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: Manzano, LLC

ADDRESS: P.O. Box 2107, Roswell, NM 88202-2107

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 __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:

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: Michael G. Hanagan TITLE: Manager

SIGNATURE: _____ DATE: 12/28/05

E-MAIL ADDRESS: mhanagan@dfn.com

OIL CONSERVATION DIVISION
CASE NUMBER
EXHIBIT NUMBER

* 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: _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

APPLICATION FOR AUTHORIZATION TO INJECT

MANZANO, LLC
PETER GARNDE 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. Manzano believes that this Application should qualify for 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.

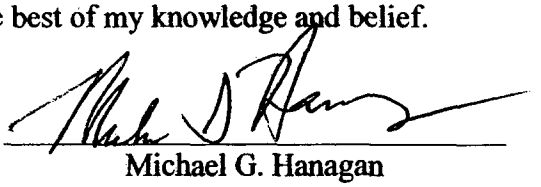
X. Well logs have been submitted to the NMOCD District 1 office in Hobbs, NM.

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. Also, see the attached Affidavit Of Publication from the Hobbs News-Sun along with the Legal Notice & Notice of Publication of this Application. A copy of this Application has also been sent to each leasehold operator within the are of review

XIV. CERTIFICATION: I, Michael G. Hanagan as Manager of Manzano, LLC, on this 28th day of December, 2005, 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

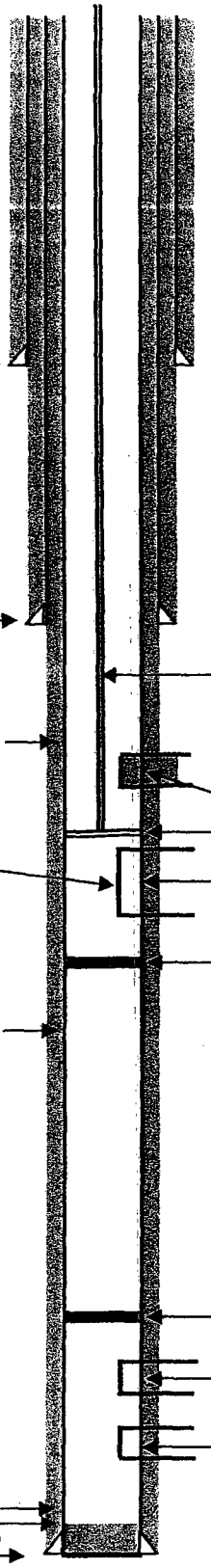
MANZANO, LLC
Peter Grande State #1

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

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

5 1/2" N-80 20# 9400'-8547'
PBTD 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

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

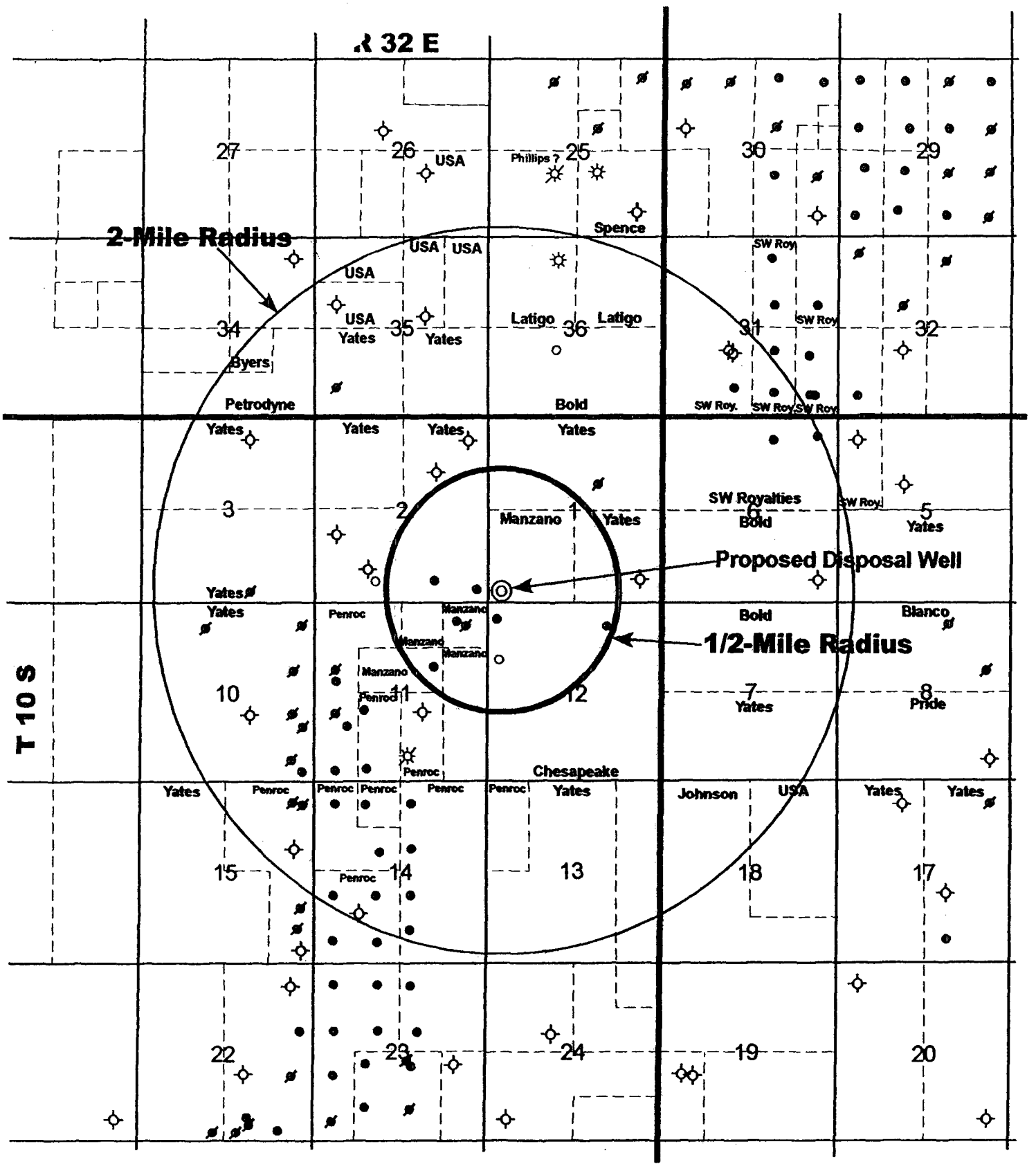
Perforations @ 4082'-4158' (San Andres)
Propose to Squeeze San Andres Perfs @ 4082'-4158'
Baker Arrowset Model AD-1 Plastic Lined Packer @ 4250'
Propose to Selectively Perf 4350'-4470'
Acidize w/10000 gl 28% acid

