LR SWD 18/24/03 10/6/03

XERIC OIL & GAS CORPORATION

RECEIVED 1801 W. Texas, P. O. Box 352 Midland, Texas 79702

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

OCT 0 & ZUU3

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,

President

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

FORM C-108 Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I.	PURPOSE: Secondary Recovery Pressure Maintenance X Disposal Storage Application qualifies for administrative approval? X Yes No
II.	OPERATOR: Xeric 0il & Gas Corporation
	ADDRESS: P. 0. Box 352, Midland, TX 79702
	CONTACT PARTY: Angie Crawford PHONE: 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 Crawford TITLE: Production Analyst
	SIGNATURE: Augu Crawford DATE: 9/30/03
*	E-MAIL ADDRESS: ACrawford@xericoil.com 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

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.

INJECTION WELL DATA SHEET

OPERATOR: Xeric 0il &	Gas Corporation				
WELL NAME & NUMBER:HO	wse #1				
WELL LOCATION: 1980	' FSL & 330' FWL	L	17	205	39E
FOOTAC	E LOCATION	UNIT LETTER	SECTION	TOWNSHIP	RANGE
WELLBORE SCHE	<u>MATIC</u>		WELL Consumation Surface	ONSTRUCTION DAT Casing	<u>'A</u>
	Surface Csg. 8 5/8" 24# J-55	Hole Size: 12 1/4'	11	Casing Size: 8	5/8"
	set @ 1660' > TOC=Surface	Cemented with:85	50 sx.	or	ft ³
	Production Csg.	Top of Cement: Si	ırface	Method Determined	: Circulated
1	5 1/2" 17# J-55 set @ 4900'		Intermedia	te Casing	
	TOC=2750' as per CBL	Hole Size:		Casing Size:	· · · · · · · · · · · · · · · · · · ·
	5 1/2" x 2 3/8" Double Grip Baker	Cemented with:	sx.	or	ft ³
	AD-1 Packer set @ 4370'	Top of Cement:		Method Determined	•
	Perfs:		Production	1 Casing	
	4332'-4346' 4356'-4362' 4412'-4428'	Hole Size: 7 7/8	3"	Casing Size: 5	1/2"
	4454'-4464' 4558'-4568'	Cemented with: 72	25 sx.	or	ft ³
	4600'-4608' 4640'-4658'	Top of Cement:	2750'	Method Determined	CBL
30	4716'-4724' 4826'-4832'	Total Depth:4900)', PBTD 4846'		
(1)	4836'-4842'		Injection 1	<u>Interval</u>	
	PBTD=4846 'TD=4900'	43321	feet	to 4842 Perfo	rated
(1 34 3 1 3 1 3 1 3 1 3 1 3 1 3 1 3 1 3	1D-4700	(P	erforated or Open Ho	ole: indicate which)	

INJECTION WELL DATA SHEET

Tu	bing Size: 2 7/8" 6.5# J-55 Lining Material: IPC
Ту	pe of Packer: 5 1/2" X 2 3/8" Double Grip Baker Type AD-1
Pa	cker Setting Depth: 4370'
Ot	her Type of Tubing/Casing Seal (if applicable): N/A
	Additional Data
1.	Is this a new well drilled for injection? Yes X No
	If no, for what purpose was the well originally drilled? Oil & Gas Exploration
2.	Name of the Injection Formation: San Andres
3.	Name of Field or Pool (if applicable): House San Andres
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: Tubb - 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

Well Name	Well Type	Construction	Cement & Tops	Date Drilled	Location	Depth	Record of Completion
(Allison) Howse #1	Oil	8 5/8" 24# set @ 300' 5 1/2" 14# set @ 4340'	300 sx Surface 175 sx	10/28/73	UL F Sec. 17, T20S, R39E	4340′	4326'-4336 San Andres
(Penrose) State #1	Oil	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	l !	10
Well History:			10 sx plug @ surface
Drilled 10/28	/73		350' 50 sx cement
Casing Recor	rd: 8 5/8" 24# Set at 300' 5 1/2" 14# Set at 4340'		
Perforated 4326'-4336'			950' 40 sx cement
25 s 40 s 50 s	CIBP at 4300' w/35' cement on top of perfs. x plug set @ 1750', Pulled 897' of 5 ½" csg. x plug set @ 950', 50' in & out of stub. x plug set @ 350, 50' in & out of shoe of		1750' 25 sx cement
	/8" csg. x plug set at surface.	xxxx	35' cement on top CIBP @ 4300'
		_	Perfs 4326'-4336'
		1	i

