18/24/03 10/6/03

DRC

SWD

PLP0328048400

XERIC OIL & GAS CORPORATION DRC 1801 W. Texas, P. O. Box 352 RECEIVED Midland, Texas 79702

(432) 683-3171, Fax: (432) 683-6348

LR

OCT 0 0 2003

September 30, 2003

OIL CONSERVATION DIVISION

New Mexico Oil Conservation Division 1220 S. St. Francis Dr. Santa Fe, New Mexico 87505

Re: Request for Administrative Approval for Saltwater Disposal, Howse #1 Well Unit L, Sec. 17, 20S, 39E Lea County, New Mexico

Gentlemen:

Please find enclosed a Form C-108 requesting approval to convert the Howse #1 to a salt-water disposal well. If all attachments are satisfactory Xeric Oil & Gas Corporation respectfully requests approval be granted administratively. I have sent this C-108 to the District Office in Hobbs.

Xeric Oil & Gas plans to inject water into the San Andres Formation from 4332'-4346', 4356'-4362', 4412'-4428', 4454' 4464', 4558'-4568', 4600'-4608', 4640'-4658', 4716'-4724', 4826'-4832', 4836'-4842'. The 2 7/8" internally plastic coated injection tubing will be set at approximately 4,370' with a Baker Model AD-1 packer.

The maximum anticipated injection rate will be 1200 BWPD with an injection pressure not to exceed 980 psi. If injection pressures need to be increased, a State witnessed step-rate test will be performed.

A copy of the required legal notice is attached. A copy of the certified letter of notice sent to the surface owner, Robert McCasland, and the other lease operator within the area of interest is also enclosed.

We have ordered a water analysis on the two producing fresh water wells and will forward to you as Attachment H upon receipt.

If you have any questions, or I can be of any assistance please do not hesitate to call me at the above-mentioned address or telephone number.

Sincerely,

R. C. Barnett President



AC

Xeric Oil & Gas Corporation Application for Authorization to Inject HOWSE #1

- I. Purpose: Produced Water Disposal
- II. Operator: Xeric Oil & Gas Corporation, P O Box 352, Midland, TX 79702, Attn: R. C. Barnett (432) 683-3171
- III. Well Data: Attachment A
- IV. This is not an expansion of an existing project.
- V. Map: Attachment B
- VI. Wells in Area of Review: Attachment C
- VII. Proposed Operations: Attachment D.
- VIII. Geological Data: Attachment E.
- IX. Proposed Stimulation: None planned at this time.
- X. Logs and Test Data: Cement Bond Log Attachment F.
- XI. Chemical Analysis of Fresh Water: Will be forwarded as Attachment G when we receive them.
- XII. Affirmative statement concerning drinking water: Attachment H.
- XIII. Proof of Notice: Attachment I.

STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL **RESOURCES DEPARTMENT**

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, New Mexico 87505

APPLICATION FOR AUTHORIZATION TO INJECT

	PURPOSE: Secondary Recovery Pressure Maintenance X Disposal Storage Application qualifies for administrative approval? X Yes No
	OPERATOR: Xeric 0il & Gas Corporation
	ADDRESS: P. O. Box 352, Midland, TX 79702
	CONTACT PARTY:Angie CrawfordPHONE: 432-683-3171
111.	WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.
IV.	Is this an expansion of an existing project? Yes X No If yes, give the Division order number authorizing the project:
V .	Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
VI.	Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
VII.	Attach data on the proposed operation, including:
	 Proposed average and maximum daily rate and volume of fluids to be injected; Whether the system is open or closed; Proposed average and maximum injection pressure; Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and, If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
*VIII.	Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
IX.	Describe the proposed stimulation program, if any.
*X.	Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted)
*XI.	Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
XII.	Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
XIII.	Applicants must complete the "Proof of Notice" section on the reverse side of this form.
XIV.	Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
	NAME:Angie CrawfordTITLE:Production Analyst
	SIGNATURE: Unger Crawford DATE: 9/30/03
*	E-MAIL ADDRESS: <u>ACrawford@xericoil.com</u> If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: Logs: DLL & SDL sent w/C-105 9/2/03

Side 2

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 material, 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 need 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 the 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, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS 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.

ATTACHMENT A

Side 1	INJECT	ION WELL DATA SHEET	ſ		
OPERATOR: Xeric 0il & Ga	as Corporation				
WELL NAME & NUMBER:	se #1				
WELL LOCATION: 1980'		L		205	<u>39e</u>
FOOTAGE	LOCATION	UNIT LETTER	SECTION	TOWNSHIP	RANGE
<u>WELLBORE SCHEM</u>	<u>IATIC</u>		<u>WELL Co</u> Surface	<u>ONSTRUCTION DAT</u> Casing	A
	<u>Surface Csg.</u> 8 5/8" 24# J-55	Hole Size: <u>12</u> 1/4"			
	set @ 1660' TOC=Surface	Cemented with:850) sx.	or	ft ³
		Top of Cement:Sur	rface	Method Determined	: Circulated
	Production Csg. 5 1/2" 17# J-55 set @ 4900'		Intermedia	te Casing	
	TOC=2750' as per CBL 5 1/2" x 2 3/8"	Hole Size:		Casing Size:	
	Double Grip Baker AD-1 Packer	Cemented with:	SX.	or	ft ³
	set @ 4370'	Top of Cement:		Method Determined	·
$\begin{pmatrix} x_1 \\ x_2 \\ x_3 \end{pmatrix} = \begin{pmatrix} x_1 \\ x_3 \end{pmatrix}$	Perfs:		Production	1 Casing	
	4332'-4346' 4356'-4362' 4412'-4428'	Hole Size:7 7/8'	r 	Casing Size: 5	1/2"
	4454'-4464' 4558'-4568'	Cemented with:725	5 sx.	0ť	ft ³
	4600'-4608' 4640'-4658'	Top of Cement:	2750'	Method Determined	: <u>CBL</u>
	4716'-4724' 4826'-4832'	Total Depth:4900	', PBTD 4846'		
	4836'-4842'		Injection I	Interval	
Z	PBTD=4846' TD=4900'	4332'	feet	to <u>4842'Perfo</u>	orated
	<i>10-4300</i>	(Per	rforated or Open H	ole: indicate which)	

·

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

.