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

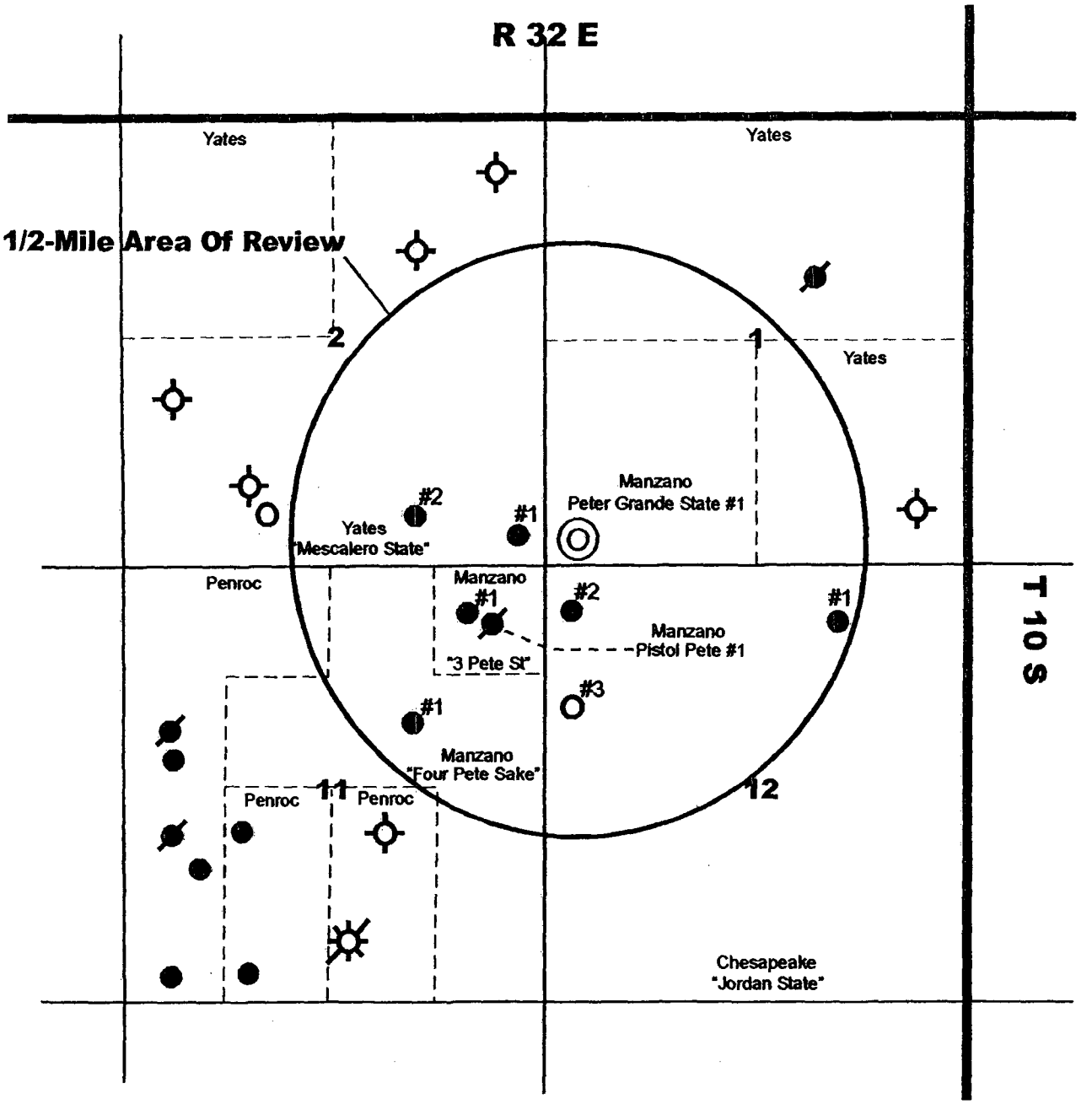
CIBP @ 8770' w/35' Class "H" on top

Perforations @ 8792'-8906' (Cisco)

