STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

Revised 7-1-81

APPLICATION FOR AUTHORIZATION TO INJECT

N DIVISION

I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage
Application qualifies for administrative approval? ☒ yes ☐ no

II. Operator: Yates Petroleum Corporation '90 NOV 21 AM 9 26

Address: 105 S. 4th Street, Artesia, NM 88210

Contact party: Brian Collins Phone: 748-1471

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 geological data on the injection zone including appropriate lithologic detail, geological 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 source 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 source 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: Brian Collins Title Petroleum Engineer

Signature: Brian Collins Date: November 19, 1990

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal. _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division district office.

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 name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

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

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

(1) The name, address, phone number, and contact party for the applicant;

(2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;

(3) the formation name and depth with expected maximum injection rates and pressures; and

(4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 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.

C-108
Application For Authorization To Inject
Yates Petroleum Corporation
Medano "VA" State #1
K 16-23S-31E
Eddy County, New Mexico

I. The purpose of completing this well is to make a disposal well for produced Bell Canyon water into the Cherry Canyon, Brushy Canyon, and Bone Spring formations.

Yates Petroleum plans to convert this well to a dual water disposal well into the Cherry Canyon, Brushy Canyon and Bone Spring, and a producing well in the Bell Canyon.

II. Operator: Yates Petroleum Corporation
105 South Fourth Street
Artesia, NM 88210
Brian Collins (505) 748-1471

III. Well Data: See Attachment A

IV. This is not an expansion of an existing project.

V. See attached map, Attachment B

VI. Tabulation of data on all wells within area of review which penetrate the proposed injection zone. (See Attachment C.)

One well penetrates the proposed injection zone. This is the Medano "VA" State #2 also operated by Yates Petroleum Corporation. It is a gas well located 1980'FNL, 660'FWL of Section 16-23S-31E approximately 1/4 mile NW of proposed well. (See wellbore sketch, Attachment D.)

VII. 1. Proposed average daily injection volume approxi-1500 BWPD.
Maximum daily injection volume approximately 5000 BWPD.

2. This will be a closed system.

3. Proposed average injection pressure-unknown.
Proposed maximum injection pressure--1204 psi.

4. Sources of injected water would be produced water from the Bell Canyon Sand. (See Attachment E.)

5. See Attachment F.

VIII. 1. The proposed injection interval is the portion of the Cherry Canyon formation consisting of porous sandstone from 6019' to 6680', the Brushy Canyon formation consisting of porous sandstone from 6996' to 7860', and the Bone Spring formation consisting of porous limestone from 8065' to 8639'.

2. Fresh water zones overlie the proposed injection formations at depths to approximately 624 feet. There are no fresh water zones underlying the formation.

IX. The proposed disposal interval may be acidized with 7-1/2% or 15% HCL acid.

X. Logs were filed at your office when the well was drilled in 1971.

XI. No windmills exist within a one mile radius of the subject location.

XII. Yates Petroleum Corporation has examined geologic and engineering data and has found that there is no evidence of faulting in the proposed interval.

XIII. Proof of Notice

A. Certified letters sent to the surface owner and offset operators-attached. (Attachment G)

B. Copy of legal advertisement attached. (Attachment H)

XIV. Certification is signed.

Yates Petroleum Corporation
Medano "VA" State #1
K 16-23S-31E

Attachment A
Page 1

III. Well Data

A. 1. Lease Name/Location:
Medano "VA" State #1
K 16-23S-31E
1947' FSL & 1986' FWL

2. Casing Strings:
a. Present Well Condition
20" 94# H40 @ 624' w/1060 sx (circ)
13-3/8" 61# S80 @ 4139' w/3400 sx (circ)
9-5/8" 43.5#, 53.5# N80, P110 @ 12444' w/4150 sx (circ)
7-5/8" 39# P110 liner @ 12257-14153' w/250 sx
2-7/8" 6.5# N80 tubing @ 4300'

Present TD: 9715', PBTD: 5900'

3. Proposed well condition:
Casing same as above
2-7/8" 6.5# N80 production tubing at 4300'
2-7/8" 6.5 N80 plastic-coated injection tubing @ 5950'

4. Propose to use Guiberson or Baker plastic-coated or nickel-plated packer set at 5950'.

B. 1. Injection Formation: Cherry Canyon
Brushy Canyon
Bone Spring

2. Injection Interval will be through perforations from approximately 6019-8639'.

3. Well was originally drilled as an exploratory Morrow gas well. Well will be dual Delaware producer (4218-4237') and Cherry Canyon (6019-6680'), Brushy Canyon (6996-7860'), and Bone Spring (8065-8639') water disposal well when work is completed.

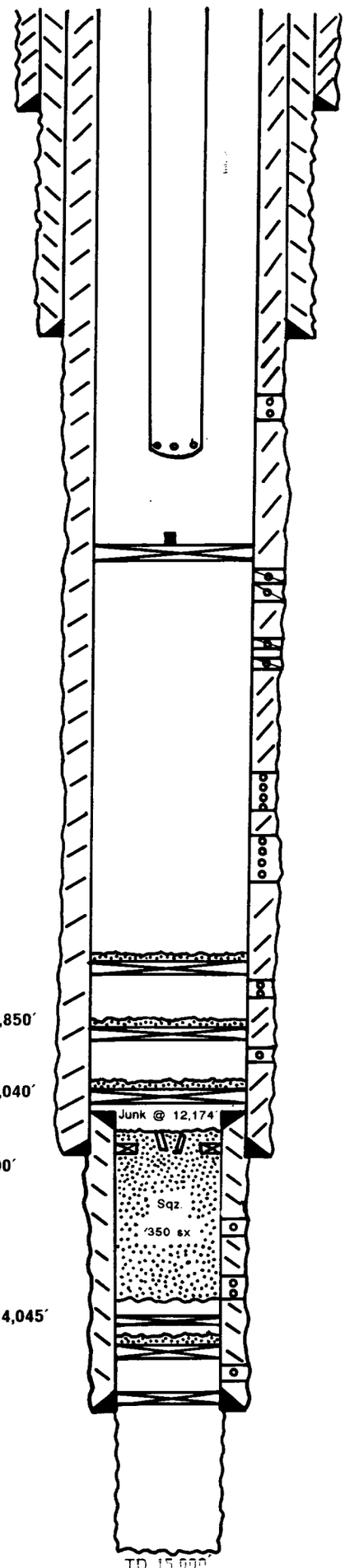
4. Perforations:
a. 14117-14126' Morrow, CIBP 14100' + 10 sx cmt

b. 13880-13890' Atoka, Sqz. 350 sx
13396-13408' Atoka
c. 11966-11990' Wolfcamp, CIBP 11850' + 35' cmt
d. 9991-10000' Bone Spring, CIBP 9750' + cmt
e. 8608-8639' Bone Spring
8511-8539' Bone Spring
8365-8374' Bone Spring
8252-8307' Bone Spring
8065-8102' Bone Spring
f. 7180-7185' Cherry Canyon *
g. 7004-7014' Cherry Canyon *
h. 6236-6375' Cherry Canyon *
i. 6019-6027' Cherry Canyon *

* (Cmt spotted inside casing before re-entry to Bone Spring.)