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	8/73					
Casing Reco	ord: 8 5/8" 24# Set at 300' 5 ½" 14# Set at 4340'					
Perforated 4	326′-4336′	301' 125 sx class C cement				
25 : 40 : 50 : 8 5	cord: CIBP at 4300' w/35' cement on top of perfs. sx plug set @ 1750', Pulled 897' of 5 ½" csg. sx plug set @ 950', 50' in & out of stub. sx plug set @ 350, 50' in & out of shoe of 1/8" csg. sx plug set at surface.	1650' 25 sx class C cement				
	on plug see de salitace.	2954' 25 sx class C cement				
		3979' 150 sx class C cement				

P. O. Box 352 Midland, TX 79702 Phone (915) 683-3650

Fax (915) 683-6348

XERIC OIL & GAS CORPORATION

To: David Catanach Fax: 505-476-3462

OCD

From: Angie Crawford Date: 10/30/03

Re: Howse #3 SWD App. Pages: 2

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.

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 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.

10 sx plug @ surface 350' 50 sx cement

950' 40 sx cement

1750' 25 sx cement

35' cement on top

Perfs 4326'-4336'

TD 4340

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 ½" 15.5# Set at 4337'

Open Hole	:	330' 100 sx cement	
Plugging F 11/28/51	Record: 20 sx cement plug on open hole 4337'-4435'. Shot 51/2" csg @ 3974' & Pulled 51/2" csg. 10 sx plug set @ 3974'. 15 sx plug set @ 3000'. 15 sx plug @ 1650'. Squeezed 100 sx @ 330' & filled to surface.	1650' 15 sx cement 3000' 15 sx cement 3974' 10 sx cement	
	TD 4435	20 sx cement 4337′-443 to fill open hole	35′

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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).

ATTACHMENT D

Champion Technologies, Inc.

Water Analysis Report

9/25/2003

/lddress: P.O. Box 352 Midland, TX 79702

Committed To improvement

Customer: Xeric

Attention: Eddie Madcox

Lease: House

Formation:

Britismun: Jeson Ussery

Target Name: House 1

Sample Paint: House 1

Sample Dets: 06/26/2003

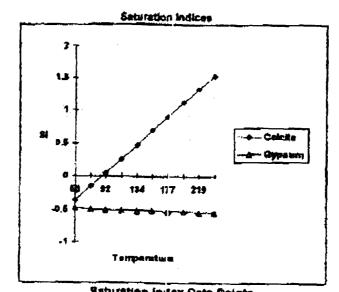
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Appended Dat	本(町<u>株</u>)	Physical Pro	897 8 96
COS	50	ionic Strenge	Moste. 1,27
H2\$	154	phi(calc.)	
Pon	225	Temperature(*	Z. i .ZZ
Охудел		Processo(Bala)	50
Additional Det	8	Density	8,70
Specific Gravi	ly	1.04	Dow Poin
Total Dissolve	d Solide(Mg/L)	53991	Lege
Total Hardnes	CaCO3 Eq Mg	13181	Zing
	A PTB Results		

Calcite Calculation Information Calculation Method Velue Known pH 6.85 Remarks

Braie Type	3 <u>}</u>	PTB
Calcite (Calcium Carbonate)	0.04	14,50
Gypsun (Calcium sulfate)	-0.50	
Heminy drate (Calcium Sulpto)	-0.49	
Anhyditte (Calcium Sulfate)	-0.86	
Barito (Barium Sulfeta)		
Calestin (Strontium Solists)		



Saturation initex Data Points 134 156 177 240 0 36 -0.15 0.08 0.27 0 48 0.70 D.91 1 12 1.34 1.55 -0,47 -0.50 -0.51 -0.52 ·0.5Z 0.53 -0.53 -0.54 -0.54



