BW - 15

GENERAL CORRESPONDENCE

YEAR(S):

1989 → 1983

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

December 6, 1989

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. C. W. Trainer
MARATHON ROAD WATER STATION
526 Sandy Mountain Drive
Sunrise Beach, Texas 78643

RE: Delegation of Responsibilities Brine Manufacturing Operations

Dear Mr. Trainer:

On June 13, 1989, the Water Quality Control Commission (WQCC) transferred the responsibility for the administration and enforcement of Commission regulations at brine manufacturing operations, including all brine production wells, holding ponds and tanks, from the Environmental Improvement Division (EID) to the Oil Conservation Division (OCD). The OCD has jurisdiction over all manufactured brine once it is transported, used or disposed of off brine plant premises for use in or directly related to oil and gas operations regulated by OCD. OCD regulates brine injection through its Class II Underground Injection Control (UIC) Program if the brine is used in the drilling for or production of oil and gas. EID shall regulate brine injection through its UIC Program if the brine is used for other purposes.

Brine production facilities that were transferred to OCD's jurisdiction must operate pursuant to an approved and current discharge plan. The discharge plan renewal process will be continued by OCD Environmental Bureau Staff. Approximately eight (8) months before the expiration date of an approved discharge plan, the discharger will be notified of the pending expiration of the plan. The discharge plan review process can, depending on circumstances, take several months. If the holder of an approved discharge plan submits a renewal application at least 180 days before discharge plan expiration, and the discharger is in compliance with his approved plan on the date of expiration, then the existing plan will not expire until the renewal application has been approved or disapproved.

Guidelines to aid you in determining what will be required for the renewal of your discharge plan are bring prepared. When the guidelines are finalized, they will be supplied to each operator of a brine production facility.

The OCD requires that any person, firm corporation or association that is in ownership of an oil, gas, or service well in the State of New Mexico shall furnish the Division with a surety bond in an amount prescribed in the OCD regulations. The current bond for well less than 5000 feet deep in Chaves, Eddy, Lea and Roosevelt Counties is $5000. I am enclosing the OCD bond forms for your use. All surety bonds previously submitted to the OCD did not include brine wells. Those surety bonds submitted to the EID must be changed to the OCD. Once the proper bond form are received and approved, all other sureties and bonds can be cancelled.

If you have any questions, please do not hesitate to contact me at (505) 827-5884.

Sincerely,

Roger C. Anderson

Roger C. Anderson
Environmental Engineer

RCA/sl

Enclosures

CC: Artesia District Office
Hobbs District Office

NEW MEXICO
HEALTH AND ENVIRONMENT
DEPARTMENT

ENVIRONMENTAL IMPROVEMENT DIVISION
Harold Runnels Bldg.-1190 St. Francis Drive
Santa Fe, New Mexico 87503

Richard Mitzelfelt
Director

GARREY CARRUTHERS
Governor
CARLA L. MUTH
Secretary
MICHAEL J. BURKHART
Deputy Secretary

December 14, 1988

C.W. Trainer, Owner
Marathon Road Water Station
526 Sandy Mountain Drive
Sunrise Beach, Texas 78643

Dear Mr. Trainer:

The Underground Injection Control staff of the New Mexico Environmental Improvement Division Ground Water Section would like to thank you for your cooperation during our recent inspection of Marathon Road Water Station brine facility. A copy of the inspection form is attached for your reference.

Deficiencies noted during the inspection are as follows:

1. Spillage of brine at loading area noted. Facility should be free of brine spillage, facility should be inspected frequently, and spillage cleaned up when detected.

2. Brine pump for storage tank has leakage. Significant salt buildup on pump. Leaks in pump should be repaired or pump should be replaced.

3. Storage pond monitor well was sampled. Field test shows electrical conductivity of ground water sample to be greater than 50,000 umhos. Evidence indicates brine contamination of ground water. Must eliminate source of brine contamination and remediate ground water contamination.

Thank you for your continued cooperation. Should you have any questions feel free to contact me (827-2902) or John Parker (827-0027).

Sincerely,

Kevin A Lambert

Kevin Lambert
Hydrologist
Ground Water Section - UIC Program

KL/mw

cc: Gene Lee, Consultant, Roswell

Enclosure

No. of Samples	Ion
1	Na
1	K
1	Ca
1	Mg
1	Cl
1	HCO3
1	CO3
1	SO4
1	TDS
////////	////////////
	NO3+ NO2
	NH3
	kjeld N
////////	////////////
	As
	Ba
	Cd
	CN
	Cr
	F
	Pb
	Hg
	Se
	Ag
	U
	V
	Ra 226
	Ra 228
////////	////////////
	Cu
	Fe
	Mn
	Phenols
	Zn
////////	////////////
	Al
	B
	Co
	Mo
	Ni
////////	////////////
	pH
	Conduct.