Perforations @ 8895'-9095' (Cisco)



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 For Authorization To Inject
Item V- Area of Review Map
Manzano, LLC
Peter Grande-State #1
330' FSL & 400' FWL
Section 1 - T10S - R32E
Lea County, New Mexico

Application Requirement No. VI

Well Data & Wellbore Diagram of Wells in Area of Review

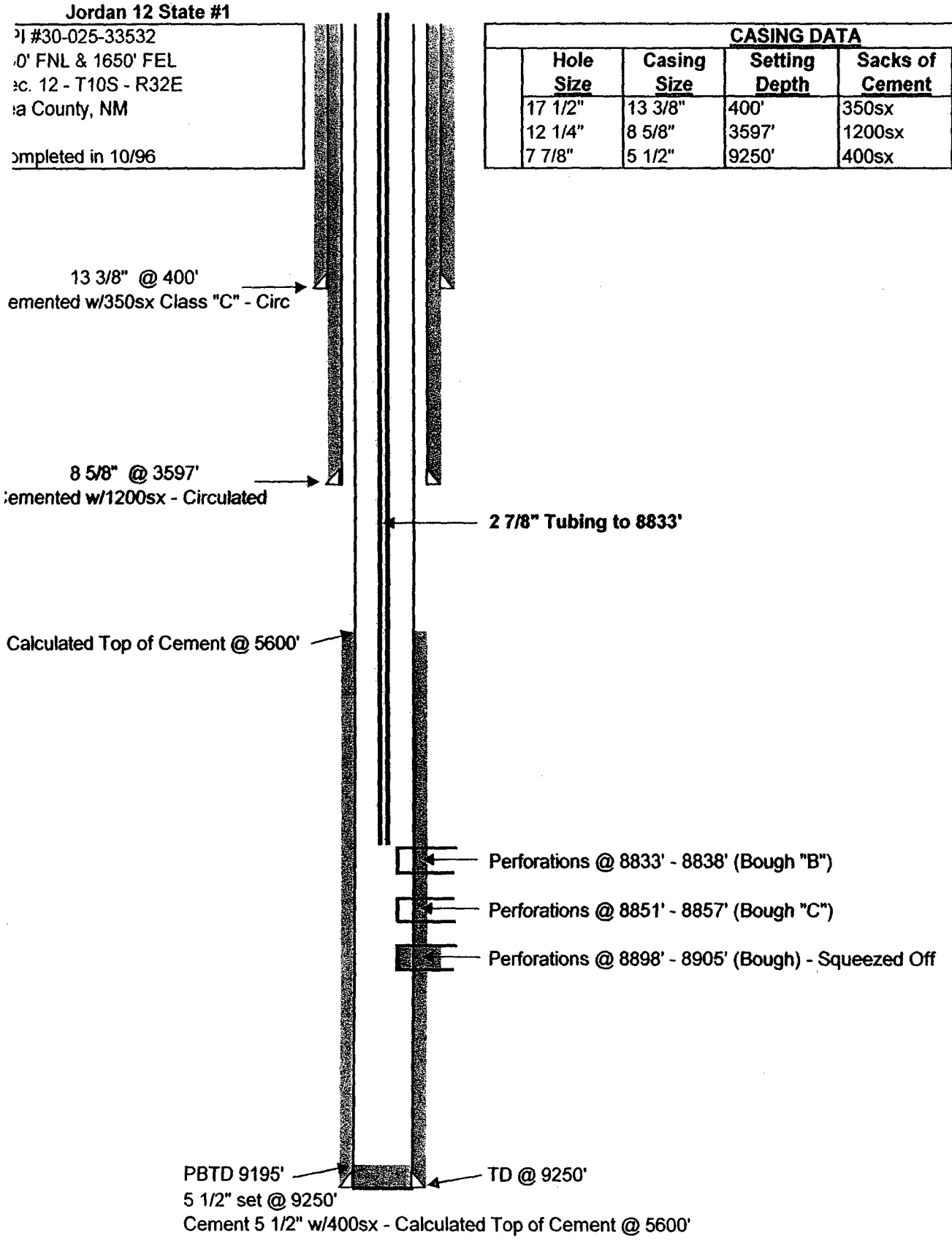
Chesapeake Operating, Inc.

