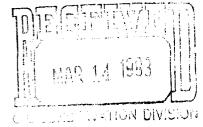
## J. L. McGill

### Petroleum Engineer - P.E. 48745

2818 W. DENGAR

915-697-1539



MIDLAND, TEXAS 79701

March 9, 1983

Oil Conservation Division
P. O. Box 2088
State Land Office Building
Santa Fe, New Mexico 87501

Attention: Mr. Oscar Simpson

Re: Proposed Gandy SWD Well Sec. 12, T-9-S, R-37-E Lea County, New Mexico

#### Gentlemen:

Enclosed herewith please find New Mexico Oil Conservation Division Form 108 with supporting exhibits as required by Section III, V, VI, VII, VIII, XI, XII, and XIII. These exhibits are discussed as follows:

- Section III Only one well is proposed for injection, the Warren Petroleum Corp. (now Gulf) Federal Heep No. 1, P. & A. in 1956; Well Data Sheet is submitted on this well.
- Section V Map identifying all wells and leases within two miles of the proposed injection well and a one-half radius circle around same as the wells area of review.
- Section VI Tabulation of data on all wells within the area of review with schematic drawing of physical condition of each well.
- Section VII Data on the proposed operation is submitted as requested.
- Section VIII- The geological data on the injection zone and underground sources of drinking water are submitted as requested.

- Section XI Enclosed are chemical analyses on the only three active fresh water wells within one mile of the proposed injection well.
- Section XII An affirmative statement concerning any hydrologic connection that may exist between the disposal zone and any underground source of drinking water is submitted as requested.
- Section XIII- The "Proof of Notice" is documented, as required, by submitting copies of the certified mail receipts to the land surface owners and to each leasehold operator within one-half mile of the proposed injection well location.

Should you desire any additional information, please advise and I will furnish same.

(/ **V** 7/1

J. L. McGill

JLM/jra

Enclosures

cc: See Attached List

#### ADDRESS LIST

Copies of Form C-108 for J. L. McGill Gandy SWD

Brazos Petroleum Company P. O. Box 1782 Midland, Texas 79702

R. S. Cooley
P. O. Box 254
Midland, Texas 79702

Katherine D. Gilmore Western Bldg., Suite 101 1031 Andrews Hwy. Midland, Texas 79701

W. H. Gilmore Western Bldg., Suite 101 1031 Andrews Hwy. Midland, Texas 79701

Gene Milford
P. O. Box 427
Tatum, New Mexico 88267

Yates Petroleum Corporation 207 South 4th Street Artesia, New Mexico 88210

Oil Conservation Division P. O. Box 1980 Hobbs, New Mexico 88240

Carlsbad Resource Area Attn: Mark Hollis P. O. Box 1778 Carlsbad, New Mexico 88201

STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT OIL CONSERVATION DIVISION C108

POST OFFICE BOX 2008
BTATE LAND OFFICE BOX 1008

BANTA FE, NEW MEXICO BY 1018

A 1 0 D 1 4 1 1 3 D 3 MAR 14 1983

	Application qualifies for adminis	trative approval?yesno
ΙΙ.	Operator: J. L. McGill	
	Address: 2818 W. Dengar; Mic	dland, Texas 79701
	Contact party: J. L. McGill	Phone: 915/697-1539 or
1.		915/684-4463 ed on the reverse side of this form for each well Additional sheets may be attached if necessary.
٧.	Is this an expansion of an existing If yes, give the Division order numb	
٧.	injection well with a one-half mile	ls and leases within two miles of any proposed radius circle drawn around each proposed injection ll's area of review. See attached map.
/I.	penetrate the proposed injection zon well's type, construction, date dril	ells of public record within the area of review which e. Such data shall include a description of each led, location, depth, record of completion, and strating all plugging detail. See attached well schemat
II.	Attach data on the proposed operatio	n, including: See attached Operations Data Si
	<ol> <li>Whether the system is open o</li> <li>Proposed average and maximum</li> <li>Sources and an appropriate a         the receiving formation if</li> <li>If injection is for disposal         at or within one mile of t</li> </ol>	daily rate and volume of fluids to be injected; r closed; & water analyses injection pressure; nalysis of injection fluid and compatibility with other than reinjected produced water; and purposes into a zone not productive of oil or gas he proposed well, attach a chemical analysis of n water (may be measured or inferred from existing
11.	detail, geological name, thickness, bottom of all underground sources of total dissolved solids concentration injection zone as well as any such s	n the injection zone including appropriate lithologic and depth. Give the geologic name, and depth to drinking water (aquifers containing waters with s of 10,000 mg/l or less) overlying the proposed ource known to be immediately underlying the tached Geological Data.
Χ.	Describe the proposed stimulation pr	ogram, if any. 2000 gal. 15% HCl acid.
х.	Attach appropriate logging and test with the Division they need not be r	data on the well. (If well logs have been filed esubmitted.) Previously submitted.
α.	available and producing) within one	water from two or more fresh water wells (if mile of any injection or disposal well showing were taken. See attached chemical analyses.
1.	examined available geologic and engi- or any other hydrologic connection b	ake an affirmative statement that they have neering data and find no evidence of open faults etween the disposal zone and any underground thed Applicants Affirmative Statement.
ı.		of Notice" section on the reverse side of this form.
٧.	Certification	ched copies of Certified Mail Receipts.
	to the best of my knowledge and beli	
	Name: J. L. McGill	Title Operator & Owner
	Signature: ( X. // =/),	Date: March 9, 1983

