Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.: NM 5980

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL ☐ GAS WELL ☐ OTHER Water Disposal

7. UNIT AGREEMENT NAME:

2. NAME OF OPERATOR: Dome Petroleum Corporation

8. FARM OR LEASE NAME: Federal 21-20-5

3. ADDRESS OF OPERATOR: %Minerals Management Inc., Suite 105, 501 Airport Drive, Farmington, New Mexico 87401

9. WELL NO.: 3

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* *See also space 17 below.) At surface

10. FIELD AND POOL, OR WILDCAT: Ojo Encino

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: SEC. 21, T20N, R5W NMPM

930' FSL, 520' FWL, SEC. 21, T20N, R5W

14. PERMIT NO.:

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 6785' GR, 6797' KB

12. COUNTY OR PARISH: McKinley

13. STATE: N.M.

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	☐
REPAIR WELL	☐	CHANGE PLANS	☐				
(Other) Complete for Water Disposal				(Other)			

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

Operator proposes to complete this well as a salt water disposal well serving the Ojo Encino Field. A nine-point information sheet is attached in compliance with the provisions of NTL-2B.

CONFIDENTIAL

RECEIVED
DEC 13 1977
OIL CON. COM.
DIST. 3

18. I hereby certify that the foregoing is true and correct

SIGNED _____ TITLE Area Manager Minerals Management Inc DATE 11-28-77

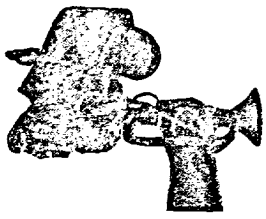
(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

DEC 1977

*See Instructions on Reverse Side



MINERALS MANAGEMENT INCORPORATED
A Division of SCIENTIFIC SOFTWARE CORPORATION

DOME PETROLEUM CORPORATION

FEDERAL 21-20-5 WELL NO. 3

APPLICATION FOR SUBSURFACE WATER DISPOSAL

1. Disposal Well

   Federal 21-20-5 Well No. 3
   930' FSL, 520' FWL, Sec. 21, T20N, R5W
   McKinley County, New Mexico
   Lease No. NM 5980

2. Proposed Injection Rate

   3000 to 5000 BPD
   Source Water: Ojo Encino-Entrada Field produced water (analysis attached)

3. Injection Formation: Gallup
   Injection Intervals: 3750'-~~3790'~~ 3970

4. The Gallup formation is not known to contain potable water in this area. It is the water disposal reservoir in the nearby Eagle Mesa, Media, and Papers Wash Entrada fields.

5. There is no fresh water in the area at depths below 1830'.

6. Casing and cementing programs for this well have been completed as follows:

   9 5/8" O.D., 36#, K-55, ST&C surface casing was set at 204' KB with 200 sx Class "B" cement with 2% CaCl.

   5 1/2" O.D., 15.5#, K-55, ST&C casing was set at 4421' KB with cement stage collar set at 3180' KB. The first stage, cemented through the shoe, consisted of 500 sx Class "B" cement with 1/4 lb. celoflake/sx. The stage collar was opened and the well circulated for 4 hours between stages. Cement was circulated. The second stage was 570 sx 65/35 Poz with 12% gel and cement was circulated.

7. Well was drilled to total depth of 6168' KB. No productive interval was discovered. The well was plugged back as follows:

   Plug No. 1 6050'-5900' (150') with 55 sx
   Plug No. 2 4990'-4840' (150') with 55 sx

8. Casing was run in this well for completion as a water disposal well. The cement stage collar will be drilled out and the plugged back depth, inside the casing, will be a maximum of 4390' KB. The Gallup interval 3750'-3970' will be perforated, the injectivity tested and stimulated as needed. A Baker Model FA production packer (or equivalent) will be set at 3700' on plastic lined 2 7/8" O.D., 6.5#, J-55, 8RT, EUE tubing with a stainless steel seating nipple in the bottom of the packer. Anticipated injection pressure is 300 psi. The tubing-casing annulus will be filled with water treated with corrosion inhibitor and a bactericide.

