KELLAHIN and KELLAHIN
Attorneys at Law
El Patio - 117 North Guadalupe
Post Office Box 2265
Santa Fe, New Mexico 87504-2265

Jason Kellahin
W. Thomas Kellahin
Karen Aubrey

Telephone 982-4285
Area Code 505

January 21, 1985

RECEIVED
JAN 2 [illegible]
OIL CONSERVATION DIVISION

Mr. Richard L. Stamets
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

"Hand Delivered:

Re: Blanco Engineering, Inc.
LaRue & Muncy SWD Well
Eddy County, New Mexico

Case 8480

Dear Mr. Stamets:

Please set the enclosed application for hearing at the next available Examiner's Docket now set for February 13, 1985.

We are sending a copy of this application to all parties listed on Exhibit "A" attached to the application.

Very truly yours,

W. Thomas Kellahin

WTK:ca
Enc.

cc: Mr. Paul White
Blanco Engineering, Inc.
116 North First Street
Artesia, New Mexico 88210

STATE OF NEW MEXICO
DEPARTMENT OF ENERGY AND MINERALS
OIL CONSERVATION DIVISION

RECEIVED

OIL CONSERVATION DIVISION

IN THE MATTER OF THE APPLICATION OF BLANCO ENGINEERING, INC., FOR SALT WATER DISPOSAL, EDDY COUNTY, NEW MEXICO.

CASE: 8480

A P P L I C A T I O N

Comes now, BLANCO ENGINEERING, INC., by and through its attorneys, Kellahin & Kellahin, and applies to the New Mexico Oil Conservation Division for authority to dispose of produced salt water into the Abo and Wolfcamp formations in the open hole interval from 5408 feet to 6531 feet, in the LaRue & Muncy, Nix & Curtis No. 1E Well located 1980 feet FNL and 660 feet FWL, Section 25, T18S, R26E, NMPM, Eddy County New Mexico, and in support thereof would show:

1. Applicant has acquired the right to utilize the LaRue and Muncy, Nix & Curtis No. 1E Well located 1980 feet FNL and 660 feet FWL, Section 25, T18S, R26E, Eddy County, New Mexico, for salt water disposal purposes.

2. Applicant seeks to convert the subject well to a salt water disposal well in the Abo and/or Wolfcamp formations open hole from 5408 feet to 6531 feet.

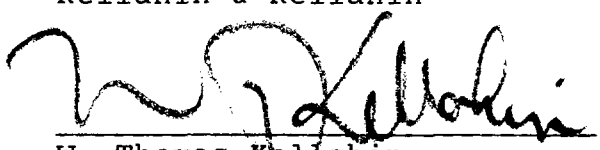
3. Applicant is preparing Division Form C-108 and will submit that form separate from this application.

4. That a copy of this application is being sent certified mail-return receipt to all of the owners and operators listed on Exhibit "A" attached hereto being all of the parties within a one-half mile radius of the subject disposal well, as best as applicant can determine.

5. That approval of this application will prevent waste, protect correlative rights and promote conservation.

WHEREFORE, applicant requests that this application be set for hearing and that after notice and hearing the application be granted.

Kellahin & Kellahin



W. Thomas Kellahin
P. O. Box 2265
Santa Fe, New Mexico 87501

EXHIBIT "A"

OWNER OF THE SURFACE AT DISPOSAL LOCATION:

Donald Fanning & Sons, Inc.
Route 1, Box 79
Artesia, New Mexico 88210

OPERATORS WITHIN ONE-HALF MILE RADIUS:

Rio Pecos Corporation
110 West Louisiana
Suite 460
Midland, Texas 79701

Mark D. Wilson
110 West Louisiana
Suite 460
Midland, Texas 79701

Yates Petroleum Corporation
Yates Drilling
ABO Petroleum Co.
MYCO
Martin Yates
Attn: Mr. Randy Patterson
207 South Street
Artesia, New Mexico 88210

Ralph Nix
7th and Main
Artesia, New Mexico 88210

Dan Hannifin
P. O. Box 182
Rosswell, New Mexico 88201

DEPCO, Inc.
1000 Petroleum Club Building
Denver, Colorado 80202

AMOCO
Box 3092
Houston, Texas 77253

H&S Oil Company
First National Bank of Artesia
Artesia, New Mexico 88210

Exhibit "A" Continued:

Joe G. Fenn
908 Main
Artesia, New Mexico 88210

ARCO
Box 1610
Midland, Texas 79702

Phillips Petroleum Co.
4001 Penbrook
Odessa, Texas 79762

INEXCO
Republic Bank Center
Suite 2100
700 Louisiana Street
Houston, Texas 77002-2702

Brewer Drilling Company
Box 566
Artesia, New Mexico 88210

Valley Refining Company
Artesia, New Mexico 88210

Collier & Bassett
Box 798
Artesia, New Mexico 88210

R. D. Collier
807 Bullock Avenue
Artesia, New Mexico 88210

C. E. LaRue &
B. N. Muncy, Jr.
P. O. Box 196
Artesia, New Mexico 88210

National Drilling Company
P. O. Box 702
Artesia, New Mexico 88210

Nelson & Pope Hearing Equipment
Box 753
Artesia, New Mexico 88210

Gary A. Swartz
Petroleum Building
Roswell, New Mexico 88201

Bassett - Birney Oil Corporation
207 South 4th Street
Artesia, New Mexico 88210

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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

FORM C-108
Revised 7-1-81

RECEIVED
JAN 28 1985
OIL CONSERVATION DIVISION

Case 8480

APPLICATION FOR AUTHORIZATION TO INJECT

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

II. Operator: BLANCO ENGINEERING, INC.

Address: 116 N. First St., Artesia, New Mexico 88210

Contact party: Paul G. White Phone: (505) 746-3223

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: W. Thomas Kellahin Title Attorney for Applicant

Signature: W. Thomas Kellahin Date: January 24, 1985

* 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.