FIELD TRIP REPORT
GROUND WATER SECTION

SLD USER CODES

Ground Water: 59300

NO_3, HC, & Toxics: 59600

UIC: (59500)

County Eddy/Lea

FACILITY VISITED

Name of Facility: 20 Brine Facilities & Climax Chemical

Location: Carlsbad/Hobbs in Southeast NM

Discharge Plan Number: DP- See Below

Type of Operation: Brine Production / Chemical Manufacturing

ENVIRONMENTAL IMPROVEMENT DIVISION FIELD VISIT

EID Inspector(s): Lambert

Date of Inspection or Visit: 12/5-8/88

Discharger's Representative Present During EID Visit:

Name:

Title or Position:

Purpose of Visit:

a. Evaluation of Proposed Discharge Plan

(b.) Compliance Inspection of Discharge with Approved Plan

c. Other (specify)

Inspection Activities During Field Visit:

a. Inspection of Facilities or Construction (specify)

b. Sampling of Effluents (give sampling locations)

c. Sampling of Ground Water (give names or locations of wells)
Sampled M.W. at Marathon

d. Evaluation of geology, soils, water levels or other physical characteristics of the location (specify)

e. Other (specify)

Observations and Information Obtained during the Visit:
The 20 Brine Facilities & Climax are listed below by DP#. See Individual File for specifics

ACTION REQUIRED

#	#	#	#	#
	323	354	370	298
318	324	355	371	426
319	325	360	372	
320	326	361	394	
321	351	369	401	
322				

BRINE STATION INSPECTION FORM

0815

DATE 12/7 1988 EID INSPECTOR Lambert
FACILITY Marathon Road WS LOCATION 20 miles W Hobbs
FACILITY REP ON SITE — COUNTY Lea

Alot of work done to upgrade facility new tanks, regraded loading area valved for reversal

WELL OPERATION

WELL IS INJECTING: __ THROUGH ANNULUS __ THROUGH TUBING
SOURCE OF FRESH WATER Water well
TRACE INJECTION/PRODUCTION LINES Underground to station well ~1/2 mile East of station ~~goes to bad pumphouse~~
WELL HEAD PRESSURE _____ PSIG PUMP PRESSURE _____ PSIG
LEAKS AROUND WELL OR PUMP None evident pumphouse ~~is~~ locked can't get to wellhead

STORAGE AREA

FOR PONDS: ~~2 tanks~~ 2 pond - 1 brine, 1 fresh
GENERAL LINER APPEARANCE some torn sections in exposed part of hypalon liner above
AMOUNT OF FREEBOARD ~1 foot
ANY SIGN OF OVERFLOW OR LEAKS Yes windblown overflow
LEAK DETECTION SYSTEM __ FLUIDS __ DRY remove debris from ponds

FOR TANKS: 2 tanks
GENERAL APPEARANCE New look good
LABLED PLAINLY ✓ YES __ NO ~~can't~~ can tell by piping
BERMED TO PREVENT RUNOFF ✓ YES __ NO
CHECK CONTENTS TO ASSURE PROPER FLUID/LABLE MATCH _____

NUMBER OF TANKS FOR BRINE 1 FRESH WATER 1

LOADING AREA

Permian Corp trucker stated brine pump broken pumping from brine pond 12/4-5/88

pump for brine tank leak, significant salt buildup w/ overflow, pressure gauge leaking access road higher than loading area any spill drains toward area between tanks & lagoon

PROPERLY GRADED AND BERMED TO CONTAIN SPILLAGE ✓ YES __ NO
ANY EVIDENCE OF RECENT SPILLAGE ✓ YES __ NO
DOES FACILITY HAVE A SPILL COLLECTION SYSTEM ✓ YES __ NO a little
ANY EVIDENCE OF OIL SPILLING/DUMPING __ YES ✓ NO with brine side have brine spills associated w/ loading need cleanup below grade collection system, not collecting all that is spill

MONITORING WELLS

DEPTH ~40 FT STATIC WATER LEVEL _____ FT BELOW CASING
SAMPLED THIS VISIT ✓ YES __ NO TEMP 15°C Ec > 50,000 mmhos

COMMENTS Facility looks better than last year
Need fix pump, cleanup brine spills at loading area
MW well shows EC > 50,000 mmhos
Have to address g.w. contamination & source (pond + bad liner

C W Trainer
P. O. Box [illegible] Kingsland, Texas 78639 915-388-36[illegible] FAX 915-388-3209

November 3, 1988

New Mexico Health and Environment Department
Box 968
Santa Fe, NM 87504 - 0968

Attn: Kevin Lambert - Re: Discharge Plan DP-361 - Marathon Road

Enclosed is water anlysis from our monitor well taken 10-8-88 that shows 33,500 ppm chlorides and 63,780 ppm dissolved solids.