Water Analysis Report

04/18/2002

Test Date: 04/17/2002

Address: P.O. Box 352

Midland, TX 79702

Lease: Patty Formation;

CC:

Customer: Xeriç

Attention: Eddie Maddox

Target Name: Patty 1	
Water Analysis(mg/L)	
Calcium	7940
Magnesium	2867
Barlum	
Strontium	
Sodium(caic.)	35315
Bicarbonate Alkalinity	342
Sulfate	2255
Chloride	75000

Sample Point:	Patty 1
Appended Da	ta(mg/L)
CO2	20
H28	17
Iron	6

Physical Properties	
ionic Strength(calc.)	2.51
pH(calc.)	
Temperature(*F)	90
Pressure(pala)	50
Density	9.05

1	Ad	kd	iti	iol	na	łC)at	3
r	_		_	_	_	_		-

Specific Gravity	1.09
Total Dissolved Solids(Mg/L)	123719
Total Hardness(CaCO3 Eq Mg/L)	31600

Celestite (Strontium Sulfate)

]	Dew Point	
]	Lead	
	Zinc	

Calcite Calculation Information

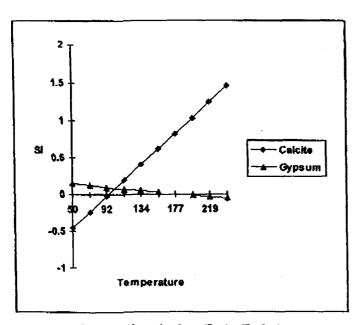
Calculation Method	Value
Known pH	6.56

ı	1	k	N	Ţ	ų	ı	r	k	3	ı;	
١.,	•			-			-	_	-	-	

Saturation Indices

SI & PTB Results Scale Type 81 PTB Calcite (Calcium Carbonate) -0.05 Gypsum (Calcium Sulfate) 0.09 206.30 Hemihydrate (Calclum Sulfate) 0.06 128.50 Anhydrite (Calcium Sulfate) 0.06 118.70 Barite (Barium Sulfate)

Sample Date: 04/01/2002



	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

CC:

Attention: Eddie Maddox

Water Analysis Report

04/18/2002

Address: P.O. Box 352

Midland, TX 79702

Lease: Paige

Formation:

Target Name: Paige 1	
Water Analysis(mg/L)	
Calcium	8742
Magnesium	2722
Barfum	
Strontium	
Sodium(calc.)	53843
Bicarbonate Alkalinity	256
Sulfate	1735
Chloride	105000

Appended Data(mg/L)			
CO2	20		
H28	0		
Iron	149		

3.35
90
50
9.33

A	ddition	al	Data	
8	pecific	G	ravity	

Sample Point Palge 1

Specific Gravity	1.12
Total Dissolved Solids(Mg/L)	172298
Total Hardness(CaCO3 Eq Mg/L)	33011
SI & PTB Results	

Dew Point	
Lead	
Zinc	

Test Date: 04/17/2002

Calcite Calculation Information

Calculation Method	Value
Known pH	6.65

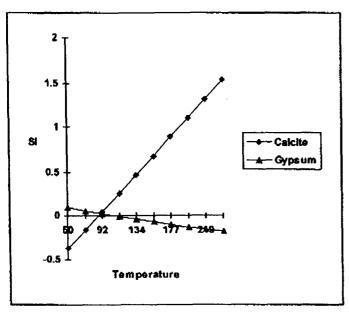
ľ	Remarks:

Saturation Indices

Scale Type	Ši	PTB
Calcite (Calcium Carbonate)	0.03	4.60
Gypsum (Calcium Sulfate)	0.03	59.70
Manifestate (Calaban Balkata)	0.04	

Sample Date: 04/01/2002

Anhydrite (Calcium Sulfate) 0.08 118.00 Barite (Barium Sulfate) 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

04/18/2002

Test Date: 04/17/2002



Committed To Improvement

Customer: Xeric

CC:

Chloride

Attention: Eddie Maddox

Water Analysis Report

Address; P.O. Box 352

Midland, TX 79702

Lease: TCB State

Formation:

Sample Point: TCB State 1

Target Name; TCB State 1		
Water Analysis(mg/L)		
Calcium	9303	
Magnesium	3159	
Barium		
Strontium		
Sodium(calc.)	57561	
Bicarbonate Alkalinity	256	
Sulfate	1735	

Appended Data(mg/L)	
CO2	20
H28	0
Iron	14

3.61
-170.4
90
50
9.40

Specific Gravity	
Total Dissolved Solids(Mg/L)	
Total Hardness(CaCO3 Eq Mg/L)	

Dew Point	
Lead	
Zinc	

Calcite Calculation Information

Calculation Method	Value
Known pH	6.70
Remarks:	

Saturation Indices

113000

\$1 & PTB Results

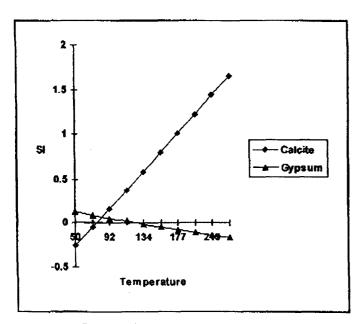
Scale Type	\$1	PTB
Calcite (Calcium Carbonate)	0.14	21.80
Gypsum (Calcium Sulfate)	0.06	118.80
Hemihydrate (Calcium Sulfate)	0.02	37.60
Anhydrite (Calcium Sulfate)	0.14	199.60
Barite (Barium Sulfate)		
Celestite (Strontium Sulfate)		1

1.13

185014

36204

Sample Date: 04/01/2002



	Calcite	Gypsum	
50	-0.26	0.13	:
71	-0.05	0.09	•
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	į
198	1,22	-0.11	;
219	1.44	-0.14	•
240	1.65	-0.16	•

Water Analysis Report

04/18/2002

Test Date: 04/17/2002

Address; P.O. Box 352

Midland, TX 79702

Lease: Mooney

Formation:

Customer: Xeric

Attention: Eddie Maddox

CC:

Target Name: Mooney 1	
Water Analysis(mg/L)	
Calcium	8822
Magnesium	2819
Barlum	
Strontium	, (4.)
Sodium(calc.)	56307
Bicarbonate Alkalinity	305
Sulfate	2000
Chloride	109000

Sample Point: Mooney 1		Sample Date: 04/01/2002
Appended Data(n	ng/L)	Physical Properties
CO2	10	ionic Strength(calc.)
		-11/2-12

Appended Data(mg/L)	
CO2	10
H2S	0
Iron	80

Physical Properties		
3.48		
90		
50		
9.37		

Additional Data	Density	
Specific Gravity	1.12	
Total Dissolved Solids(Mg/L)	179253	
Total Hardness(CaCO3 Eq Mg/L)	33608	

Dew Point	
Lead	
Zinc	

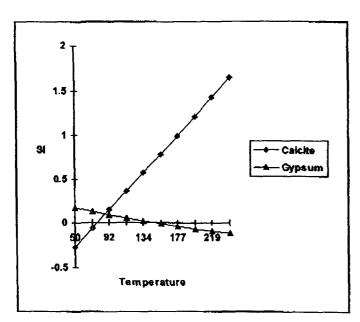
Calcite Calculation Information

Calculation Method Value		
Known pH	6.65	
Remarks:		

Saturation Indices

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)		
Celestite (Strontium Sulfate)	and the state of t	1



	Calcite	Gypsum
50	-D.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



Customer: Xeric

Attention: Eddie Maddox

Water Analysis Report

04/18/2002

Address: P.O. Box 352

Midland, TX 79702

Lease: Jerry State

Formation:

CC:

Target Name: Jerry State 1 Water Analysis(mg/L)		
Magnesium	3596	
Barlum	- 17	
Strontium		
Sodium(calc.)	57783	
Bicarbonate Alkalinity	281	
Sulfate	1965	
Chloride	115000	

Sample	Point :	Jerry	State	1

Sample	Date:	04/01/

Physical Properties

Test Date: 04/17/2002

Appended Data(mg/L)	
CO2	30
H2S	0
lron	154

3.70
90
50
9.42

Additional Data	FABIRITA	
Specific Gravity	1.13	
Total Dissolved Solids(Mg/L)	188249	
Total Hardness(CaCO3 Eq Mg/L)	38798	