SECTION III

WELL DATA

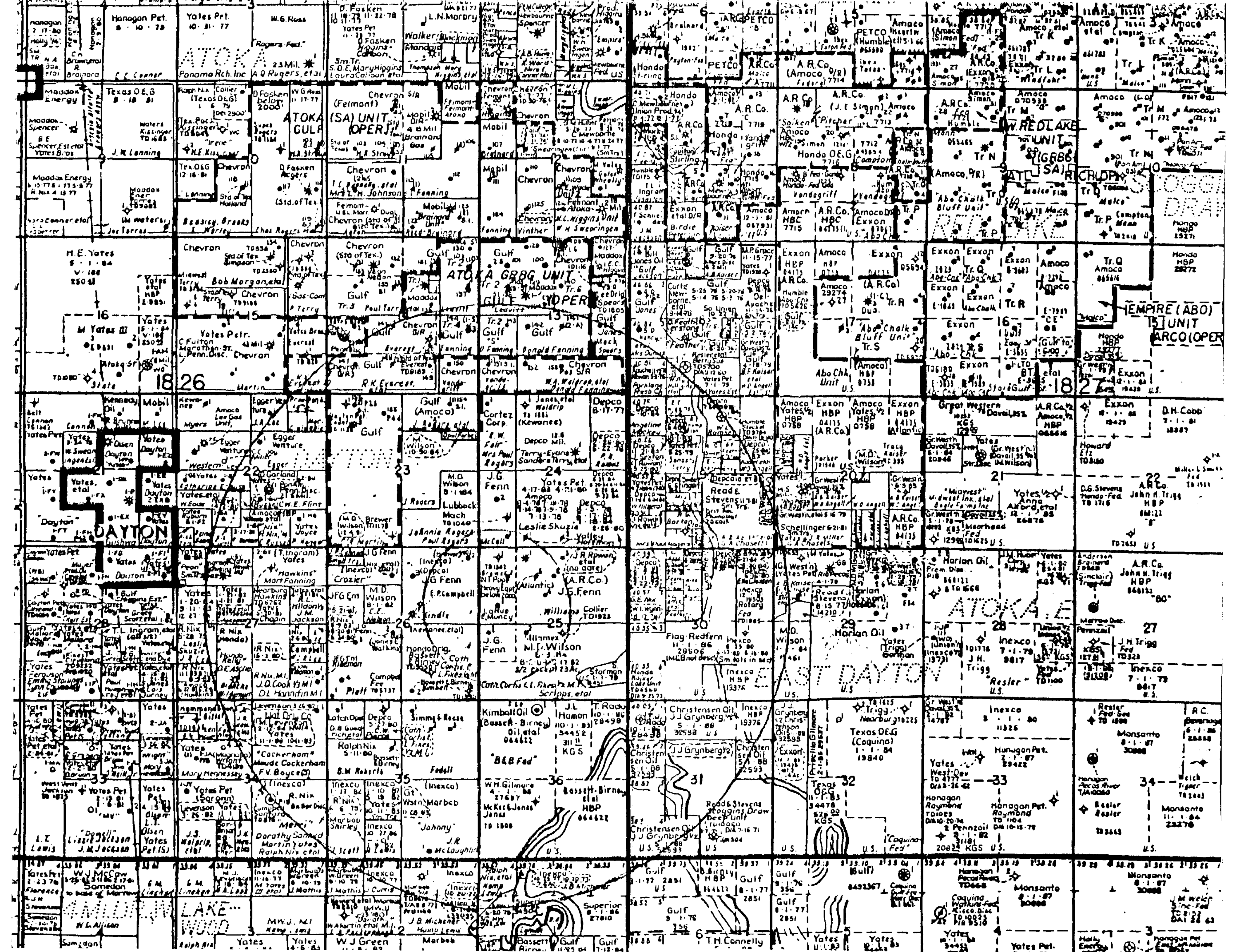
	LL NAME, NUMBER, OPERATOR	LOCATION UNIT, SEC., TWP., RANGE	TYPE	DATE SPUDDED	DATE COMPLETED	DEPTH TD	DEPTH PBTD	RECORD OF COMPLETIONS ZONE(S)	RECORD OF COMPLETIONS PERF(S)& WELL CONSTRUCTION
(1)	Williams Estate Well No. 1 Brewer Drilling Co.	330' FNL, 1550' FEL Unit C, Sec 25 T18S, R26E	P&A	10-28-40	11-18-40	1041'			
(2)	Williams # 6 Collier & Bassett	990' FNL, 2623' FEL Unit C, Section 25 T18S, R26E	Oil Producer	1-25-49	7-1-49	1075'			
(3)	William #6 Collier & Bassett	990' FNL, 1980' FEL Unit C, Section 25 T18S, R26E	T-A	12-10-48	4-10-49	1186'			
(4)		330' FNL, 660' FWL Unit D, Section 25 T18S, R26E							
(5)	Williams Estate Well # 2 Drewer Drilling Co.	990' FNL, 990' FWL Unit D, Section 25 T18S, R26E		3-23-41	4-18-41	1050'			
(6)	LaRue & Muncy	1980' FNL, 660' FWL Unit E, Section 25 T18S, R26E		Proposed SWD Well					
(7)	Williams #4 Well Valley Refining Co.	1650' FNL, 2310' FWL Unit F, Section 25 T18S, R26E	T-A	7-8-44	11-15-44	1086'			
(8)	Scripps # 3 R. D. Collier	2310' FSL, 2310' FEL Unit J, Section 25 T18S, R26E	P&A	7-56	8-26-56	1923'		Queen Grayburg San Andres	
(9)	Scripps # 2 R. D. Collier	2310' FSL, 1650' FWL Unit K, Section 25 T18S, R26E	P&A	10-20-56	12-27-56	1881'			
(10)	Scripps # 1 Valley Refining Co. Nelson & Pope	2310' FSL, 330' FWL Unit L, Section 25 T18S, R26E		9-7-44	9-30-44	1042'			

