

12/11/07 DATE IN	 SUSPENSE	W Jones ENGINEER	12/12/07 LOGGED IN	JPI TYPE	PKUR0734652676 APP NO.
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
- Engineering Bureau -
 1220 South St. Francis Drive, Santa Fe, NM 87505



Manzano

ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
 [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
 [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
 [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
 [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
 [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] TYPE OF APPLICATION - Check Those Which Apply for [A]

- [A] Location - Spacing Unit - Simultaneous Dedication
☐ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

- [B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☒ SWD ☒ IPI ☐ EOR ☐ PPR

- [D] Other: Specify _____

[2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or ☐ Does Not Apply

- [A] ☐ Working, Royalty or Overriding Royalty Interest Owners
 [B] ☒ Offset Operators, Leaseholders or Surface Owner
 [C] ☒ Application is One Which Requires Published Legal Notice
 [D] ☐ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
 [E] ☒ For all of the above, Proof of Notification or Publication is Attached, and/or,
 [F] ☐ Waivers are Attached

[3] SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.

[4] CERTIFICATION: I hereby certify that the information submitted with this application for administrative approval is accurate and complete to the best of my knowledge. I also understand that no action will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

MIKE HANAGAN
 Print or Type Name

Mike Hanagan
 Signature

MANAGING MEMBER 12/11/07
 Title Date

mhanagan@abn.com
 e-mail Address

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: _____ Secondary Recovery _____ Pressure Maintenance ☒ Disposal _____ Storage
Application qualifies for administrative approval? ☒ Yes _____ No
- II. OPERATOR: _____ MANZANO, LLC _____
ADDRESS: _____ P.O. BOX 2107, ROSWELL, NM 88202 _____
CONTACT PARTY: _____ MIKE HANAGAN _____ PHONE: 505-623-1996 _____
- III. 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 ☒ 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:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
 2. Whether the system is open or closed;
 3. Proposed average and maximum injection pressure;
 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
 5. 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: _____ MIKE HANAGAN _____ TITLE: _____ MANAGING MEMBER _____
SIGNATURE: _____ [Signature] _____ DATE: _____ 12/06/07 _____
E-MAIL ADDRESS: _____
- * 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: _____

APPLICATION FOR AUTHORIZATION TO INJECT

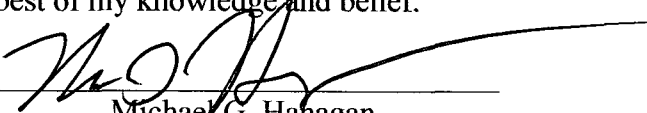
**MANZANO, LLC
PETER GARNDI STATE #1
SECTION 1 – TOWNSHIP 10 SOUTH, RANGE 32 EAST
LEA COUNTY, NEW MEXICO**

- I. PURPOSE:** Manzano, LLC proposes to utilize the wellbore for the purpose of disposing produced water into the San Andres formation. This application has been previously approved by Administrative Order SWD-1021, which was rescinded by Order No. R-12570. As provided for in Order No. R-12570, the Division may reinstate the order following the presentation of an acceptable plan that will reduce or eliminate risk to the Yates Mescalero “ARL” State Well No. 1. This application is the same as the previously approved application with the exception of; (1) a plan to reduce risk to the Yates Mescalero Well No. 1 (as shown on the well data sheet) which has been accepted by Yates Petroleum Corporation, and (2) the inclusion of well data sheets on wells that have been drilled within the Area of Review subsequent to the approval of the previous application. Should the Division determine that the Mescalero “ARL” State Well No. 1 will be adequately protected, Manzano hereby requests that the Division reinstate Order No. SWD-1021 by administrative approval.
- II. OPERATOR:** Manzano, LLC
P.O. Box 2107
Roswell, NM 88202-2107
(505) 623-1996
Contact: Mike Hanagan
- III. WELL DATA:** See attached well data sheet & schematic
- IV.** This is not an expansion of an existing project.
- V.** See attached maps for location and area of review
- VI.** See attached schematics of wellbores within the area of review
- VII. OPERATION DATA**
- (1) Average daily injection rate and volume is estimated to be between 500 and 1,000 barrels of produced water per day. Maximum injection rate and volume will not exceed 2,000 barrels of produced water per day.
 - (2) The system will be a closed system.
 - (3) Average injection pressure is anticipated to be 250-500 psia. Maximum injection pressure will not exceed 800 psia.
 - (4) See attached analysis of the fluid to be injected.
 - (5) Based on data from nearby San Andres wells (located outside of area of review but in the mapped area in Item V. above) we believe that fluids

found within the injection zone will have the following chemical composition:

1. Specific Gravity: 1.1-1.2 @ 60 degrees
2. Sodium: 25,000-100,000+ ppm
3. Calcium: 2,000+ ppm
4. Magnesium: 200-400+ ppm
5. Chlorides: 50,000-150,000+ ppm

- VIII. INJECTION ZONE DATA:** The proposed disposal zone will be into the San Andres formation from depths of 4350' to 4470'. The lithology of the entire 120' thick interval is a dolomite. A search of the records of the State of New Mexico Engineers Office in Roswell, NM, as well as a visual survey at the site, shows that there are no known sources of drinking water within one mile of the proposed disposal well.
- IX.** The zone will be stimulated with 10,000 gallons of 28% Hydrochloric acid.
- X.** Well logs have been submitted to the NMOCD District 1 office in Hobbs, NM.
- XI.** There are no fresh water wells within one mile of the proposed disposal well.
- XII.** A geologic and engineering review of the available geologic and geophysical data finds that there is no evidence to indicate the presence of any open faults or other hydrologic connection between the disposal zone and any underground sources of drinking water.
- XIII.** See attached Certified Mail Receipts of notice to the owner of the surface of the land as well as all leasehold operators within the area of review. An Affidavit of Publication from the Hobbs News-Sun along with the Legal Notice & Notice of Publication of this Application will be forwarded upon receipt from the Hobbs News Sun. A copy of this Application has also been sent to each leasehold operator within the area of review.
- XIV. CERTIFICATION:** I, Michael G. Hanagan as Manager of Manzano, LLC, on this 6th day of December, 2007, do hereby certify that the information submitted is true and correct to the best of my knowledge and belief.



