Ref: Item VII of C-108

Data on Proposed Operation of Eunice Monument South Unit

1. Proposed average and maximum daily rate and volume of fluids to be injected:

Average daily rate of 400 BWPD Maximum daily rate of 500 BWPD

- 2. System is closed.
- 3. Proposed average and maximum injection pressures:

Average injection pressure of 350 psi Maximum injection pressure of 740 psi *

- 4. The source of injection fluids will be from the San Andres formation initially, then produced water from Unit wells will be used as the primary source of water when the Unit becomes fully developed.
- 5. The make-up water from the San Andres formation to be used as injection fluid is compatible with the produced water from the Unit wells (See attached water analysis).
- * Until a fracture gradient is determined, maximum injection pressure will be based on a .2 psi/foot gradient.

EXHIBIT NO. 33a

Case No. <u>8397</u>

November 7, 1984

Ref: Item VII of C-108

P 0 BOX 1408 MONAMANS TEXAS 70786 PM 043-3234 OR 863-1040

Martin Water Laboratories, Inc.

709 W INDIANA MIDLAND TEXAS 79701 PHONE 683-4821

RESULT OF WATER ANALYSES

	ı	ABORATORY NO	284226	
ro: Mr. Stan Chapman		MPLE RECEIVED _	2-15-84	
P.O. Box 670, Hobbs, NM		RESULTS REPORTED_	2-20-84	
COMPANY Gulf Oil Exploration & Produ	uction LEASE			
FIELD OR POOL Company				
SECTION BLOCK SURVEY	COUNTY	STA	TF	
SOURCE OF SAMPLE AND DATE TAKEN.			\ ' E	
NO. 1 Make-up water.				
No. 2 Produced water.	· · · · · · · · · · · · · · · · · · ·			
NO. 2 Floqueed water.		······································		
NO. 3				
NO. 4				
REMARKS:				
CHEMICAL A	ND PHYSICAL	PROPERTIES		
	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0465	1.0051		
pH When Sampled				
pH When Received	6.80	7.22	<u> </u>	
Bicarbonate as HCO3	964	1,830		
Supersaturation as CaCO3	75	120		
Undersaturation as CaCO3				
Total Hardness as CaCO3	5,400	800		
Catcium as Ca	1,400	144		
Magnesium as Mg	462	107		
Sodium and/or Potassium	23,244	2,308		
Sulfate as SOz	3,432	3 00		
Chioride as CI	36,575	2,841		
fron as Fe	0.27	7.5		
Barium as Ba				
Turbidity, Electric				
Color as Pt	ļ			
Total Splids, Carculated	66.077	7.530		· · · · · · · · · · · · · · · · · · ·
Temperature FF.				
Carbon Dioxide Calculated				
Dissolved Oxigen, Winkler	(0)	725		
Hydrogen Sulf de	600	325		
Resistivity, ohms/m at 77 F	0.126	0.935		
Suspended Ori	<u> </u>		·	
Volume Filterec. T.	ļ			
	NONE	NONE		
Calcium Carbonate Scaling Tendency Calcium Sulfate Scaling Tendency	NONE	NONE		
Carcium Surface Scaring Tendency	NONE	- NO.12		
Pag (to)	Reported As Milligi	ome Par Liter	· · · · · · · · · · · · · · · · · · ·	
		in the above re	sults that	would indi-
cate any incompatibility when mixing	on these two	waters in any	rroportion	Please
contact us if we can be of any add	itional ass	stance in this	recard.	11030
contact us if we can be of any aud.	ILIUMAI ASS.	tstance In this	regard.	
				
		EXHIF	BIT NO. <u>33</u>	Ь
			No. <u>8397</u>	
		Nover	mber 7, 1984	4

Form No. 3

Wayfan C. Martin, M.A.

Ref: Item IX of C-108

Proposed Stimulation Program
For
Typical Injection Well
Eunice Monument South Unit
Lea County, New Mexico

It is proposed to selectively perforate the interval from approximately -100' to -300' subsea and then open this interval by acidizing with approximatley 3,000 gallons of 15% HCL Acid.

EXHIBIT NO. 33 c.

Case No. 8397

November 7, 1984