LL NAME, NUMBER, OPERATOR	LOCATION UNIT, SEC., TWP., RANGE	TYPE	DATE SPUDDED	DATE COMPLETED	DEPTH TD	DEPTH PBTD	RECORD OF COMPLETIONS ZONE(S)	RECORD OF COMPLETIONS PERF(S)& WELL CONSTRUCTION
(11) McCall # 1 Martin Yates, Jr.	990' FWL, 330' FSL Unit M, Section 24 T18S, R26E		5-9-40	7-20-40	1033'			
(12) Hoffman #1 Brewer Drilling Co. National Drilling Co.	330' FSL, 1650' FWL Unit N, Section 24 T18S, R26E	P&A	2-6-41	3-11-41	1175'	1060'		
(13) Kindle #2 Well LaRue & Munch	330' FNL, 330' FEL Unit A, Section 26 T18S, R26E		12-1-76	1-8-77	1045'			
(14) Kindle # 1 E. P. Campbell	1980' FNL, 1980' FEL Unit G, Section 26 T18S, R26E	P&A						
(15) Chad #2 Ralph Niz	330' FEL, 1650" FSL Unit I, Section 26 T18S, R26E	Oil Producer	7-27-84	8-20-84	3919'	3880'	Glorieta, Yeso,	2874 to 3594
(16) Williams #3 Joe G. Fenn	330' FNL, 2310' FEL Unit B, Section 25 T18S, R26E	Oil Producer					Grayburg	
(17) Williams #2 Joe G. Fenn	990' FNL, 990' FWL Unit D, Section 25 T18S, R26E	Oil Producer					Grayburg	
(18) Williams # 4 Joe G. Fenn	1650' FNL, 2310' FWL Unit F, Section 25 T18S, R26E	Oil Producer					Grayburg	
(19) Williams #5 Joe G. Fenn	990' FNL, 1980' FWL Unit C, Section 25 T18S, R26E	Oil Producer					Grayburg	

L NAME, NUMBER, OPERATOR	LOCATION UNIT, SEC., TWP., RANGE	TYPE	DATE SPUDDED	DATE COMPLETED	DEPTH TD	DEPTH PBTD	RECORD OF COMPLETIONS ZONE(S)	RECORD OF COMPLETIONS PERF(S)& WELL CONSTRUCTION
(20) Williams #6 Joe G. Fenn	990' FNL, 2623' FEL Unit B, Section T18S, R26E	Oil Producer					Grayburg	
(21) McCall # 1 Joe G. Fenn	330' FSL, 990' FWL Unit M, Section 24 T18S, R18E						Grayburg	
(22) McCall # 1 Lubbock Machine Co.	990' FSL, 990' FWL Unit M, Section 24 T18S, R26E				1032'			