Tul	bing Size: 2 7/8" 6.5# J-55 Lining Material: IPC
Ty	pe of Packer: 5 1/2" X 2 3/8" Double Grip Baker Type AD-1
Pac	cker Setting Depth:4370'
Oth	ner Type of Tubing/Casing Seal (if applicable): <u>N/A</u>
	Additional Data
1.	Is this a new well drilled for injection?YesYo
	If no, for what purpose was the well originally drilled? <u>011 & Gas Exploration</u>
2.	Name of the Injection Formation: San Andres
3.	Name of Field or Pool (if applicable): <u>House San Andres</u>
4.	Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. No
5.	Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: underlying - Estimate top @ 6600'
	7 Rivers - overlying - 2993'-4306'

ATTACHMENT "C" AREA OF REVIEW

-

Xeric Oil & Gas Corporation Application for Authorization to Inject Howse #1

¥	Vell Name	Well Type	Construction	Cement & To	ps	Date Drilled	Location	Depth	Record of Completion
J ₍₁	Allison) Howse #1	Oil	8 5/8" 24# set @ 300' 5 1/2" 14# set @ 4340'	300 sx Sur 175 sx	face	10/28/73	UL F Sec. 17, T20S, R39E	4340′	4326'-4336 San Andres
(Penrose) State #1		8 5/8" 24# set @ 200' 5 1/2" 15.5# set @ 4337'	150 sx 50 sx		11/5/51	SE4/SW4 Sec. 17, T20S, R39E	4435′	Open hole

ATTACHMENT "C"

XERIC OIL & GAS CORPORATION Application for Authorization to Inject HOWSE #1

Well Bore Diagram

Well: Penrose State #1

Status: Plugged and Abandon

Location: SE/4/SW/4, Sec. 17, T20S, R39E Lea County, New Mexico

Elevation: 3553.4' GR

Well History:

Drilled 10/28/73

Casing Record: 8 5/8" 24# Set at 300' 5 1/2" 14# Set at 4340'

Perforated 4326'-4336'

Plugging Record:

11/85 Set CIBP at 4300' w/35' cement on top of perfs.
25 sx plug set @ 1750', Pulled 897' of 5 1/2" csg.
40 sx plug set @ 950', 50' in & out of stub.
50 sx plug set @ 350, 50' in & out of shoe of 8 5/8" csg.

10 sx plug set at surface.



ATTACHMENT "C"

XERIC OIL & GAS CORPORATION Application for Authorization to Inject HOWSE #1

Well Bore Diagram

Well: Allison Howse #1

Status: Plugged and Abandon

Location: Unit F, 2310 FNL & 2310 FwL, Sec. 17, T20S, R39E Lea County, New Mexico

Elevation: 3553.4' GR

Well History:

- Drilled 10/28/73
- Casing Record: 8 5/8" 24# Set at 300' 5 1/2" 14# Set at 4340'

 Re:

Howse #3 SWD App.

500.4

1.

۰.

From:	Angie Crawford	Date:	10/30/03
	OCD	100.001 · · ·	
To:	David Catanach	Fax:	505-476-3462
XI	ERIC OIL & (GAS C	ORPORATION
•			P. O. Box 352 Midland, TX 79702 Phone (915) 683-3650 Fax (915) 683-6348

The wellbore diagrams for the two plugged well are enclosed with this fax. These should replace the ones sent previously. If you need anything else let me know.

Pages: 2

ATTACHMENT "C"

XERIC OIL & GAS CORPORATION Application for Authorization to Inject HOWSE #1

Well Bore Diagram

Well: Allison Howse #1

Status: Plugged and Abandon 6/22/79

Location: Unit F, 2310 FNL & 2310 FWL, Sec. 17, T20S, R39E Lea County, New Mexico

Elevation: 3553.4' GR

Well History:

Drilled 10/28/73

Casing Record: 8 5/8" 24# Set at 300' 5 1/2" 14# Set at 4340'

Perforated 4326'-4336'

Plugging Record:

11/85 Set CIBP at 4300' w/35' cement on top of perfs.
25 sx plug set @ 1750', Pulled 897' of 5 ½" csg.
40 sx plug set @ 950', 50' in & out of stub.
50 sx plug set @ 350, 50' in & out of shoe of 8 5/8" csg.
10 sx plug set at surface.

 _______950' 40 sx cement

 fs.

 ______1750' 25 sx cement

 ______35' cement on top

 XXXX

 _______1750' 25 sx cement

 _______35' cement on top

 CIBP @ 4300'

 Perfs 4326'-4336'

 TD 4340

10 sx plug @ surface

350' 50 sx cement

XERIC OIL & GAS CORPORATION Application for Authorization to Inject HOWSE #1

Well Bore Diagram

Well: Penrose State #1

Status: Plugged and Abandon 12/51

Location: Unit N, (SE/4SW/4) 660' FSL & 1980' FWL, Sec. 17, T20S, R39E Lea County, New Mexico

Elevation: 3537' Gr.

Well History:

Drilled 11/05/51

Casing Record: 8 5/8" 24# Set at 200' 5 1/2" 15.5# Set at 4337'

 Open Hole
 330' 100 sx cement

 Plugging Record:
 11/28/51 20 sx cement plug on open hole 4337'-4435'.
 1650' 15 sx cement

 11/28/51 20 sx cement plug on open hole 4337'-4435'.
 1650' 15 sx cement

 10 sx plug set @ 3974'.
 15 sx plug @ 1650'.