N/A

#### III. WELL DATA

- A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:
  - (1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.
  - (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
  - (3) A description of the tubing to be used including its size, lining materia, and setting depth.
  - (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

- B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells reed be shown only when different. Information shown on schematics need not be repeated.
  - (1) The name of the injection formation and, if applicable, the field or pool name.
  - (2) The injection interval and whether it is perforated or open-hole.
  - (3) State if the well was drilled for injection or, if not, the original purpose of the well.
  - (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
  - (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

#### XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;
- (3) the formation name and depth with expected maximum injection rates and pressures; and
- (4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 vithin 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HA; BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

WELL NO. FOUTAGE EDUATION	12 SCCTION	9-S TOWNSHIP	37-E RANGE
Schematic	Tabula	r Data	
50 5x A A B L 133/2	Size13 3/8" @ 373' "  3" TOC Surface feet	Cemented with	400s; Visual
Q37	Intermediate Casing	· · · · · · · · · · · · · · · · · · ·	
// /300'	Size 9 5/8" @ 4370' "  TOC 1275 feet  Hole size 12 1/4"	Cemented with determined by	2200 s
1350'	Liner	Comported with	325
7 1/2 ne 7 0 4160.	' F'	determined by _	
	Total depth 11,812'	····	
25 sx 0 4860 } for	4210 feet to perforated or open-hole, i	4810 Indicate which)	feet
50 5x 5030	24961	•	
	•		
9913' 3 25 5x 7 10,000			
11.662			
50 Sx			
// 8/2' TD  Tubing size 2 7/8" OD line	d with <u>AMF TK-75 Epoxy</u>		set in a
	(māteřial)	4110	<del></del>
Tubing size 2 7/8" OD line  Baker Model "AD" Tension	(māteřial) packer at		<del></del>
Baker Model "AD" Tension  (brand and model)  (or describe any other casing-tubin	(māteřial) packer at g seal).		<del></del>
Baker Model "AD" Tension  (brand and model)  (or describe any other casing-tubing there Data	(māteřial) packer at g seal).  San Andres		<del></del>
Baker Model "AD" Tension  (brand and model)  (or describe any other casing-tubing the Data)  1. Name of the injection formation	(māteřial)  packer at  g seal).  San Andres  cable) None  injection? / 7 Yes / X	4110 No	feet
Baker Model "AD" Tension (brand and model) (or describe any other casing-tubin  Other Data  1. Name of the injection formation 2. Name of Field or Pool (if appli 3. Is this a new well drilled for If no, for what purpose was the  4. Has the well ever been perforat and give plugging detail (sacks  4860-4900'. No other zone per	(material)  packer at  g seal).  San Andres  cable)  None  injection? / 7 Yes / X/  well originally drilled? D  ded in any other zone(s)? Lists of cement or bridge plug(s)  rforated. 50 sx. 11662-812	No evonian test-fa t all such performed) 7" OD line '; 25 sx. 9913-	feet . ailure orated interva
Baker Model "AD" Tension (brand and model) (or describe any other casing-tubin Other Data  1. Name of the injection formation 2. Name of Field or Pool (if appli 3. Is this a new well drilled for If no, for what purpose was the 4. Has the well ever been perforat and give plugging detail (sacks	(material)  packer at  g seal).  San Andres  cable)  None  injection? /// Yes /X/  well originally drilled? _D  ded in any other zone(s)? List of cement or bridge plug(s)  rforated. 50 sx. 11662-812  ; 25 sx. 1300-1350'; 50 sx.	No evonian test-fa t all such performed) 7" OD line '; 25 sx. 9913- 0-100'.	feet  dilure  orated intervaler perforated -10000'; 50 sx

Associated Oil & Gas Exploration, Inc.		Trainer-Federal		
	RATOR	LEASE		
	1 330' FSL & 660' FWL	7	9-S	38-E
WELL	NO. FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
Le	a County, New Mexico			
	SCHEMATIC	TABU	LAR DATA	
	0' 45 5x	Surface Cas	ing	
		Size <u>1<b>3</b> 3/8</u>	<u>"@437</u> ! Cmtd w/_	400 sx.
	25 5x 455, 133/8"@ 437	TOC <u>Surface</u>	ft. as per	visual
	1150. 25 Sx	Hole size _	17 1/2 "	
858°C	-39.	Intermediat	e Casing	
		Size <u>8 5/8"</u>	<u>@4240</u> , Cmtd w/_	550 SX.
41/2" Cs Stub @		TOC <u>Unknown</u>	ft. as per	
	3.500	Hole size _	11_"	
	BP@4800. 85/9"@4240"	Long string		
412" Perfs	4947	Size <u>4 1/2"@</u>	5456', Cmtd w/_	425 sx.
	41/2"@ 5456	TOC <u>Unknow</u>	n ft. as per	
		Hole size _	7 7/8 "	
		<u>Liner</u>		
		Size <u>None</u>		<u>'</u> to
		Cmtd. w/	sx, TOC	
		Hole size _	11	
		Total Depth		
Oth	er Data TD /1,750			
1.	Name of Field or Pool (if applicabl	e) <u>NA</u>		
2.	Is this a new well drilled for inje	ction	Yes X	_No
	If no, for what purpose was the wel (failure) then attempted San Andres			<u>an test</u>
3.	3. Has the well ever been perforated in any other zone (s)? List all su perforated intervals and give plugging detail (sacks of cement or brid plug (s) used )4 1/2" Csq. perfed from 4876° to 4947' w/ 9 holes; 25.sx			or bridge
	@ 4650' - 4950' (did not hold) set E			
	covered 3390' of 4 1/2" csg., then a			.; 25 sx
	3340-3500'; 25 sx 1150 -1250';25sx@	425 <b>-</b> 455 <b>;</b> 15 s	sx. @ 0-20	