SECTION V

AREA MAP

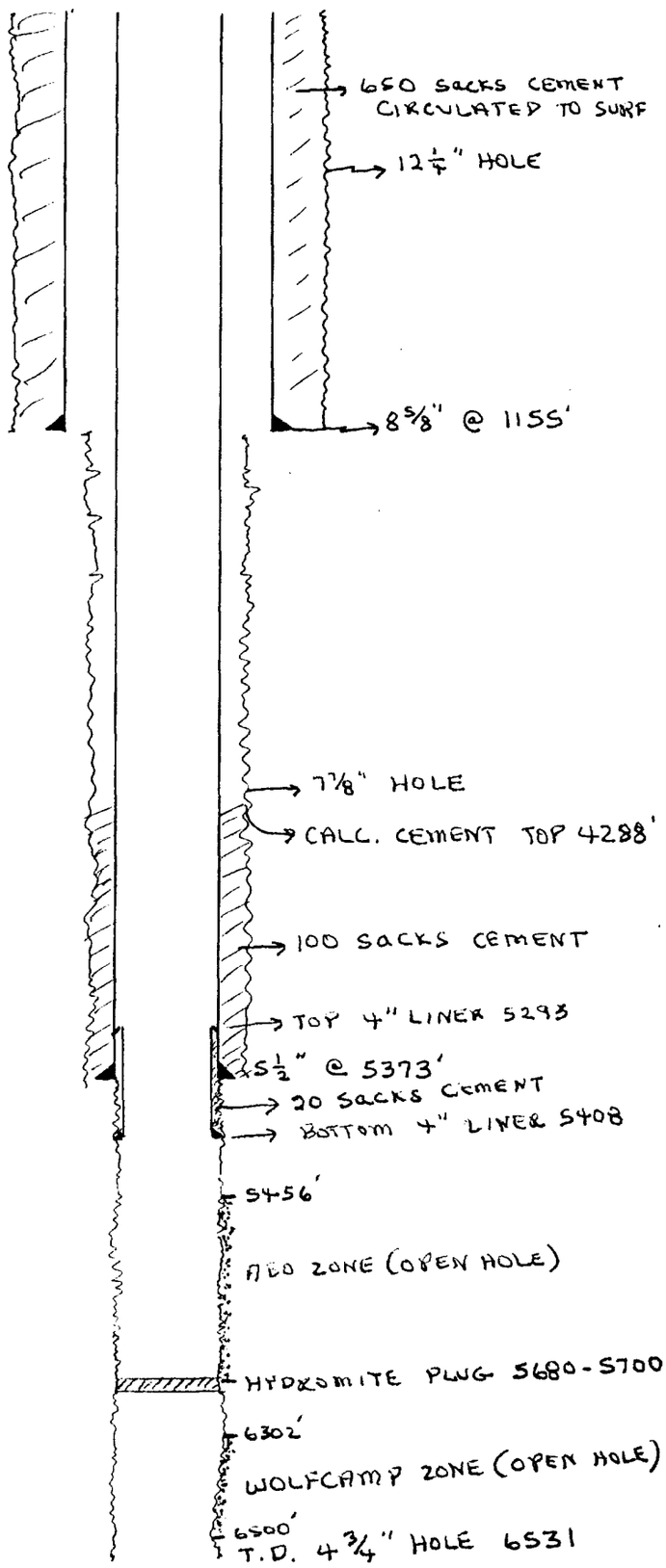

DAYTON
ATOKA (SA) UNIT (OPER)
ATOKA GRBG UNIT (OPER)
W. REDLAKE UNIT (GRBG SA)
EMPIRE (ABO) UNIT ARCO (OPER)
EAST DAYTON
ATOKA, E.
Abo Chalk Bluff Unit
Flag-Redfern
Kimball Oil
Harlan Oil
Yates Pet.
Chevron
Gulf
Exxon
Amoco
Inexco
Monsanto

SECTION VI

WELLBORE TABULATION

ALL WELLS SHOWN ON TABULATION ARE WITHIN THE AREA OF REVIEW. NO WELL EXCEPT FOR THE PROPOSED SWD WELL PENETRATED TO PROPOSED DISPOSAL INTERVAL

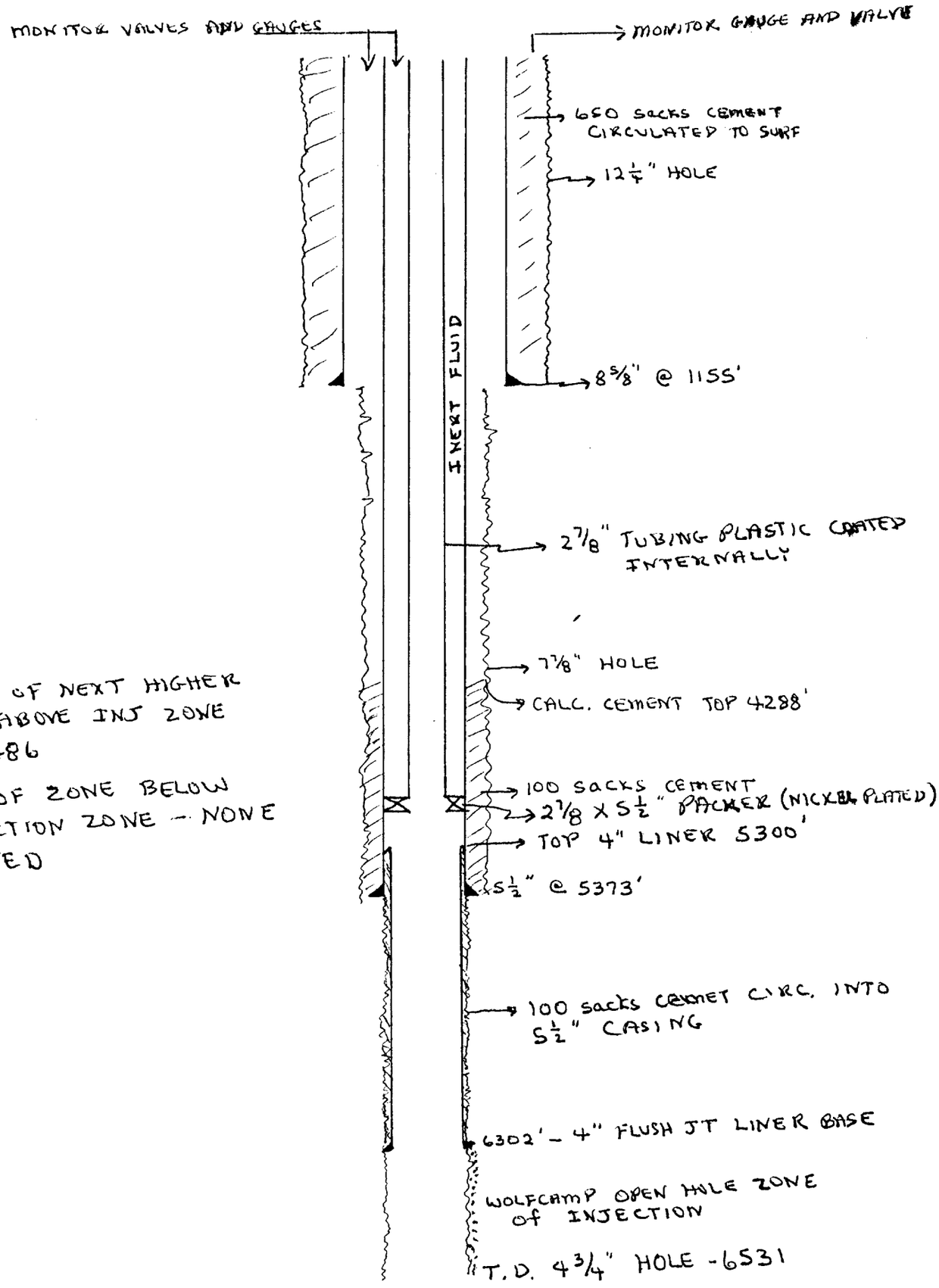
C E LARUE and B. M. MUNCY, JR.
NIX AND CURTIS
1E SEC 25 - T18S - R26E
1980' FNL - 660' FWL
EDDY COUNTY, N.M.
DAYTON ABO' POOL



SCHEMATIC WELL DIAGRAM - PRESENT CONDITION

1. Wolfcamp DST SHOWED NO COMMERCIAL PRODUCTION. RECOVERED 1000' SULPHUR WATER, 1700' GAS CUT SULPHUR WATER
2. COMPLETED in ABO 5408-5680 (OPEN HOLE) FOR 40 BOPD in JULY-1959. PRODUCED 8,258 BBLS/OIL TO MAY-1975 TEMP. ABANDONED.