 15 sx plug @ 1650'.
 3000' 15 sx cement

 3000' 15 sx cement
 3974' 10 sx cement

 3974' 10 sx cement
 20 sx cement 4337'-4435'

 10 sx plug bet @ 330' & filled to surface.
 20 sx cement 4337'-4435'

	NE(9		McCasland	L.R.(S) Speight	A.E. Brooks yr. etal	Signe -	A-600 JEWellmer	T.C. Weitmer Muriel A 603 J.Weitmer McNeill, Tr
	Prize Ener. 5 1 1003 10-11-2002	Stevense, Tull		1.05 Ac 140.01 Ac 1 1055 First Ac 7 97219 7 25 2000 (MGF)	4aib Le Ji 4a 35 Le 2 Koistr Di Thiloncis J. 7 Miloncis R.E. Brooks Jr., etal	2 White 5172002	Great Westin. Dungan 16 Drig. etal 104460 Prag. 10 53	Pet Tects Serv. etal 10 · 1 · 2001
. 1	Gilmer (1.20.2004)	Trilogy Op etal		S. Henning Balla	(N Webergicketol 2)	start	Franking ↓ Franking ● Franking	Maynard Dil Magch 6 Zi ZOO4 El 32 6 19 ZOO4 TO 32
×	· · · · · · · · · · · · · · · · · · ·	triboy Oressen (Prill	XICIS Sevens C 	Stephen	A A • • • •		Pril 1 Arch 2 Weitmer 10 Ar 1 07 95 0/41-15	5 14 2003 DALG - N/2
54	Aroche 2 · 2 · 2002	(Prize Ener.) Thupgy	2 Ste 2 Sterest, 1 Tull Sn 200	1 - Heorard/	Wite Osabise je kit	29 4 Apscho	Pakote Qu. (Univan) West V. West V. West V.	Pet Jech Serv. Acyler To 7800
	Frize Ener.	Norsworthy Six Wold-or ID JISOSStrivense. Trilogy [Tuil] Oper 113-cool	Notarop MIRL McCq	stand L P. (S)		2-25 2000 19 /1	Union) Weifmet - Kor J	Mrs. O.B. Terru.M.
	5 13 2001 2 - 2 - 2002 McCasion	Trilogy [Tuit] ,0per 113-2001 012000]	TE4755 OMI2:29 30	N.B. Hester 12-A leyeta (M.I.) 4175- A. McCosland (S)4	CH.Kyte McCas: Iand LP	0 - 0	T.C. Weltmer J.B. Waltmer, etal	Angelo Brumley,etall A.608 W.F. McNeill
-	EVATES AEVASIO	Cross Tumbers 10 7200' ME/4 (Alfurce) - 3-8		Xerlc OF.G			<u>ک</u>	Maynard (),'
1e- 165	Yatiset Leongra Minn rol 5.20.200 Kulp En. Horkey	0-2001, Amoce 10 72001, Amoce 10 72001, Amoce	11.7.2003 01 10.25.2003 01 2.8.2004 forio Xeric 10.7078		Xeric 13 - 25 - 2003 7 - 28 - 2001		Union 10 355	(in the second s
. 12	AR WOND'S	1 2 0	Xeric 101018 10:25:2003 D/A2 5:10 11:1:1003 M/10110 2:4:2004 Les Hesteretoi M.I.	Stono, Xeric ()EG Hester II 19 2002 TO 4500 D/A 4 26 51	McLasiand L.P.(S) Intertirst Bank Fl. Worth Trustee	19/1 * eric 1 51 201	Hitchcoch DrA 9-21-52 Dumbor	Epstland
ן א	Baisy Blakenshid Wester	2 Metosland L.P.	A STATE OLS		8	- 17 M	DIA I MCMORUN Exel	4 10 1640 10 1640 0/4 7-20-36
	Alinen- Xeric	Amatonse etal(S)	DAI 26-51 Robit.	4. 9. etas (5. 16. 2652)	Som B, Flets	bar	0 10 7700 inter 04 1 20 78	*Foster Dunbar* P.S. Dunbar, etal, M.I.
52.01	Crest GI	Leonard Res 3 20 2003 3 8 7001 Cr. J. A. E. D. A. Cr. M. Casland (S)	2:15:2003 # 1.2002 Interfirst Am Petro R.A.E.D	FI Worth Tr 1. 2003 M McCasland (S)	JERLE Mabre Fer Mill. A. McCasland L.P. (S		A 1210 Constant of the second	McCasland Ltd. Prishp. Hoynes
2 32	Pierce OTTAOI 5 2 2005 5	Apache	10 1125 McCoslo 10 112 000 2.55-2003 10-75-2003 10-75-2003	nd L.P. (S) 6 23 - 602	Apache Hanley			M. ynaid Oil Texas Crude etal Manley
ş	10005 C	Apache Apache Apache Apache Apache Apache Apache	979 11000 EnerQuest "Ave-Fed" 1-26-2002 U.S.	Ener Ovest	Apoche Hanley 17 4 200 TO 48TE 19 50 TO 48TE 19 50 TO 48TE 19 50 TO 48TE 19 50 TO 48TE		(King Res) D.L.Dorlandly S (Pennzoil) Lenexce, Inc.	Lanexco, A
	10 4407 zerdi	ti z 2000 Lenerd	5 2001	J.W. C.M.W. Yourse M.	JEE	LID. of	Dunbor Hel "B" TD BIEG HOE Mitchcock () NDAG 23 SHOE Mitchcock ()	Pack Moyned
2.1.84		3 RACON	23 200 1 100 2 Loonur a Micasland Fre 22 200 21 X Freck Erenguesti (2.25.200 9.13 2001 1 MELA	McCashand L P (Energuist) 10-5-1002 1- 8-1002	LE Motore 12 . Fon Annual Antion Apache 2 . Martin Togo Lind T	17262 1790/ J	DAG.24 TO UMILY S.A.Di	r. m.
14 14 12	etal MI U.M. MC	Casiang is n mooney	5-10-2001 ULL	Xeric OE G. 4 25 2003 8 28 2001	McCasland L.P. (S	Fed.		Ck Forest Dunbar Maynard Oil
F) 2	Appepe to M	17163 2 0 (178) ps	Atric 1913 2001 I.Strodley, MM I. L. Roberto R.A eto (D.M. Mi	Bourdon" 10 4. Hourdon, 6. etal M.I.	Texa-6 71200 v 516 1250 51254 State M.I. D. R.A.G. D.M. McCaslande	AUR	"D" "Mrs. P.S. Dunbar, etal	Mer PS Due her Tran
5	DM Hickstand (S)	Capps Fed "Paige"	Texas	Keric OEG		5743. Al	101 Ac . Mc Casland Ltd. Prish	P McCasland Ltd. Prtshp 6 W.W.Perry 7 11 36
7	Apache	97163 Surger I (wold) Cepos Fed Cepos Fed Trilogy	Crude I Xeric HBP 112-1-2006 0634 c 97915 Hurnell 1 110 03	1 Duncan	Texaco	1	CA MEA	Anderson, etal
2	Apache Eureko (webt Gos) 2 (Talaan Creek Pest)	Sapient Vates	Deveu				Roberts 6, Koch 9-3-94 10-5-94	
-	Apache (Eureka (was) Gas) 2 (Falan Creek Res) "WEM" 'MB M" "Payaay (Ma)	Terry Serry SopientEner	U.S., Mat I		State, M/ 20- Mgrk Prod.	+ j + j		PUBLIC
2	Mezer werter, etch	Stevens •6	(Ma) 5-21-2004		Cont'l. 7 - 1 - 72 (8) 878 548	+		S Adv. E.A.
	670° 0 1 0 2	57 10 7100" U.S. 4	IS Texcr	A.C.D.M.	Echanterni chanarra 3 1 30 1 480 60 164 1 114 120 EUS NJ R.A. KGS Annia Miccost	Ener, 4 29.23 6, D.M.	B.B. Ralph, Est, etal	La Oga etal Noverso D'A 9-6 30 8.8. Rolph, Est, afal
•	Conoco.etal	Sopient Ener.	Mewpourne Oil	<u>Cosland (s)</u> Mewbourne Oil	Tex. Chapare Coude Ener.	and (S)		A-674 C.C.Greenwood(S) 5. R.A. Mosbocher
1	45 063458	4 3 Steph Ord Marchusto Disc. Thorn Triple	BRGPET 2	(Rush Wold)	0634-C 1 HBP	1	Parsley E, Smith 4 - 23 - 2000 12 - 30 - 2000	Mosbacher C.
		Thorn Triple		* "Raiph,Est"	Dincore (Vycca Handis) Alice M. 5 1 36 Thomp- Son, M.1 29			Maskacher Red (3) 3-18-97 4-9
		I withher "aig	D.MCL	Oltontil Mento	a Conoco	1	Parsley E, Smith	Versad) 115 - 2000 Versad
	Marothan	Korneyuy TO 7465 BA 2-17-55	Jones (Tes Ur.) Feg Boyter	279540 (Tex. Por	079540 (0.5.)	ines:	11-1-2007 II + 1 - 2002 12 - 23 - 2001	Verdad) II 5. 2000 Verdad (Parsley, 0) C.Smith) McDarold Der
	U.S.,		S CORPORATION	, F	HBP U.S.	R.A.E D.M. McCas	H B Daugh Est and	SA Disc
	R.A.E. D.M S (Mobil) 57	1,980 FSI	L, 330 FWL 7, 20S, 39E	end(S	D.Mc Casland Pto 10	liondis	C.C.Greenwood	B.Raiph Est.etal A-526 C.C.Greenwood
		Lea Cou ATTACHM	nty, NM	NBP 11540	Mirage Ener, Inc. LG TIB	-	Xeric O E, G Verdad O E, G	0a1 Parsley E, Smith 5 - 11 - 2002 a, 10 - 10 - 2001
	(Guil) 1.0-244 3 Triple 9126	HI IACIIII. V-\$107 'm Beste 1 1001 22	(Chaparrai Ener.) (Involi 64%)		10 3T Y	the ar	L 1 5.34 2000	Verded DE,G
	Gut St. Pize	36 Collins	Hart Prod	FELSE Chopen	- 10 4355 32	1-	Potti (P/8) DAIZS	55
	Jerry- St.	+ 1 60	- Y HBP	117261 0	(DrigEExol)	Nurtundo Kyfesisł	Since	D- SA 4303 Ser DIA 2 - 20-96
	1:3967 19469 888 - 11	106734 . 1084 21-55	R.A.E. I VER	TEK SA	(Store) Yates (TD ASCOL Yates) (20154Disc) St (4 5 52	20.57	B IE	92 ²