Jordan 12 State #1

)I #30-025-33532
)0' FNL & 1650' FEL
:c. 12 - T10S - R32E
:a County, NM

)mpleted 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"	9250'	400sx	5600' - Calc



Application Requirement No. VI

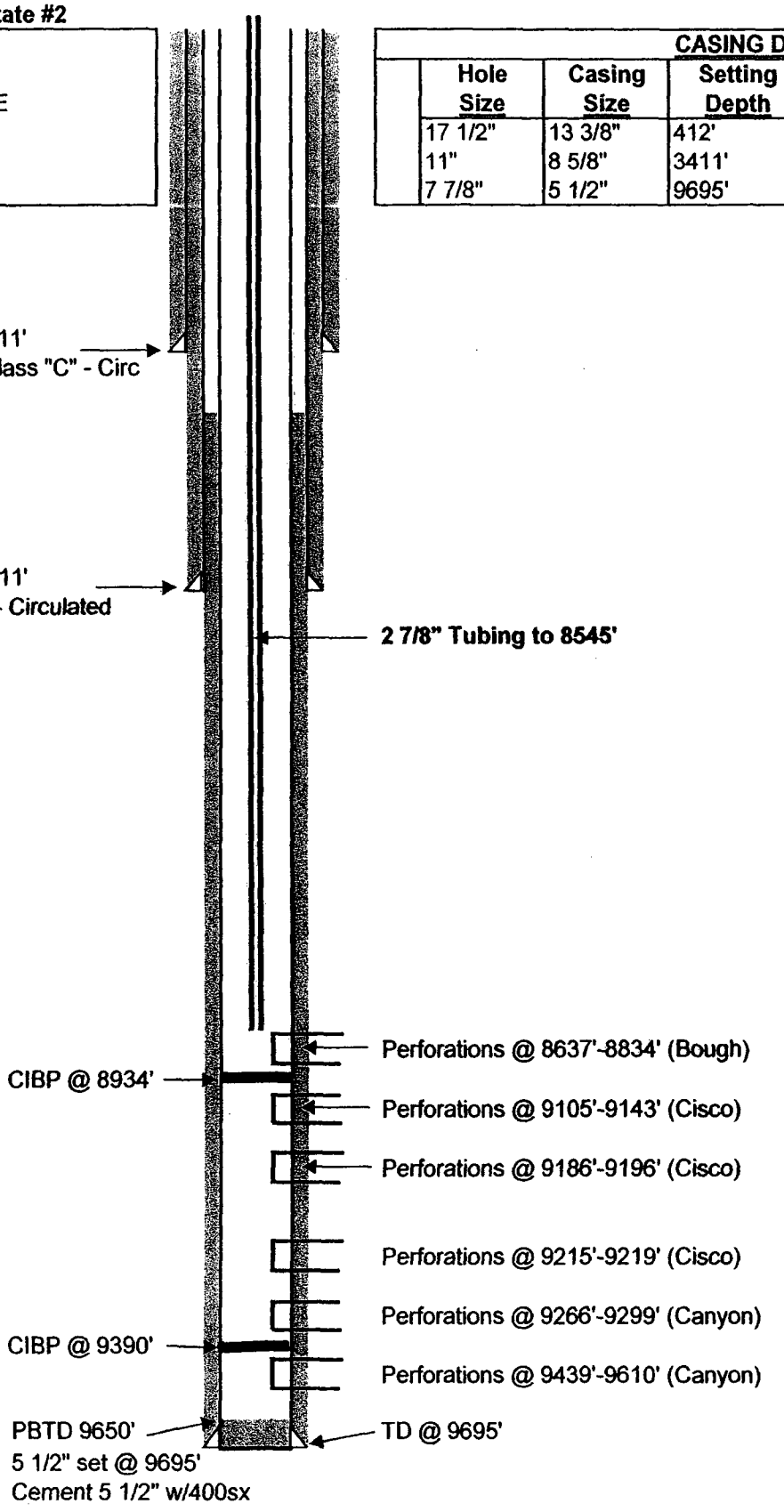
Well Data & Wellbore Diagram of Wells in Area of Review