5. Next higher (shallower) oil or gas zone within 2 miles--NONE.
Next lower (deeper) oil or gas zone within 1/2 mile--Morrow.

Attachment A
"Current Status"
Wellbore Schematic
Medaño VA State #1
1947′ FSL & 1986′ FWL
Unit K Sec. 16-23S-31E
Eddy Co., New Mexico
Form C-108



Bell Canyon
4147′

Cherry Canyon
5110′

Brushy Canyon
6892′

Bone Spring
8050′

Wolfcamp
10,904′

Strawn
13,095′

Atoka
13,266′

Morrow
13,932′

26" hole

17 1/2" hole

12 1/4" hole

RBP 5900′

CIBP + cmt. 9750′

CIBP + 35′ cmt. 11,850′

CIBP + 20′ cmt. 12,040′

?? Prod. Pkr. 12,400′

8 1/2" hole

?? Model "J" Plug 14,045′

Baker CIBP 14,100′
+ 10 sx. cmt.

Baker CIBP 14,140′

61/2" hole

20" @ 624′ 1060 sx.

13 3/8" @ 4139′
3400 sx.

4218-26′
4229-37′ Bell Canyon

6019-27′
6236-6375′ Cherry Canyon
Sqzd. Tested to 3000 psi

7004-14′
7180-85′ Cherry Canyon
Sqzd. Tested to 3000 psi

8065-68′ 70.5′, 72.9′, 77-79′, 81′,
82′, 86′, 88′, 91′, 93′, 8100.5′, 8102′ Bone Spring

8252′, 54′, 97′, 8303′, 09′,
8365-74′
8511′, 12′, 14′, 16′, 38′, 8539′ Bone Spring
8608-10′, 12′, 14′, 16′, 25′, 28′,
31′, 34′, 37′, 8639′

9991-10,000′ Bone Spring

11,966-73′, 79′, 82′, 83′, 87′, 88′, 90′ Wolfcamp

9 5/8" @ 12,444′
3500 sx. orig. + 650 sx. re-entry

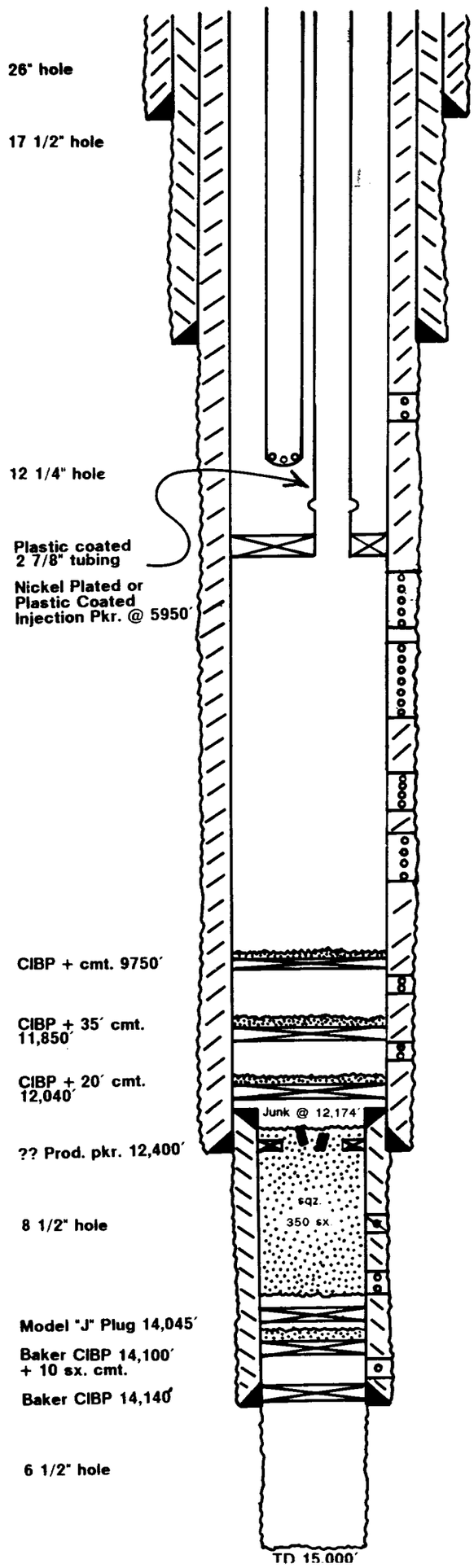
13,396′-408′ Atoka

13,880-890′ Atoka

14,117-126′ Morrow

7 5/8" 12,257′-14,153′ 250 sx.

Attachment A
"Proposed"
Wellbore Schematic
Medano VA State #1
1947' FSL & 1986' FWL
Unit K Sec. 16-23S-31E
Eddy Co., New Mexico
Form C-108



Bell Canyon
4147'

Cherry Canyon
5110'

Brushy Canyon
6892'

Bone Spring
8050'

Wolfcamp
10,904'

Strawn
13,095'

Atoka
13,266'

Morrow
13,932'

20" @ 624' 1060 sx.

13 3/8" @ 4139' 3400 sx.

4218-26', 4229-37' Bell Canyon

6019-27', 6222-44', 6262-82', 6334-52', 6362-88', 6398-6442', 6640-80' Cherry Canyon

6996-7040', 7250-80', 7434-56', 7566-7620', 7825-60' Brushy Canyon

8065-68', 70.5', 72.3', 77-79', 81', 82', 86', 88', 91', 93', 8100.5', 8102' Bone Spring

8252', 54', 97', 8303-09', 8365-74', 8511', 12', 14', 16', 38', 8539', 8608-10', 12', 14', 16', 25', 28', 31', 34', 37', 8639' Bone Spring