We have sampled the well daily between 10-26 and 10-31 and found the samples weigh 9.4 to 9.8 ppg which indicates a similarly high salt content.

The well also seems to be staying full of water up to the perforations at 30'. Our brine pit liner may be leaking, or conceivably this is the result of the vandal spill last month.

We will put no more brine in the pit at this time. We seek your help in how to cope with this problem.

Our brine sales are down to almost nothing now so this might well be the best time to get everything in order. But we are not making any money so we need to spend as wisely as possible.

Perhaps we can figure out a way to install the "sensor, leak detector system" you require on new pits. Do you have the design of such a system that will work? I would like to consider it.

Sincerely,

C W Trainer

xc: Gene Lee & Eddie Elliott

LABORATORY REPORT
ROSWELL TEST FACILITY

3801 East 2nd
(Mailing) P. O. Drawer 1838
Roswell, N. M. 88201
Phone (505) 623-0531
Open, Monday thru Friday 7:00AM to 3:30PM

The test results reported relate only to the items tested.

Reports shall not be reproduced except in full without the approval of the testing laboratory.

Any deviations, additions to or exclusions from the test specifications and any other information relevant to a specific test will be in the note section of the report.

Non-standard test methods or procedures used will be explained in the note section of the report.

A description of sampling procedure will be found in the note section of the report when relevant.

When necessary, an explanation of measurement uncertainty will be in the note section of the report.

REFERENCE

SM- Standard Methods 16th Edition 1980
EPA- Methods for chemical analysis of water and waste
Environmental Protection Agency 1983
EPA-B- Microbiological Methods for Monitoring the Environment
ASTM- American Society for Testing Materials

The Roswell Test Facility is accredited by the American Association For Laboratory Accerditation on the Chemical/ Biological (Environmental) Field of testing, as listed in the current AALA Directory of Accredited Laboratories.

Roswell Test Facility

Lab Request # 490
Lab Sample # 3-293-88
Date Sampled 10-8-88
Date Received 10-19-88
Date Reported 10-21-88
Notes: * see notes on back

Sample Source Monitoring Well- Marathon Road Water Station
Copies To: Mr. Charlie Sparnon
C. W. Trainer
1306 Meadow Lane
Roswell, N. M. 88201
Attn: Gene Lee

Sample					Unit Price	Total Price	Ref. Method
	mg/L	mg/L	mg/L	mg/l			
Sodium (Na^+)							EPA 273.1
Potassium (K^+)							EPA 258.1
Calcium (Ca^{2+})							EPA 215.2
Magnesium (Mg^{2+})							SM 313 C.
Chloride (Cl^-)	33,500				10	10	EPA 325.3
Sulfate ($SO_4^=$)							ASTM D515-88 B
Bicarbonate (HCO_3^-)							SM 403
Carbonate ($CO_3^=$)							SM 403
Total Iron (Fe)							EPA 236.1
Ferrous Iron (Fe^{2+})							ASTM D1068-77 A
Ferric Iron (Fe^{3+})							ASTM D1068-77 A
Dis. Solids, Evap.	63,780				10	10	SM 209 B
pH							SM 423
Conductivity (25C°)							SM 205
Total Hardness ($CaCO_3$)							EPA 130.2
Nitrate (NO_3-N)							EPA 352.1
TKN-N							EPA 351.3
Total Chlorine (Cl)							SM 309
Free Chlorine (Cl)							SM 309
Total Phosphate ($PO_4^=$)							ASTM D515-72 B
Orhto Phosphate ($PO_4^=$)							ASTM D515-72 B
MPN Tot. # of Pos. Tube							SM 908 A
MF Tot. Coli./100mL							SM 909 A
Specific Gravity							SM 231 E
Dissolved Oxygen (O_2)							SM 421 F
Cyanide (CN^-)							EPA 335.2

References on cover sheet and notes on back

Total $ 20.00

October 25, 1988

Kevin Lambert
EID--Groundwater
P.O. Box 968
Runnells Building
Santa Fe, New Mexico 875Ø4-Ø968

RE: Discharge Plan DP-361

Dear Mr. Lambert,

I appreciated your extension of time to October 31, 1988 for the plans of the Marathon Road Water Station and report status of the clean-up of the brine contamination. You stated you are in receipt of the photos and diagrams of the Water Station. I would like to bring you up to date on the increase of chlorides and TDS in the Monitor well, as well as action being taken to prevent any future spills at Marathon Road Water Station.