C E LARUE and B. M. MUNGY, JR.
NIX AND CURTIS
1E SEC 25 - T18S - R26E
1980' FNL - 660' FWL
EDDY COUNTY, N.M.
DAYTON ABO' POOL



1. BOTTOM OF NEXT HIGHER ZONE ABOVE INJ ZONE IS 5486
2. TOP OF ZONE BELOW INJECTION ZONE - NONE OPENED

SCHEMATIC WELL DIAGRAM - AFTER CONVERSION

SECTION VII

(1) Proposed injection rates:

(a) average daily injection rate: 2,000 bbls/day

(b) Maximum daily injection rate: 3,500 bbls/day

(2) Proposed system will be open:

(3) Proposed injection pressures:

(a) average injection pressure: Unknown

(b) Maximum injection pressure: 1260 psi

(4) Type of injection fluid: Produced water from Yeso/Glorieta wells.

(5) Analysis of disposal formation water if not produced within one mile: None produced. Analysis being conducted. Will submit at hearing.

SECTION VIII

Geological Data:

(1) Geological names of injection zones:

Wolfcamp Formation

(2) Lithological detail of injection zones:

The Wolfcamp Formation is comprised of porous limestone and sandy limestone stringers with intermittent shale.

(3) Thickness of injection zone (Wolfcamp Formation):

a.	Average thickness	198'
b.	Range of thickness	250'

(4) Depth to injection zone (Wolfcamp Formation):

a.	Average depth	6302-6500
b.	Range of depth	varied

(5) Geologic name and depth of bottom of all underground sources of drinking water (TDS of 10,000 mg/l or less) overlying or immediately under injection zone:

Base of fresh water in area is 860 feet. No drinking or fresh water underlies the proposed injection.

SECTION IX

A stimulation program is currently planned that may include:

A moderate acid job in the range of 3,000 gallons of 15% NE regular acid.

SECTION X

The well log has been filed with the Division.

SECTION XI

WATER ANAYLSIS

UNICHEM
INTERNATIONAL

Home Office 707 N. Leech, P. O. Box 1499 / Hobbs, NM 88240 / Ph. 505/393-7751, TWX 910/986-0010

July 19, 1984

Blanco Engineering
116 N. First St.
Artesia, NM 88210

Attention: Paul White

Dear Mr. White:

Enclosed please find our water analyses and compatibility reports, submitted to our laboratory on July 18, 1984.

If you have any questions or require further information, please do not hesitate to contact us.

Sincerely,

Elizabeth Wesley

Elizabeth Wesley
Senior Lab Technician

EW/bf

cc: Charlie Kyle
Jerry Golson
Cy Foster

UNICHEM INTERNATIONAL

601 NORTH LEECH P.O.BOX1499

HOBBS, NEW MEXICO 88240

COMPANY : BLANCO ENGINEERING
DATE : 7-19-84
FIELD,LEASE&WELL : SCRIPPS 37.5%/WILLIAMS 37.5%/CHEV-CR MARTIN 25%
SAMPLING POINT:
DATE SAMPLED : 7-17-84

SPECIFIC GRAVITY = 1.108
TOTAL DISSOLVED SOLIDS = 160652
PH = 6.475

		ME/L	MG/L
CATIONS			
CALCIUM	(CA)+2	113.	2271.
MAGNESIUM	(MG)+2	104.	1279.
SODIUM	(NA).CALC.	2552.	58680.
ANIONS			
BICARBONATE	(HCO3)-1	9.5	581.
CARBONATE	(CO3)-2	0	0
HYDROXIDE	(OH)-1	0	0
SULFATE	(SO4)-2	61.2	2939.
CHLORIDES	(CL)-1	2700	94900
DISSOLVED GASES			
CARBON DIOXIDE	(CO2)	NOT RUN	
HYDROGEN SULFIDE	(H2S)	NOT RUN	
OXYGEN	(O2)	NOT RUN	
IRON(TOTAL)	(FE)	NOT RUN	
BARIUM	(BA)+2	NOT RUN	
MANGANESE	(MN)	NOT RUN	

IONIC STRENGTH (MOLAL) =3.066

SCALING INDEX	TEMP
	30C
	86F
CARBONATE INDEX	.225
CALCIUM CARBONATE SCALING	LIKELY
CALCIUM SULFATE INDEX	-26.
CALCIUM SULFATE SCALING	UNLIKELY

UNICHEM INTERNATIONAL

601 NORTH LEECH P.O.BOX1499

HOBBS, NEW MEXICO 88240

COMPANY : BLANCO ENGINEERING
DATE : 7-19-84
FIELD,LEASE&WELL : SCRIPPS 12.5%/WILLIAMS 12.5%/CHEV-CR MARTIN 75%
SAMPLING POINT:
DATE SAMPLED : 7-17-84