9991-10,000' Bone Spring

11,966-73', 79', 82', 83', 87', 88', 90' Wolfcamp

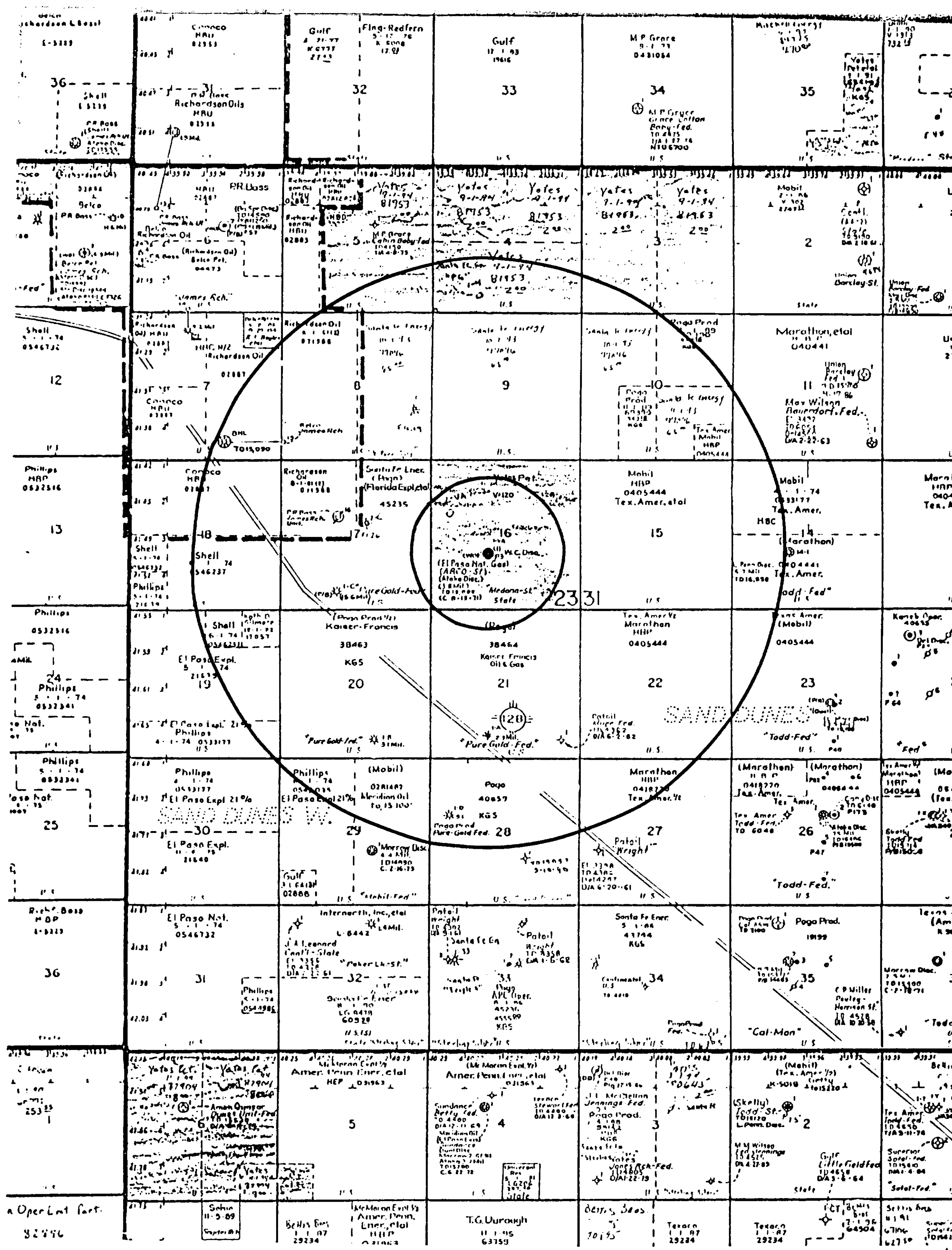
9 5/8" @ 12,444'
3500 sx. orig. + 650 sx. re-entry

13,396-408' Atoka

13,880-890' Atoka

14,117-126' Morrow

7 5/8" 12,257-14,153' 250 sx.



YATES PETROLEUM CORPORATION

MEDANO "VA" STATE #1

PROPOSED SALT WATER DISPOSAL WELL

SEC 16-T23S-R31E

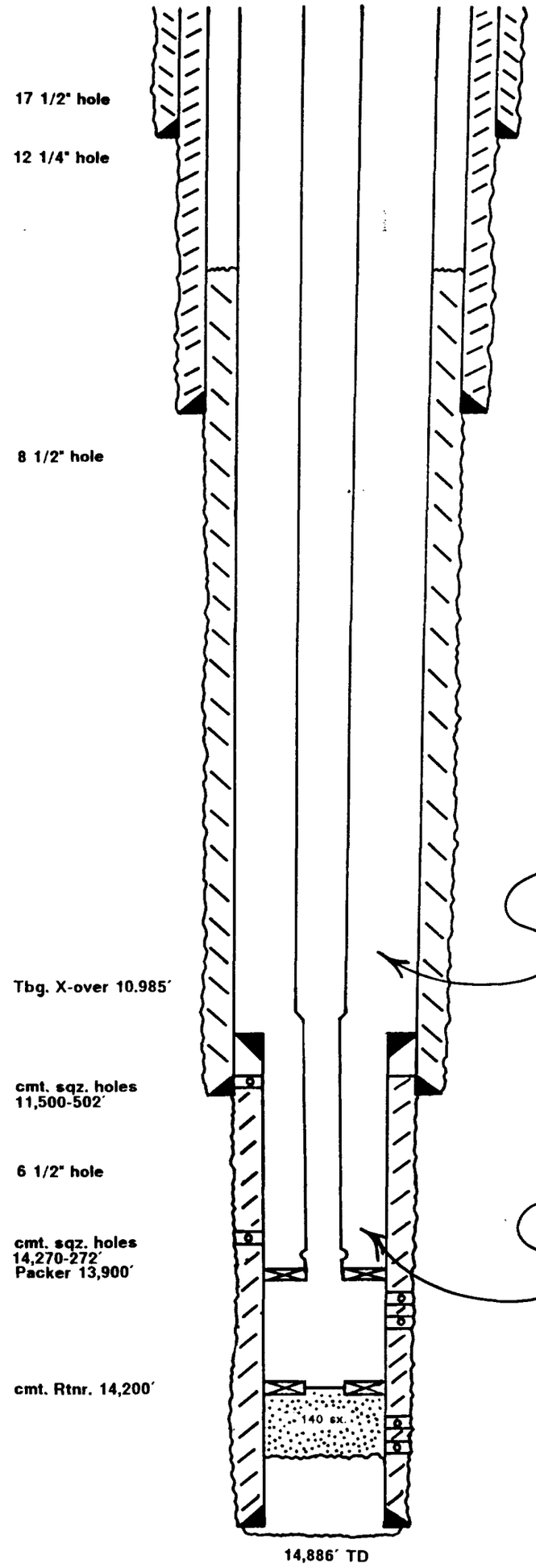
1980'FSL & 1980'FWL

EDDY COUNTY, NEW MEXICO

ATTACHMENT B

Attachment D

Wellbore Schematic
Medaño VA State #2
1980´ FNL & 660´ FWL
Unit E Sec. 16-23S-31E
Eddy Co., New Mexico



Delaware Sands
4128´

Bone Spring
8010´

Wolfcamp
11,282´

Strawn
12,985´

Atoka
13,122´

Morrow
13,875´

Attachment E

WATER ANALYSIS REPORT

ɔmpany	: YATES PET.	Date	: 10-22-90
.ddress	: ARTESIA	Date Sampled	: 10-19-90
Lease	: MEDANO ~~BA~~ VA	Analysis No.	: 1
Well	: 1		
Sample Pt.	: WELLHEAD		

	ANALYSIS		mg/L		* meq/L
1.	pH	7.1			
2.	H2S	POS			
3.	Specific Gravity	1.085			
4.	Total Dissolved Solids		115832.4		
5.	Suspended Solids		NR		
6.	Dissolved Oxygen		NR		
7.	Dissolved CO2		NR		
8.	Oil In Water		NR		
9.	Phenolphthalein Alkalinity (CaCO3)				
10.	Methyl Orange Alkalinity (CaCO3)				
11.	Bicarbonate	HCO3	207.0	HCO3	3.4
12.	Chloride	Cl	68799.0	Cl	1940.7
13.	Sulfate	SO4	1750.0	SO4	36.4
14.	Calcium	Ca	1480.0	Ca	73.9
15.	Magnesium	Mg	268.2	Mg	22.1
16.	Sodium (calculated)	Na	43328.2	Na	1884.7
17.	Iron	Fe	0.0		
18.	Barium	Ba	0.0		
19.	Strontium	Sr	0.0		
20.	Total Hardness (CaCO3)		4800.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter

74	*Ca <----- *HCO3	3
	/------->	
22	*Mg -----> *SO4	36
	<---------/	
1885	*Na -----> *Cl	1941

Saturation Values Dist. Water 20 C

CaCO3	13 mg/L
CaSO4 * 2H2O	2090 mg/L
BaSO4	2.4 mg/L

Compound	Equiv wt	X meq/L	= mg/L
Ca(HCO3)2	81.0	3.4	275
CaSO4	68.1	36.4	2480
CaCl2	55.5	34.0	1888
Mg(HCO3)2	73.2		
MgSO4	60.2		
MgCl2	47.6	22.1	1050
NaHCO3	84.0		
Na2SO4	71.0		
NaCl	58.4	1884.7	110139

REMARKS:

Petrolite Oilfield Chemicals Group

Respectfully submitted,
L MALLETT

Attachment F

1343-A

HALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES

MIDLAND DIVISION

ARTESIA, NEW MEXICO 88210

LABORATORY WATER ANALYSIS No. W199-87

To Mr. Billy Horner

Yates Petroleum Corporation

105 South Fourth Street

Artesia, NM 88210

Date October 13, 1987

Submitted by _____ Date Rec. October 13, 1987

Well No. Medano VA St. #1 Depth 8065' to 8639' Formation Bone Springs

County Eddy Field Sec. 16, T 23S, R 31E Source _____

Resistivity	.220 @ 70°			
Specific Gravity	1.022			
pH	6.5			
Calcium (Ca)	30,519			*MPL
Magnesium (Mg)	4,480			
Chlorides (Cl)	19,000			
Sulfates (SO_4)	Small			
Bicarbonates (HCO_3)	76			
Soluble Iron (Fe)	Moderate			

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: Owen Puckett - Special Operator

HALLIBURTON COMPANY

cc:

NOTICE

This report is limited to the described sample tested. Any user of this report agrees that Halliburton shall not be liable for any loss or damage, whether it be to act or omission, resulting from such report or its use.

Attachment F

Water analyses for the Cherry Canyon and Brushy Canyon are not available. It is reasonable to believe that the formation waters in the Cherry Canyon and Brushy Canyon are quite similar in composition to the Bell Canyon formation water. No water compatibility problems are expected with Bell Canyon water mixing with Cherry Canyon and Brushy Canyon waters.

There is a possibility of scale formation in the Bone Spring when the Bell Canyon water mixes with the Bone Spring water. If evidence of scale formation is found after disposal begins, we will treat the Bone Spring formation and the Bell Canyon disposal water with appropriate scale inhibitors to eliminate scaling.

Attachment G

YATES PETROLEUM CORPORATION

105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210
TELEPHONE (505) 748-1471

November 19, 1990

CERTIFIED RETURN RECEIPT

Kaiser-Francis Oil Co.
P.O. Box 84234
Dallas, TX 75284

Dear Sir:

Enclosed please find a copy of form C-108 (Application for Authority to Inject) on Yates' Medano VA State #1 located in Unit K of Section 16-T23S-R31E.

Should you have any questions, please feel free to contact me at (505) 748-1471.

Sincerely,

Brian Collins
Petroleum Engineer

BC/sj

Enclosure

YATES PETROLEUM CORPORATION

105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210
TELEPHONE (505) 748-1471

November 19, 1990

CERTIFIED RETURN RECEIPT

Santa Fe Energy Partners
550 W. Texas
Suite 1330
Midland, TX 79701

Dear Sir:

Enclosed please find a copy of form C-108 (Application for Authority to Inject) on Yates' Medano VA State #1 located in Unit K of Section 16-T23S-R31E.

Should you have any questions, please feel free to contact me at (505) 748-1471.

Sincerely,

Brian Collins

Brian Collins
Petroleum Engineer

BC/sj

Enclosure

Attachment H

Legal Notice

Yates Petroleum Corporation, 105 South Fourth Street, Artesia, NM 88210, has filed form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval for an injection well. The proposed well, the "Medano VA State #1" located 1947' FSL & 1986' FWL of Section 16, Township 23 South, Range 31 East of Eddy County, New Mexico, will be used for saltwater disposal. Disposal waters from the Bell Canyon will be re-injected into the Cherry Canyon, Brushy Canyon, and Bone Spring formations at a depth of 6019-8639 feet with a maximum pressure of 1204 psi and a maximum rate of 5000 BWPD.

All interested parties opposing the aforementioned must file objections or requests for a hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, NM 87501, within 15 days. Additional information can be obtained by contacting Brian Collins at (505) 748-1471.

MARTIN YATES, III
1912 - 1985
FRANK W. YATES
1936 - 1986

YATES PETROLEUM CORPORATION

105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210
TELEPHONE (505) 748-1471

S. P. YATES
CHAIRMAN OF THE BOARD
JOHN A. YATES
PRESIDENT
PEYTON YATES
EXECUTIVE VICE PRESIDENT
RANDY G. PATTERSON
SECRETARY
DENNIS G. KINSEY
TREASURER

January 15, 1991

New Mexico Energy & Minerals Department
Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87504

Attention: David Catanach

Dear Mr. Catanach,

Enclosed, per our phone conversation 1/9/91, is the revised C-108 Application for Authorization to Inject for the Medano VA State #1. The major differences between the revised and the original C-108's are:

Revised C-108	Original C-108
1. Currently completed in Bell Canyon 4218-37'and Brushy Canyon 7825-56'	1. Completed in Bell Canyon 4218-37'
2. Propose to inject produced water into the Bone Spring 8065-8639'	2. Propose to inject produced water into the Bone Spring 8065-8639' Brushy Canyon 6996-7860' Cherry Canyon 6019-6680'
3. Proposed maximum injection pressure = 1610 psi	3. Proposed maximum injection pressure = 1204 psi
4. Set injection packer at 8000'	4. Set injection packer at 5950'

Please call me at (505) 748-1471 if you have any questions.

Sincerely,

Brian Collins

Brian Collins
Engineer

XC: Artesia Oil Conservation Division

BC/sj

C-108
Application For Authorization To Inject
Yates Petroleum Corporation
Medano "VA" State #1
K 16-23S-31E
Eddy County, New Mexico

I. The purpose of completing this well is to make a disposal well for produced Delaware Sand water into the Bone Spring formation.

Yates Petroleum plans to convert this well to a dual water disposal well into the Bone Spring and a producing well in the Delaware Sand.

II. Operator: Yates Petroleum Corporation
105 South Fourth Street
Artesia, NM 88210
Brian Collins (505) 748-1471

III. Well Data: See Attachment A

IV. This is not an expansion of an existing project.

V. See attached map, Attachment B

VI. Tabulation of data on all wells within area of review which penetrate the proposed injection zone. (See Attachment C.)