Chesapeake Operating, Inc.
Jordan 12 State #2

PI #30-025-36716
0' FNL & 330' FWL
ec. 12 - T10S - R32E
ea County, NM

ompleted 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

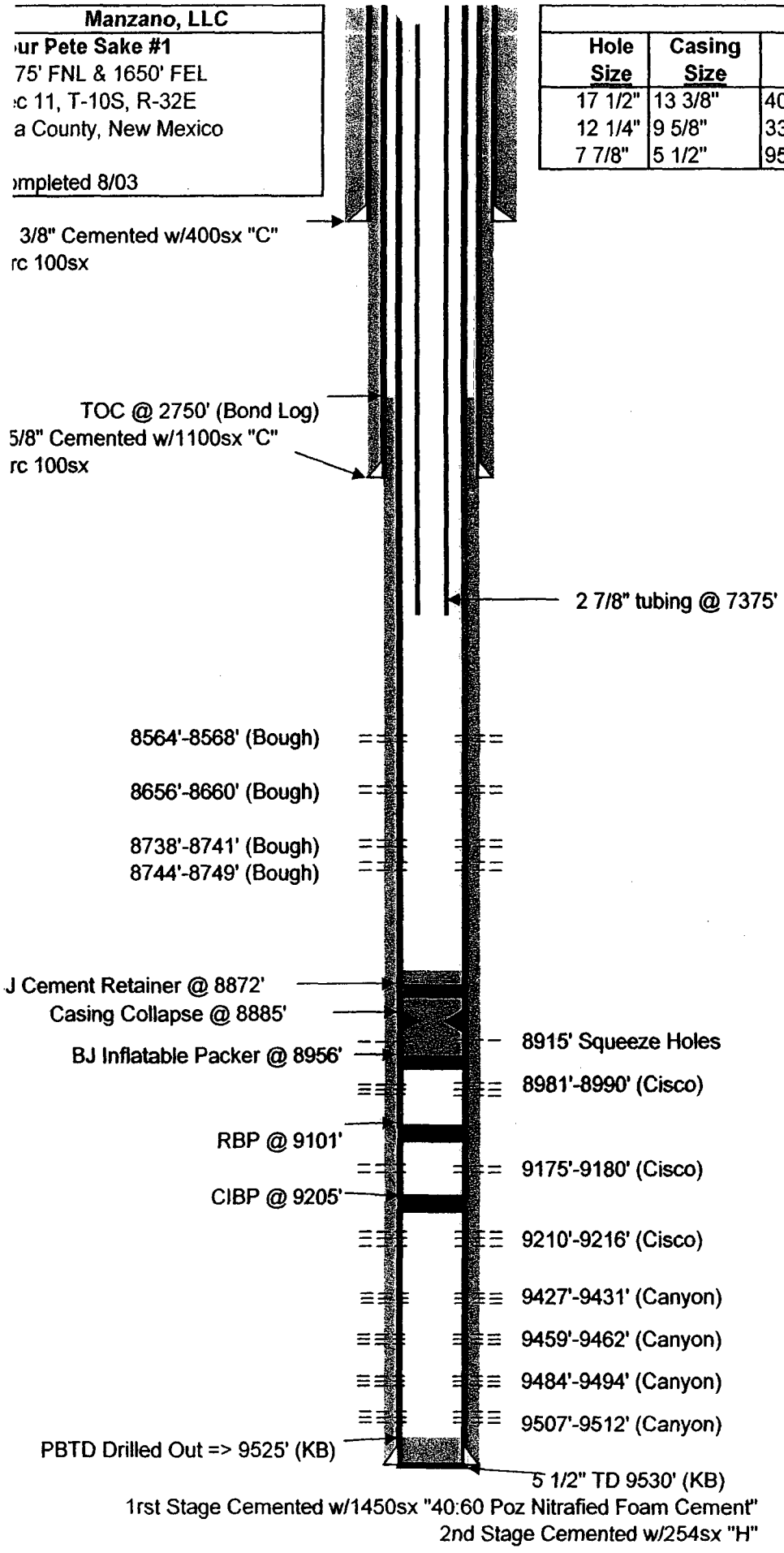


Well Data & Wellbore Di[illegible]am of Wells in Area of Review

Manzano, LLC
[illegible]ur Pete Sake #1
75' FNL & 1650' FEL
[illegible]c 11, T-10S, R-32E
a County, New Mexico

[illegible]mpleted 8/03

CA[illegible]G 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



1rst Stage Cemented w/1450sx "40:60 Poz Nitrafied Foam Cement"
2nd Stage Cemented w/254sx "H"

Application Requirement No. V1

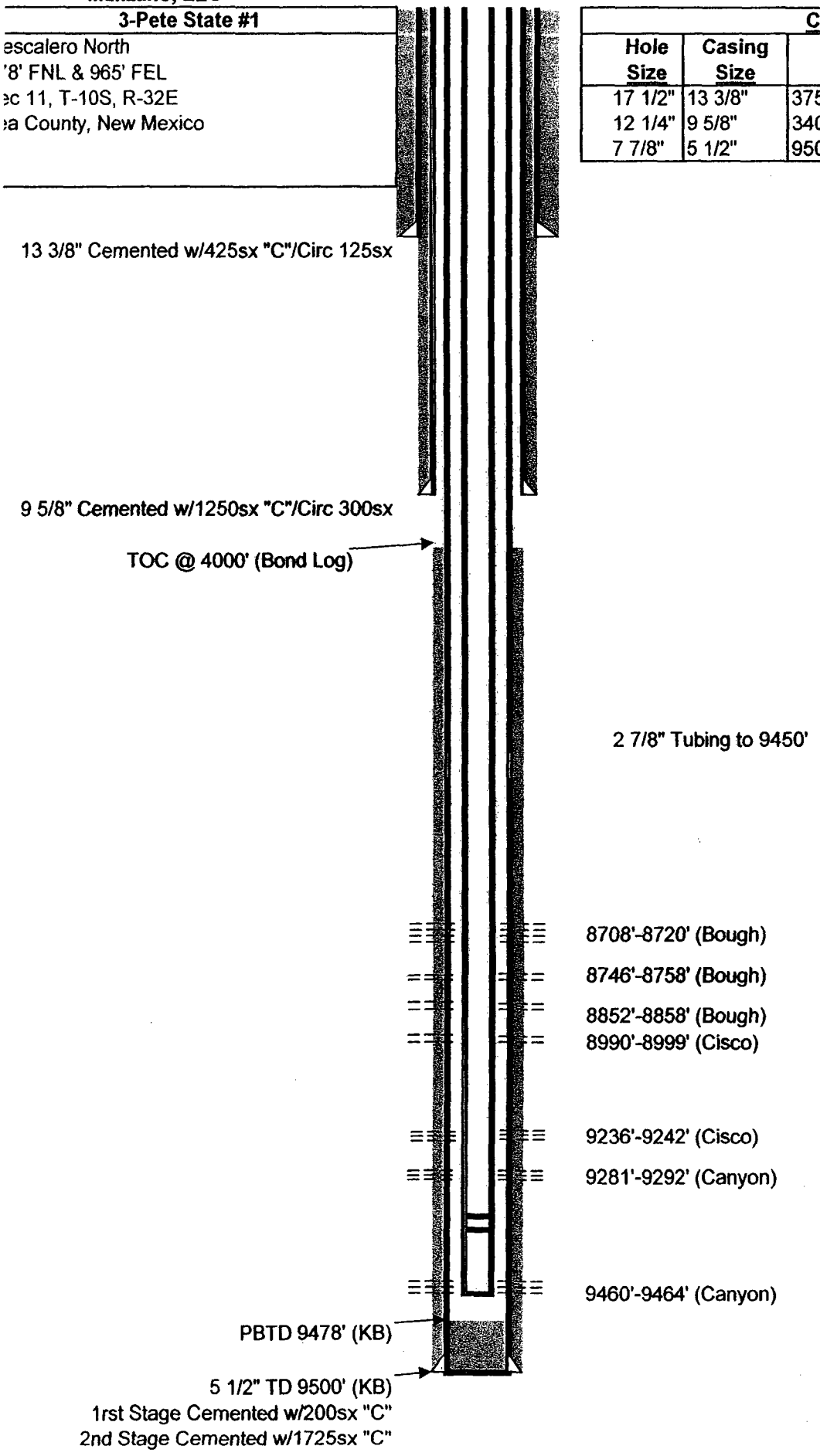
Well Data & Wellbore Diagram of Wells In Area of Review