After the recent brine spill, a motor grader was sent to clean up the area covered by the brine. At this time, a ditch was placed in a position to direct any brine away from the pavement to the brine sump tank located at the end of the brine loading line. This work was explained to you by Mr. C. W. Trainer in his latest letter to you. We plan to also increase the pump capacity to handle spillage from one valve on the brine manifold. At this time, Marathon Road Water Station is in the process to lock the two end valves on the brine manifold and leaving the valve in the center unlocked for the truckers. If brine sales increase substantially, these locks may be removed for a time to expedite loading and handling of trucks hauling brine. This should eliminate vandals from opening more than one valve at a time on the manifold, giving the sump pump a better chance to keep up pumping from the sump to the pit. The elbows on the valves have also been removed to keep any flow within the grade and ditch that will carry it to the sump tank.

A recent visual inspection showed four holes in the permanent liner of the brine pond. The material needed to patch these holes has been ordered and Diamond Rental Co., who installed the liner originally has been contracted to repair these leaks. The level of brine water in the pond is being allowed to drop to a minimal level in order to wash salt from the liner and let us make a visual inspection of the liner to the bottom as well. The monitor well is being bailed daily and samples taken to determine if the brine water has leaked from the pond and is causing any contamination. If the samples indicate this has occurred, pumping the monitor well will take place to intercept the brine plume as was described in the original Discharge Plan. The original process to take samples from the monitor well left some doubt as to the accuracy and consistency of the samples. The process currently taking place should eliminate this doubt. An inspection of the brine facility is coming soon and I feel that you will be impressed with the amount of time, money, and effort spent to have Marathon Road Water Station one of the most efficient around the area, as well as being environmentally protective as well as aesthetic.

If I can be of any further assistance or if you need additional information please let me know. I will keep you informed as to the water samples being taken from the Monitor well and hope to have any problems with leaks in the Brine Pond liner eliminated within the next 3Ø-6Ø days.

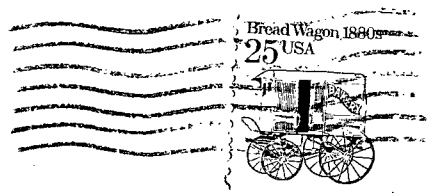
Sincerely,

Gene Lee

xc: C.W. Trainer

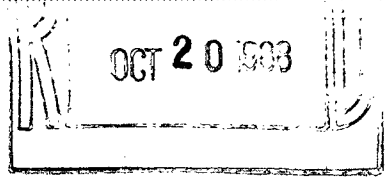
H. E. (Gene) Lee
1306 MEADOW LANE
ROSWELL, NM 88201

ROSWELL, N.M.
OCT 31
PM
1988



Kevin Lambert
EID Groundwater
Runnells Building
P.O. Box 968
Santa Fe, New Mexico
87504-0968

C W Trainer
P. O. Box [illegible]9 Kingsland, Texas 78639 915-388-36[illegible] FAX 915-388-3209



Octobeber 14, 1988

New Mexico Health & Environment Dept - Attn: Kevin Lambert
Box 968
Santa Fe, NM 87504

Re: Discharge Plan DP-361

We have covered the brine spill and constructed a barrow ditch from the existing overflow sump tank to, and along the dirt brine pit wall to the main tank and pump area. It will hold any excess spilled brine and we may put another pump at the soutwest corner of the brine pit that would return extra spillage into the pit. We are installing compibnation locks on the north and south brine loading valves and plan the leave the center one unlocked. This should reduce the danger and make spills easier to pick up.

Harry Teague will patch the holes in our pit liner. (They are all above the permitted brine level).

Gene Lee and I bailed on the observation well and Gary is bailing it some daily now. I want to satisfy myself that our sampling technique is OK. I haven't had any confidence in it up to now. We will send you water analysis when we have something we can rely on. The same water has been in the well for several years below the water sand at 30' and since we have never produced the well, I have doubts. We are bailing it daily and hope to get an idea what sort of water, if any, is entering it.

Please note I have a P O Box now so I can receive certified mail easier.

We have been, and still are, quite busy in the oil business. It sure would be nice to get our problems behind us. We are hoping to see your inspector next month. Please let me know what more you want at this time.

