APPLICATION FOR AUTHORIZATION TO INJECT
EXXON YATES FEDERAL "C" #22

Attached is the chemical analysis of the fresh water produced from the Raines fresh water well located in Section 32, T-20S, R-28E. Also attached are chemical analyses of the produced water from the Yates "C" #6 (3550-3624') and Yates Federal "C" #8 (2570-2694').

EXXON

EXHIBIT NO. 6

DOCKET NO. 8705

HEARING DATE 9-25-85

P O BOX 1468
MONAHANS, TEXAS 79756
PH 943-3234 OR 563-1040

Martin Water Laboratories, Inc.

709 W INDIANA
MIDLAND, TEXAS 79701
PHONE 683-4521

RESULT OF WATER ANALYSES

LABORATORY NO. 883315

TO: Mr. Mike Metza
1700 W. Broadway, Andrews, Texas 79714

SAMPLE RECEIVED 8-17-83

RESULTS REPORTED 8-24-83

COMPANY Exxon Company, U.S.A. LEASE Raines

FIELD OR POOL

SECTION BLOCK SURVEY COUNTY STATE

SOURCE OF SAMPLE AND DATE TAKEN:

NO. 1 Raw water-taken from water well, 8-14-83 Raines fresh water well

NO. 2 SE/4 Sec. 32, T20S, R28E

NO. 3

NO. 4

REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0062			
pH When Sampled				
pH When Received	7.6			
Bicarbonate as HCO_3	171			
Supersaturation as $CaCO_3$				
Undersaturation as $CaCO_3$				
Total Hardness as $CaCO_3$	2,180			
Calcium as Ca	656			
Magnesium as Mg	131			
Sodium and/or Potassium	332			
Sulfate as SO_4	1,895			
Chloride as Cl	561			
Iron as Fe	0.47			
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	3,746			
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen, Winkler				
Hydrogen Sulfide	0.0			
Resistivity, ohms/m at 77° F.	1.90			
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks: The undersigned certifies the above to be true and correct to the best of his knowledge and belief.

Form No. 3

By

Waylan C. Martin, M. A.

cc: Mr. O. W. Davenport, Midland
Mr. Ralph King, Andrews

P. O. BOX 1468
MONAHANS, TEXAS 79756
PH. 943-3234 OR 563-1040

Martin Water Laboratories, Inc.

709 W. INDIANA
MIDLAND, TEXAS 79701
PHONE 683-4521

RESULT OF WATER ANALYSES

LABORATORY NO. 483239

TO: Mr. Ralph King
1700 W. Broadway, Andrews, Texas 79714

SAMPLE RECEIVED 4-19-83
RESULTS REPORTED 4-25-83

COMPANY Exxon Company, U.S.A. LEASE Yates
FIELD OR POOL Burton Flat
SECTION ___ BLOCK ___ SURVEY ___ COUNTY Eddy STATE NM
SOURCE OF SAMPLE AND DATE TAKEN:
NO. 1 Produced water-taken from Yates #6.
NO. 2
NO. 3
NO. 4
REMARKS: Delaware

CHEMICAL AND PHYSICAL PROPERTIES

	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.1268			
pH When Sampled				
pH When Received	7.4			
Bicarbonate as HCO_3	342			
Supersaturation as $CaCO_3$				
Undersaturation as $CaCO_3$				
Total Hardness as $CaCO_3$	49,500			
Calcium as Ca	15,000			
Magnesium as Mg	2,916			
Sodium and/or Potassium	49,634			
Sulfate as SO_4	870			
Chloride as Cl	110,790			
Iron as Fe	0.16			
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	179,552			
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen, Winkler				
Hydrogen Sulfide	7.0			
Resistivity, ohms/m at 77° F.	0.062			
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks: The above results show characteristics reasonably commensurate with what we would expect from natural Delaware water in this area.

Form No. 3

cc: Mr. O.W. Davenport, Midland

By _____
Waylan C. Martin, M. A.

#9

P O BOX 1468
MONAHANS, TEXAS 79756
PH 943-3234 OR 563-1040

Martin Water Laboratories, Inc.

709 W INDIANA
MIDLAND, TEXAS 79701
PHONE 683-4521

RESULT OF WATER ANALYSES

LABORATORY NO. 883314

TO: Mr. Mike Metza
1700 W. Braodway, Andrews, Texas 79714

SAMPLE RECEIVED 8-17-83
RESULTS REPORTED 8-24-83

COMPANY Exxon Company, U.S.A. LEASE Yates Federal "C"
FIELD OR POOL Burton Flat
SECTION ___ BLOCK ___ SURVEY ___ COUNTY Eddy STATE NM
SOURCE OF SAMPLE AND DATE TAKEN:
NO. 1 Produced water- taken from Yates Federal "C" #8. 8-14-83
NO. 2
NO. 3
NO. 4
REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.1085			
pH When Sampled				
pH When Received	8.1			
Bicarbonate as HCO_3	1,427			
Supersaturation as $CaCO_3$				
Undersaturation as $CaCO_3$				
Total Hardness as $CaCO_3$	30,500			
Calcium as Ca	8,320			
Magnesium as Mg	2,357			
Sodium and/or Potassium	50,001			
Sulfate as SO_4	1,769			
Chloride as Cl	96,586			
Iron as Fe	0.08			
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	160,460			
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen, Winkler				
Hydrogen Sulfide	875			
Resistivity, ohms/m at 77° F.	0.066			
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks The objective herein is to compare the above with the water from Yates #6 reported on analysis #483239 (4-25-83) in regard to compatibility between these waters. We have identified no evidence of any clear-cut incompatibility. However, this should be qualified in that we showed an unusually high pH in the above, which could conceivably result in some potential calcium carbonate scaling on mixing with the water from Yates #6. However, we strongly suspect that the pH of this water was the result of loss of carbon dioxide on sampling and would not acutally be present in the produced water. We also find this water to be mildly supersaturated with calcium sulfate, but this does not carry over in the mixture to cause any problem with compatibility.

Form No. 3

By _____
Waylan C. Martin, M. A.

cc: Mr.O. W. Davenport, Midland
Mr. Ralph King, Andrews

#9