Dew Point	
Lead	
Zinc	

Calcite Calculation Information

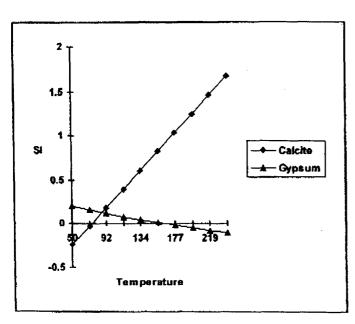
	Calculation Method	Value
Ξ	Known pH	6.65

Remarks:

Saturation Indices

SI & PTB Results

Scale Type	\$1	PTB
Calcite (Calcium Carbonate)	0.16	26.50
Gypsum (Calcium Sulfate)	0.12	250.50
Hemihydrate (Calcium Sulfate)	0.09	154.90
Anhydrite (Calcium Sulfate)	0.22	317.00
Barite (Barium Sulfate)		1
Celestite (Strontium Sulfate)		1



	Calcite	Gypsum	
50	-0.24	0.20	
71	-0.03	0.16	
92	0.18	0.12	
113	0.39	0.08	
134	08.0	0.05	
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	

Customer: Xeric

Attention: Eddie Maddox

Water Analysis Report

04/18/2002

Test Date: 04/17/2002

Address: P.O. Box 352

Midland, TX 79702

Lease: Capps Fed

Formation:

Target Name: Capps Fed 2	
Water Analysis(mg/L)	
Calcium	8341
Magnesium	2819
Bartum	
Strontium	
Sodium(calc.)	54913
Bicarbonate Alkalinity	305
Sulfate	2000
Chloride	106000

Sample Point: C	apps Fed 2
Appended Data	r(mg/L)
CO2	

 	٠.	
	i	
	ı	
 	1	
	ı	
	ı	

C	04/04/0002	
Sample Date:	U4/U 1/2002	
Physical	Properties	

Market Linkerpon		
onic Strength(calc.)	3.38	•
H(calc.)		
remperature(*F)	90	
ressure(psia)	50	••
)ensity	9.34	

Additional	
Chacles G	

H28 Iron

Specific Gravity	1.12
Total Dissolved Solids(Mg/L)	174378
Total Hardness(CaCO3 Eq Mg/L)	32406

150 0

21

Dew Point	
Lead	
Zinc	

Calcite Calculation Information

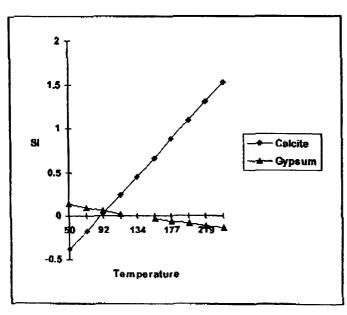
Į	Calculation Method	Value
	Known pH	6.58

HOMBAKS:
Remarks:
1

Saturation Indices

St & PTB Results

SI	PTB
0.02	4.10
0.07	155.30
0.03	58.20
0.13	218.40
	
	0.02 0.07 0.03



	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
156	0.67	-0.03
177	0.89	-0.06
198	1.10	-0.08
219	1.31	-0.11
240	1.53	-0.13



Customer: Xeric

CC:

Chloride

Attention: Eddie Maddox

Water Analysis Report

04/18/2002

Test Date: 04/17/2002

Address: P.O. Box 352

Midland, TX 79702

Lease: Carter

Formation:

Target Name: Carter 1		
Water Analysis(mg/L)		
Calcium	9704	
Magnesium	3645	
Barlum		
Strontium		
Sodium(calc.)	62028	
Bicarbonate Alkalinity	378	
Sulfato	1880	

Sample Point: Carter 1	
Appended Data(mg/L)	

Appended Data(mg/L)		
CO2	140	
H2\$	0	
iron	135	

Sample Date: 04/01/2002 Physical Properties

rilysical riopetues	
lonic Strength(calc.)	3.89
pH(calc.)	
Temperature(*F)	90
Pressure(psia)	50
Daneity	0.40

Additional Data	
Specific Gravity	ſ
Total Dissolved Solids(Mg/L)	ĺ

Total Hardness(CaCO3 Eq Mg/L)