Associated Oil & Gas Exploration Co.,	Inc.	Federal-Midwes	t
OPERATOR	LEASE		
1 1650' FS & EL	12	9-S	37-E
1 1650' FS & EL WELL NO. FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
Lea County, New Mexico			
SCHEMATIC	TAB	ULAR DATA	
0.	Surface Ca	sing	
30. 10.2x	Size <u>8 5/8"</u>	<u>@420'</u> , Cmtd w/	200 sx.
700'	TOC <u>Surfa</u>	<u>ace</u> ft.as per	
380' 898" @ 420'	Hole size	11 "	
450'	Intermedia	te Casing	
	Size No	one , Cmtd w/	SX.
1752'	TOC	ft. as per	
5/2" Cs4. 5 tub @ 1815	, Hole size	**	
1875	Long strin	<u>a</u>	
	Size <u>5 1/2'</u>	<u>'@5061'</u> , Cmtd w/	400 sx.
	TOC <u>Unknov</u>	n ft. as per	
	Hole size	7 5/8 "	··
	Liner		
4735	Size <sub>None</sub>	gg", from	'to
20 4851 ) 12		sx, TOC_	
5/2" @ 5061	Hole size		
3/2 6 3061	Total Dept	h 5379'	
Other Data TD 5379			****
Other Data	- ·		
1. Name of Field or Pool (if applicab	ole)		
<ol><li>Is this a new well drilled for inj If no, for what purpose was the we</li></ol>			No .ndres test.
3. Has the well ever been perforated perforated intervals and give plug plug (s) used ) 5 1/2" csg. perf. 4	ging detail	(sacks of cement	or bridge
shot 5 1/2" csg. @ 1815' and recove			
380-450; 10 sx @ surface to 30'			

Magr	nolia Petroleum Co.	Byler-Fed	deral	
<u> </u>	1980' FNL & 660' FWL NO. FOOTAGE LOCATION	7 SECTION	9-S TOWNSHIP	38-E RANGE
		SECTION	TOWNSHIF	RANGE
<u>Lea</u>	a County, New Mexico			
	SCHEMATIC	TAE	BULAR DATA	
	1 /0 Sx 1 /	Surface Ca	sing	
	70 3*	Size <u>13 3/</u>	8"@417, Cmtd	$w/_{450}$ sx.
	133/3"@417	TOC Surfa	ce ft. as p	er <u>Visual</u>
	7273 6.417	Hole size	17 1/2 "	
		Intermedia	ite Casing	
		Size <u>8 5/8</u>	"@5000', Cmtd	$w/_{2891}$ Sx.
		TOCUnk	nown ft. as p	er
	4925	Hole size	11 "_	
	505x 85/9 5000	Long strin	ng	
	3030	Size <u>None</u>	, Cmtd	w/sx.
		тос	ft.as p	er
	9635'	Hole size		
	7800°	Liner		
	, , , , , , , , , , , , , , , , , , , ,	Size <u>None</u>	", from	<u>'</u> to
		Cmtd. w/	sx, TOC_	
	11875' 25 5x	Hole size	**	
	TD /1,895'	Total Dept	h <u>11,895</u>	
<u>oth</u>	er Data	No Casi	ng Pulled	
1.	Name of Field or Pool (if applicab	le)		
2.	Is this a new well drilled for inj If no, for what purpose was the we	11 original1	y drilled? Devo	xNo onian test
_				
3.	Has the well ever been perforated perforated intervals and give plug plug (s) used ) 25 sx @ 11875-1189	ging detail	(sacks of cemen	nt or bridge
	4925-5050'; 10 sx @ surface.			