Manzano, LLC

3-Pete State #1

escalero North
'8' FNL & 965' FEL
ec 11, T-10S, R-32E
ea 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



Application Requirement No. VI

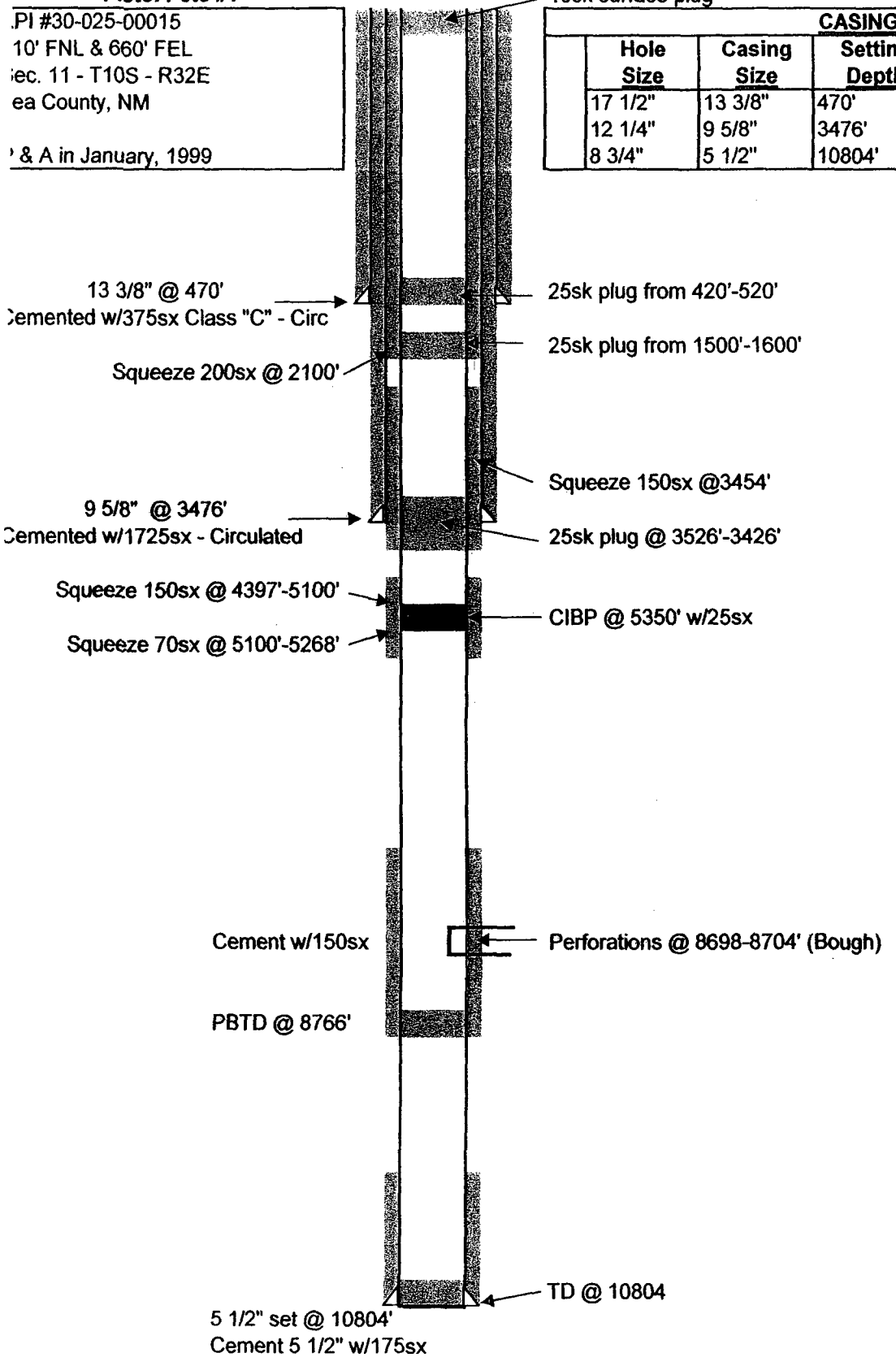
Well Data & Wellbore Diagram of Wells in Area of Review