One well penetrates the proposed injection zone. This is the Medano "VA" State #2 also operated by Yates Petroleum Corporation. It is a gas well located 1980'FNL, 660'FWL of Section 16-23S-31E approximately 1/4 mile NW of proposed well. (See wellbore sketch, Attachment D.)

VII. 1. Proposed average daily injection volume approxi-1500 BWPD.
Maximum daily injection volume approximately 5000 BWPD.

2. This will be a closed system.

3. Proposed average injection pressure-unknown.
Proposed maximum injection pressure--1610 psi.

4. Sources of injected water would be produced water from the Delaware Sand. (See Attachment E.)

5. See Attachment F.

VIII. 1. The proposed injection interval is the portion of the Bone Spring formation consisting of porous limestone from estimated depths of 8065 to 8639'.

2. Fresh water zones overlie the proposed injection formations at depths to approximately 624 feet. There are no fresh water zones underlying the formation.

IX. The proposed disposal interval may be acidized with 15% HCL acid.

X. Logs were filed at your office when the well was drilled in 1971.

XI. No windmills exist within a one mile radius of the subject location.

XII. Yates Petroleum Corporation has examined geologic and engineering data and has found that there is no evidence of faulting in the proposed interval.

XIII. Proof of Notice

A. Certified letters sent to the surface owner and offset operators-attached. (Attachment G)

B. Copy of legal advertisement attached. (Attachment H)

XIV. Certification is signed.

Yates Petroleum Corporation
Medano "VA" State #1
K 16-23S-31E

Attachment A
Page 1

III. Well Data

A. 1. Lease Name/Location:
Medano "VA" State #1
K 16-23S-31E
1947' FSL & 1986' FWL

2. Casing Strings:
a. Present Well Condition
20" 94# H40 @ 624' w/1060 sx (circ)
13-3/8" 61# S80 @ 4139' w/3400 sx (circ)
9-5/8" 43.5#, 53.5# N80, P110 @ 12444' w/4150 sx (circ)
7-5/8" 39# P110 liner @ 12257-14153' w/250 sx
2-7/8" 6.5# N80 tubing @ 4300'

Present TD: 9715', PBTD: 5900'

3. Proposed well condition:
Casing same as above
2-7/8" 6.5# N80 production tubing at 7800'
2-7/8" 6.5 N80 plastic-coated injection tubing @ 8000'

4. Propose to use Guiberson or Baker plastic-coated or nickel-plated packer set at 8000'.

B. 1. Injection Formation: Bone Spring

2. Injection Interval will be through perforations from approximately 8065-8639'.

3. Well was originally drilled as an exploratory Morrow gas well. Well will be dual Delaware producer (4218-4237', 7825-7856') and Bone Spring water disposal well (8065-8639') when work is completed.

4. Perforations:
a. 14117-14126' Morrow, CIBP 14100' + 10 sx cmt
b. 13880-13890' Atoka, Sqz. 350 sx
13396-13408' Atoka

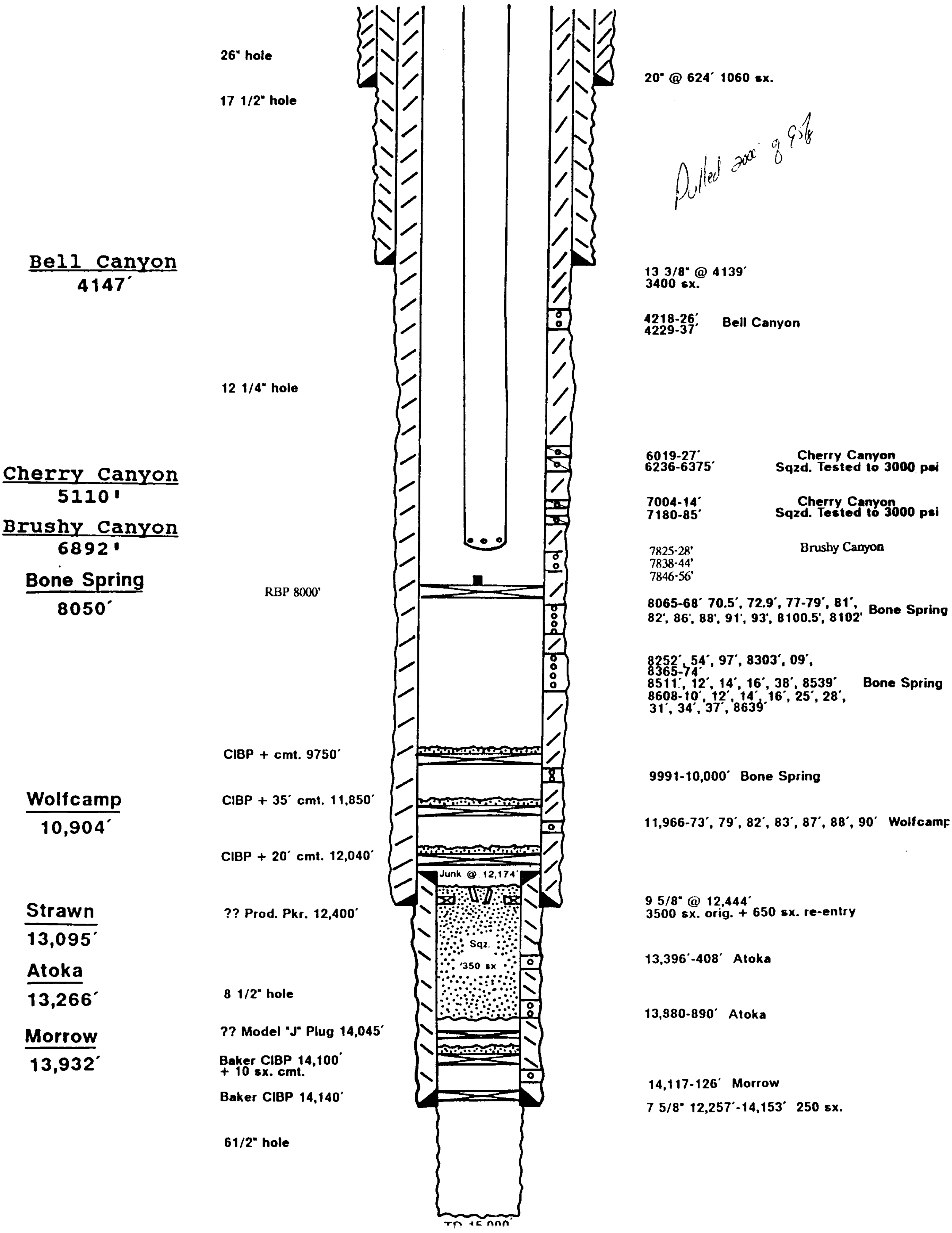
c. 11966-11990' Wolfcamp, CIBP 11850' + 35' cmt
d. 9991-10000' Bone Spring, CIBP 9750' + cmt
e. 8608-8639' Bone Spring
8511-8539' Bone Spring
8365-8374' Bone Spring
8252-8307' Bone Spring
8065-8102' Bone Spring
f. 7180-7185' Cherry Canyon *
g. 7004-7014' Cherry Canyon *
h. 6236-6375' Cherry Canyon *
i. 6019-6027' Cherry Canyon *

* (Cmt spotted inside casing before re-entry to Bone Spring.)