US.Min. Percy Iveu.(2)	US. Percy Ive	<u> </u>	US Percy	s Ivey, (s)		4· 7·63 eGreen,etol -Gober Rchs.(S)	Bertha Ware	Tennece Fed. 109592	72
ara Horsifin : - 1 - 89 35371 per Drig. 1010	7-1-81 14012	ike P2	1 LG-1033 1 5 22 DOB	J.R. Parrish 5 - 1 - 87 LG 4187 26 80	Bliss Pet. 3-1-62 1 15332 Bliss Pet. Fed 7 T05525 DA 3 12:82 Fed 7	Bliss Pet. (Fasken) Hughes- Lopez-Fed TB 9601	A.R.Co. FIZII	Ingram TSfare A.R.Co. I HBP I K-2610   JANGGERO	M.J vey 4. 20 Vir 9
96:: 2:538 -5538 -5536 -5536 -5538 -	C.L Links (S) Lig	gnum Oil bz	51016 E13988 TO 9610 Abo 7630 M.C. 8810 Bough C. 24:5 D/A 3-11-63 D/A 3-11-63	1	J.R.Porrish 7:25-84 7:22-64 C.C. Go M.H.Mc R.S.D	D/A8-17-61 J.R. Parrish 7 22-84 Thard 7/16 Grail Est 7/16 Davis et al	T.L. A.R.Ce Ingram HBP K-2610 K-2610 HBP	<b>.</b>	Ain
	The second lives in the second lives in		1184 4 4154 3		29 994: 4 19 98 4: J		39 SEAC & 39 89 AC		سرزار
e Energy 1: 87 121 J.S., MI L.Brown(S)	1xe Lovelody 10-1-90 LG 8796 15524	T 3.	4 - 11	MITS 82 81 80 1 PORTORS MA	Katherine 20392	D. Gilmore 94  . S Game Comm(S)	W.Duncan, etal 7- 1- 15929 Stephenson 12:145		Grander Wee
prothy ngamer - 1 - 90	ike Lovelo 6 · 1 · 8 16-44 45 27 21	12 1	Murphy Mins. 7 18 82 7 18 80 E.W Anguish	James C	Ohio Katheri Slatto Gilmo El 3934 4 - 1 - 1 TD 11848 20392 WK 8783 Devilano U.S	me D. Mog. Fed.	LWG RAIS (JOSE	M.J 1923	2
L. Brown	Store		Ivon E	Brown	C/A3-1-55 L.D.C	lark (s)			اما
to Ener: -1 - 87	T-9-5, A	8-37-E va of R	eviaw	W.H.Gilmore 6 1 84 20590	Gilmo TD Sec. 4-1-1 DAID 48 2039 Trainer 1 tes Pet. I	84 4 1 84 2 20392	W. Duncon, etal 7 - 1 - 82 15929	Aztec 6- 12 77	
I.S., ME L. Brown	Del Aooghe J M Broid T 9737 Donold L.	wn,MI .Brown(S)			Byler fed. 7 1 : 85 12 28 954 U. TD11895 16 15 D'A 6 6 55 KG3	s L.D. Clark(s)	//	Est of Polle	Az 1 6 - 12
(e)	Irei	OTHOUMI OL Brown, S.	(Heen Qjili)	Assoc OEGI Fed Midwest I Trainer I Fed Heep SA Disc. TO 11812 Pg.1-X666	Varren Simmons-Fed Vates-Pet. 29064	W. Dun-   Con,etal   Toll 162   15929   Toll 162   15929   Tos Pet.   Caroes   W. Sin	Clark	8 Anderson, M.V. Lowry Martin ( Flog-Merchalt Ltd. V21 Flog-redfern to bose SA	The Rec
S M.I.) Willer (S)	Ches. Turner, M.L. A.C.Ches. Ter.Est. Ted Sandy S.	6 T. Hall.MI. Ivan Brown	Ivan Brown, S.	Ted Gandy,S	⊕1 F. G. F. 8y, 3	Ted Gandu	Los	Coywoods NeroCoywall M wru Martins	1/20
I.S., MI II Miller	5 M Cone etal M / L .	T.Holl, M.I.	Flag- Redfern! etal : to 5200 ! 066884 ! (Del-Apache) below \$200'	(J. Russell) Gene Milfordy  0 67 69 3  Toles-Fed.  U.S.  Vicki & David (100)	DA1-23-66  06803	azos Pet. 15 Mil. Soley Sondieth	Flog-Redfern, etal to base of SA *Brown* •	Flag-Redfern (Aztec) "Davengart". Eve Developer Hiel	1-1
:0 Ener: • 1 • 87	Doug Tuli Se	nn Brown  er Huber b Del 1.87   Apoche	•	13 Bilbrey (S) (Heep Oil) Flag-Redfern	"Holeans-Fed Yates 2806 KB	8-//	Grt. Westin etal 063659 HBP	1 R & Cooleyet 2-1-61(2)	+
rey, S	U.S., MI		*Вломп 84" <sub>Рв 9<sup>2</sup> <sub>F25</sub> •U.S Ivan Brown S.</sub>	068035 *Brown 35 *MI 22Mitx! W.E.Bilbrey(S)	I >+	Mobil Brown Fed  S., MI  David Bilbrey(S)	J*	N.M.03318 S., MI David Bilbrey (S)	(H
Huber, (72) Apaches (1,1) 2390 235(Cham) DEC bers (4) Fed " 1	Bibi	100°p30 / 1 4 SWD (McDermatt) 5. Cooley) DESIST 2	for Rear Flag- fern etal Readfern, etal etal etal P9 lorosassa (Allied Chem.) 4 hop realernan	RC Al- Aikman trogge Bros-Fed below/ KGS	(MO) / MORKS E / MORKS E / MORKS E / MORKS E / MORKS E GOTNET OESISI 2		Mobil MBP 525725	ا Mobil ۱ 027887 ۱ - B	Grt
50475 -A.J.L.2	Coces W.P. Bilbrey  oc. Red err etc to STIPS Red resites	fern.etal 105100 4 065151 Pp47	0103833	41-//-	1	J. L. SED GANDY SA	MCGILL LT WATER DI	SPOSAL	_1
S. MI Fig. 1 Fed Bilbrey	Per 3 Lyerold's M. U.S. M.I. Wilson E. Bijbrey	5 p21 6 *Birbrey-23* y (S)		rown, 5	two miles o	ifying all work the propose one-half m	sed salt wa	iter dispos	al
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reu(s)		0 2500.	HBP U.S. MI	` ∰					