ATTACHMENT D

Xeric Oil & Gas Corporation Application for Authorization to Inject HOWSE #1 Proposed Operations

- 1. The proposed average volume of fluids to be injected will be 750 bbls/day. The maximum daily rate would be 1200 bbls/day.
- 2. The system will be a closed system.
- 3. The proposed average injection pressure is 600 psi. The proposed maximum injection pressure is 980 psi.
- 4. The proposed injection fluid is produced water from Xeric Oil & Gas offsetting leases. A water analysis from these wells is attached.
- 5. There is no production from this zone within one mile of the Howse #1. Attached is a water analysis from from the Howse #1 disposal zone (San Andres).

9/26/2003

ATTACHMENT D

Water Analysis Report

Address: P.O. Box 352

Midand, TX 79702

Sample Paint: House 1

Lease: House

Famation:

Bulasman: Jeson Ussery

Amentes: Eddie Madcox

¢¢.

Target Name: House 1

Customer: Xeric

Water Anelveleima/L)	
Catcium	2005
Megneslum	19\$3
Banum	
Strondum	
Bodium(csic.)	19836
Dicarbonate Alkalinky	647
Suffste	1710
Chloride	38000

Champion Technologies, Inc.

Committed To Improvement

		· - ·			
	Appende	Data(men.)	Physical Pro		
005	COZ		ionic Strange	Mcalc.	1.27
1993	H2\$	154	phicele.)		
	hou	225	Temperature(*	F)	90
	Oxygen	((()()((()()())))	Prodeure(Sula]		50
9836	Additions	1 Date	Density		8,70
34 7	Specific (1,04		w Pein
1710	Total Die	olved Soliche(Mg/L)	53991	1	
0008	Total Han	Iness(CaCiD3 Eq Mg	13181	Zha	

Calche Calculation Information

Calculation Method	<u>Valup</u>
Known pH	6.85
Remarks	

SI & PTB Results		
Braie Type	\$L	PTE
Calcite (Calcium Carbonate)	0.04	14,50
Gypsun (Calcium sulfate)	-0.50	
Hemin drate (Celchum Bullate)	-0 49	
Anhyditte (Calcium Sulfate)	-0.86	
Barite (Barium Sulfete)		
Celestia (Strontium Solists)		