9. Pressure gauges will be installed on the tubing head and annulus pressure will be monitored at regular intervals. The entire salt water disposal system is visible from the plant site, producing wells and the main road serving the lease. The casing cement program isolates the injected water to the disposal interval and an increase in annular pressure would indicate tubing failure which could then be corrected.

CL1-12A (REV. 1964)

CHEMICAL & GEOLOGICAL LABORATORIES

P. O. Box 2794
Casper, Wyoming

WATER ANALYSIS REPORT

OPERATOR Dome Petroleum Corp.
WELL NO. Federal 21 No. 1
FIELD Wildcat
COUNTY McKinley
STATE New Mexico

DATE October 28, 1976 LAB NO. 21604-1
LOCATION Sec. 21-20N-5W
FORMATION Entrada
INTERVAL
SAMPLE FROM (10-20-76)

REMARKS & CONCLUSIONS:

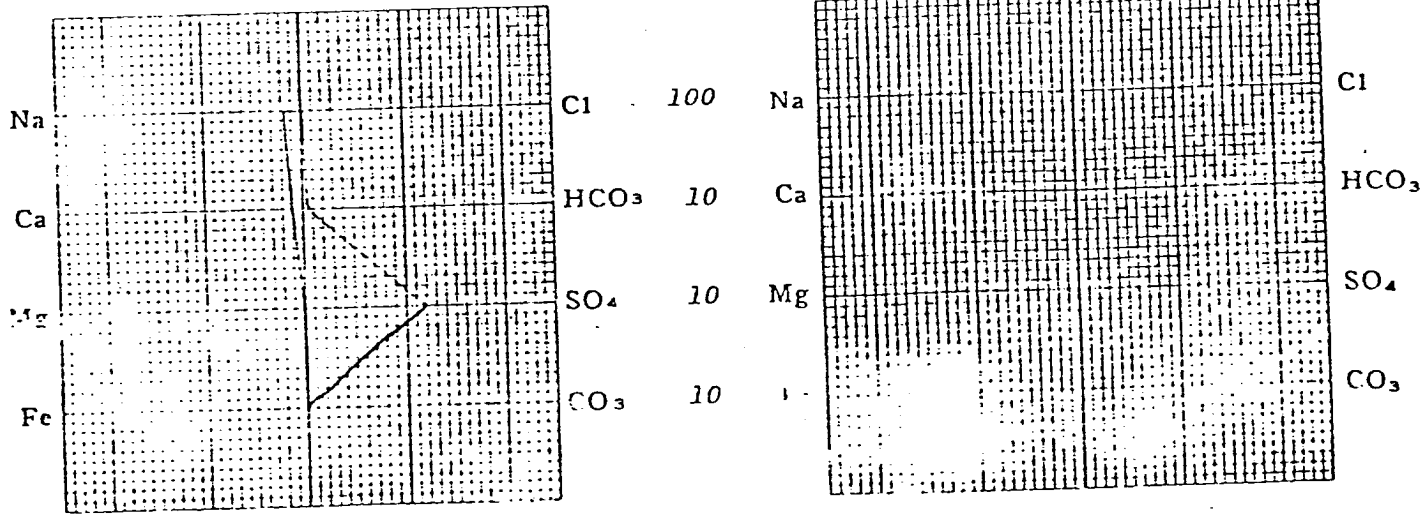
Cations	mg/l	meq/l	Anions	mg/l	meq/l
Sodium	3301	143.61	Sulfate	5900	122.72
Potassium	67	1.72	Chloride	1070	30.17
Lithium			Carbonate	-	
Calcium	238	11.88	Bicarbonate	293	4.81
Magnesium	6	0.49	Hydroxide		
Iron	-		Hydrogen sulfide	-	
Total Cations		157.70	Total Anions		157.70

Total dissolved solids, mg/l	10726	
NaCl equivalent, mg/l	7705	
Observed pH	7.6	
Specific resistance @ 68°F.: Observed	0.90 ✓	ohm-meters
Calculated	0.86 ✓	ohm-meters

WATER ANALYSIS PATTERN

Sample above described

Scale
MEQ per Unit



(Na value in above graphs includes Na, K, and Li)
NOTE: Mg/l Milligrams per liter Meq/l Milligram equivalents per liter
Sodium chloride equivalent by Dunlap & Hawthorne calculation from components