5. Next higher (shallower) oil or gas zone within 2 miles--NONE.
Next lower (deeper) oil or gas zone within 1/2 mile--Morrow.

Attachment A

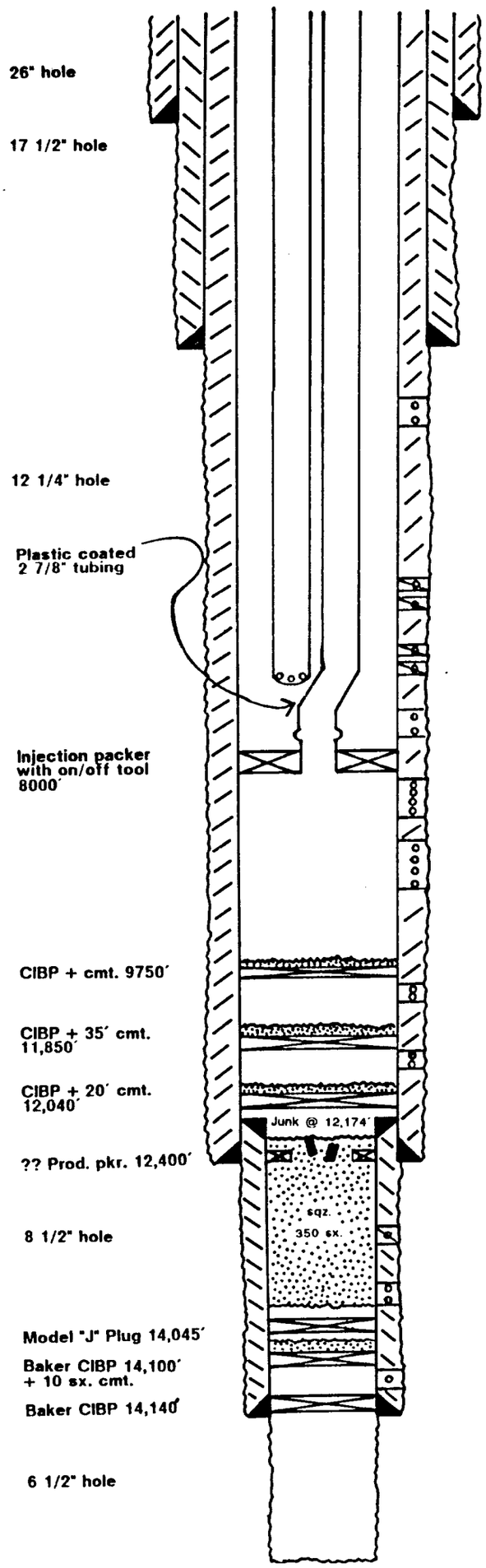
"Current Status"
Wellbore Schematic
Medaño VA State #1
1947′ FSL & 1986′ FWL
Unit K Sec. 16-23S-31E
Eddy Co., New Mexico
Form C-108



26" hole
17 1/2" hole
20" @ 624′ 1060 sx.
Pulled 200′ of 9 5/8
Bell Canyon
4147′
13 3/8" @ 4139′
3400 sx.
4218-26′
4229-37′
Bell Canyon
12 1/4" hole
Cherry Canyon
5110'
6019-27′
6236-6375′
Cherry Canyon
Sqzd. Tested to 3000 psi
Brushy Canyon
6892'
7004-14′
7180-85′
Cherry Canyon
Sqzd. Tested to 3000 psi
7825-28'
7838-44'
7846-56'
Brushy Canyon
Bone Spring
8050′
RBP 8000'
8065-68′ 70.5′, 72.9′, 77-79′, 81′,
82′, 86′, 88′, 91′, 93′, 8100.5′, 8102′
Bone Spring
8252′, 54′, 97′, 8303′, 09′,
8365-74′
8511′, 12′, 14′, 16′, 38′, 8539′
8608-10′, 12′, 14′, 16′, 25′, 28′,
31′, 34′, 37′, 8639′
Bone Spring
CIBP + cmt. 9750′
9991-10,000′ Bone Spring
Wolfcamp
10,904′
CIBP + 35′ cmt. 11,850′
11,966-73′, 79′, 82′, 83′, 87′, 88′, 90′ Wolfcamp
CIBP + 20′ cmt. 12,040′
Junk @ 12,174′
Strawn
13,095′
?? Prod. Pkr. 12,400′
9 5/8" @ 12,444′
3500 sx. orig. + 650 sx. re-entry
Sqz.
350 sx
Atoka
13,266′
13,396′-408′ Atoka
8 1/2" hole
13,880-890′ Atoka
Morrow
13,932′
?? Model "J" Plug 14,045′
Baker CIBP 14,100′
+ 10 sx. cmt.
14,117-126′ Morrow
Baker CIBP 14,140′
7 5/8" 12,257′-14,153′ 250 sx.
61/2" hole
TD 15,000′

Attachment A

"Proposed"
Wellbore Schematic
Medaño VA State #1
1947´ FSL & 1986´ FWL
Unit K Sec. 16-23S-31E
Eddy Co., New Mexico
Form C-108



Bell Canyon 4147´

Cherry Canyon 5110'

Brushy Canyon 6892'

Bone Spring 8050´

Wolfcamp 10,904´

Strawn 13,095´

Atoka 13,266´

Morrow 13,932´

20" @ 624´ 1060 sx.

13 3/8" @ 4139´ 3400 sx.

4218-26´, 4229-37 Bell Canyon

6019-27´, 6236-6375´ Cherry Canyon Sqzd. Tested to 3000 p

7004-14´, 7180-85´ Cherry Canyon Sqzd. Tested to 3000 p

7825-28', 7838-44', 7846-56' Brushy Canyon

8065-68´, 70.5´, 72.3´, 77-79´, 81´, 82´, 86´, 88´, 91´, 93´, 8100.5´, 8102´ Bone Spri

8252´, 54´, 97´, 8303-09´, 8365-74´, 8511´, 12´, 14´, 16´, 38´, 8539´, 8608-10´, 12´, 14´, 16´, 25´, 28´, 31´, 34´, 37´, 8639´ Bone Spri