	Market all the second sec			•		
5		92 1	13 184	156	177 196	218 240
C yicity _0	36 -0.15	0.08 0	27 048	070	D.91 1 172	1.34 1.55
Gypeum -D	67 -0.49	-0.60	.51 -0.52	-0.52	-0.53 -0.53	-0.54 -0.54



Customer: Xeric

Attention: Eddle Maddox

CC:

Target Name: Patty 1

Calcium	7940
Magnesium	2867
Barlum	
Strontium	
Sodium(calc.)	35315
Bicarbonate Alkalinity	342
Sulfate	2255
Chloride	75000

Water Analysis Report

04/18/2002

Address: P.O. Box 352 Midland, TX 79702

Lease: Patty

Formation:

Barriels Balas Dames

1		Sample Point: Patty 1		Sample Date: 04/01	Test Date: 04/17/2002		
fL)		Appended Data	Appended Data(mg/L)		Physical Properties		
- · · -	7940	CO2	20	ionic Strength(calc.)	2	.51
	2867	H2S	17	pH(calc.)			
		Iron	6	Temperature(*I	=)	5	20
				Pressure(psla)		50	
	35315	Additional Data	2	Density		9.	.05
uity 🛛	342	Specific Gravit	y	1.09	Der	w Point	
	2255	Total Dissolve	d Solids(Mg/L)	123719	Les	be	
	75000		(CaCO3 Eq Mg/L)	31600	Zin	c	
Informatio	00	· <u> </u>	SI & PTB Results	-l,			

Calcite Calculation Information

Calculation Method	Vatue
Known pH	6.56
Remarks:	

Scale Type	81	PTB
Calcite (Calcium Carbonate)	-0.05	
Gypsum (Calcium Sulfate)	0.09	206.30
Hemihydrate (Calcium Sulfate)	0.06	128.50
Anhydrite (Calcium Sulfate)	0.06	118.70
Barite (Barium Sulfate)		1
Celestite (Strontium Sulfate)		†

Saturation Indices



	Calcite	Gypsum
50	-0.45	0.15
71	-0.24	0.12
92	-0.03	0.09
113	0,18	0.06
134	0.40	0.04
156	0.61	0.02
177	0.82	0.00
198	1.03	-0.02
219	1.25	-0.04
240	1.46	-0.05



Customer: Xeric

Attention: Eddie Maddox

CC:

Target Name: Paige

Water Analysis(mg/L)			
Calcium	8742		
Magnesium	2722		
Barium			
Strontium	<u> </u>		
Sodium(calc.)	53843		
Bicarbonate Alkalinity	256		
Sulfate	1735		
Chloride	105000		

Water Analysis Report

04/18/2002

Address: P.O. Box 352 Midland, TX 79702

Lease: Paige

Formation:

ge 1		Sample Point Page 1		Sample Date: 04/01/2002		Test Date: 04/17/2002		
ng/L)		Appended Da	Appended Data(mg/L)		operties	5		
<u> </u>	8742	CO2	20	Ionic Stren	gth(calc	.) 3.35		
	2722	H28	0	pH(calc.)				
		Iron	149	Temperatu	re(*F)	90		
			p.al.,	Pressure(p	sia)	50		
	53843	Additional Da	Ita	Density		9.33		
linity	256	Specific Grav	ity	1.12		Dew Point		
	1735	Total Dissolv	ed Solids(Mg/L)	172298		Lead		
	105000	Total Hardner	ss(CaCO3 Eq Mg/L)	33011		Zinc		
on informa	ation		SI & PTB Results		•	`		
tion Meth		Value	Scale Ty	pe	\$I	РТВ		

Calcite Calculation

Calculation Method	Value
Known pH	6.65
Remarks:	

Saturation Indices

SI & PTB Results		
Scale Type	<u>\$1</u>	PTB
Calcite (Calcium Carbonate)	0.03	4.60
Gypsum (Calcium Sulfate)	0.03	59.70
Hemihydrate (Calcium Sulfate)	-0.01	
Anhydrite (Caicium Sulfate)	0.08	118.00
Barite (Barium Sulfate)		1
Celestite (Strontium Sulfate)		



	Calcite	Gypsum
50	-0.37	0.10
71	-0.16	0.06
92	0.05	0.02
113	0.26	-0.01
134	0,47	-0.04
156	0.68	-0.07
177	0.90	-0.10
198	1,11	-0.13
219	1.32	-0.15
240	1.54	-0.17



Customer: Xeric

Attention: Eddie Maddox

CC:

Target Name:

Water Analysis(mg/L)	
Calçium	9303
Magnesium	3159
Barium	
Strontium	
Sodium(calc.)	57561
Bicarbonate Alkalinity	256
Sulfate	1735
Chloride	113000

Water Analysis Report

04/18/2002

Address: P.O. Box 352 Midland, TX 79702

Lease: TC8 State

Formation:

TCB State 1		Sample Point T	Sample Point: TCB State 1		Sample Date: 04/01/2002		Test Date: 04/17/2002	
łs(mg/L)		Appended Dat	Appended Data(mg/L)		Physical Properties			
	9303	CO2	20	lonic	Strength(cak	:.)	3.61	7
	3159	H28	0	pH(c	alc.)		· ///	1
		Iron	14	Tem	perature(°F)		90	7
	<u></u>			Pressure(psia)			50	
)	57561	Additional Dat	a	Dens	ity		9.40	
Alkalinity	258	Specific Gravit	Specific Gravity		1,13		Dew Point	
	1735	Total Dissolve	d Solids(Mg/L)	18	5014	Lead		
	113000	Total Hardness	(CaCO3 Eq Mg/L)	36	i204	Zinc		-1
lation Informa	tion	\	SI & PTB Results	- • • • • • • • • •		L		

Calcite Calculati

Calculation Method	Value
Known pH	6.70
Remarks:	

Saturation Indices

Scale Type	<u>\$</u> 1	PTB
Calcits (Calcium Carbonate)	0.14	21.80
Gypsum (Calcium Sulfate)	0.06	118.80
Hemihydrate (Calcium Sulfate)	0.02	37.60
Anhydrite (Calcium Sulfate)	0.14	199.60
Barite (Barium Sulfate)		1
Celestite (Strontium Sulfate)	*** 14-8	1