Michael G. Hanagan
Manager of Manzano, LLC

**Requirement No. III
WELL DATA & WELLBORE DIAGRAM**

MANZANO, LLC
Peter Grande State #1

API #30-025-36993
330' FSL & 400' FWL
Sec. 1, T10S, R-32E
Lea County, NM

TD reached on Feb. 19, 2005

CASING DATA					
	Hole Size	Casing Size	Setting Depth	Sacks of Cement	Top Of Cement
	17 1/2"	13 3/8"	400'	400sx	Circulated
	11"	8 5/8"	3400'	1317sx	Circulated
	7 7/8"	5 1/2"	9400'	2370sx	Circulated
TUBING DATA					
	Casing Size	Tubing Size	Tubing Grade	Coated	Type of Coating
	5 1/2"	2 7/8"	6.5#/ft J-55	Yes	FusionBond

13 3/8" 48#/ft H-40 @ 400'
Cemented w/400sx Class "C"
Circulate 50 sx

8 5/8" 24#&32#/ft J55 @ 3400'
Cemented w/1100sx
1" w/217sx

5 1/2" I-80 17# 6360'-Surf

Proposed Injection Interval

2 7/8" J-55 6.5#/ft EUE 8td Tubing lined w/FusionBond TK70 coating
Set @ 4250'

Perforations @ 4082'-4158' (San Andres)

Propose to Squeeze San Andres Perfs @ 4082'-4158'

Baker Arrowset Model AD-1 Plastic Lined Packer @ 4250'

Propose to Selectively Perf 4350'-4470'

Acidize w/10000 gl 28% acid

CIBP @ 4510' w/35' Class "H" on top

5 1/2" HCP-110 17# 8547'-6360'

DVE 8087

CIBP @ 8770' w/35' Class "H" on top

Perforations @ 8792'-8906' (Cisco)

Perforations @ 8895'-9095' (Cisco)

5 1/2" N-80 20# 9400'-8547'
PBSD 9343' KB (Wireline)
5 1/2" TD @ 9400' (KB)

Cement 1st Stage w/470sx Super "H"

Cement 2nd Stage w/1800sx Hall Lite

Tail in w/100sx Prem Plus - Circ 250sx to pits

Submit 3 Copies To Appropriate District
Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM
87505

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
May 27, 2004

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-025-36993
1. Type of Well: Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/>		5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
2. Name of Operator Manzano, LLC		6. State Oil & Gas Lease No. VO-6174
3. Address of Operator P.O. Box 2107, Roswell NM 88202-2107		7. Lease Name or Unit Agreement Name Peter Grande State
4. Well Location Unit Letter: M : 330' feet from the South line and 400' feet from the West line Section 1 Township 10s Range 32e NMPM County Lea		8. Well Number 1
11. Elevation (Show whether DR, RKB, RT, GR, etc.) GL - 4223'		9. OGRID Number 231429
Pit or Below-grade Tank Application <input type="checkbox"/> or Closure <input type="checkbox"/>		10. Pool name or Wildcat Mescalero, North-Cisco
Pit type _____ Depth to Groundwater _____ Distance from nearest fresh water well _____ Distance from nearest surface water _____		
Pit Liner Thickness: _____ mil Below-Grade Tank: Volume _____ bbls; Construction Material _____		

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	P AND A <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
OTHER: <input type="checkbox"/>		OTHER: Re-completion Operations <input checked="" type="checkbox"/>	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

9-30-05 Set CIBP w/wireline @ 8770' capped with 35' class H cement.

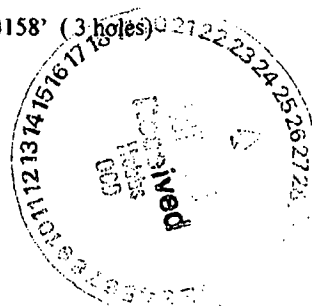
Set CIBP w/wireline @ 4510' capped with 35 class H cement.

Perforated San Andres @ 4082'-86', 4095'-4102', 4108'-4112' (18 holes) and 4154', 4155, & 4158' (3 holes)

Acidized perms with 10,525 gal. 20 % NEFE acid. Flowback and swab test.

10-1-05 through 10-4-05 Swab test interval at 150-250 BFPD w/5% oil cut

10-5-05 Pull out of hole and lay down production tubing.



I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Mike Hanagan TITLE Manager DATE 10/25/05