Warren Petroleum Corp.	Simmons-Federal
OPERATOR	LEASE
11980' FSL & 660' FWL	7 9-S 38-E
WELL NO. FOOTAGE LOCATION	SECTION TOWNSHIP RANGE
Lea County, New Mexico	
SCHEMATIC	TABULAR DATA
<u>oʻ</u>	Surface Casing
Cmt. Plug	Size 13 $3/8$ "@372, Cmtd w/ $400$ sx.
	TOC <u>Surface</u> ft. as per <u>Visual</u>
133/9"	9372' Hole size <u>17 1/2" "</u>
	Intermediate Casing
	Size 9 5/8" @4237, Cmtd w/ 2000 SX.
	TOC <u>Unknown</u> ft. as per
7590	1237 Hole size <u>12 1/4 "</u>
4590'	Long string
75/9" Lines	643 Size 5 1/2"@11689, Cmtd w/ 1800 sx.
5/2" Csg. Cmt. Plus Stub @ 5650' 5700'	TOC <u>Unknown</u> ft. as per
Stub @ 5650	Hole size 6 1/2 "
	Liner
	Size 7 5/8", from 4024 _ 'to 4643
(1565) 0	Cmtd. w/ 175 sx, TOC Unknown
Plug   11618' } Pa 11642'   51/2" @ 11	Hole size 8 1/2 "
5/2" @ 11	89' Total Depth 11689'
TD //687	11005
	! 1-1-1 · ·
1. Name of Field or Pool (if app	
<ol><li>Is this a new well drilled fo If no, for what purpose was t</li></ol>	injection Yes $_{ m X}$ No well originally drilled? Devonian test and
successful completion.	
perforated intervals and give	ted in any other zone (s) ? List all such plugging detail (sacks of cement or bridge E @ 11618-11642' (Devonian); spot cement plug
	5 1/2" csg; spot cement plugs @ 5590-5700;

#### OPERATIONS DATA SHEET

Section VII - Data on the proposed Gandy Salt Water Disposal operation is as follows:

- 1. Proposed average daily rate of produced water injection 600 BWPD Proposed maximum daily rate of produced water injection 1500 BWPD Monthly volumes estimated at 18,000 to 45,000 barrels.
- 2. The proposed system would be open.
- 3. Proposed average and maximum injection pressures are estimated to be in the range of 400 to 800 psig at the triplex pump.
- 4. Primary sources of the injected fluid will be produced water from the Sawyer San Andres Pool of Lea County, New Mexico and the Buckshot San Andres Field of Cochran County, Texas, with a minor volume of produced water from deeper horizons in the immediate area. The bulk of the water, probably 80 to 90 percent, will be produced San Andres water being re-injected back into the San Andres. Water analyses from the San Andres reservoirs involved are submitted herewith.
- 5. The proposed water injection is for disposal purposes into an abandoned dry hole within one mile of oil and gas production. The same water analyses referred to in #4 above are the same as fluids in the proposed injection zone.

IN ANON	,
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•	1
	1
	-4
	7
YOUR EXT, NO.	1
	1

#### WATER ANALYSIS

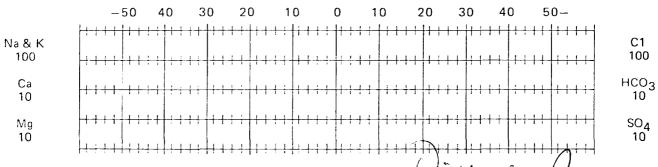
ANALYSIS NO.	•

GENERAL INFORMATION						
OPERATOR	Merchinson & Mallary	DATE SAMPLED 12-14-59				
WELL	Sherrill #3	DATE RECEIVED				
FIELD	Buckshot	SUBMITTED BY				
FORMATION	San Andres	WORKED BY				
COUNTY	Cochran	SAMPLE DESCRIPTION:				
STATE	Texas					
DEPTH	4952-4988					

PHYSICAL AND	CHEMIC	CAL DETERMINATION	S	
SPECIFIC GRAVITY 2.255 AT 72	°F	TOTAL DISSOLVED	SOLIDS	PPM
pH <u>5.5</u>		RESISTIVITY	0.050	PPM
IRON none		SULFATE	1060	PPM
HYDROGEN SULFIDE very strong trace		BICARBONATE	610	PPM
HARDNESS		CHLORIDE	149,000	PPM
CALCIUM 23,750		SODIUM CHLORIDE		PPM
MAGNESIUM 6,770	PPM	SODIUM		PPM
SODIUM & POTASSIUM	РРМ	POTASSIUM		PPM
PHOSPHATE				

REMARKS:

for Stiff type plot (in meq./1.)



ANALYST\_

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Location	-
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#### WATER ANALYSIS

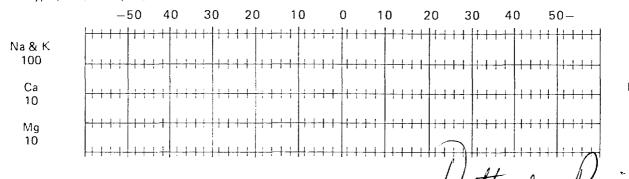
1	ANALYSIS NO.	
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GENERAL INFORMATION							
OPERATOR	R.H. Fulton Co.	DATE SAMPLED 4-28-59					
WELL	Frost 13-1	DATE RECEIVED					
FIELD	Buckshot	SUBMITTED BY					
FORMATION	San Andres	WORKED BY					
COUNTY	Cochran	SAMPLE DESCRIPTION:					
STATE	Texas						
DEPTH	5000						

PHYSICAL AND CHEMIC					CAL DETERMINATION	S	
SPECIFIC GRAVITY	1.145	АТ	76	°F	TOTAL DISSOLVED	SOLIDS	PPM
рН	5.8				RESISTIVITY		PPM
IRON	none				SULFATE	7,790	PPM
HYDROGEN SULFIDE	good tra	ce			BICARBONATE	732	PPM
HARDNESS					CHLORIDE	127,200	PPM
CALCIUM	9,600				SODIUM CHLORIDE		PPM
MAGNESIUM	3,790			PPM	SODIUM		PPM
SODIUM & POTASSIU	M			PPM	POTASSIUM		PPM
PHOSPHATE							

REMARKS:

for Stiff type plot (in meq./1.)