SPECIFIC GRAVITY = 1.055
TOTAL DISSOLVED SOLIDS = 83285
PH = 6.905

		ME/L	MG/L
CATIONS			
CALCIUM	(CA)+2	73.3	1469.
MAGNESIUM	(MG)+2	51.4	627.
SODIUM	(NA).CALC.	1305.	30015.
ANIONS			
BICARBONATE	(HCO3)-1	8.7	535.
CARBONATE	(CO3)-2	0	0
HYDROXIDE	(OH)-1	0	0
SULFATE	(SO4)-2	21.5	1037.
CHLORIDES	(CL)-1	1400	49600
DISSOLVED GASES			
CARBON DIOXIDE	(CO2)	NOT RUN	
HYDROGEN SULFIDE	(H2S)	NOT RUN	
OXYGEN	(O2)	NOT RUN	
IRON(TOTAL)	(FE)	NOT RUN	
BARIUM	(BA)+2	NOT RUN	
MANGANESE	(MN)	NOT RUN	

IONIC STRENGTH (MOLAL) =1.548

SCALING INDEX	TEMP
	30C 86F
CARBONATE INDEX	.107
CALCIUM CARBONATE SCALING	LIKELY
CALCIUM SULFATE INDEX	-53.
CALCIUM SULFATE SCALING	UNLIKELY

UNICHEM INTERNATIONAL

601 NORTH LEECH P.O.BOX1499

HOBBS. NEW MEXICO 88240

COMPANY : BLANCO ENGINEERING
DATE : 7-19-84
FIELD.LEASE&WELL : SCRIPPS 25%/WILLIAMS 25%/CHEV-CR MARTIN 50%
SAMPLING POINT:
DATE SAMPLED : 7-17-84

SPECIFIC GRAVITY = 1.083
TOTAL DISSOLVED SOLIDS = 123168
PH = 6.69

		ME/L	MG/L
CATIONS			
CALCIUM	(CA)+2	93.3	1870.
MAGNESIUM	(MG)+2	78.1	953.
SODIUM	(NA).CALC.	1979.	45497.
ANIONS			
BICARBONATE	(HCO3)-1	9.1	558.
CARBONATE	(CO3)-2	0	0
HYDROXIDE	(OH)-1	0	0
SULFATE	(SO4)-2	41.3	1988.
CHLORIDES	(CL)-1	2100	72300
DISSOLVED GASES			
CARBON DIOXIDE	(CO2)	NOT RUN	
HYDROGEN SULFIDE	(H2S)	NOT RUN	
OXYGEN	(O2)	NOT RUN	
IRON(TOTAL)	(FE)	NOT RUN	
BARIUM	(BA)+2	NOT RUN	
MANGANESE	(MN)	NOT RUN	

IONIC STRENGTH (MOLAL) =2.325

SCALING INDEX	TEMP
	30C
	86F
CARBONATE INDEX	.131
CALCIUM CARBONATE SCALING	LIKELY
CALCIUM SULFATE INDEX	-43.
CALCIUM SULFATE SCALING	UNLIKELY

UNICHEM INTERNATIONAL

601 NORTH LEECH P.O.BOX1499

HOBBS, NEW MEXICO 88240

COMPANY : BLANCO ENGINEERING
DATE : 7-19-84
FIELD,LEASE&WELL : FRESH WATER WELL #2
SAMPLING POINT:
DATE SAMPLED : 7-17-84

SPECIFIC GRAVITY = 1.001
TOTAL DISSOLVED SOLIDS = 4035
PH = 7.5

		ME/L	MG/L
CATIONS			
CALCIUM	(CA)+2	29.3	587.
MAGNESIUM	(MG)+2	36.6	445.
SODIUM	(NA),CALC.	3.0	69.6
ANIONS			
BICARBONATE	(HCO3)-1	3.8	231.
CARBONATE	(CO3)-2	0	0
HYDROXIDE	(OH)-1	0	0
SULFATE	(SO4)-2	31.2	1500
CHLORIDES	(CL)-1	34	1200
DISSOLVED GASES			
CARBON DIOXIDE	(CO2)	NOT RUN	
HYDROGEN SULFIDE	(H2S)	NOT RUN	
OXYGEN	(O2)	NOT RUN	
IRON(TOTAL)	(FE)	NOT RUN	
BARIUM	(BA)+2	NOT RUN	
MANGANESE	(MN)	NOT RUN	

IONIC STRENGTH (MOLAL) = .118

SCALING INDEX	TEMP
	30C 86F
CARBONATE INDEX	.768
CALCIUM CARBONATE SCALING	LIKELY
CALCIUM SULFATE INDEX	-1.3
CALCIUM SULFATE SCALING	UNLIKELY

UNICHEM INTERNATIONAL

601 NORTH LEECH P.O.BOX1499

HOBBS, NEW MEXICO 88240

COMPANY : BLANCO ENGINEERING
DATE : 7-19-84
FIELD,LEASE&WELL : WATERWELL #1
SAMPLING POINT:
DATE SAMPLED : 7-17-84

SPECIFIC GRAVITY = 1.001
TOTAL DISSOLVED SOLIDS = 4377
PH = 7.59

		ME/L	MG/L.
CATIONS			
CALCIUM	(CA)+2	30	601.
MAGNESIUM	(MG)+2	29	352.
SODIUM	(NA),CALC.	14.3	328.
ANIONS			
BICARBONATE	(HCO3)-1	3.6	219.
CARBONATE	(CO3)-2	0	0
HYDROXIDE	(OH)-1	0	0
SULFATE	(SO4)-2	30.7	1475
CHLORIDES	(CL)-1	39	1400
DISSOLVED GASES			
CARBON DIOXIDE	(CO2)	NOT RUN	
HYDROGEN SULFIDE	(H2S)	NOT RUN	
OXYGEN	(O2)	NOT RUN	
IRON(TOTAL)	(FE)	NOT RUN	
BARIUM	(BA)+2	NOT RUN	
MANGANESE	(MN)	NOT RUN	