Type or print name: Mike Hanagan

E-mail address: mhanagan@dmn.com

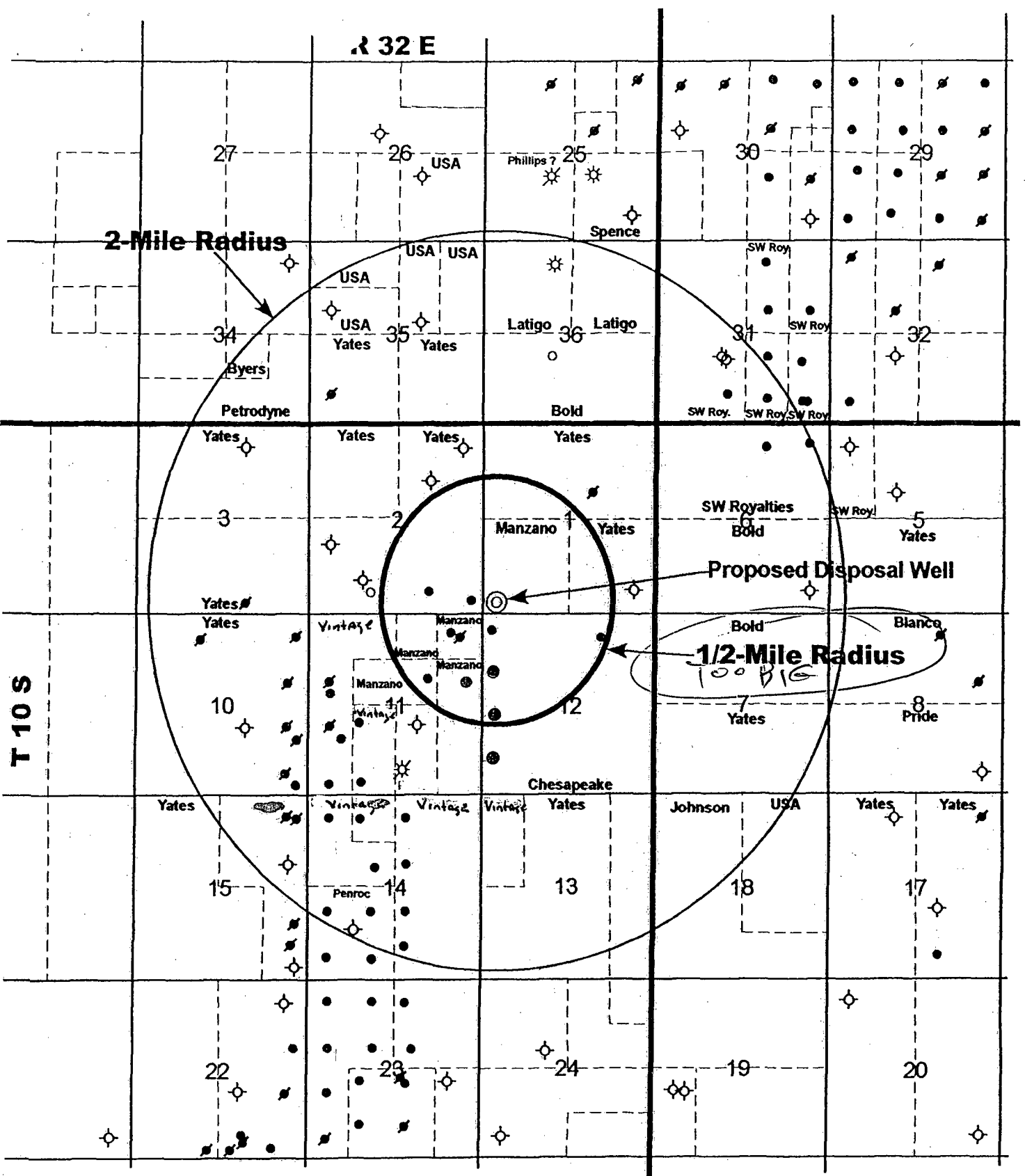
Telephone No. 505-623-1996

For State Use Only

APPROVED BY: [Signature] TITLE PETROLEUM ENGINEER DATE DEC 16 2005

Conditions of Approval (if any):

2A Mescalero Upper Permian North



Application For Authorization To Inject Item V- Lease & Well Map

Manzano, LLC
Peter Grande-State #1
Section 1 - T10S - R32E
Lea County, New Mexico

Application Requirement No. VI
Well Data & Wellbore Diagram of Wells in Area of Review

Yates Petroleum
Mescalero ARL State #1

API #30-025-33969
 330' FSL & 330' FEL
 Sec. 2 - T10S - R32E
 Lea County, NM
 Completed in 11/97

CASING DATA					
	Hole Size	Casing Size	Setting Depth	Sacks of Cement	Top Of Cement
	14 3/4"	11 3/4"	405'	300sx	Circulated
	11"	8 5/8"	2995'	1200sx	Circulated
	7 7/8"	5 1/2"	9535'	300sx	7500' - Rptd

11 3/4" @ 405'
 Cemented w/300sx Class "C" - Circ

8 5/8" @ 2995'
 Cemented w/1200sx - Circulated

Prior to starting water disposal into Peter Grande, Yates Pet
 will squeeze cement across injection interval
 Current top Of Cement @ 7500'

Top of Cement @ 7500' ?

2 7/8" Tubing @ 8708'?

- Perforations @ 8668' - 8684' (Bough "B")
- Perforations @ 8718' - 8728' (Bough "C")
- Perforations @ 8831' - 8864' (Bough)
- Perforations @ 8996'-9002' (Bough)
- Perforations @ 9242-9246' (Cisco)
- Perforations @ 9435'-9456' (Cisco?)

PBTD 9482'
 5 1/2" set @ 9535'
 Cement 5 1/2" w/300sx

TD @ 9535

Application Requirement No. VI
Well Data & Wellbore Diagram of Wells in Area of Review

Yates Petroleum
Mescalero ARL State #2

API #30-025-37039
 330' FSL & 1650' FEL
 Sec. 2 - T10S - R32E
 Lea County, NM
 Completed in 05/05

CASING DATA					
	Hole Size	Casing Size	Setting Depth	Sacks of Cement	Top Of Cement
	17 1/2"	13 3/8"	425'	440sx	Circulated
	12 1/4"	9 5/8"	3500'	1120sx	Circulated
	8 3/4"	5 1/2"	10470'	2050sx	1000'-Calc

13 3/8" Set @ 425'
 Cemented w/440sx Class "C" - Circ

9 5/8" @ 3500'
 Cemented w/1120sx - Circulated

Calculated Top of Cement @ 1000'

2 7/8" Tubing to 9301'

Perforations @ 8614'-8628' (Bough "A")

Perforations @ 8744'-8748' (Bough "B")

Perforations @ 8750'-8804' (Bough "C")

Perforations @ 8825'-9040' (Bough)

Perforations @ 9275'-80' (Cisco)

Perforations @ 9326' - 9350' (Canyon)

Perforations @ 9573'-9601' (Strawn)

Perforations @ 9648'-9684' (Strawn)

Perforations @ 9758'-9762' (Strawn)

Perforations @ 9898'-9967' (Strawn)

Perforations @ 10261'-10290" (Strawn)

Perforations @ 10380'-10411' (Atoka)

TD @ 10470'

CIBP @ 10200' w/35' Cement

Composite Bridge Plug @ 10360'

PBTD 10200'

5 1/2" set @ 10470'

Cement 5 1/2" w/2050sx (Calculated TOC @ 1000')

*One Stage
1508'*

*1582 = Puzos
2152 = Yates
3384 = SA
4774 = GOR
6226 = Tubing
7080 = ABO*

*1550
50:50 POZ H' Fel (2.45 yield) Lead
021.35 + Tail
+ 500 15:11 POZ C'*

Submit 3 Copies To Appropriate District Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
May 27, 2004

