COASTAL STATES GAS PRODUCING COMPANY

NORTH TEXAS DIVISION WILCO BUILDING MIDLAND, TEXAS 79701

December 9, 1966

PMX-23

New Mexico Oil Conservation Commission P. O. Box 871 Santa Fe, New Mexico

Attention: Mr. A. L. Porter, Jr., Secretary-Director

Gentlemen:

As provided for in the New Mexico Oil Conservation Commission's Order No. R-3033, Coastal States Gas Producing Company hereby requests that the Secretary-Director furnish administrative approval for the expansion of Coastal States Flying "M" Pressure Maintenance Project by the conversion of one additional well to water injection.

The proposed injection well is Coastal States' FM "B" Well No. 3, Unit F, Section 17, Township 9-S, Range 33-E, Lea County, New Mexico.

The following exhibits concerning the proposed injection well are attached:

- 1. Plat showing the location of the proposed injection well and other wells in the vicinity, with producing horizons noted.
- 2. Gamma Ray-Sonic Log of the proposed injection well.
- 3. Diagrammatic Sketch of the proposed injection well.
- 4. List of other pertinent information.

A copy of this application, complete with all attachments, has been sent to the State Engineer Office, and to Pan American Petroleum Corporation and Louisiana Land and Exploration Company, the offset operators.