IONIC STRENGTH (MOLAL) = .119

SCALING INDEX	TEMP
	30C 86F
CARBONATE INDEX	.840
CALCIUM CARBONATE SCALING	LIKELY
CALCIUM SULFATE INDEX	-1.1
CALCIUM SULFATE SCALING	UNLIKELY

UNICHEM INTERNATIONAL

601 NORTH LEECH P.O.BOX1499

HOBBS, NEW MEXICO 88240

COMPANY : BLANCO ENGINEERING
DATE : 7-19-84
FIELD,LEASE&WELL : WILLIAMS #8
SAMPLING POINT: WELLHEAD
DATE SAMPLED : 7-17-84

SPECIFIC GRAVITY = 1.135
TOTAL DISSOLVED SOLIDS = 201607
PH = 6.31

		ME/L	MG/L
CATIONS			
CALCIUM	(CA)+2	126.	2538.
MAGNESIUM	(MG)+2	143.	1742.
SODIUM	(NA).CALC.	3217.	73978.
ANIONS			
BICARBONATE	(HCO3)-1	9.8	597.
CARBONATE	(CO3)-2	0	0
HYDROXIDE	(OH)-1	0	0
SULFATE	(SO4)-2	78.0	3750
CHLORIDES	(CL)-1	3400	119000
DISSOLVED CASES			
CARBON DIOXIDE	(CO2)	NOT RUN	
HYDROGEN SULFIDE	(H2S)	NOT RUN	
OXYGEN	(O2)	NOT RUN	
IRON(TOTAL)	(FE)	NOT RUN	
BARIUM	(BA)+2	NOT RUN	
MANGANESE	(MN)	NOT RUN	

IONIC STRENGTH (MOLAL) =3.903

SCALING INDEX	TEMP
	30C 86F
CARBONATE INDEX	.379
CALCIUM CARBONATE SCALING	LIKELY
CALCIUM SULFATE INDEX	-9.6
CALCIUM SULFATE SCALING	UNLIKELY

IONIC STRENGTH IS TOO HIGH FOR CARBONATE METHOD

UNICHEM INTERNATIONAL

601 NORTH LEECH P.O.BOX1499

HOBBS, NEW MEXICO 88240

COMPANY : BLANCO ENGINEERING
DATE : 7-19-84
FIELD.LEASE&WELL : SCRIPPS #4M
SAMPLING POINT: WELLHEAD
DATE SAMPLED : 7-17-84

SPECIFIC GRAVITY = 1.133
TOTAL DISSOLVED SOLIDS = 196954
PH = 6.21

		ME/L	MG/L
CATIONS			
CALCIUM	(CA)+2	140	2805.
MAGNESIUM	(MG)+2	120	1458.
SODIUM	(NA).CALC.	3133.	72048.
ANIONS			
BICARBONATE	(HCO3)-1	10	610.
CARBONATE	(CO3)-2	0	0
HYDROXIDE	(OH)-1	0	0
SULFATE	(SO4)-2	83.9	4031.
CHLORIDES	(CL)-1	3300	116000
DISSOLVED GASES			
CARBON DIOXIDE	(CO2)	NOT RUN	
HYDROGEN SULFIDE	(H2S)	NOT RUN	
OXYGEN	(O2)	NOT RUN	
IRON(TOTAL)	(FE)	NOT RUN	
BARIUM	(BA)+2	NOT RUN	
MANGANESE	(MN)	NOT RUN	

IONIC STRENGTH (MOLAL) =3.802

SCALING INDEX	TEMP
	30C 84F
CARBONATE INDEX	.298
CALCIUM CARBONATE SCALING	LIKELY
CALCIUM SULFATE INDEX	-1.3
CALCIUM SULFATE SCALING	UNLIKELY

IONIC STRENGTH IS TOO HIGH FOR CARBONATE METHOD

SECTION XII

AFFIRMATIVE STATEMENT ON OPEN FAULTING OR HYDROLOGIC CONNCECTION

AFFIRMATIVE STATEMENT

I have examined the available geologic and engineering data for this project and I found no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

Paul White

Paul G. White, President
Blanco Engineering, Inc.

SECTION XIII

PROOF OF NOTICE

PROOF OF NOTICE

STATE OF NEW MEXICO)
) ss
COUNTY OF SANTA FE)

The undersigned, being first duly sworn, upon oath, states that on the 28 day of January, 1985, the undersigned did mail in the United States Post Office at Artesia, New Mexico, true copies of the foregoing Application for Authorization to Inject, in securely sealed, certified mail, return receipt requested, postage prepaid envelopes, addressed to the following named owners 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:

See Exhibit "A" Attached

W. Thomas Kellahin

SUBSCRIBED AND SWORN TO before me this 28 day of January, 1985.