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO.
30-025-37039
5. Indicate Type of Lease
STATE ☒ FEE ☐
6. State Oil & Gas Lease No.
VA-0621

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☒ Other

2. Name of Operator
Yates Petroleum Corporation

3. Address of Operator
105 S. 4th Street, Artesia, NM 88210

4. Well Location
Unit Letter O : 660 feet from the South line and 1650 feet from the East line
Section 2 Township 10S Range 32E NMPM Lea County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
4244' GR

Pit or Below-grade Tank Application ☐ or Closure ☐

Pit type _____ Depth to Groundwater _____ Distance from nearest fresh water well _____ Distance from nearest surface water _____

Pit Liner Thickness: _____ mil Below-Grade Tank: Volume _____ bbls; Construction Material _____

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P & A ☐
CASING/CEMENT JOB ☐

OTHER: Production Casing ☒

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

3-7-05 TD 8-3/4" hole to 10470' @ 3:00 a.m. Ran 5-1/2" 17# casing set @ 10470'. Cemented w/1550 sx 50:50:10 POZ "H" gel w/additives. Tailed in w/500 sx 15:61:11 POZ "C" w/additives. TOC calculated @ 1000'.

RECEIVED
Hobbs
OCD

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Stormi Davis TITLE Regulatory Compliance Technician DATE 3-24-05

Type or print name Stormi Davis E-mail address: stormid@vncnm.com Telephone No. 505-748-1471
For State Use Only

APPROVED BY: [Signature] TITLE _____ DATE MAR 29 2005
Conditions of Approval (if any): _____

Application Requirement No. VI
Well Data & Wellbore Diagram of Wells in Area of Review

Chesapeake Operating, Inc.
Jordan 12 State #2

API #30-025-36716
 510' FNL & 330' FWL
 Sec. 12 - T10S - R32E
 Lea County, NM
 Completed in 08/04

CASING DATA					
	Hole Size	Casing Size	Setting Depth	Sacks of Cement	Top Of Cement
	17 1/2"	13 3/8"	412'	375sx	Circulated
	11"	8 5/8"	3411'	1090sx	Circulated
	7 7/8"	5 1/2"	9695'	1440sx	Unknown

13 3/8" @ 411'
 Cemented w/375sx Class "C" - Circ

8 5/8" @ 3411'
 Cemented w/1090sx - Circulated

2 7/8" Tubing to 8545'

*3400 SA
 4770 92
 QZ
 2*

CIBP @ 8934' →

Perforations @ 8637'-8834' (Bough)

Perforations @ 9105'-9143' (Cisco)

Perforations @ 9186'-9196' (Cisco)

Perforations @ 9215'-9219' (Cisco)

Perforations @ 9266'-9299' (Canyon)

Perforations @ 9439'-9610' (Canyon)

CIBP @ 9390' →

PBTD 9650'
 5 1/2" set @ 9695'
 Cement 5 1/2" w/400sx

TD @ 9695'

(1440 SX)
*950 (2.5)
 + 490 (1.3)*

Application Requirement No. VI
Well Data & Wellbore Diagram of Wells in Area of Review

Chesapeake Operating, Inc.
Jordan 12 State #3

API #30-025-37050
 1650' FNL & 330' FWL
 Sec. 12 - T10S - R32E
 Lea County, NM
 Completed in 01/06

CASING DATA					
	Hole Size	Casing Size	Setting Depth	Sacks of Cement	Top Of Cement
	17 1/2"	13 3/8"	430'	318sx	Circulated
	11"	8 5/8"	3404'	585sx	Circulated?
	7 7/8"	5 1/2"	10496'	2685sx	Circulated?

13 3/8" @ 430'
 Cemented w/318sx Class "C" - Circ

8 5/8" @ 3404'
 Cemented w/585sx - Circulated?

2 7/8" Tubing to 8545'

7 7/8" Hole

Perforations @ 9450'-9806' (Cisco)

CIBP @ 10175'

Perforations @ 10212'-10216" (Atoka)

PBTD 10145'
 5 1/2" set @ 10496
 Cement 5 1/2" w/2685sx

TD @ 10500'

*865 @ 2.38
 790 @ 1.25
 1655
 10 @ 2760*

Application Requirement No. VI
Well Data & Wellbore Diagram of Wells in Area of Review