Manzano Oil Corp.
Pistol Pete #1

.PI #30-025-00015
10' FNL & 660' FEL
ec. 11 - T10S - R32E
ea County, NM

' & A in January, 1999

CASING DATA				
Hole Size	Casing Size	Setting Depth	Sacks of Cement	Top Of Cement
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

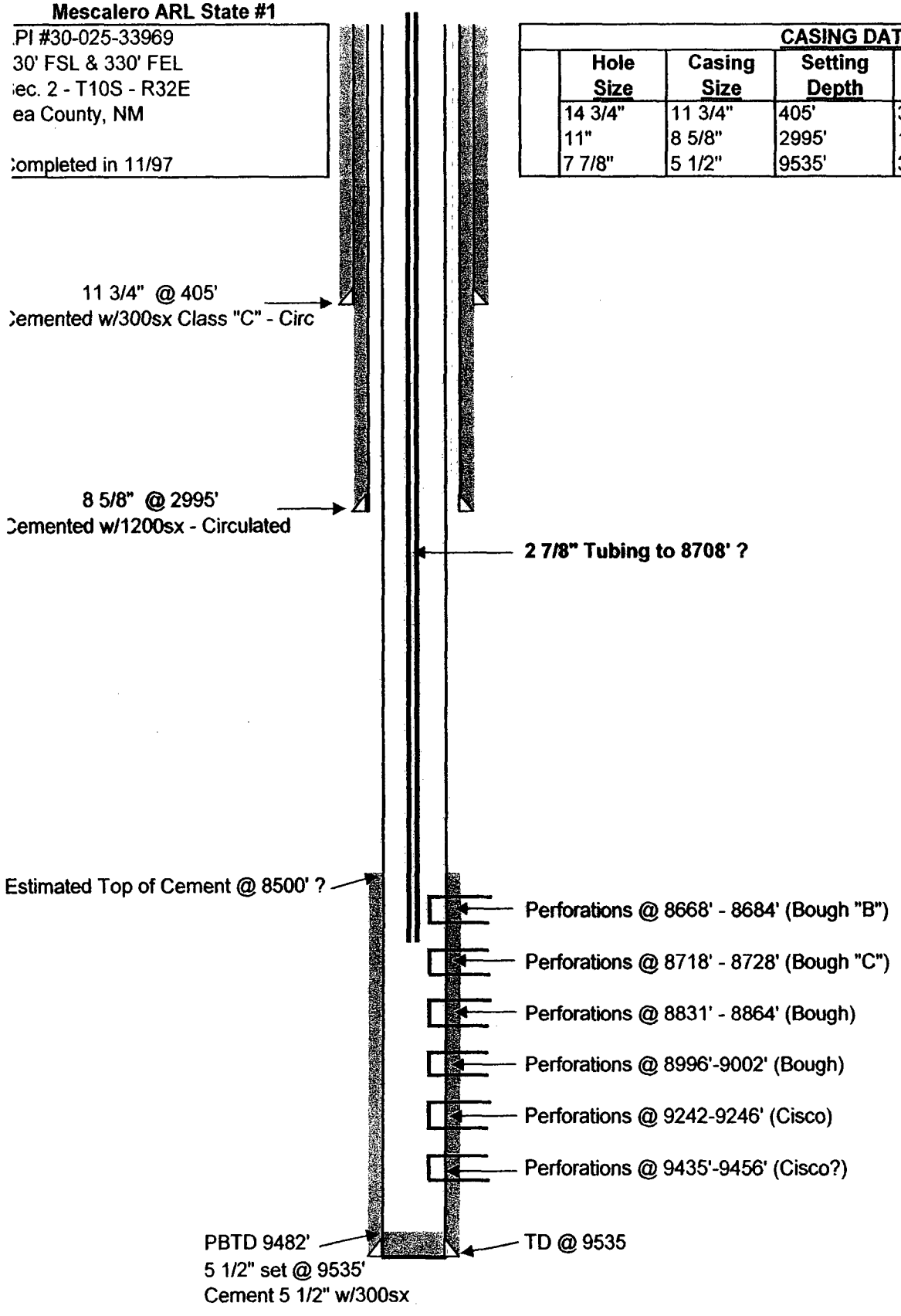
Well Data & Wellbore Diagram of Wells in Area of Review

Yates Petroleum
Mescalero ARL State #1

PI #30-025-33969
30' FSL & 330' FEL
ec. 2 - T10S - R32E
ea County, NM

ompleted 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	8500' - Est.