Joe R Howard

Division Production Superintendent

JRH:BPMcC:1b Attachments

cc: E. Forbes Gordon

W. D. Elliott

Pan American Petr. Corp. P. O. Box 1540 Midland, Texas

Louisiana Land & Expl. Co. V&J Tower Building P. O. Box 1696

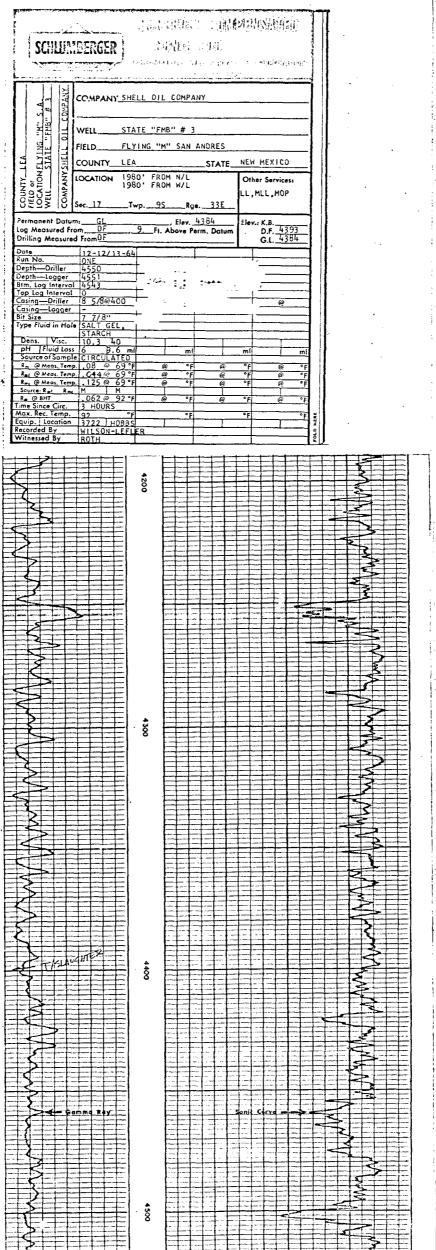
Midland, Texas

Mr. Frank Irby State Engineer P. O. Box 1079

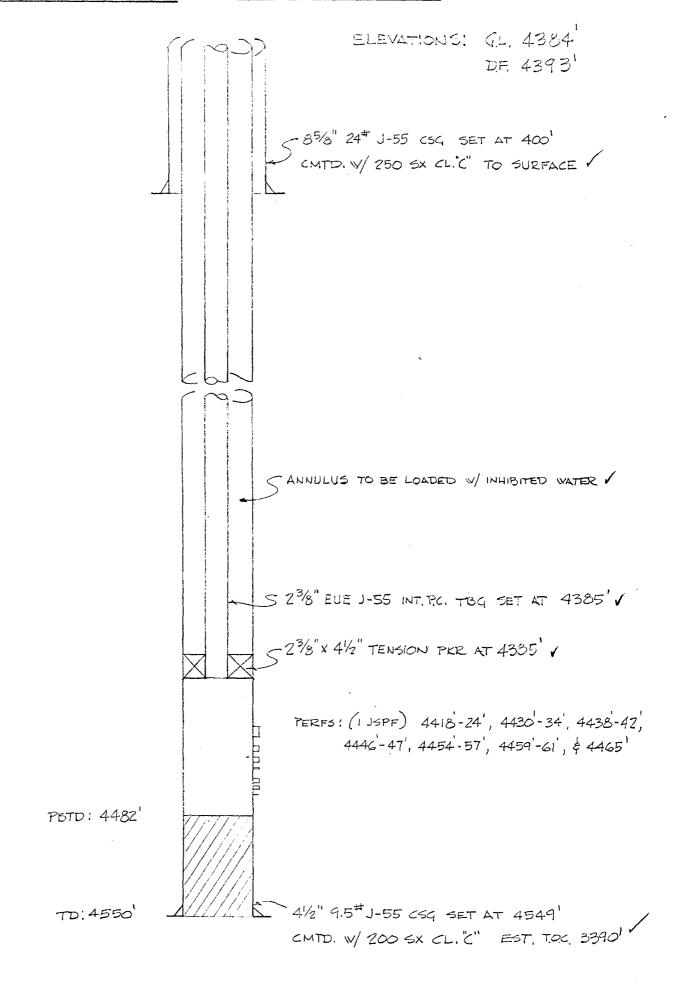
Santa Fe, New Mexico

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Pertinent Information

- A. Formation into which injection will be made:

 Slaughter zone of the San Andres, at 4418' to 4465'
- B. Kind of fluid to be injected:
 Produced brine water and fresh water
- C. Anticipated volumes to be injected:
 250 1000 Bbls/Day
- D. Source of injected fluid:

Produced brine water from the San Andres formation, approximately 50%, and fresh water produced from the Santa Rosa formation, approximately 50%.

Martin Water Laboratories

BOX 1468 MONAHANS, TEXAS

RESULT OF WATER ANALYSES

WI 3-3234

To: Mr. Jack McGraw P. O. Box 235, Mic		SAMPLE RECEIV	666133 ED 6-30-66 RTED 7-8-66
COMPANY Coastal States	Gas Producing (COLEASE Flying "	M''
FIELD OR POOL		Flying "M"	
SECTIONBLOCK	SURVEY	COUNTY Lea	state <u>N. M.</u>
SOURCE OF SAMPLE AND DAT	E TAKEN:		
NO.1 Raw water - taker	from water sup	oply line at storage	tank. 6-30-66
NO. 2 Produced (San And	lres) water - ta	aken from heater-trea	ter. 6-30-66
NO. 3 Treated water -	aken from injec	tion pump discharge.	6-30-66
NO. 4			
REMARKS:			
			· · · · · · · · · · · · · · · · · · ·

CHEMICAL AND PHYSICAL PROPERTIES							
	NO.1	NO. 2	NO. 3	NO. 4			
Specific Gravity at 60° F.	1.0016	1.1688	1.1570				
pH When Sampled	7.3	6.7	6.8				
pH When Received	7.3	6,8	6.8				
Ricerbonate as HCOg	178	664	547				
Superseturation as CaCO3	5	50	34				
Undersaturation as CaCO ₃							
Total Hardness as CaCO3	420	6,930	6,914				
Calcium as Co	142	2,288	2,167				
Magnesium as Mg	16	294	364				
Sodium and/or Potassium							
Sulfate as 804	298	2,647	2,650				
Chloride as Ci	114	136,108	128,903				
Iron as Fe	0.27	0.38	1.0				
Bartum as Ba	0.0	0.0	0.0				
Turbidity, Electric	0.0	7.0	29.9				
Color as Pt	0.0	1.5	6.0	10.000			
Dissolved Solids at 1030 C.							
Total Solids at IOSO C.							
Total Solids, Calculated							
Temperature of,	75	109	106				
Carbon Dioxide, Calculated	15	218	143				
Dissolved Oxygen, Winkler	8.0	0.0	0.0				
Hydrogen Bulfide	0.0	65.0	75.0				
Resistivity, ohms/m at 60° Y.	9.30	0.048	0.051				
Suspended Oil		73.0	27.5				
Filterable Solids, ppm	0.38		9.5				
Volume Filtered, ml	4,000		2,000				
		<u> </u>					