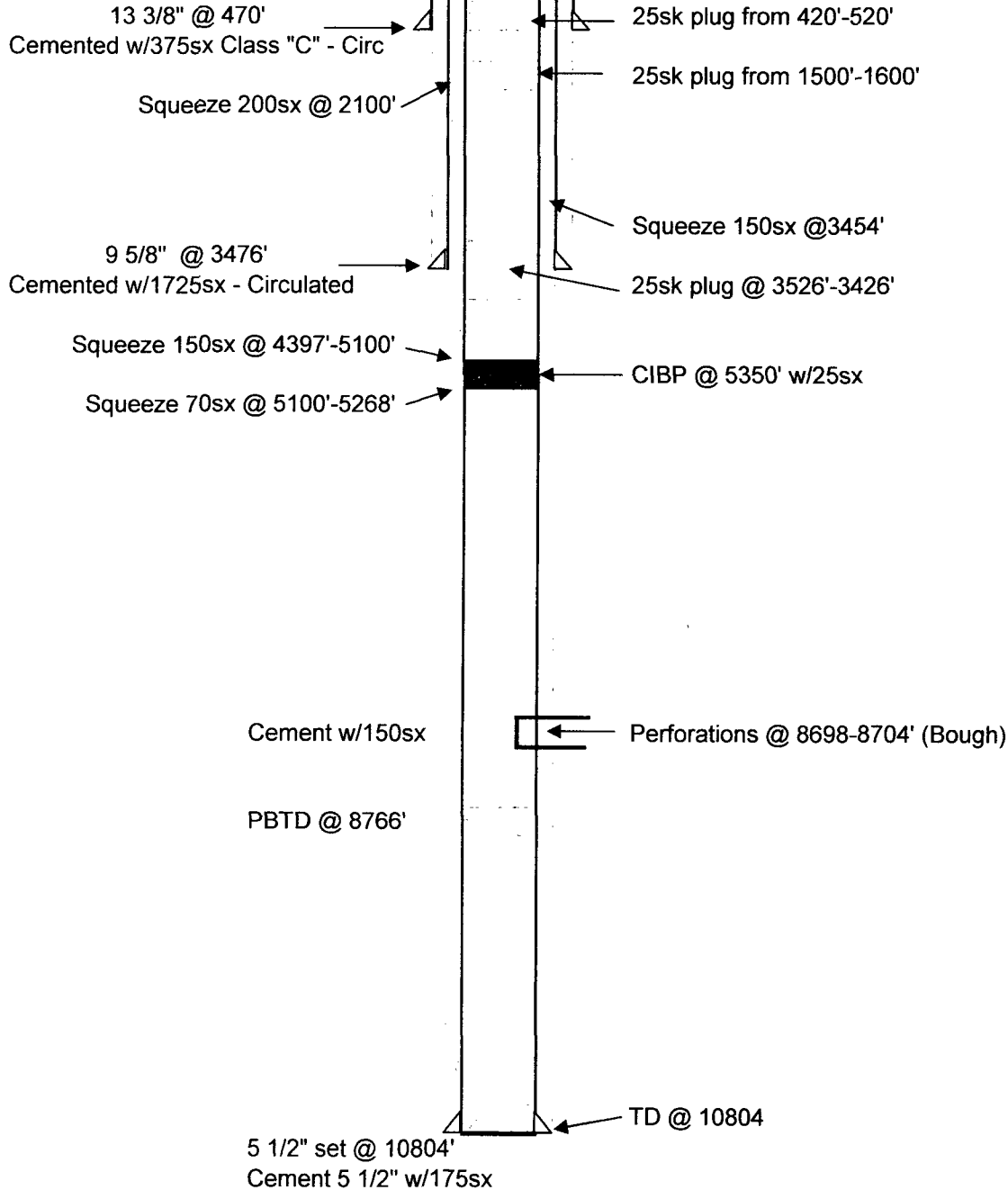
Manzano Oil Corp.
Pistol Pete #1

API #30-025-00015
 510' FNL & 660' FEL
 Sec. 11 - T10S - R32E
 Lea County, NM
 P & A in January, 1999

10sk surface plug

CASING DATA

	<u>Hole Size</u>	<u>Casing Size</u>	<u>Setting Depth</u>	<u>Sacks of Cement</u>	<u>Top Of Cement</u>
	17 1/2"	13 3/8"	470'	375sx	Circulated
	12 1/4"	9 5/8"	3476'	1725sx	Circulated
	8 3/4"	5 1/2"	10804'	150sx	Unknown



Application Requirement No. VI

Well Data & Wellbore Diagram of Wells In Area of Review

Manzano, LLC

3-Pete State #1

Mescalero North
578' FNL & 965' FEL
Sec 11, T-10S, R-32E
Lea County, New Mexico

CASING DATA

Hole Size	Casing Size	Setting Depth	Sacks of Cement	Top Of Cement
17 1/2"	13 3/8"	375'	425sx	Circulated
12 1/4"	9 5/8"	3400'	1250sx	Circulated
7 7/8"	5 1/2"	9500'	1925sx	4000'-CBL

13 3/8" Cemented w/425sx "C"/Circ 125sx

9 5/8" Cemented w/1250sx "C"/Circ 300sx

TOC @ 4000' (Bond Log)

2 7/8" Tubing to 9450'

DV @ 8075'

8708'-8720' (Bough)

8746'-8758' (Bough)

8852'-8858' (Bough)

8990'-8999' (Cisco)

9236'-9242' (Cisco)

9281'-9292' (Canyon)

9460'-9464' (Canyon)

PBTD 9478' (KB)

5 1/2" TD 9500' (KB)

1st Stage Cemented w/200sx "C" + 113

2nd Stage Cemented w/1725sx "C"

$$\begin{array}{r} \text{above DV:} \\ 225 \text{ (35.65 C)} \\ + 1500 \text{ (15.61 C)} \\ \hline 1725 \text{ SX C?} \end{array}$$

$$\begin{array}{r} \text{Below DV:} \\ 200 \text{ @ } 2.04 \\ + 113 \\ \hline 313 \text{ @ } 2.04 \end{array}$$

Application Requirement No. VI.

Well Data & Wellbore Diagram of Wells in Area of Review

Manzano, LLC
30-025-37568
Four Pete Sake #2
1955' FNL & 437' FEL
Sec 11, T-10S, R-32E
Lea County, New Mexico
Completed 04/06

CASING DATA				
Hole Size	Casing Size	Setting Depth	Sacks of Cement	Top Of Cement
17 1/2"	13 3/8"	400'	400sx	Circulated
12 1/4"	8 5/8"	3400'	1450sx	Circulated
7 7/8"	5 1/2"	9050'	2275sx	Circulated

13 3/8" @ 400'
Cemented w/400sx - circ 100sx

8 5/8" @ 3400'
Cemented w/1450sx - Circ

2 7/8" tubing @ 8895'

8576'-8579' (Bough) == =

8664'-8670' (Bough) == =

8713'-8714' (Bough) == =

8848'-8853' (Bough) == =

PBTD @ 9000' (KB)

5 1/2" TD 9050' (KB)

Application Requirement No. VI.

