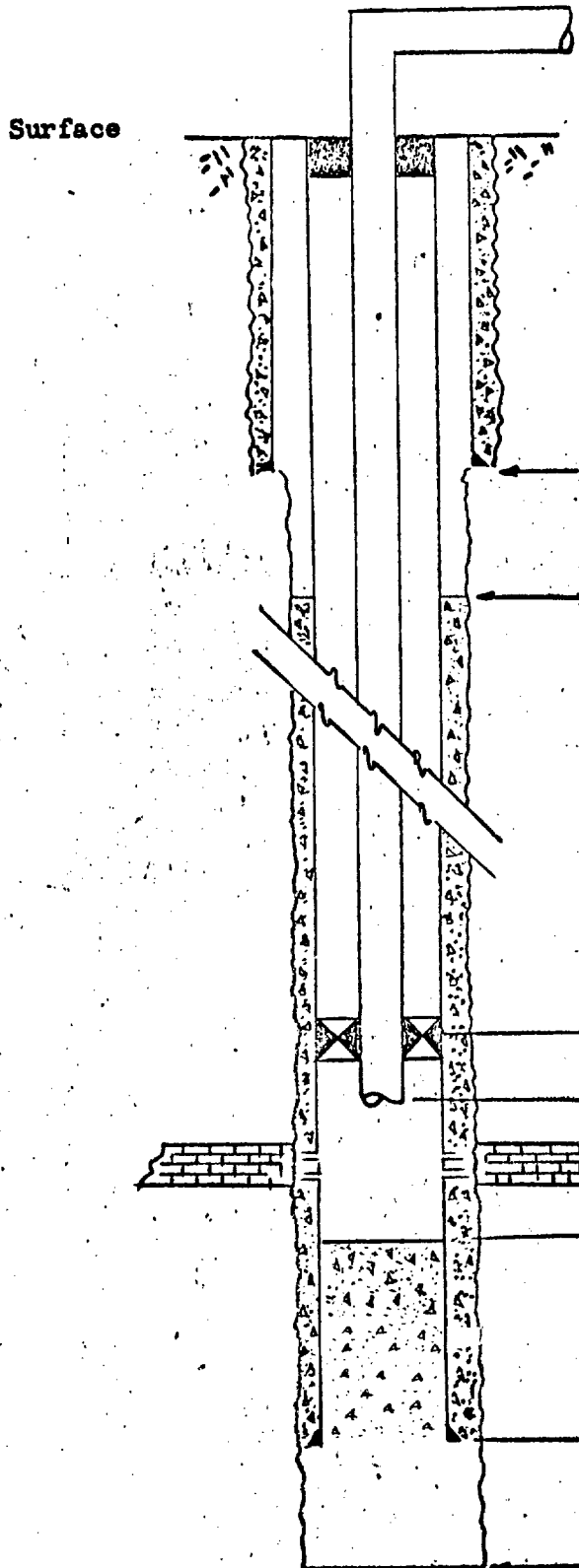
Bottom of perforated Metex interval 2445' (est)

PBTD 2670'

4 1/2" at 2700'

TD 2700'

Diagrammatic Sketch of Injection Well
Sunray DX Oil Company
Lease: M. Dodd "B"
Well No.: 19
Location: Unit "N", Sec. 11, T-17-S, R-29-E
Eddy County, New Mexico



From Injection Pump

8 5/8" at 500' w/250 sx to surface

TOC est 1600'

Baker Model "AD" Packer at approx. 2400'

2 3/8" tbg at approx 2400'

Top of perforated Metex interval 2435' (est)

Bottom of perforated Metex interval 2445' (est)

PBD 2670'

4 1/2" at 2700'

TD 2700'

SUNRAY DX OIL COMPANY

WATERFLOOD DATA

Lease: M. Dodd "B"

Field: Square Lake

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

Well No: 16

Location of well: Unit "B", Section 15, T-17-S, R-29-E, Eddy County, New Mexico

Date well completed: 6-5-58

Present status of well: Producing 3 BOPD

Present producing formation: Metex

Present producing interval: 2407 - 2432

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: 2407

Bottom of formation: 2432

Proposed injection interval: 2407 - 2432

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

Anticipated volumes to be injected: 200 BWPD

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: 18

Location of well: Unit "P", Section 10, T-17-S, R-29-E, Eddy County, New Mexico

Date well completed: Proposed well

Present status of well: -

Present producing formation: -

Present producing interval: -

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: est. 2435

Bottom of formation: est. 2445

Proposed injection interval: est. 2435 - 2445

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

Anticipated volumes to be injected: 200 BWPD

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: 19

Location of well: Unit "N", Sec. 11, T-17-S, R-29-E, Eddy County, New Mexico

Date well completed: Proposed well

Present status of well: -

Present producing formation: -

Present producing interval: -

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: • est 2435

Bottom of formation: est 2445

Proposed injection interval: 2435 - 2445 (est)

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

Anticipated volumes to be injected: 200 BWPD

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-116
Revised 1-1-65

Operator		Pool		County		Eddy								
Sunray DX Oil Company		Grayburg Jackson												
Address		TYPE OF TEST - (X)		SCHEDULED		COMPLETION								
P. O. Box 1416, Roswell, New Mexico						Special ☒								
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.
M. Dodd "A"	16	A	15	17S 29E	3-3-65	P -	-	3	24	0	36	3	5.2	1733
NOTE: The above test was taken prior to waterflood response on this well. This well is the center pilot producing well in the SDX Metex Waterflood, Commission Order No. R-3013. FOR USE AS EXHIBIT ONLY.														