Application Requirement No. VI

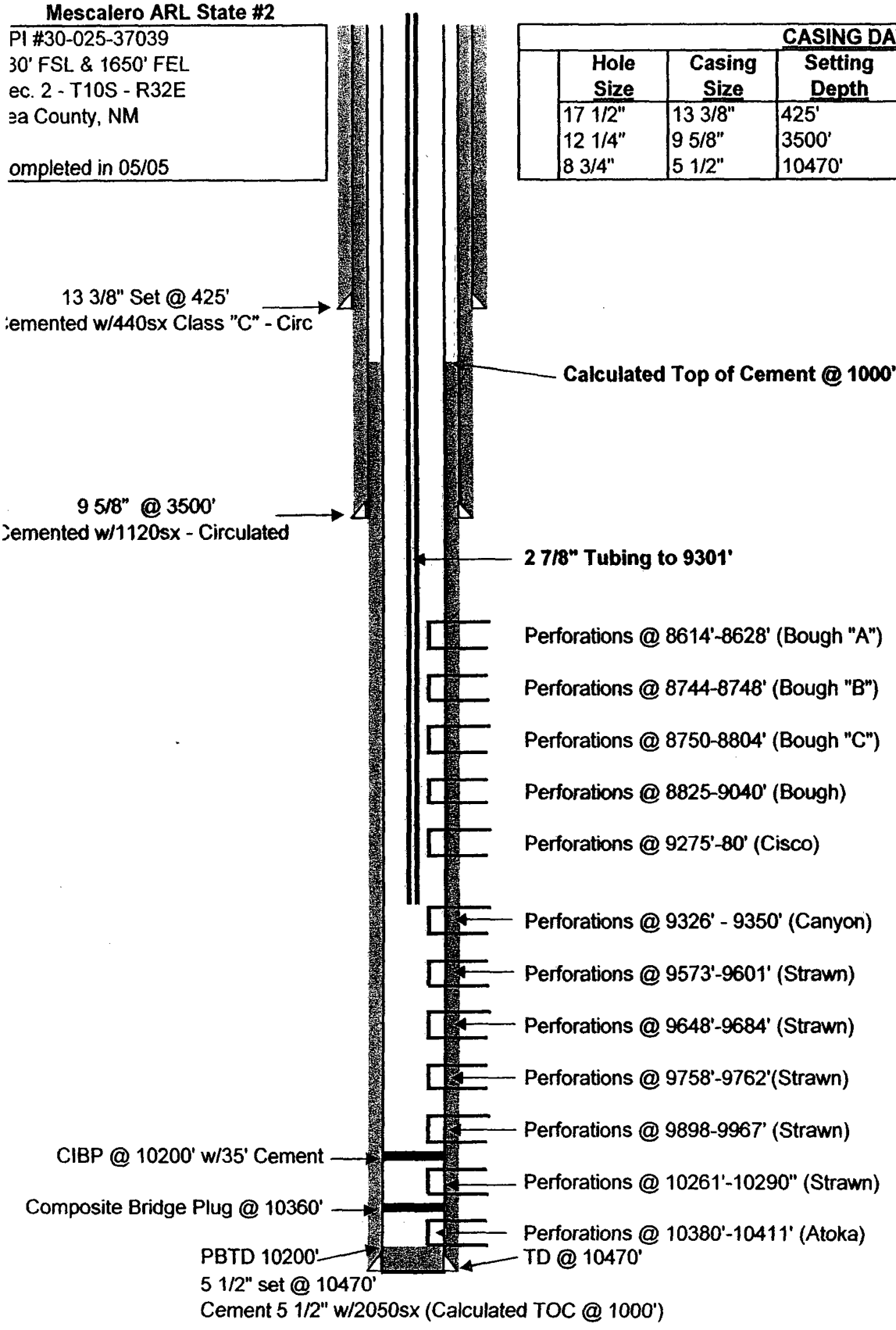
Well Data & Wellbore Diagram of Wells in Area of Review

Yates Petroleum
Mescalero ARL State #2

PI #30-025-37039
30' FSL & 1650' FEL
ec. 2 - T10S - R32E
ea County, NM

ompleted 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



BJ SERVICES

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*	253
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*	63,673
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 - 10,000,00 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

BJ SERVICES

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
Soluable 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*	226,300
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 - 10,000,00 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

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 7 2005

and ending with the issue dated

December 7 2005

Kathi Bearden

Publisher

Sworn and subscribed to before me this 7th day of December 2005

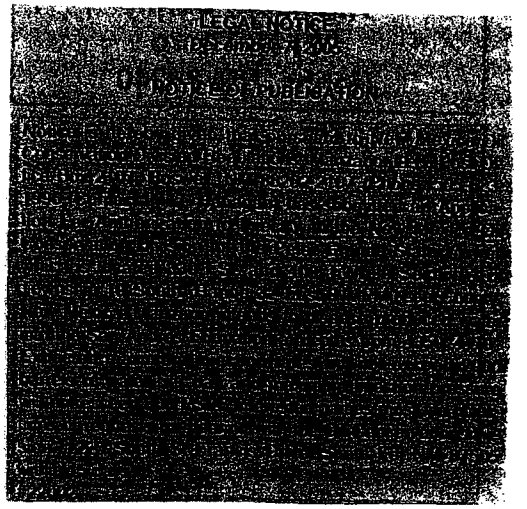
Dora Montz

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 advertisements within the meaning of Section 3, Chapter 167, Laws of 1937, and payment of fees for said publication has been made.



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