Well Data & Wellbore Diagram of Wells in Area of Review

Manzano, LLC

Four Pete Sake #1

1775' FNL & 1650' FEL

Sec 11, T-10S, R-32E

Lea County, New Mexico

Completed 8/03

CASING DATA

Hole Size	Casing Size	Setting Depth	Sacks of Cement	Top Of Cement
17 1/2"	13 3/8"	402'	400sx	Circulated
12 1/4"	9 5/8"	3388'	1100sx	Circulated
7 7/8"	5 1/2"	9530'	1700sx	2750'-CBL

13 3/8" Cemented w/400sx "C"

Circ 100sx

TOC @ 2750' (Bond Log)

9 5/8" Cemented w/1100sx "C"

Circ 100sx

2 7/8" tubing @ 7375'

8564'-8568' (Bough)

8656'-8660' (Bough)

8738'-8741' (Bough)

8744'-8749' (Bough)

BJ Cement Retainer @ 8872'

Casing Collapse @ 8885'

BJ Inflatable Packer @ 8956'

8915' Squeeze Holes

8981'-8990' (Cisco)

RBP @ 9101'

9175'-9180' (Cisco)

CIBP @ 9205'

9210'-9216' (Cisco)

9427'-9431' (Canyon)

9459'-9462' (Canyon)

9484'-9494' (Canyon)

9507'-9512' (Canyon)

PBTD Drilled Out => 9525' (KB)

5 1/2" TD 9530' (KB)

1st Stage Cemented w/1450sx "40:60 Poz Nitratified Foam Cement"

2nd Stage Cemented w/254sx "H"

32% OF THE TUBING

1450 SX 40:60 Poz @ 2.35
224 @ 1.5

Application Requirement No. VI
Well Data & Wellbore Diagram of Wells in Area of Review

Chesapeake Operating, Inc.
Jordan 12 State #1

API #30-025-33532
 660' FNL & 1650' FEL
 Sec. 12 - T10S - R32E
 Lea County, NM
 Completed in 10/96

CASING DATA					
	Hole Size	Casing Size	Setting Depth	Sacks of Cement	Top Of Cement
	17 1/2"	13 3/8"	400'	350sx	Circulated
	12 1/4"	8 5/8"	3597'	1200sx	Circulated
	7 7/8"	5 1/2"	9535'	650sx	5600' -Calc

13 3/8" @ 400'
 Cemented w/300sx Class "C" - Circ

8 5/8" @ 3597'
 Cemented w/1200sx - Circulated

2 7/8" Tubing to 8833'

Estimated Top of Cement @ 5600'

*JUST
OUT
of AOR*

Perforations @ 8833'-8838' (Bough "B")

Perforations @ 8851'-8857' (Bough "C")

Perforations @ 8898'-8905' (Squeezed off)

PBTD 9195'
 5 1/2" set @ 9250'
 Cement 5 1/2" w/650sx

TD @ 9250'

Application Requirement No. VI
Well Data & Wellbore Diagram of Wells in Area of Review

Chesapeake Operating, Inc.
Jordan 12 State #4

API #30-025-37766
2310' FSL & 330' FWL
Sec. 12 - T10S - R32E
Lea County, NM

Completed in 06/06

CASING DATA					
	Hole Size	Casing Size	Setting Depth	Sacks of Cement	Top Of Cement
	17 1/2"	13 3/8"	423'	380sx	Circulated
	11"	8 5/8"	3411'	1225sx	Circulated
	7 7/8"	5 1/2"	10000'	1425sx	Circulated?

13 3/8" @ 423' →
Cemented w/380sx Class "C" - Circ

8 5/8" @ 3411' →
Cemented w/1225sx - Circulated

← 2 7/8" Tubing to 9380'

Perforations @ 9484"-9684' (Cisco)

PBTD 9907' →
5 1/2" set @ 10000"
Cement 5 1/2" w/1425sx

← TD @ 10000'

OUT of AOR



Water Analysis

Date: 15-Dec-05

2708 West County Road, Hobbs NM 88240

Phone (505) 392-5556 Fax (505) 392-7307

Analyzed For

Company	Well Name	County	State
Monzano	3 Pete	Lea	New Mexico

Sample Source

Sample #

1

Formation

unknown

Depth

Specific Gravity	1.045	SG @ 60 °F	1.045
pH	7.20	Sulfides	Present
Temperature (°F)	62	Reducing Agents	Not Tested

Cations

Sodium (Calc)	in Mg/L	23,320	in PPM	22,308
Calcium	in Mg/L	2,200	in PPM	2,104
Magnesium	in Mg/L	264	in PPM	263
Soluable Iron (FE2)	in Mg/L	10.0	in PPM	10

Anions

Chlorides	in Mg/L	40,000	in PPM	38,263
Sulfates	in Mg/L	120	in PPM	115
Bicarbonates	in Mg/L	649	in PPM	621
Total Hardness (as CaCO3)	in Mg/L	6,600	in PPM	6,313
Total Dissolved Solids (Calc)	in Mg/L	66,563	in PPM	63,873
Equivalent NaCl Concentration	in Mg/L	63,300	in PPM	60,551

Scaling Tendencies

*Calcium Carbonate Index 1,427,888

Below 500,000 Remote / 500,000 - 1,000,000 Possible / Above 1,000,000 Probable

*Calcium Sulfate (Gyp) Index 264,000

Below 500,000 Remote / 500,000 - 10,000,000 Possible / Above 10,000,000 Probable

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

Remarks

RW=0.05 @6

Report # 2049



Water Analysis

Date: 15-Dec-05

2708 West County Road, Hobbs NM 88240

Phone (505) 392-5556 Fax (505) 392-7307

Analyzed For

Company	Well Name	County	State
Monzano	4 Pete Sake	Lea	New Mexico

Sample Source Sample # 1

Formation	unknown	Depth	
Specific Gravity	1.165	SG @ 60 °F	1.167
pH	6.74	Sulfides	Absent
Temperature (°F)	70	Reducing Agents	Not Tested

Cations

Sodium (Calc)	in Mg/L	100,953	in PPM	86,507
Calcium	in Mg/L	2,000	in PPM	1,714
Magnesium	in Mg/L	480	in PPM	411
Soluble Iron (FE2)	in Mg/L	0.0	in PPM	0

Anions

Chlorides	in Mg/L	158,000	in PPM	135,390
Sulfates	in Mg/L	2,200	in PPM	1,885
Bicarbonates	in Mg/L	459	in PPM	393

Total Hardness (as CaCO3)	in Mg/L	7,000	in PPM	5,998
Total Dissolved Solids (Calc)	in Mg/L	264,092	in PPM	228,300
Equivalent NaCl Concentration	in Mg/L	225,396	in PPM	193,141