	Calcite	Gypsum	
50	-0.26	0.13	
71	-0.05	0.09	ł
92	0.16	0.05	•
113	0.37	0.02	!
134	0.58	-0.02	
156	0.80	-0,05	:
177	1.01	-0.08	i
198	1,22	-0.11	;
219	1.44	-0.14	•
240	1.65	-0.16	•

04/18/2002

9.37



Committed To Improvement

Customer: Xeric

Attention: Eddie Maddox

CC:

Target Name: Mooney 1

8822
2819
56307
305
2000
109000

Calcite Calculation Information

Calculation Method	Value
Known pH	6.65
,	
temarks:	
4	

Saturation Indices



Address: P.O. Box 352 Midland, TX 79702

Lease: Mooney

Formation:

Bample Point: M	ooney 1	Sample Date: 04/01/2002	Test Date: 04/17/2002
Appended Data	(ma/L)	Physical Properties	
CO2	10	Ionic Strength(calc.)	3.48
H2\$	0	pH(calc.)	
Iron	80	Temperature(°F)	90
h		Pressure(psia)	50

Density

Additional Data

Specific Gravity	1.12	Dew Point
Total Dissolved Solids(Mg/L)	179253	Lead
Total Hardness(CaCO3 Eq Mg/L)	33608	Zinc

SI & PTB Results

Scale Type	SI	PTB
Calcite (Calcium Carbonate)	0.12	21.90
Gypeum (Calcium Sulfate)	0.09	189.50
Hemihydrate (Calcium Sulfate)	0.06	116.20
Anhydrite (Calcium Sulfate)	0.16	258.80
Barite (Barium Sulfate)		1
Celestite (Strontium Sulfate)		



	Calcite	Gypsum
j 50 [°]	-0.27	0.17
71	-0.06	0.13
92	0.15	0.09
113	0.36	0.06
134	0.57	0.02
156	0.78	-0.01
177	0.99	-0.04
198	1.21	-0.07
219	1.42	-0.09
240	1.64	-0.11

04/18/2002



Committed To Improvement

Customer: Xeric

Attention: Eddie Maddox

CC:

Target Name: Jerry State 1

Water Analysis(mg/L)	_
Calcium	9624
Magnesium	3596
Barlum	
Strontium	
Sodium(calc.)	57783
Bicarbonate Alkalinity	281
Sulfate	1965
Chloride	115000

Water Analysis Report

Address: P.O. Box 352 Midland, TX 79702

Lease: Jerry State

Formation:

				10			
	Sample Point: Je	rry State 1	Sample Date: 04/01	/2002	Test Da	te: 04/17/20	02
	Appended Data	(mg/L)	Physical Prope	rties			
24	CO2	30	ionic Strength(calc_)	3.	70	
96	H2S	0	pH(calc.)				
~~	Iron	154	Temperature(°F	5)	Ş	0	
4- <i>4</i>		······	Pressure(psia)			0	
783	. Additional Data	L	Density		9.	42	
B1	Specific Gravit	1	1.13	De	w Point	1 .]
65	Total Dissolved	Solids(Mg/L)	188249	Lo	ad		1

Total Hardness(CaCO3 Eq Mg/L)

Calcite Calculation Information

alue	Valu	Calculation Method
.65	6.65	Known pH
		-

Saturation Indices

ss(CaCO3 Eq Mg/L)	38798	Z	nc
SI & PTB Results			
Scale Type		\$1	РТВ
Calcite (Calcium Carbo	onate)	0.16	26.50
Gypsum (Calcium Sulf	ate)	0,12	250.50
Hemihydrate (Calcium	Sulfate)	0.09	154.90
Anhydrite (Calcium Su	lfate)	0.22	317.00
Barite (Barlum Sulfate)	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	· · · · · · · · · · · · · · · · · · ·
Celestite (Strontium \$	ulfate)		1



	Calcite	Gypsum
50	-0.24	0.20
71	-0.03	0.16
92	0.18	0.12
113	0.39	0.08
134	0.60	D,05
156	0.82	0.01
177	1.03	-0.02
198	1.24	-0.05
219	1.46	-0.08
240	1.67	-0.10



Water Analysis Report

Midland, TX 79702

Address: P.O. Box 352

Lease: Capps Fed

04/18/2002

Test Date: 04/17/2002

Committed To Improvement

Customer: Xeric

Attention: Eddie Maddox

CC:

Target Name: Capps Fed 2

Water Analysis(mg/L)	
Calcium	8341
Magnesium	2819
Barium	
Strontium	
Sodium(Calc.)	54913
Bicarbonate Alkalinity	305
Sulfate	2000
Chloride	106000

Sample Point: Capps Fed 2 Appen CO2 H28 Iron

Formation:

Appended Dat	a(mo/L)	Physical Propertie	3
CO2	150	Ionic Strength(cal	c.) 3.38
H28	0	pH(calc.)	
Iron	21	Temperature(*F)	90
Additional Data		Pressure(psia)	50
		Density	9.34
Specific Gravity Total Dissolved Solids(Mg/L)		1.12	Dew Point
		174378	Lead
Total Hardness(CaCO3 Eq Mg/L)		32406	Zinc

Sample Date: 04/01/2002

Calcite Calculation Information

Calculation Method	Value
Known pH	6.58
Remarks:	

Saturation Indices

Si & PTB Results		
Scale Type	SI	PTB
Calcite (Calcium Carbonate)	0.02	4.10
Gypsum (Calcium Sulfate)	0.07	155.30
Hemihydrate (Calcium Sulfate)	0.03	58.20
Anhydrite (Calcium Sulfate)	0.13	218.40
Barite (Barium Sulfate)		
Celestite (Strontium Sulfate)		



	Calcite	Gypsum	
50	-0.38	0.14	;
71	-0.17	0.10	:
92	0.04	0.07	
113	0.25	0.03	
134	0.46	0,00	•
15 6	0.67	-0.03	•
177	0.89	-0.06	
198	1.10	80.0-	
219	1.31	-0.11	:
240	1.53	-0.13	:



Customer: Xeric

Attention: Eddie Maddox

CC:

Target Name: Carter 1

Calcium	9704
Magnesium	3645
Barlum	• •••••••••••••••••••••••••••••••••••••
Strontium	
Sodium(calc.)	62028
Bicarbonate Aikalinity	378
Sulfate	1660
Chloride	122000

Water Analysis Report

04/18/2002

Address: P.O. Box 352 Midland, TX 79702

Lease: Carter

Formation:

Sample Point: Carter 1	Sample Date: 04/01/2	Sample Date: 04/01/2002		Test Date: 04/17/2002	
Appended Data(mg/L)	Physical Propert	les			
 CO2 140	Ionic Strength(ca	alç.)	3.89		
 H2\$ 0	pH(catc.)				
 Iron 135	Temperature(*F)	•••••	90		
	Pressure(psla)	-	50		
 Additional Data	Density		9.48		
Specific Gravity	1.14	De	w Point		
 Total Dissolved Solids(Mg/L)	199415	Lei	bad		
 Total Hardness(CaCO3 Eq Mg/L)	39199	Zin	ю.		
		L		ł	

Calcite Calculation Information

Calculation Method	Value
Known pH	6.53
Remarks:	

SI & PTB Results Scale Type PTB **S**1 Calcite (Calcium Carbonate) 0.20 44.10 Gypsum (Calcium Sulfate) 0.06 113.10 Hemihydrate (Calcium Sulfate) 0.03 47.70 Anhydrits (Calcium Sulfate) 0.18 234.80 Barite (Barlum Sulfate) Celestite (Strontium Sulfate)





Calcite	Gypsum
-0.60	-0.29
-0.39	-0.33
-0.18	-0.38
0.03	-0.42
0.24	-0.46
0.45	-0.49
0.67	-0.53
0.88	-0.56
1.09	-0.59
1.31	-0.62
	-0.60 -0.39 -0.18 0.03 0.24 0.45 0.67 0.88 1.09



Customer: Xeric

Attention: Eddie Maddox

CC:

Target Name: TCB State 3

Water Analysis(mg/L)	
Calcium	9865
Magneslum	3159
Barlum	**
Strontlum	
Sodium(calc.)	59580
Bicarbonate Alkalinity	256
Sulfate	1880
Chloride	117000

Water Analysis Report

04/18/2002

Address: P.O. Box 352 Midland, TX 79702

Lease: TCB State Formation:

	Sample Point: T	CB State 3	Sample Date: 04/01	/2002	Test Da	te: 04/17/200
	Appended Date	ú mg/L)	Physical Prope	rties		
5	CO2	10	Ionic Strength(calc.)	3.	74
9	H2S	0	pH(calc.)			
	Iron	14	Temperature(*F	7)	8	0
			Pressure(psia)	· - · · •	5	0
Ø	Additional Data		Density		9.	44
5	Specific Gravit	y	1.13	Dev	Point	
0	Total Dissolved	Solids(Mg/L)	191740	Lea		
00	Total Hardness	(CaCO3 Eq Mg/L)	37609	Zine	c	
		SI & PTB Results	- · · · · · · · · · · · · · · · · · · ·	J Line	I	

Calcite Calculation Information

Calculation Method	Value
Known pH	6.65
Remarks:	

Saturation Indices

8cale Type	SI	PT8
Calcite (Calcium Carbonate)	0.14	21.80
Gypsum (Calcium Sulfate)	0.12	240.80
Hemilhydrate (Calcium Sulfate)	0.09	148.90
Anhydrite (Calcium Sulfate)	0.22	304.80
Barite (Barium Sulfate)		
Celestite (Strontium Sulfate)		†•••



: 50]	Calcite -0.26	Gypsum
· · · · ·	-0.20	0.20
71	-0.05	0.16
92	0.16	0.12
113	0.37	0.08
134	0.58	0.04
156	0.79	0.01
177	1,01	-0.02
198	1.22	-0.05
219	1.43	-0.08
240	1.65	-0.11

ATTACHMENT "E" Xeric Oil & Gas Corporation Application for Authorization to Inject Howse #1 Geological Data of the Injection Zone

Depth	Lithologic	Geological Name	Thickness
4306'-4900'	Dolomite	San Andres	594'
Perfs: 4332-4346' 4356-4362' 4412-4428' 4454-4464' 4558-4568 4600-4608' 4640-4658' 4716-4724' 4826-4832' 4836-4842'			

According to the State of New Mexico Engineering Department there are no known underground sources of drinking water overlying the proposed injection zone as well as known underground sources of drinking water underlying the injection interval.

ATTACHMENT H

XERIC OIL & GAS CORPORATION APPLICATION FOR AUTHORIZATION TO INJECT HOWSE #1

I, Randy Hall, of Xeric Oil & Gas Corporation, have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water concerning the Howse #1 located in Unit Letter L, Section 17, Township 20 South, Range 39 East, Lea County, New Mexico.

Kanch, Hull Randy Hall, Geologist

9-30-03 Date

ATTACHMENT I

State of New Mexico, County of Lea.

I, KATHI BEARDEN

Publisher

of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, do solemnly swear that the clipping attached hereto was published once a week in the regular and entire issue of said paper, and not a supplement thereof for a period.

of _____1

____ weeks.

2003

Beginning with the issue dated

September 14 2003 and ending with the issue dated

September 14

Publisher Sworn and subscribed to before

me	thie	15th	day	of
IIIC.	uus		uav.	UI.

September

_____ 2003

otary Public.

My Commission expires 4-16-04 (Seal)

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937, and payment of fees for said publication has been made.

01105518000

67516423

Xeric Oil & Gas P.O. Box 352 MIDLAND, TX 79702



ATTACHMENT I

XERIC OIL & GAS CORPORATION

1801 W. Texas, P. O. Box 352 Midland, Texas 79702 (432) 683-3171, Fax: (432) 683-6348

<u>SENT VIA CERTIFIED MAIL</u>

7002 0460 0002 0065 5494

September 30, 2003

Apache Corporation Attn: Land Administration 2000 Post Oak Blvd., Ste. 100 Houston, TX 77056-4400

Re: Howse #1 Application for Saltwater Disposal Unit L, Sec. 17, 20S, 39E Lea County, New Mexico

Gentlemen:

In accordance with Rules and Regulations of the Oil Conservation Division of the State of New Mexico you are being provided a copy of the Application for Authorization to Inject on the above captioned well.