9991-10,000´ Bone Spring

11,966-73´, 79´, 82´, 83´, 87´, 88´, 90´ Wolfcar

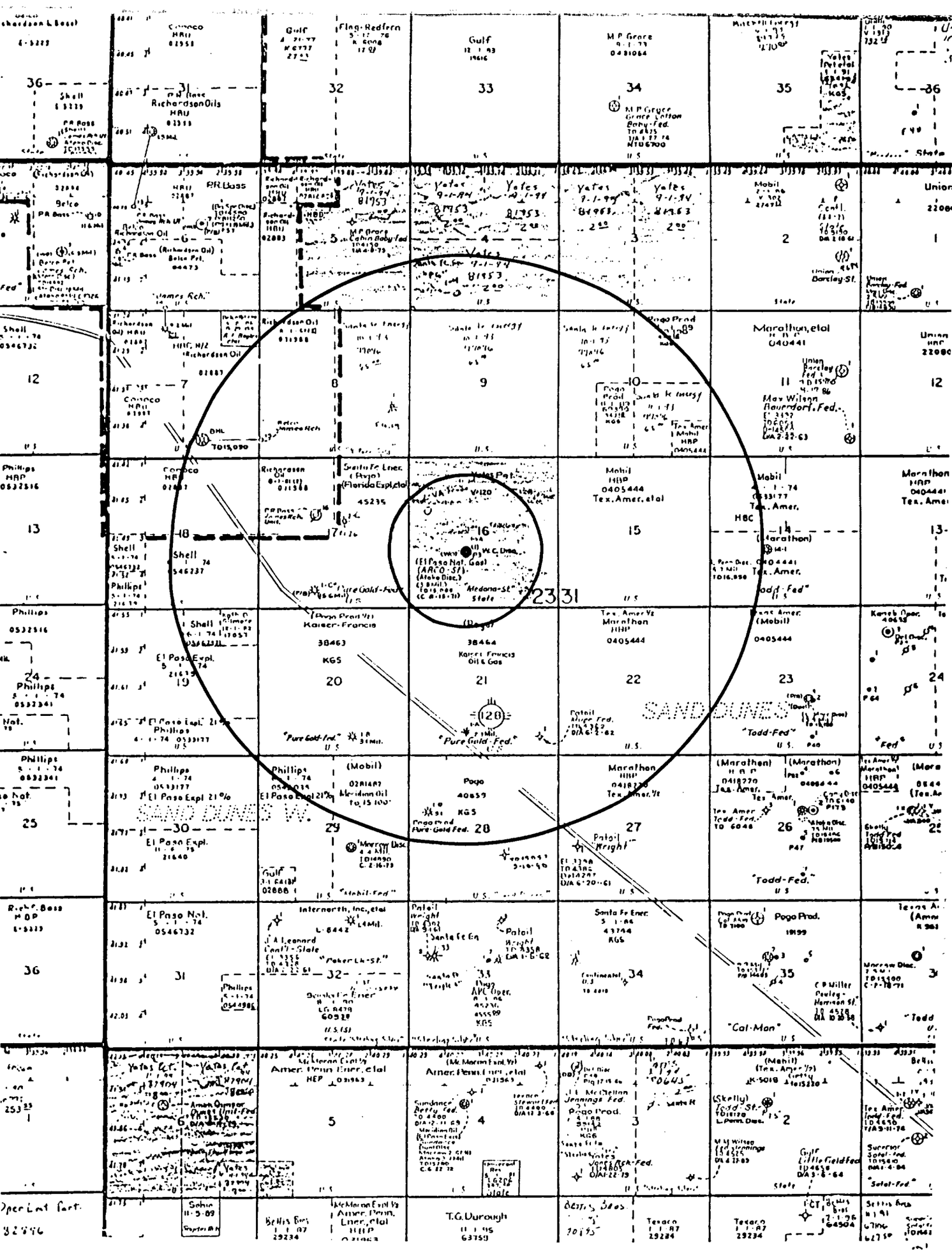
9 5/8" @ 12,444´ 3500 sx. orig. + 650 sx. re-entry

13,396-408´ Atoka

13,880-890´ Atoka

14,117-126´ Morrow

7 5/8" 12,257-14,153´ 250 sx.



YATES PETROLEUM CORPORATION

MEDANO "VA" STATE #1

PROPOSED SALT WATER DISPOSAL WELL

SEC 16-T23S-R31E

1980'FSL & 1980'FWL

EDDY COUNTY, NEW MEXICO

ATTACHMENT B

ATTACHMENT C

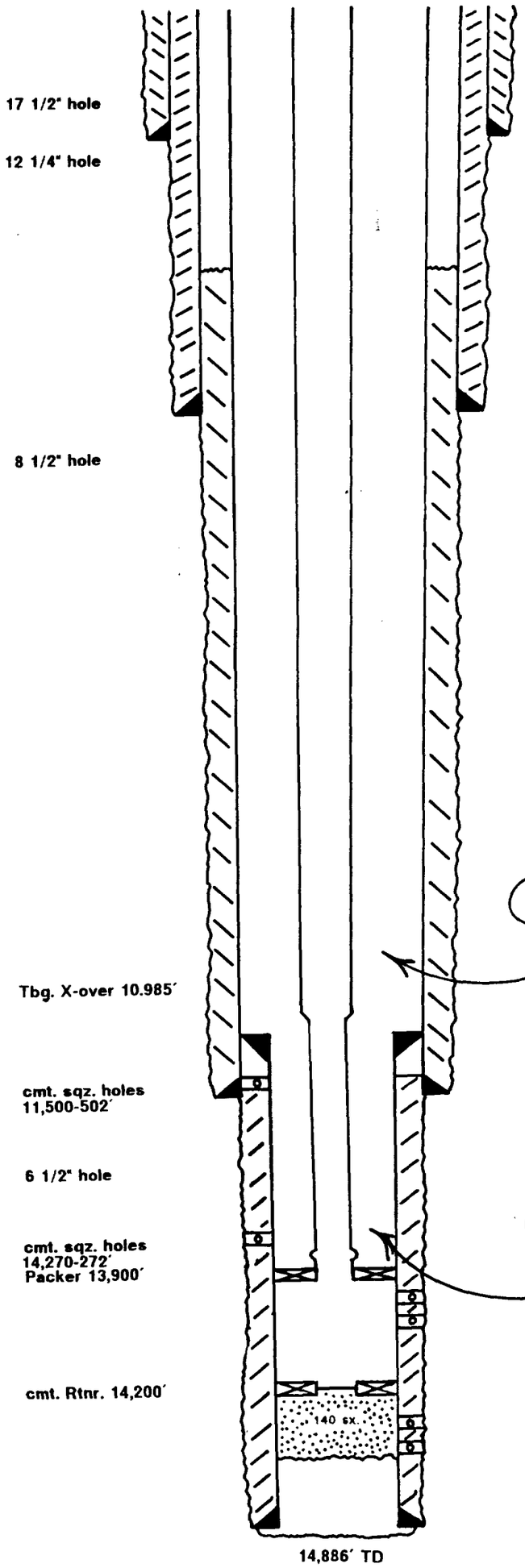
Medano "VA State #1
Form C-108

Tabulation of Data on Wells Within Area of Review

Well Name	Operator	Type	Spud	Completed	Total Depth	Producing Zone	Perforations	Completion Information	Plugging Information
Medano "VA" State #2 E 16-23S-31E	YPC	Gas	6-12-90	In progress	14,886'	Morrow	14011-14021' 14068-14092' 14352-14362' 14389-14402'	13-3/8" @ 675' w/800 sx 9-5/8" @ 4126' w/2175 sx 7" @ 11852' w/1975 sx 4-1/2" @ 11384-14886' w/825 sx 2-7/8" & 2-3/8" tbg @ 13900'	Cement retainer @ 14200' w/140 sx

ATTACHMENT D

Wellbore Schematic
Medaño VA State #2
1980´ FNL & 660´ FWL
Unit E Sec. 16-23S-31E
Eddy Co., New Mexico