Scaling Tendencies

*Calcium Carbonate Index 917,440

Below 500,000 Remote / 500,000 - 1,000,000 Possible / Above 1,000,000 Probable

*Calcium Sulfate (Gyp) Index 4,400,000

Below 500,000 Remote / 500,000 - 10,000,000 Possible / Above 10,000,000 Probable

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

Remarks

RW=0.05 @6

Report # 2048

Manzano, LLC

P.O. Box 2107

Roswell, New Mexico 88202-2107

(505) 623-1996

12/06/07

Yates Petroleum Corporation
105 South Fourth Street
Artesia, NM 88210

RE: Application For Authorization To Inject
Manzano, LLC
Peter Grande-State #1
Section 1-T10S-R32E
Lea County, NM

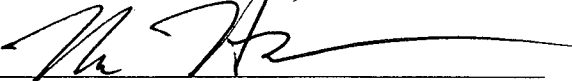
Manzano, LLC has submitted an *Application For Authorization To Inject* with the New Mexico Oil Conservation Division which, upon approval by the NMOCD, would allow Manzano to convert the above referenced well to a produced water disposal well.

As provided for in Item XIII of the Application, Manzano is required to furnish, by certified or registered mail, a copy of this Application to each offset operator within one-half mile of the above referenced well. Please find attached hereto a copy of the Application.

Should you have any questions please call me at 505-623-1996.

Sincerely,

MANZANO, LLC



Mike Hanagan

Sent via certified mail 12/6/07

Certified mail receipt #7006 2760 0003 8631 8258

Manzano, LLC

P.O. Box 2107

Roswell, New Mexico 88202-2107

(505) 623-1996

12/06/07

Vintage Petroleum LLC
110 W. 7th Street
Tulsa, OK 74119

RE: Application For Authorization To Inject
Manzano, LLC
Peter Grande-State #1
Section 1-T10S-R32E
Lea County, NM

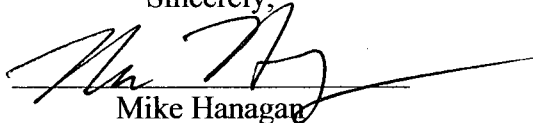
OUT OF ORDER

Manzano, LLC has submitted an *Application For Authorization To Inject* with the New Mexico Oil Conservation Division which, upon approval by the NMOCD, would allow Manzano to convert the above referenced well to a produced water disposal well.

As provided for in Item XIII of the Application, Manzano is required to furnish, by certified or registered mail, a copy of this Application to each offset operator within one-half mile of the above referenced well. Please find attached hereto a copy of the Application.

Should you have any questions please call me at 505-623-1996.

Sincerely,


Mike Hanagan

Sent via certified mail 12/6/07

Certified mail receipt #7006 2760 0003 8631 8289

Manzano, LLC

P.O. Box 2107

Roswell, New Mexico 88202-2107

(505) 623-1996

12/06/07

Chesapeake Operating Inc
PO Box 11050
Midland, TX 79702-8050

RE: Application For Authorization To Inject
Manzano, LLC
Peter Grande-State #1
Section 1-T10S-R32E
Lea County, NM

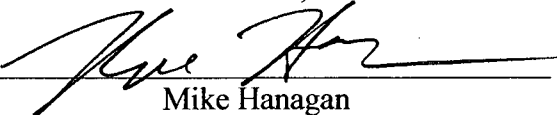
Manzano, LLC has submitted an *Application For Authorization To Inject* with the New Mexico Oil Conservation Division which, upon approval by the NMOCD, would allow Manzano to convert the above referenced well to a produced water disposal well.

As provided for in Item XIII of the Application, Manzano is required to furnish, by certified or registered mail, a copy of this Application to each offset operator within one-half mile of the above referenced well. Please find attached hereto a copy of the Application.

Should you have any questions please call me at 505-623-1996.

Sincerely,

MANZANO, LLC


Mike Hanagan

Sent via certified mail 12/6/07

Certified mail receipt #7006 2760 0003 8631 8265

Manzano, LLC

P.O. Box 2107

Roswell, New Mexico 88202-2107

(505) 623-1996

12/06/07

New Mexico state Land Office
PO Box 1148
Santa Fe, NM 87504-1148

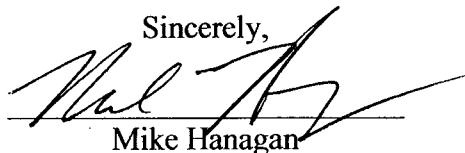
RE: Application For Authorization To Inject
Manzano, LLC
Peter Grande-State #1
Section 1-T10S-R32E
Lea County, NM

Manzano, LLC has submitted an *Application For Authorization To Inject* with the New Mexico Oil Conservation Division which, upon approval by the NMOCD, would allow Manzano to convert the above referenced well to a produced water disposal well.

As provided for in Item XIII of the Application, Manzano is required to furnish, by certified or registered mail, a copy of this Application to the owner of the surface of the land on which the above referenced well is located. As the State of New Mexico is the surface owner, please find attached hereto a copy of the Application (Manzano has also filed for an SWD easement with the State Land Office.

Should you have any questions please call me at 505-623-1996.

Sincerely,



Mike Hanagan

Sent via certified mail 12/6/07

Certified mail receipt #7006 2760 0003 8631 8272



Manzano, LLC

P.O. Box 2107
Roswell, New Mexico 88202-2107
(505) 623-1996
FAX (505) 625-2620

December 17, 2007

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

Re: Application for Authorization to Inject
Peter Grande State #1
Lea County, New Mexico

Gentlemen:

Enclosed is a copy of the Affidavit of Publication with a copy of the Legal Notice that ran in the Hobbs News-Sun on December 11, 2007 for the Peter Grande State #1 well.

Sincerely,

A handwritten signature in cursive script, appearing to read "Debbi Jeffers".

Debbi Jeffers

AFFIDAVIT OF PUBLICATION

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.

Beginning with the issue dated

December 11 2007

and ending with the issue dated

December 11 2007

Kathi Bearden

PUBLISHER

Sworn and subscribed to before

me this 11th _____ day of

December 2007
[Signature]

Notary Public.