Objections or requests for hearing must be filed with the Oil Conservation Division within fifteen (15) days from the above date. Objections and requests for hearing should be addressed to: Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico, 87505.

Yours truly,

Unger Craugord

Angie Crawford

AC



ATTACHMENT I

XERIC OIL & GAS CORPORATION

1801 W. Texas, P. O. Box 352 Midland, Texas 79702 (432) 683-3171, Fax: (432) 683-6348

SENT VIA CERTIFIED MAIL 7002 0460 0002 0065 5487

September 30, 2003

Mr. Robert McCasland P. O. Box 206 Eunice, New Mexico 88231

Re: Howse #1 Application for Saltwater Disposal Unit L, Sec. 17, 20S, 39E Lea County, New Mexico

Dear Mr. McCasland:

In accordance with Rules and Regulations of the Oil Conservation Division of the State of New Mexico you are being provided a copy of the Application for Authorization to Inject on the above captioned well.

Objections or requests for hearing must be filed with the Oil Conservation Division within fifteen (15) days from the above date. Objections and requests for hearing should be addressed to: Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico, 87505.

Yours truly,

Maju Crowford

Angie Crawford

AC



XERIC OIL & GAS CORPORATION

1801 W. Texas, P. O. Box 352 Midland, Texas 79702 (432) 683-3171, Fax: (432) 683-6348

October 17, 2003

RECEIVED

OCT 2 0 2003

Richard Azanium New Mexico Oil Conservation Division 1220 S. St. Francis Dr. Santa Fe, New Mexico 87505

Re: Request for Administrative Approval for Saltwater Disposal, Howse #1 Well Unit L, Sec. 17, 20S, 39E Lea County, New Mexico

Dear Richard:

As per our conversation late yesterday, please find enclosed Attachment G, water analysis for two of the water wells in the area of interest for the above application.

If you have any questions, or I can be of any assistance please do not hesitate to call me at the above-mentioned address or telephone number.

Sincerely,

Angie Crawford Angie Crawford

AC

CC: OCD, District I

ATTACHMENT G



Water Analysis

Date: 07-Oct-03

2708 West County Road, Hobbs NM 88240 Phone (505) 392-5556 Fax (505) 392-7307

Analyzed For

Company	Well Name West Windmil # 1 Wellhead Sar			County	State	
Xeric			1	Lea	New Mexico	
Sample Source			Sample #		1	
Formation			Depth			
Specific Gravity	1.005		SG (@ 60 °F	1.007	
рН	6.69		÷	Sulfides	Absent	
Temperature (°F)	70		Reducing	Agents		
Cations						
Sodium (Calc)		in Mg/L	263	in PPM	261	
Calcium		in Mg/L	80	in PPM	79	
Magnesium		in Mg/L	24	in PPM	24	
Soluable Iron (FE2)		in Mg/L	0.0	in PPM	0	
Anions	<u></u>					
Chlorides		in Mg/L	240	in PPM	238	
Sulfates		in Mg/L	300	in PPM	298	
Bicarbonates		in Mg/L	268	in PPM	267	
Total Hardness (as CaCO	3)	in Mg/L	300	in PPM	298	
Total Dissolved Solids (Ca	nic)	in Mg/L	1,176	in PPM	1,168	
Equivalent NaCl Concentr	ation	in Mg/L	844	in PPM	838	
Scaling Tendencies						
Calcium Carbonate Index Below 500,00) Remote / 500),000 - 1,000,00	00 Possible / Abov	re 1,000,000 Probab	21,472 <i>le</i>	
Calcium Sulfate (Gyp) Ind Below 500,000		000 - 10 000 0	0 Possible / Above	e 10,000,000 Probal	24,000	

treatment.

Remarks rw=10@70f

NENEL Sec 19

Report #

1406

NENW

ATTACHMENT G



Water Analysis

Date: 07-Oct-03

2708 West County Road, Hobbs NM 88240 Phone (505) 392-5556 Fax (505) 392-7307

Analyzed For

Company	Well N		i	ounty	State	
Xeric	South Win	South Windmil # 3		Lea	New Mexico	
Sample Source	Wellhead		Sample #		1	
Formation			Depth			
Specific Gravity	1.005	<u> </u>	SG @	0,60 °F	1.007	
ρΗ	6.53		S	Sulfides	Absent	
Temperature (°F)	70		Reducing	Agents		
Cations						
Sodium (Calc)	in	Mg/L	225	in PPM	223	
Calcium	in	Mg/L	144	in PPM	143	
Magnesium	in	Mg/L	19	in PPM	19	
Soluable Iron (FE2)	in	Mg/L	0.0	in PPM	0	
Anions						
Chlorides	in	Mg/L	240	in PPM	238	
Sulfates	in	Mg/L	350	in PPM	348	
Bicarbonates	in	Mg/L	273	in PPM	271	
Total Hardness (as CaCC)3) in	Mg/L	440	in PPM	437	
Total Dissolved Solids (C	alc) in	Mg/L	1,251	in PPM	1,243	
Equivalent NaCl Concent	ration in	Mg/L	883	in PPM	876	
Scaling Tendencies						
Calcium Carbonate Index	,				39,352	
Below 500,00	0 Remote / 500,000 -	1,000,000	Possible / Above	a 1,000,000 Probabl	e	
*Calcium Sulfate (Gyp) Ind					50,400	
Below 500,00	0 Remote / 500,000 - 1	10,000,00	Possible / Above	10,000,000 Probab	le	

*This Calculation is only an approximation and is only valid before treatment of a well or several weeks after treatment.

Remarks rw=9@70f

NESE Sec 19



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON Governor Joanna Prukop **Cabinet Secretary**

Lori Wrotenbery Director **Oil Conservation Division**

Oil Conservation Division 1220 S. Francis Drive Santa Fe, NM 87505

RE: Proposed: MC DHC NSL NSP SWD WFX PMX

Gentlemen:

I have examined the application for the:

as loro 6226 Unit Lease & Well No.

and my recommendations are as follows:

Yours very truly,

ny con Chris Williams

Supervisor, District 1