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ANALYST\_

FORM 052-1025 (3/81)

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#### WATER ANALYSIS

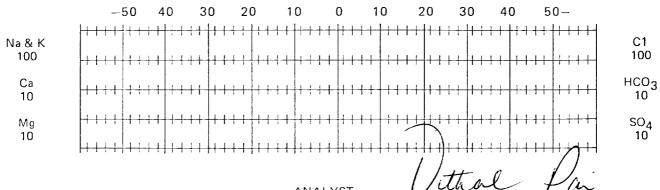
ANALYSIS NO.
•

GENERAL INFORMATION							
OPERATOR	Coaley & Holcomb	DATE SAMPLED 2-17-65					
WELL	Byers #1	DATE RECEIVED					
FIELD	Sawyer San Andres	SUBMITTED BY					
FORMATION	San Andres	WORKED BY					
COUNTY	Lea	SAMPLE DESCRIPTION: 10,000 gal/gelled DS-30					
STATE	Texas						
DEPTH							

	PHYSICAL AND CHEMICAL DETERMINATIONS						
SPECIFIC GRAVIT	Y 1.150 AT	<sub>70</sub> °F	TOTAL DISSOLVED	SOLIDS	PPM		
рН	6.6		RESISTIVITY		PPM		
IRON	no trace		SULFATE	1,290	PPM		
HYDROGEN SULF	IDE very strong tro	асе	BICARBONATE	634	PPM		
HARDNESS			CHLORIDE	127,100	PPM		
CALCIUM	12,100		SODIUM CHLORIDE		PPM		
MAGNESIUM	5,250	PPM	SODIUM		PPM		
SODIUM & POTAS	SIUM <i>59</i> ,400	PPM	POTASSIUM		PPM		
PHOSPHATE							

REMARKS:

for Stiff type plot (in meq./1.)



ANALYST\_

#### GEOLOGICAL DATA ON INJECTION ZONE

Section VIII - The San Andres formation in the proposed injection well is 1415 feet in vertical thickness with the top at 4135 feet and the base at 55550 feet. The lithology is predominately a carbonate with anhydrite stringers in the upper 260 feet. The San Andres is of Permian age with the deposits accumulating on a marine carbonate depositional shelf. The only underground source of drinking water with total dissolved solids concentrations of 10,000 mg/l or less is the Ogallala formation, occurring at depths of 100 to 300 feet from the surface. There is no known source of drinking water underlying the San Andres.

LOCATION	
YOUR EXT. NO.	

#### **WATER ANALYSIS**

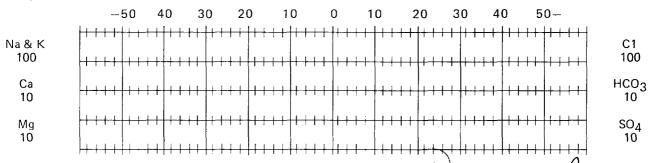
ANALYSIS NO.	

GENERAL INFORMATION						
OPERATOR	J.L. McGill	DATE SAMPLED	7-30-83			
WELL	SW/SW of Sec 12,9-5,37E	DATE RECEIVED	1-31-83			
FIELD		SUBMITTED BY	Midland			
FORMATION	Ogalala	WORKED BY En	mue Lord			
COUNTY	Lea	SAMPLE DESCRIPT	$\tau = v \cdot o$			
STATE	New Mexico		Ivan Brown			
DEPTH						

	PHY	SICAL	AND CH	AL DETERMINATIO	NS		
SPECIFIC GRAVITY	0.98	AT	68.5	°F	TOTAL DISSOLVE	D SOLIDS	PPM
рН	8.7	=			RESISTIVITY		PPM
IRON	None	_			SULFATE	163	PPM
HYDROGEN SULFIDE	None				BICARBONATE	272 .	PPM
HARDNESS					CHLORIDE	265	PPM
CALCIUM	118				SODIUM CHLORID	E	PPM
MAGNESIUM	65		1	PPM	SODIUM		PPM
SODIUM & POTASSIUM	71			PPM	POTASSIUM		PPM
PHOSPHATE							

REMARKS:

for Stiff type plot (in meq./1.)



ANALYST\_

FORM 052-1025 (3/81)

LOCATION	
YOUR EXT. NO.	

#### **WATER ANALYSIS**

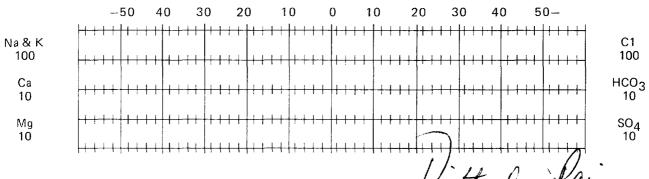
ANALYSIS NO.	· · · · · · · · · · · · · · · · · · ·

	FORMATION	
OPERATOR	J.L. McGill	DATE SAMPLED 1-30-83
WELL	SW/SW Sec7,T-9-5,R-38E	DATE RECEIVED 1-31-83
FIELD		SUBMITTED BY Midland
FORMATION	Ogalala	WORKED BY Enrique Logs
COUNTY	Lea_	SAMPLE DESCRIPTION:
STATE	New Mexico	Ted Gandy Water Well
DEPTH		

	PH	YSICAL A	AND CI	HEMIC	AL DETERMINATION	NS	
SPECIFIC GRAVITY	0.98	АТ	68	°F	TOTAL DISSOLVED	SOLIDS	PPM
рН	8.6				RESISTIVITY		PPM
IRON	Faint	trace			SULFATE	281	PPM
HYDROGEN SULFIDE	None				BICARBONATE	286	PPM
HARDNESS		·			CHLORIDE	245	PPM
CALCIUM	8				SODIUM CHLORIDE		PPM
MAGNESIUM	2			PPM	SODIUM		PPM
SODIUM & POTASSIUM	388			PPM	POTASSIUM		PPM
PHOSPHATE							

REMARKS:

for Stiff type plot (in meq./1.)