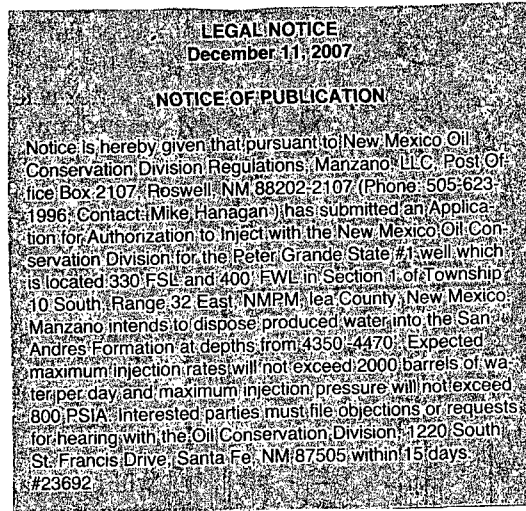
My Commission expires
February 07, 2009
(Seal)



OFFICIAL SEAL
DORA MONTZ
NOTARY PUBLIC
STATE OF NEW MEXICO

My Commission Expires: _____

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



01101555000 67547867
MANZANO OIL CORPORATION
P.O. BOX 2107
ROSWELL, NM 88202-2107

Advertising Receipt

Hobbs Daily News-Sun

201 N Thorp

P O Box 850

Hobbs, NM 88241-0850

Phone: (505) 393-2123

Fax: (505) 397-0610

KEN BARBIE
MANZANO OIL CORPORATION
ATTN: ACCOUNTS PAYABLE
P.O. BOX 2107
ROSWELL, NM 88202-2107

Cust#: 01101555-000

Ad#: 67547867

Phone: (505) 623-1996

Date: 12/05/07

Ad Taken: G2 Salesperson: D6 Classification: 672

Description	Start	Stop	Ins.	Cost/Day	Surcharges	Total
-------------	-------	------	------	----------	------------	-------

07 07 Daily News-Sun	12/11/07	12/11/07	1	23.52		23.52
Bold						1.00
Affidavit for legals						3.00

Payment Reference:

LEGAL NOTICE
December 11, 2007

NOTICE OF PUBLICATION

Notice is hereby given that pursuant to New Mexico Oil Conservation Division Regulations, Manzano, LLC, Post Office Box 2107, Roswell, NM 88202-2107 (Phone: 505-623-1996, Contact: Mike Hanagan) has submitted an Application for Authorization to Inject with the New Mexico Oil Conservation Division for the Peter Grande State #1 well which is located 330 FSL and 400' FWL in Section 1 of Township 10 South, Range 32 East, NMPM, Lea County, New Mexico. Manzano intends to dispose produced water into the San Andres Formation at depths from 4350'-4470'. Expected maximum injection rates will not exceed 2000 barrels of water per day and maximum injection pressure will not exceed 800 PSIA. Interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, NM 87505 within 15 days.

#23692

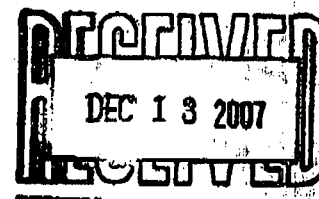
Total: 27.52

Tax: 1.84

Net: 29.36

Prepaid: 0.00

Total Due 29.36



SWD Order Number _____ Dates: Division Approved _____ District Approved _____

Well Name/Num: Peter GRANDE State #1 Date Spudded: 2/19/05API Num: (30-) 025-36993 County: LEA 231429 OGKIDFootages 330 FSL / 400 FUL Sec 1 Tsp 10S Rge 32EOperator Name: MANZANO, LLC Contact MICHAEL HANAGANOperator Address: P.O. BOX 2107 Roswell NM 88202

Current Status of Well: _____

Planned Work: _____

Inj. Tubing Size: 2 7/8

	Hole/Pipe Sizes	Depths	Cement	Top/Method
Surface	<u>13 1/2 13 3/8</u>	<u>400</u>	<u>400</u>	<u>CIRC</u>
Intermediate	<u>11" 8 5/8</u>	<u>3400</u>	<u>1317 (a) (b)</u>	<u>CIRC</u>
Production	<u>7 7/8 5 1/2</u>	<u>9400</u>	<u>2370 (470 + 1800 + 100)</u>	<u>CIRC</u>
Last DV Tool				
Open Hole/Liner				
Plug Back Depth				

Diagrams Included (Y/N): Before Conversion OK After Conversion ✓

Checks (Y/N): Well File Reviewed _____ ELogs in Imaging _____

Intervals:	Depths	Formation	Producing (Yes/No)
Salt/Potash			
Capitan Reef			
Cliff House, Etc:			
Formation Above			
Top Inj Interval	<u>4350</u>	<u>SA.</u>	
Bottom Inj Interval	<u>4470</u>	<u>SA.</u>	
Formation Below	<u>8792-8950</u>	<u>CISCO</u>	

See SWD-1021
R-12570
A-R State/Marathon ARL State #1

870 PSI Max. WHIP
Open Hole (Y/N) _____
Deviated Hole (Y/N) _____

Fresh Water: Depths: None Wells (Y/N) NO Analysis Included (Y/N): _____ Affirmative Statement ✓Salt Water Analysis: Injection Zone (Y/N/NA) Yes Disp Waters (Y/N/NA) _____ Types: _____Notice: Newspaper (Y/N) ✓ Surface Owner SLO Mineral Owner(s) _____Other Affected Parties: Yale, Chisum, VintageAOR/Repairs: NumActiveWells 6 Repairs? 1 Producing in Injection Interval in AOR NOAOR Num of P&A Wells 1 Repairs? NO Diagrams Included? Yes RBDMS Updated (Y/N) _____Well Table Adequate (Y/N) Yes AOR STRs: Sec _____ Tsp _____ Rge _____ UIC Form Completed (Y/N) _____

New AOR Table Filename _____ Sec _____ Tsp _____ Rge _____ This Form completed _____

Conditions of Approval: Sec _____ Tsp _____ Rge _____ Data Request Sent _____

SQZ 4082-4158 then Prof 4350-4470, S at CIBP C 4510'

Keep Trail of BH's on: Jordan 12 State #1

AOR Required Work: _____

Required Work to this Well: _____

1/27 under; Rub 40 OK