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

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.

John B. Hastings
(Signature)
District Engineer
(Title)
March 8, 1967
(Date)

NEW MEXICO OIL CONSERVATION COMMISSION
GAS-OIL RATIO TESTS

C-1116
Revised 1-1-65

Operator Sunray DX Oil Company		Pool Grayburg Jackson		County Eddy											
Address P. O. Box 1416, Roswell, New Mexico		TYPE OF TEST - (X)		Completion ☐ Scheduled ☐ Special ☒											
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	CHOKE SIZE	TBG. PRESS.	DAILY ALLOWABLE	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	3-1-67	P	-	56	24	20	36	72	61	846
<u>NOTE:</u> 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. FOR USE AS EXHIBIT ONLY.															

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

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.

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John B. Hastings
(Signature)
John B. Hastings
(Title)
District Engineer
March 9, 1967
(Date)

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL: OIL WELL ☒ GAS WELL ☐ DRY ☐ Other _____		7. UNIT AGREEMENT NAME	
b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other _____		8. FARM OR LEASE NAME M. Dodd "B"	
2. NAME OF OPERATOR Sunray DX Oil Company		9. WELL NO. 17	
3. ADDRESS OF OPERATOR P. O. Box 1416, Roswell, New Mexico		10. FIELD AND POOL, OR WILDCAT Square Lake	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* At surface At top prod. interval reported below At total depth		11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA Sec. 14, T-17-S, R-29E	
		12. COUNTY OR PARISH Eddy	13. STATE New Mexico
14. PERMIT NO.	DATE ISSUED		
15. DATE SPUDDED 1-29-67	16. DATE T.D. REACHED 2-2-67	17. DATE COMPL. (Ready to prod.) 2-16-67	18. ELEVATIONS (DF, REB, ET, GR, ETC.)* 3602 DF
19. ELEV. CASINGHEAD 3590			
20. TOTAL DEPTH, MD & TVD 2700	21. PLUG, BACK T.D., MD & TVD 2700	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY ROTARY TOOLS ☒ CABLE TOOLS _____
24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* Matex 2436-46			25. WAS DIRECTIONAL SURVEY MADE Yes
26. TYPE ELECTRIC AND OTHER LOGS RUN GR-Density			27. WAS WELL CORED Yes
28. CASING RECORD (Report all strings set in well)			
CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE
8 5/8"	24#	498	11"
4 1/2"	9.5#	2700	7 7/8"
CEMENTING RECORD		AMOUNT PULLED	
250 sx reg.			
250 sx Incor Poz.			
29. LINER RECORD			
SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*
30. TUBING RECORD			
SIZE	DEPTH SET (MD)	PACKER SET (MD)	
2" EUE	2450		
31. PERFORATION RECORD (Interval, size and number) 1/Ft. 2436-46 Matex		32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.	
DEPTH INTERVAL (MD)		AMOUNT AND KIND OF MATERIAL USED	
2436-46		500 gal BDA	
2436-46		30,000 gal refined oil	
		60,000# sand	
33. PRODUCTION			
DATE FIRST PRODUCTION 2-16-67		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) Pump	
WELL STATUS (Producing or Shut-in) Producing			
DATE OF TEST 2-16-67	HOURS TESTED 24	CHOKE SIZE	PROD'N. FOR TEST PERIOD
OIL—BBL. 72	GAS—MCF. 57.8	WATER—BBL. 2	GAS-OIL RATIO 803
FLOW. TUBING PRESS. P	CASING PRESSURE -	CALCULATED 24-HOUR RATE 72	OIL GRAVITY-API (CORR.) 36
34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) Sold			TEST WITNESSED BY
35. LIST OF ATTACHMENTS Gamma Ray-Density Log			
36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records			
SIGNED <i>C.T. McClanahan</i>		TITLE Dist. Production Manager	
DATE 2-20-67			

*** (See Instructions and Spaces for Additional Data on Reverse Side)**

NEW MEXICO OIL CONSERVATION COMMISSION
GAS-OIL RATIO TESTS

C-116
Revised 1-1-65

Operator Sunray DX Oil Company		Pool Square Lake		County Eddy											
Address P. O. Box 1416, Roswell, New Mexico		TYPE OF TEST - (X)		Completion ☐ Special ☒											
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 "B"	17	E	14	17S	29E	3-7-67	P	-	50	24	20	36	75	94	1250
NOTE: The above test indicates waterflood response on this well. This well is the center producing well of the 5-spot pattern resulting from conversion of the M. Dodd "B" No. 7 and 8 as authorized by Order WFX No. 254. FOR USE AS EXHIBIT ONLY.															

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John B. Hastings
(Signature)
District Engineer

March 9, 1967
(Date)

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.
Tom Boyd Drilling Co.	501 West Texas, Artesia, N. M.

P.H. Kapteina
MAR 13 1967

Sunray DX Oil Company

District Office



P. O. Box 1416
Roswell, New Mexico
March 9, 1967

RECEIVED

MAR 10 1967

O. C. C.
ARTESIA, OFFICE

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

Gentlemen:

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- (F) U.S.G.S. Form 9-330 indicating initial potential of M. Dodd "B" No. 17.

*Note to J.E.K.
No objection to this
application 3-10-67
J.P. L.*

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