Ref: Item VII of C-108

Exhibit <u>5</u>
Case No. 8312
August 22, 1984

Data on Proposed Operation of Gulf Oil Corporation's North Seven Rivers Queen Pilot Well Nos. 10WI, 11WI, 12WI, 13 WI 130 TO 141 / 1/2000

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

Average daily rate of 525 BWPD Maximum daily rate of 700 BWPD

- The injection system will be closed.
- 3. The maximum injection pressure will be limited to 0.2 PSI/ft depth to the top most interval until an actual step rate test can be taken to determine the actual parting pressure. Once the parting pressure has been determined, the maximum injection pressure will be limited to this pressure upon approval of the OCD.
- 4. The source of injection fluids will be from Gulf Oil Corporation's Janda and Ramsay Consolidated batteries on the William A. Ramsay (NCT-A) Lease, northeast of the J. F. Janda (NCT-F) Lease.

P 0 BOX 1468

709 W. INDIANA MIDLAND, TEXAS 79701

MONAHANS, TEXAS 79756 PM 943-3234 OR 563-1040				PHONE 683-4521
•	RESULT OF WATER A	NALYSES	584214	
	LA	BORATORY NO		
TO: Mr. Chris Bezner	SA	MPLE RECEIVED	5-16-84	
P.O. Box 670, Hobbs, NM	RE	SULTS REPORTE	o 5-23-84	
0.16.0/1.7	· Dona da catalan		As listed	
COMPANY Gulf Oil Exploration &	Production LEASE -	· · · · · · · · · · · · · · · · · · ·	AS listed	
FIELD OR POOL Company		Too	W	
SECTION BLOCK SURVEY	COUNTY	reas	TATE NM	· · · · · · · · · · · · · · · · · · ·
SOURCE OF SAMPLE AND DATE TAKEN:		_		
NO. 1 Produced water - taken	from W.A. Ramsey	NCT-A #4. 5-	16-84	· · · · · · · · · · · · · · · · · · ·
NO. 2 Produced water - taken	from Janda NCT-F	#14. 5-16-84		
NO. 3 Disposal water - taken				
		<u> </u>		
NO. 4				
REMARKS:				
CHE	MICAL AND PHYSICAL F	ROPERTIES	·	<u> </u>
<u></u>	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0092	1.0183	1.0122	
pH When Sampled			<u> </u>	
pH When Received	7.76	7.24	7.37	
Bicarbonate as HCO3	2,513	2,098	2,416	
Supersaturation as CaCO3	160	340	340	
Undersaturation as CaCO3				<u> </u>
Total Hardness as CaCO3	1,800	4,850	2,600	
Calcium as Ca	392	2:88-	540	
Magnesium as Mg	199	1,003	304	
Sodium and/or Potassium	2,377	6,008	3,671	
Sulfate as SO4	384	354	278	
Chloride as CI	2,196	11,221	5,895	
Iron as Fe	0.39	كبلر	0.20	
Barium as Ba	Q	0	0	
Turbidity, Electric	4	14	15	

Calcium Carbonate Scaling Tendency	NONE	MILD	NONE	
Calcium Sulfate Scaling Tendency	NONE	NONE	NONE	
Results R	eported As Milligram	ns Per Liter		
Additional Determinations And Remarks				

9,061

0.0

0.790

625

Form No. 3

Color as Pt

Temperature °F.

Hydrogen Sulfide

Suspended Oil

Total Solids, Calculated

Carbon Dioxide, Calculated Dissolved Oxygen, Winkler

Resistivity, ohms/m at 77° F.

Filtrable Solids as mg/1 Valume Filtered, ml

49

0.0

0.360

150

20,972

27

0.0

0.540

150

29

13,104

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

ABORBIORIES, INC. 709 W. INDIANA MIDLAND. TEXAS 79701 PHONE 683-4921

RESULT OF WATER ANALYSES

ro. Mr. Chris Bezner	SAMPLE RECEIVEDRESULTS REPORTED	5-16-84
COMPANY Gulf Oil Exploration & Production LEAS		
SECTION BLOCK SURVEY COUNTY	Lea STAT	E NM
SOURCE OF SAMPLE AND DATE TAKEN:		
NO. 1 Mixture of 35% Ramsay water & 65% Janda	water.	
NO. 2 Mixture of 25% Ramsay water & 75% Janda	water.	
NO. 3 Mixture of 4% Janda water & 96% disposa	ıl water.	
Mixture of 11% Janda water & 89% dispos		

CHEMICAL AND PHYSICAL PROPERTIES					
	NO. 1	NO. 2	NO. 3	NO. 4	
Specific Gravity at 60° F.					
pH When Sampled					
pH When Received				_	
Bicarbonate as HCO3	2,202	2,196	2,367	2,355	
Supersaturation as CaCO3	225	260	90	155	
Undersaturation as CaCO3					
Total Hardness as CaCO3				T	
Calcium as Ca	360	356	480	456	
Magnesium as Mg					
Sodium and/or Potassium					
Sulfate as SO4	394	400	316	316	
Chloride as Cl	8,523	9,230	6,248	6,532	
Iron as Fe					
Barium as Ba				·	
Turbidity, Electric	5	7	8	8	
Color as Pt					
Total Solids, Calculated					
Temperature °F.					
Carbon Dioxide, Calculated					
Dissolved Oxygen, Winkler					
Hydrogen Sulfide					
Resistivity, ohms/m at 77° F.					
Suspended Oil					
Filtrable Solids as mg/					
Volume Filterød, ml					
alcium Carbonate Scaling Tendency	NONE	NONE	NONE	NONE	
alcium Sulfate Scaling Tendency	NONE	NONE	NONE	NONE	

Additional Determinations And Remarks A careful examination of the results herein reveals no evidence of any incompatibility between any combination of these waters. The water from Janda #14 shows a minor excess of supersaturation to calcium carbonate, but we do not consider this to be of any concern. We would not expect any difficulty with potential calcium carbonate scaling in mixing these waters though this is an aspect of the water that should be checked under actual operating conditions of the waterflood. In summary, we have identified no concern with combining these waters though we do suggest the waters be maintained air-free and that examination of the mixture of the waters should be made after injection has been commenced for confirmant.

Results Reported As Milligrams Per Liter

Form No. 3 tion of conditions.

cc: Mr. Elvin Allen, Eunice

Waylan C. Martin, M.A.