Cassie Aguilar
Notary Public

My Commission Expires:

9-26-87

EXHIBIT "A"

OWNER OF THE SURFACE AT DISPOSAL LOCATION:

Donald Fanning & Sons, Inc.
Route 1, Box 79
Artesia, New Mexico 88210

OPERATORS WITHIN ONE-HALF MILE RADIUS:

Rio Pecos Corporation
110 West Louisiana
Suite 460
Midland, Texas 79701

Mark D. Wilson
110 West Louisiana
Suite 460
Midland, Texas 79701

Yates Petroleum Corporation
Yates Drilling
ABO Petroleum Co.
MYCO
Martin Yates
Attn: Mr. Randy Patterson
207 South Street
Artesia, New Mexico 88210

Ralph Nix
7th and Main
Artesia, New Mexico 88210

Dan Hannifin
P. O. Box 182
Rosswell, New Mexico 88201

DEPCO, Inc.
1000 Petroleum Club Building
Denver, Colorado 80202

AMOCO
Box 3092
Houston, Texas 77253

H&S Oil Company
First National Bank of Artesia
Artesia, New Mexico 88210

Exhibit "A" Continued:

Joe G. Fenn
908 Main
Artesia, New Mexico 88210

ARCO
Box 1610
Midland, Texas 79702

Phillips Petroleum Co.
4001 Penbrook
Odessa, Texas 79762

INEXCO
Republic Bank Center
Suite 2100
700 Louisiana Street
Houston, Texas 77002-2702

Brewer Drilling Company
Box 566
Artesia, New Mexico 88210

Valley Refining Company
Artesia, New Mexico 88210

Collier & Bassett
Box 798
Artesia, New Mexico 88210

R. D. Collier
807 Bullock Avenue
Artesia, New Mexico 88210

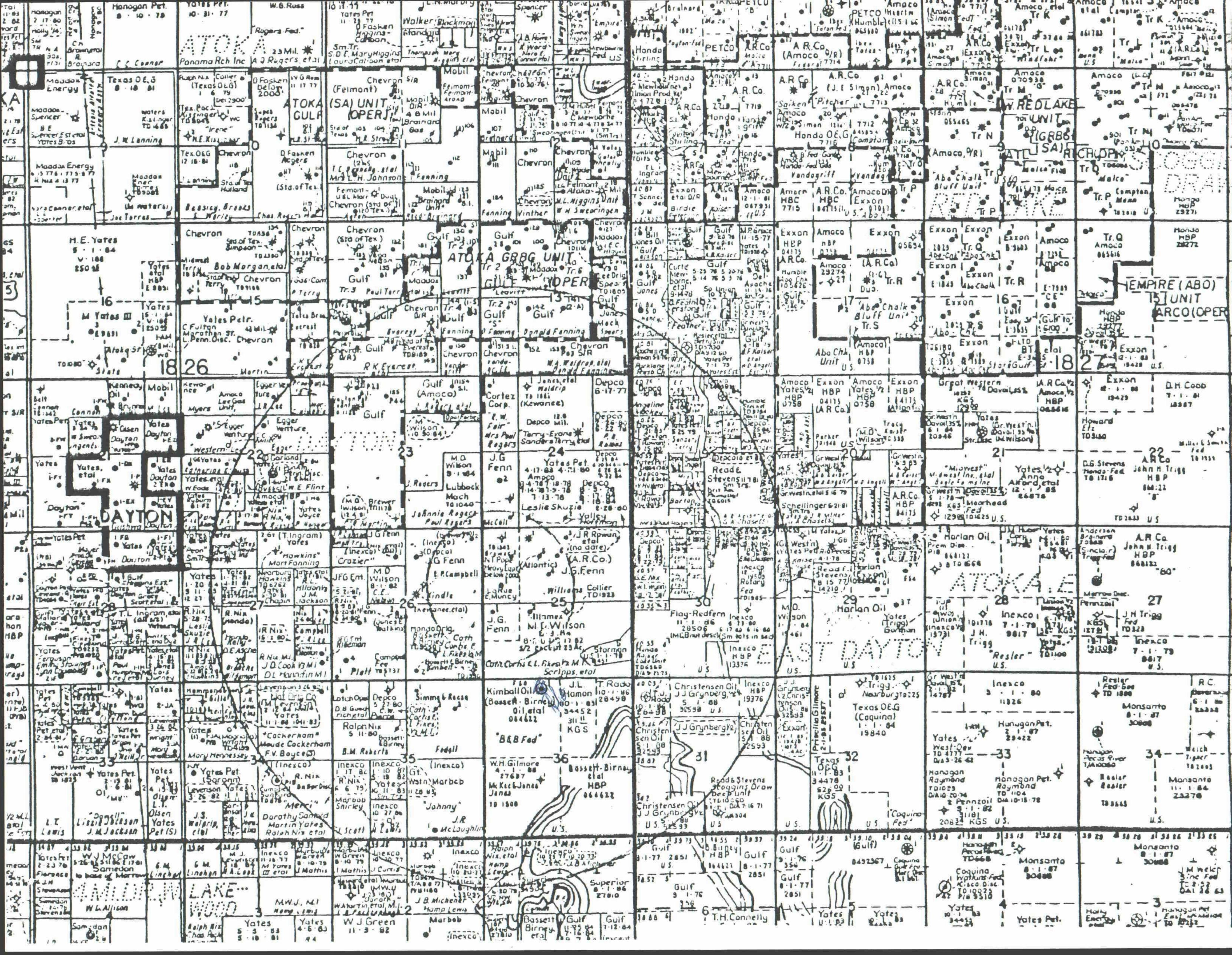
C. E. LaRue &
B. N. Muncy, Jr.
P. O. Box 196
Artesia, New Mexico 88210

National Drilling Company
P. O. Box 702
Artesia, New Mexico 88210

Nelson & Pope Hearing Equipment
Box 753
Artesia, New Mexico 88210

Gary A. Swartz
Petroleum Building
Roswell, New Mexico 88201

Bassett - Birney Oil Corporation
207 South 4th Street
Artesia, New Mexico 88210



EMPIRE (ABO) UNIT ARCO (OPER)
ATOKA GRBG UNIT
ATOKA (SA) UNIT (OPER) GULF
RED LAKE UNIT
DAYTON
EAST DAYTON
ATOKA E
LAKE WOOD