ANALYST\_

LOCATION	
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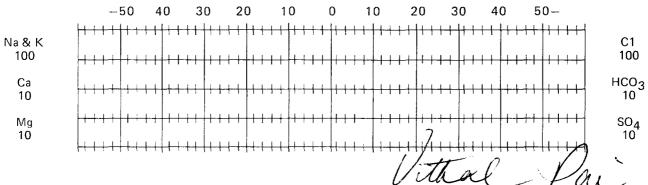
ANALYSIS NO.	

GENERAL INFORMATION							
OPERATOR	J.L. McGill	DATE SAMPLED 2-30-83					
WELL	SE/SE Sec 7, T9S, R-38-E	DATE RECEIVED 1-31-83					
FIELD		SUBMITTED BY Midland					
FORMATION	Ogalala	WORKED BY Enrique Tops					
COUNTY	Lea	SAMPLE DESCRIPTION:					
STATE	New Mexico	Ted Gandy Water Well					
DEPTH							
		1					

	PH	YSICAL .	AND CH	IEMIC	CAL DETERMINATIONS	
SPECIFIC GRAVITY	. <u>9</u> 5	AT	68.5	°F	TOTAL DISSOLVED SOLIDS	PPM
рН	7.9				RESISTIVITY	PPM
IRON	None				SULFATE 122	PPM
HYDROGEN SULFIDE	None				BICARBONATE 327	PPM
HARDNESS					CHLORIDE 71	PPM
CALCIUM	62				SODIUM CHLORIDE	PPM
MAGNESIUM	43			PPM	SODIUM	PPM
SODIUM & POTASSIUM	74			PPM	POTASSIUM	PPM
PHOSPHATE						

REMARKS:

for Stiff type plot (in meq./1.)



ANALYST\_

FORM 052-1025 (3/81)

#### APPLICANTS AFFIRMATIVE STATEMENT

Section XII - The only underground source of drinking water in this general area is the Ogallala Formation, occurring at a depth of 100 to 300 feet from the surface. The top of the San Andres Formation, proposed injection zone, is at 4135 feet. Since Permian time there has not been tectonic activity, nor upheaval of any significance, that would disturb the competence or stability of the strata overlying the San Andres Formation. I have examined available geologic and engineering data of this general area and I find no evidence of open faults or any other hydrologic connection between the proposed disposal zone and any underground source of drinking water.

J. Macill

## P 220 603 804

#### RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED-**NOT FOR INTERNATIONAL MAIL** (See Reverse)

:	SĒ	SENT TO									
,	K.	KATHERINE GILMORE									
		STREET AND NO. 1031 Andrews Hwy.									
	P.O. STATE AND ZIP CODE										
	Midland Tx 79702										
	PO	STA	GE		S						
		CE	RTII	FIED FEE	.75¢	¢					
	E		I	PECIAL DELIVERY		E					
	8		R	STRICTED DELIVERY		¢					
	STER F	VICES	3VICE	SHOW TO WHOM AND DATE DELIVERED	.60¢	¢					
	CONSULT POSTMASTER FOR FEES	OPTIONAL SERVICES	RETURN RECEIPT SERVICE	SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY		c					
	ONSULT	01110	JRN REC	SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY		6					
92	Ö		RETI	SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY		¢					
PS Form 3800, Apr. 1976	тот	AL I	POS	TAGE AND FEES	<b>\$</b> 2.06						
Ap	POS	TM	ARK	OR DATE							
8											
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## P 220 603 805

#### RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED-NOT FOR INTERNATIONAL MAIL (See Reverse)

				(See Develse)					
	R.S. Cooley								
		S.							
- 1	P.O. Box 254								
ŀ			_	AND ZIP CODE					
	Mi	.d1	an	d, Tx. 79702					
t	POS	STAC	3E		\$				
		CE	RTIF	IED FEE		.75 €			
1	EES		SP	ECIAL DELIVERY		¢			
	E .		AE	STRICTED DELIVERY		¢			
	STER FO	IICES	VICE	SHOW TO WHOM AND DATE DELIVERED		.60			
	CONSULT POSTMASTER FOR FEES	OPTIONAL SERVICES	AL SERI	SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY		¢			
	NSULT	OPTION	ETURN RECEIPT SERVICE	SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY		¢			
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Form 3800, Apr. 1976	TO	TAL	POS	5	2.06				
Ap	PO	STM	ARK	OR DATE					
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## **P 220** 603 802 RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED-NOT FOR INTERNATIONAL MAIL (See Reverse)

	SEN BI	BRAZOS PETROLEUM CO.								
t			AND							
-	P.O. Box 1782 PO STATE AND ZIP CODE Midland, Tx. 79702									
1	POS	TAC	E.		\$					
	-	CE	RTIF	ED FEE	.75 *					
	8		SP	ECIAL DELIVERY	¢					
	R FI		RE	STRICTED DELIVERY	¢					
	CONSULT POSTMASTER FOR FEES	ICES	VICE	SHOW TO WHOM AND DATE DELIVERED	.60					
		OPTIONAL SERVICES	RETURN RECEIPT SERVICE	SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢					
	NSULT		OPTION	OPTION	OPTION	OPTION	OPTION	AN RECE	SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	•
vo			RETU	SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	6					
PS Form 3800, Apr. 1976	то	TAL	POS	TAGE AND FEES	\$2.06					
Apr.	PC	STN	ARK	OR DATE						
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### P 220 603 794 RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED-NOT FOR INTERNATIONAL MAIL