Delaware Sands
4128´

Bone Spring
8010´

Wolfcamp
11,282´

Strawn
12,985´

Atoka
13,122´

Morrow
13,875´

Attachment E

WATER ANALYSIS REPORT

ɔmpany	: YATES PET.	Date	: 10-22-90
.ddress	: ARTESIA	Date Sampled	: 10-19-90
Lease	: MEDANO ~~BA~~ VA	Analysis No.	: 1
Well	: 1		
Sample Pt.	: WELLHEAD		

	ANALYSIS		mg/L		* meq/L
1.	pH	7.1			
2.	H2S	POS			
3.	Specific Gravity	1.085			
4.	Total Dissolved Solids		115832.4		
5.	Suspended Solids		NR		
6.	Dissolved Oxygen		NR		
7.	Dissolved CO2		NR		
8.	Oil In Water		NR		
9.	Phenolphthalein Alkalinity (CaCO3)				
10.	Methyl Orange Alkalinity (CaCO3)				
11.	Bicarbonate	HCO3	207.0	HCO3	3.4
12.	Chloride	Cl	68799.0	Cl	1940.7
13.	Sulfate	SO4	1750.0	SO4	36.4
14.	Calcium	Ca	1480.0	Ca	73.9
15.	Magnesium	Mg	268.2	Mg	22.1
16.	Sodium (calculated)	Na	43328.2	Na	1884.7
17.	Iron	Fe	0.0		
18.	Barium	Ba	0.0		
19.	Strontium	Sr	0.0		
20.	Total Hardness (CaCO3)		4800.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter

74	*Ca <----- *HCO3	3
	/------->	
22	*Mg -----> *SO4	36
	<---------/	
1885	*Na -----> *Cl	1941

Saturation Values Dist. Water 20 C

CaCO3	13 mg/L
CaSO4 * 2H2O	2090 mg/L
BaSO4	2.4 mg/L

Compound	Equiv wt	X meq/L	= mg/L
Ca(HCO3)2	81.0	3.4	275
CaSO4	68.1	36.4	2480
CaCl2	55.5	34.0	1888
Mg(HCO3)2	73.2		
MgSO4	60.2		
MgCl2	47.6	22.1	1050
NaHCO3	84.0		
Na2SO4	71.0		
NaCl	58.4	1884.7	110139

REMARKS:

Petrolite Oilfield Chemicals Group

Respectfully submitted,
L MALLETT

Attachment F

HALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES

MIDLAND DIVISION

ARTESIA, NEW MEXICO 88210

LABORATORY WATER ANALYSIS No. W199-87

To Mr. Billy Horner

Yates Petroleum Corporation

105 South Fourth Street

Artesia, NM 88210

Date October 13, 1987

Submitted by _____ Date Rec. October 13, 1987

Well No. Medano VA St. #1 Depth 8065' to 8639' Formation Bone Springs

County Eddy Field Sec. 16, T 23S, R 31E Source _____

Resistivity	.220 @ 70°			
Specific Gravity	1.022			
pH	6.5			
Calcium (Ca)	30,519			*MPL
Magnesium (Mg)	4,480			
Chlorides (Cl)	19,000			
Sulfates (SO_4)	Small			
Bicarbonates (HCO_3)	76			
Soluble Iron (Fe)	Moderate			

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: Owen Puckett - Special Operator

HALLIBURTON COMPANY

cc:

NOTICE

This report is limited to the described sample tested. Any user of this report agrees that Halliburton shall not be liable for any loss or damage, whether it be as a result of negligence, resulting from such use.

Attachment F

There is a possibility of scale formation in the Bone Spring when the Bell Canyon and Brushy Canyon waters mix with the Bone Spring water. If evidence of scale formation is found after disposal begins, we will treat the Bone Spring formation and the Bell Canyon disposal water with appropriate scale inhibitors to eliminate scaling.

YATES PETROLEUM CORPORATION

105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210
TELEPHONE (505) 748-1471

November 19, 1990

CERTIFIED RETURN RECEIPT

Kaiser-Francis Oil Co.
P.O. Box 84234
Dallas, TX 75284

Dear Sir:

Enclosed please find a copy of form C-108 (Application for Authority to Inject) on Yates' Medano VA State #1 located in Unit K of Section 16-T23S-R31E.

Should you have any questions, please feel free to contact me at (505) 748-1471.

Sincerely,

Brian Collins
Petroleum Engineer

BC/sj

Enclosure

YATES PETROLEUM CORPORATION

105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210
TELEPHONE (505) 748-1471

November 19, 1990

CERTIFIED RETURN RECEIPT

Santa Fe Energy Partners
550 W. Texas
Suite 1330
Midland, TX 79701

Dear Sir:

Enclosed please find a copy of form C-108 (Application for Authority to Inject) on Yates' Medano VA State #1 located in Unit K of Section 16-T23S-R31E.

Should you have any questions, please feel free to contact me at (505) 748-1471.

Sincerely,

Brian Collins

Brian Collins
Petroleum Engineer

BC/sj

Enclosure

Attachment H

Legal Notice

Yates Petroleum Corporation, 105 South Fourth Street, Artesia, NM 88210, has filed form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval for an injection well. The proposed well, the "Medano VA State #1" located 1947' FSL & 1986' FWL of Section 16, Township 23 South, Range 31 East of Eddy County, New Mexico, will be used for saltwater disposal. Disposal waters from the Bell Canyon will be re-injected into the Cherry Canyon, Brushy Canyon, and Bone Spring formations at a depth of 6019-8639 feet with a maximum pressure of 1204 psi and a maximum rate of 5000 BWPD.

All interested parties opposing the aforementioned must file objections or requests for a hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, NM 87501, within 15 days. Additional information can be obtained by contacting Brian Collins at (505) 748-1471.

YATES PETROLEUM CORPORATION

105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210
TELEPHONE (505) 748-1471

November 15, 1990

Artesia Daily Press
503 W. Main
Artesia, NM 88210

Gentlemen,

Yates Petroleum Corporation desires to place a public notice in your newspaper for one day. The notice is enclosed.

Please place this notice in your paper Tuesday, November 20, 1990 and forward a copy of it along with your billing as soon as possible to:

Yates Petroleum Corporation
105 S. 4th Street
Artesia, NM 88210
Attn: Brian Collins

If you have any questions, please contact me at 748-1471, Ext. 180. Thank you for your cooperation in this matter.

Sincerely,

Brian Collins
Petroleum Engineer

BC/sj

Enclosure

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

ARTESIA DISTRICT OFFICE

GARREY CARRUTHERS
GOVERNOR

P.O. DRAWER DD
ARTESIA, NEW MEXICO 88210
(505) 748-1283

12-13-90

Attention: Dave Catanach

The only objection I have with converting the Yates Petr Corp, Medano "VA" St #1 to a SWD, as proposed, would be the inability of running a mechanical integrity test on casing-tubing annulus due to producing above packer in Bell Canyon 4218-26 and 4229-37.

Johnny Robinson

David I do not like injecting into the Del + Bone Springs - either zone is fine, but not both Mike Williams