All Results Reported As Perts Per Million (mg/1)

Additional Determinations And Rameria Theoretical Compatible Actual

Equal Mixture of Waters Turbidity, ppm Turbidity, ppm

Supply water & produced water 3.5 5.1

Letter of recommendation attached.

cc: Mr. K. E. Oden
2900 N. Acres, Hobbs, N. M.

Waylan C. Martin, M. A.

Cardinal



ANALYTICAL SERVICE LABORATORY

Company Coastal States Gas Producing Co.

Address P. O. Box 235

Midland, Texas

Attention Joe Howard

Karl Oden

Recent Treatments 250 gallons 15% Regular Acid

County Lea

Field Flying "M"

Sama iZosa Formation San Andres

Lease Sinclair State

Well No. 2 900

Depth 47000 (approx)

Sampled 9/2/66

Sample

Source Swab

WATER ANALYSIS (Reported as mg per Liter)

Specific Gravity 1.025 @ 74°

Chloride 37,500

Bicarbonate 858

Sulfate 1.050

Sulfide faint

Total Hardness (as Ca CO₂) 7,700

pH 6.5

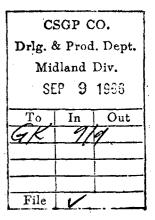
Calcium 1,960

Magnesium 672

Total Iron Strong Trace

Sodium (Calc.) 322

Total Dissolved Solids (Calc.)42,362



Remarks:



Analyst Jim Foley	-
Cardinal Representative Bobby Jones	-

(Date)

NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OPERATOR			ADDRESS					
Coastal States Gas	Producing	Company	P. O.	Box 235,	Midland	, Texa	as 79701	
FM "B" State		3		ng "M" (S	an Andre	s)	Lea	
UNIT LETTER		TELL IS LOCATED 19	980 FEET F	ROM THE NOT	thLIN	E AND	1980 FEET FR	OM THE
West LINE, SECTION	17 _{то}	OWNSHIP 95	RANGE 33	BE NMPM.				
		CASING	AND TUBING DA	ΓA				
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEME	NT TO	P OF CEMEN	Т	TOP DETERMINED	3 Y
24# , J- 55	8-5/8"	400°	250		Surf.		Circ.	
INTERMEDIATE			<u> </u>					
	<u> </u>							
LONG STRING								
9.5#, J-55	4-1/2"	4549 t	200		3390'		Calc.	
TUBING 4.7件、J-55 NAME OF PROPOSED INJECTION FORMA	2-3/8"	4385*	NAME, MODEL AND D	EPTH OF TUBING	PACKER			
NAME OF PROPOSED INJECTION FORMA	TION		TOP OF FORM	ATION		воттом о	F FORMATION	
San Andres			441			446	55 *	
IS INJECTION THROUGH TUBING, CASIN	G, OR ANNULUS?	PERFORATIONS	OR OPEN HOLE?	ROPOSED INTERVA	L(S) OF INJECT	rion		
Tubing		Perfs.	<u> </u>		-4465°			
IS THIS A NEW WELL DRILLED FOR DISPOSAL?		S NO, FOR WHAT PURPO	SE WAS WELL ORIGIN	IALLY DRILLED?		HAS WELL Zone othe Tion zone	EVER BEEN PERFORATED ER THAN THE PROPOSED !	NJEC-
NO LIST ALL SUCH PERFORATED INTERVA	0i1	production	· 				No	
LIST ALL SUCH PERFORATED INTERVA	LS AND SACKS OF C	EMENT USED TO SEAL O	OFF OR SQUEEZE EAC	н				
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA		DEPTH OF BOTTOM OF OIL OR GAS ZONE IN	THIS AREA	1	DEPTH OF TOP DIL OR GAS ZON	OF NEXT L IE IN THIS	AREA	
ANTICIPATED DAILY MINIMUM	MAXIMUM	OPEN OF CLOS	ED TYPE SYSTEM	- LIS IN IECTION 7	O BE BY CDAVI	TV OR	8500 PRESSURE (PSI	
INJECTION VOLUME (!		ED TIPE STSTEM	IS INJECTION T	_ BE BT GRAVI	11 08	•	,
ANSWER YES OR NO WHETHER THE FOL	LOWING WATERS AS		TO BE DISPOSED OF		Pressure		2000 R ANALYSES ATTACHED?	
ERALIZED TO SUCH A DEGREE AS TO B STOCK, IRRIGATION, OR OTHER GENER.	E UNFIT FOR DOMES	STIC,		SAL ZONE		_	_	
NAME AND ADDRESS OF SURFACE OWN	ER (OR LESSEE, IF	STATE OR FEDERAL LAN	attached	Ye.	s		<u>Yes</u>	
B. M. Medlin, Tatum	New Mexic	o (Lessee)					<u> Mitarile</u>	
LIST NAMES AND ADDRESSES OF ALL	SPERATORS WITHIN	UNE-HALF () MILE OF	THIS INJECTION WE	- L				
Louisiana Land and	Expl. Co.,	V&J Tower, Mi	<u>dland, Texa</u>	.s		- 66	Tier 12 5H H	-17
						u u	DEC MII S	
Pan American Petro.	Corp., P.	0. Box 1696,	Midland, T	exas				
						-		
HAVE COPIES OF THIS APPLICATION B	EEN SURFACE OW	NER	EACH OPERA	TOR WITHIN ONE-H	ALF MILE T	THE NEW P	MEXICO STATE ENGINEER	
SENT TO EACH OF THE FOLLOWING?	1 1		! Yes	.L	1	Υe	<u> </u>	
ARE THE FOLLOWING ITEMS ATTACHED	TO PLAT'OF ARE	:A	ELECTRICAL				ATIC SKETCH OF WELL	
THIS APPLICATION (SEE RULE 701-B)	1	Yes	Yes	<u>.</u>	1	Vε	es	
I harahy or	ertify that the in	formation above is			f my knowle			
\bigcirc	The same the same	atton above 18	and complete	, to the nest o	I my knowie	age and	DOLLOI.	
Al K. Hall	and	Division	Production	Superint	endent	Decer	mber 9, 1966	

NOTE: Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well. not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.

(Signature)

(Title)



STATE OF NEW MEXICO

STATE ENGINEER OFFICE

S. E. REYNOLDS STATE ENGINEER

December 13, 1966

ADDRESS CORRESPONDENCE TO: STATE CAPITOL SANTA FE, NEW MEXICO 87501

Mr. A. L. Porter, Jr. Secretary-Director Oil Conservation Commission Santa Fe, New Mexico

Dear Mr. Porter:

Reference is made to the application of Coastal States Gas Producing Company which seeks administrative approval to expand their Flying "M" Pressure Maintenance Project by converting their FM "B" well No. 3 to water injection. This project was authorized by the Commission's Order R-3033.

After reviewing the application and the exhibits attached thereto, it appears that no threat of contamination to the fresh waters which exist in the area will occur. Therefore, this office offers no objection to the granting of this application, provided the packer on the end of the tubing is set not more than 200' above the uppermost perforations shown on the diagrammatic sketch of the well.

FEI/ma

cc-Coastal States Gas Producing
Co.

F. H. Hennighausen

Yours truly,

S. E. Reynolds State Engineer

Frank E. Irby

Chief

Water Rights Div.