Dew Point	T
Lead	Ţ
Zinc	

Calcite Calculation Information

Calculation Method	Value
Known pH	6.53
Remarks:]

Saturation Indices

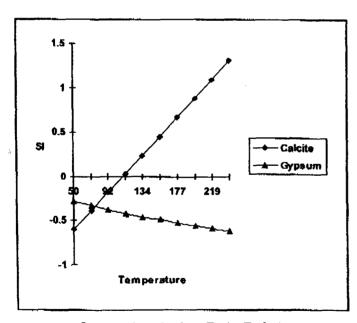
122000

SI & PTB Results

Scale Type	S 1	PTB
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)	****	

1.14 199415

39199



		Calcite	Gypsum
	50	-0.60	-0.29
i	71	-0.39	-0.33
į	92	-0.18	-0.38
ļ	113	0.03	-0.42
į	134	0.24	-0.46
ļ	156	0.45	-0.49
1	177	0.67	-0.53
į	198	0.88	-0.56
	219	1.09	-0.59
į	240	1.31	-0.52



Customer: Xeric Attention: Eddie Maddox

Water Analysis Report

04/18/2002

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

Lease: TCB State

Formation:

-	_
4 1	

Target Name: 1CB State 3		Sample Point: TCB State 3		Sample Date: 04/01/2002		Test Date: 04/17/2002	
Water Analysis(mg/L)		Appended Dat	a(mg/L)	Physical Proper	ties		
Calcium	9865	CO2 10		Ionic Strength(calc.)		3.74	
Magneslum	3159	H2S	0	pH(calc.)			
Barlum		Iron	14	Temperature(*F))	90	
Strontlum			· ···	Pressure(psia)		50	
Sodium(calc.)	59580	Additional Data		Density		9.44	
Bicarbonate Alkalinity	256	Specific Gravi		1.13	De	w Point	1
Sulfate	1880	Total Dissolved Solids(Mg/L)		191740	Lead		1
Chloride	117000		s(CaCO3 Eq Mg/L)	37609	Zin		1
			CL O DTD Dan Ma	·	, —	<u> </u>	J

Calcite Calculation Information

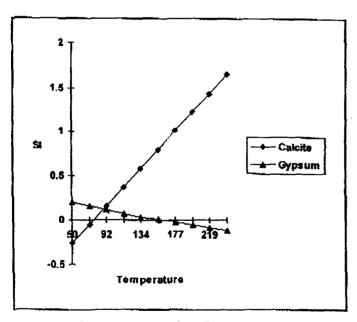
Calculation Method	Value
Known pH	6.65
,—————————·	

Remarks:

Saturation Indices

SI & PTB Results

Scale Type	SI	PT8
Calcite (Calcium Carbonate)	0.14	21.80
Gypsum (Calcium Sulfate)	0.12	240.80
Hemilnydrate (Calcium Sulfate)	0.09	148.90
Anhydrite (Calcium Sulfate)	0.22	304.80
Barite (Barium Sulfate)		
Celestite (Strontium Sulfate)		†"· ·



	Calcite	Gypsum
50	-0.26	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.

Randy Hall, Geologist	
Randy Hall, Geologist	_
9-30-03	
Date	_

State of New Mexico, County of Lea.

I. KATHI BEARDEN

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.
of1
weeks. Beginning with the issue dated
September 14 2003 and ending with the issue dated
September 14 2003
Lati Praden
Publisher Sworn and subscribed to before
me thisday of
September 2003
Sanie Holdande Notary Public.

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.