	(See Reverse)								
	YATES PETROLEUM CORP.								
	STREET AND NO. 207 South 4th Street								
i	P.O., STATE AND ZIP CODE ARTESIA NM 88210								
	PO	STA	GE		s				
		CE	ATIF	FIED FEE	.75°				
	EES			PECIAL DELIVERY	¢				
	8		RE	STRICTED DELIVERY	ţ.				
	STER F	VICES	SERVICE	SHOW TO WHOM AND DATE DELIVERED	.60				
	CONSULT POSTMASTER FOR FEES	OPTIONAL SERVICES	EIPT SEP	SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢				
	DINSULT	OPTION	RETURN RECEIPT	SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢				
,	מ		HETI	SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢				
	TOTAL POSTAGE AND FEES \$ 2.06								
1	POSTMARK OR DATE								
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## P 220 603 803

#### RECEIPT FOR CERTIFIED MAIL NO INSURANCE COVERAGE PROVIDED-

NOT FOR INTERNATIONAL MAIL (See Reverse)

	(See Heverse)					
	SENT TO GENE MILFORD					
1	STREET AND NO. P.O. Box 427					
Ì	P.O. STATE AND ZIP CODE Midland, Tx. 88267					
t	POSTAGE				\$	
		CERTIFIED FEE			.75\$ <sup>¢</sup>	
1	CONSULT POSTMASTER FOR FEES		SP	ECIAL DELIVERY	¢	
١		OPTIONAL SERVICES	RESTRICTED DELIVERY		¢	
			OPTIONAL SERVICES RETURN RECEIPT SERVICE	SHOW TO WHOM AND DATE DELIVERED	.60¢¢	
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	NSULT		OPTION RN RECE	SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢	
	93		RETU	SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢	
rorm 3800, Apr. 1970	TOTAL POSTAGE AND FEES				\$2.06	
Apr	POSTMARK OR DATE					
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## P 265 194 757

## RECEIPT FOR CERTIFIED MAIL

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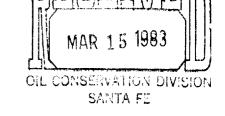
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	р <u>1</u> М	Q3 id	1 1a	Andrews Hwy. nd, Texas 797	
-	POS	TAC	\$		
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	R FFES			ECIAL DELIVERY STRICTED LILLIVERY	·- ¢
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) 	t			TAGE AND FEES	2.06
Ž	PC	574			
m 3800, Apr. 1970					

## J. L. McGILL

Petroleum Engineer - P.E. 48745

2818 W. DENGAR

915-697-1539



MIDLAND, TEXAS 79701

March 11, 1983

Oil Conservation Division
P. O. Box 2088
State Land Office Building
Santa Fe, New Mexico 87501

Attention: Mr. Oscar Simpson

Re: Proposed Gandy SWD WeJ1 Sec. 12, T-9-S, R-37-E

Lea County, New Mexico

#### Gentlemen:

I transmitted a Form 108 on the above referenced well with supporting exhibits to you under cover letter dated March 9, 1983. I inadvertently neglected to send a copy of the application to Mr. Ted Gandy of Crossroad, New Mexico, whom is the surface owner of the tract where the proposed disposal well is located. The copy of said application is being transmitted today under certified mail. Enclosed herewith is a copy of the certified mail receipt as sent to Mr. Gandy.

Yours truly

J. L. McGill

JLM/jra

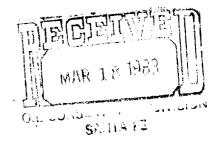
Enclosure

### P 220 603,806 RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED— NOT FOR INTERNATIONAL MAIL (See Reverse)

	(Occ Hevelse)						
	T TM						
	MR. TED GANDY						
STREET AND NO.							
1 -							
	P.O., STATE AND ZIP CODE CrossRoads NM 88114						
PO	STA	\$					
	CE	RTIF	FIED FEE	.75¢ ¢			
器		SPECIAL DELIVERY		¢			
E .	1	RESTRICTED DELIVERY		¢			
CONSULT POSTMASTER FOR FEES	VICES	OPTIONAL SERVICES RETURN RECEIPT SERVICE	SHOW TO WHOM AND DATE DELIVERED	.60¢			
POSTMA	AL SER		SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢			
ONSULT	0PT10		SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢			
			SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢			
TO1	TOTAL POSTAGE AND FEES \$ 2.0						
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# OIL CORSERVATION DIVISION DISTRICT I



OIL CONSERVATION DIVISION		DATE	March 14, 1983
P. O. BOX 2088		_	
SANTA FE, NEW NEXTCO 87501		RE:	Proposed MC
	•		Proposed DHC
			Proposed NSL
- · · · · · · · · · · · · · · · · · · ·			Proposed NSP
			Proposed SND X
•	•		Proposed WFX -
			Proposed PMX
Gentlemen:			
I have examined the applic	ation for the:		•
J. L. McGill	Federal Heep	• • •	· No. 1-H 12-9-37
Operator	Lease and Well No	).	Unit. S - T - R
0.KJ.S.	· · · · · · · · · · · · · · · · · · ·		
<u>-</u>		<del>-</del> .	
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		* ,	
Yours very truly,		٠.	•
•	<u>.</u>	.*	•
/mc	·		