My Commission expires

LEGAL NOTICE

September 14, 2003 (c. 14.2003)

LEGAL NOTICE Ch. 14.2003

NOVICE INSTERNATION OF THE COLOR OF

01105518000 67516423 Xeric Oil & Gas P.O. Box 352 MIDLAND, TX 79702

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 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,

Augu Crawford

AC

CERTIFIED MAIL RECEIPT (Domestic Mail Only; No Insurance Coverage Provided) Postage 006 Certified Fee Return Receipt Fee (Endorsement Required) Restricted Delivery Fee (Endorsement Required) Total Postage & Fees | \$ **Apache Corporation** Sent To Attn: Land Administration 2000 Post Oak Blvd., Ste. 100 or PO Box No. Houston, TX 77056-4400 City, State, ZIP+ 4

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:

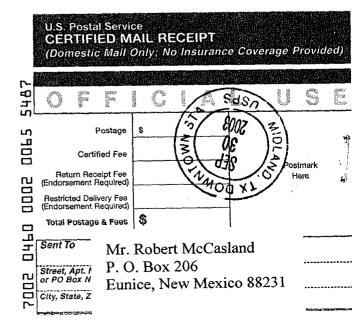
In accordance with Rules and Regulations of the Oil Conservation Division of the State of New Mexico you are being provided a copy of the Application for Authorization to Inject on the above captioned well.

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,

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 OIL CONSERVATION 1220 S. St. Francis Dr. Santa Fe, New Mexico 87505

DIVISION

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,

May Claudoul Angie Crawford

AC

CC: OCD, District I



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			ounty	State
Xeric			<u>1</u>	Lea	New Mexico
Sample Source	Wellhea	ad	Sample #		1
Formation			Depth		
Specific Gravity	1.005		SG @) 60 °F	1.007
pН	6.69		S	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					
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 CaCO3)	in Mg/L	300	in PPM	298
Total Dissolved Solids (Cale	c)	in Mg/L	1,176	in PPM	1,168
Equivalent NaCl Concentra	tion	in Mg/L	844	in PPM	838
Scaling Tendencies					
Calcium Carbonate Index					21,472
Below 500,000	Remote / 500	,000 - 1,000,0	00 Possible / Above	1,000,000 Probabl	le
Calcium Sulfate (Gyp) Inde	x				24,000
Below 500,000 F	Remote / 500,	000 - 10,000,0	0 Possible / Above	10,000,000 Probab	ole
This Calculation is only an appro reatment.	oximation an	d is only valid	l before treatment	of a well or sever	al weeks after
Remarks rw=10@70f	-				·

Remarks rw=10@70f

NENE Sec 19

Report #

1406



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 Nan	ne C	ounty	State New Mexico	
Xeric	South Windn	nil # 3	Lea !		
Sample Source	Wellhead	Sample #	1		
Formation		Depth			
Specific Gravity	1.005	SG (1.007	
рН	6.53		Sulfides	Absent	
Temperature (°F)	70	Reducing	Agents		
Cations					
Sodium (Calc)	in Mg	y/L 225	in PPM	223	
Calcium	in Mg	y/L 144	in PPM	143	
Magnesium	in Mg	g/L 19	in PPM	19	
Soluable Iron (FE2)	in Mg	g/L 0.0	in PPM	0	
Anions					
Chlorides	in Mg	g/L 240	in PPM	238	
Sulfates	in Mg	g/L 350	in PPM	348	
Bicarbonates	in Me	g/L 273	in PPM	271	
Total Hardness (as CaCO:	3) in M	g/L 440	in PPM	437	
Total Dissolved Solids (Ca	lc) in M	g/L 1,251	in PPM	1,243	
Equivalent NaCl Concentra	ation in M	g/L 883	in PPM	876	
Scaling Tendencies					
Calcium Carbonate Index				39,352	
Below 500,000	Remote / 500,000 - 1,0	00,000 Possible / Abov	e 1,000,000 Probable	,	
'Calcium Sulfate (Gyp) Inde	ex			50,400	
Below 500,000	Remote / 500,000 - 10,	000,00 Possible / Above	10,000,000 Probabl	le	
This Calculation is only an appr reatment.	oximation and is only	valid before treatmen	t of a well or severa	l weeks after	

Remarks

rw=9@70f

NESE Sec 19



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON

Governor
Joanna Prukop
Cabinet Secretary

Supervisor, District 1

Lori Wrotenbery
Director
Oil Conservation Division

Cabinet Secretary	
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:	
Veric Dil & Gas Corp Howse #1-L-17-20s-39e Operator Lease & Well No. Unit S-T-R 30-025-3	162ZE
and my recommendations are as follows:	
V / KZ	
Yours very truly,	
Chry William (fg)	
Chris Williams	