Sincerely,

C W Trainer

xc: Gene Lee & Eddie Elliott

H. E. (Gene) Lee

DRILLING CONSULTANT
OIL OR GAS DEVELOPMENT

CAPROCK NO. 9493
ROSWELL - 623 - 0989
HOBBS - 397 - 6511

1306 MEADOW LANE
ROSWELL, NM 88201
622 - 7355

September 1, 1988

Kevin Lambert
EID--Groundwater
P.O. Box 968
Runnells Building
Santa Fe, New Mexico 87504-0968

RECEIVED
OCT 05 1988
GROUND WATER BUREAU

RE: Discharge Plan DP-361

Dear Mr. Lambert,

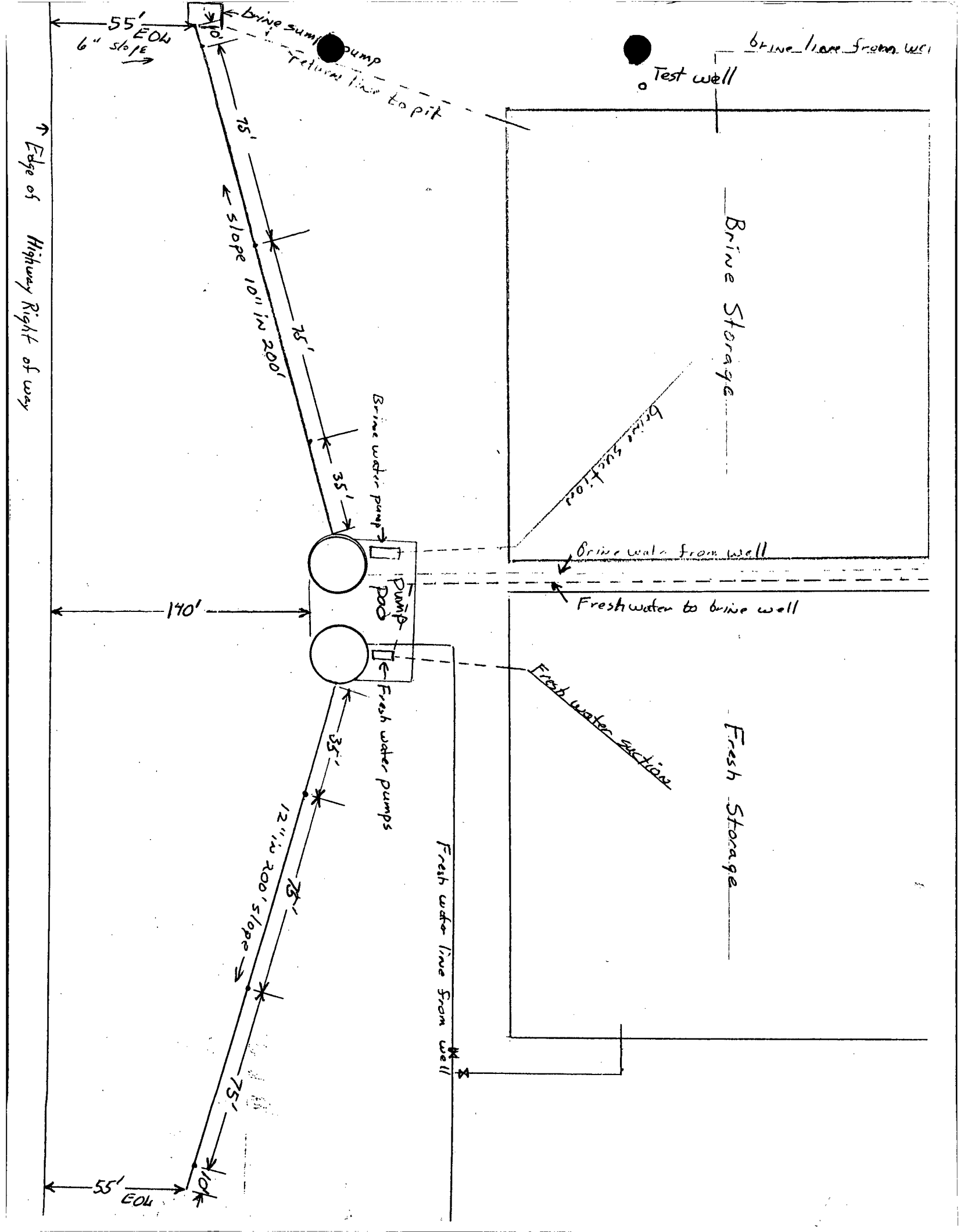
I recently received your letter of August 29, 1988 requesting the recent upgrade information on the complete refurbishing of Marathon Road Water Station. Enclosed you will find some pictures of the new existing facilities now in service for brine extraction, storage, and handling.

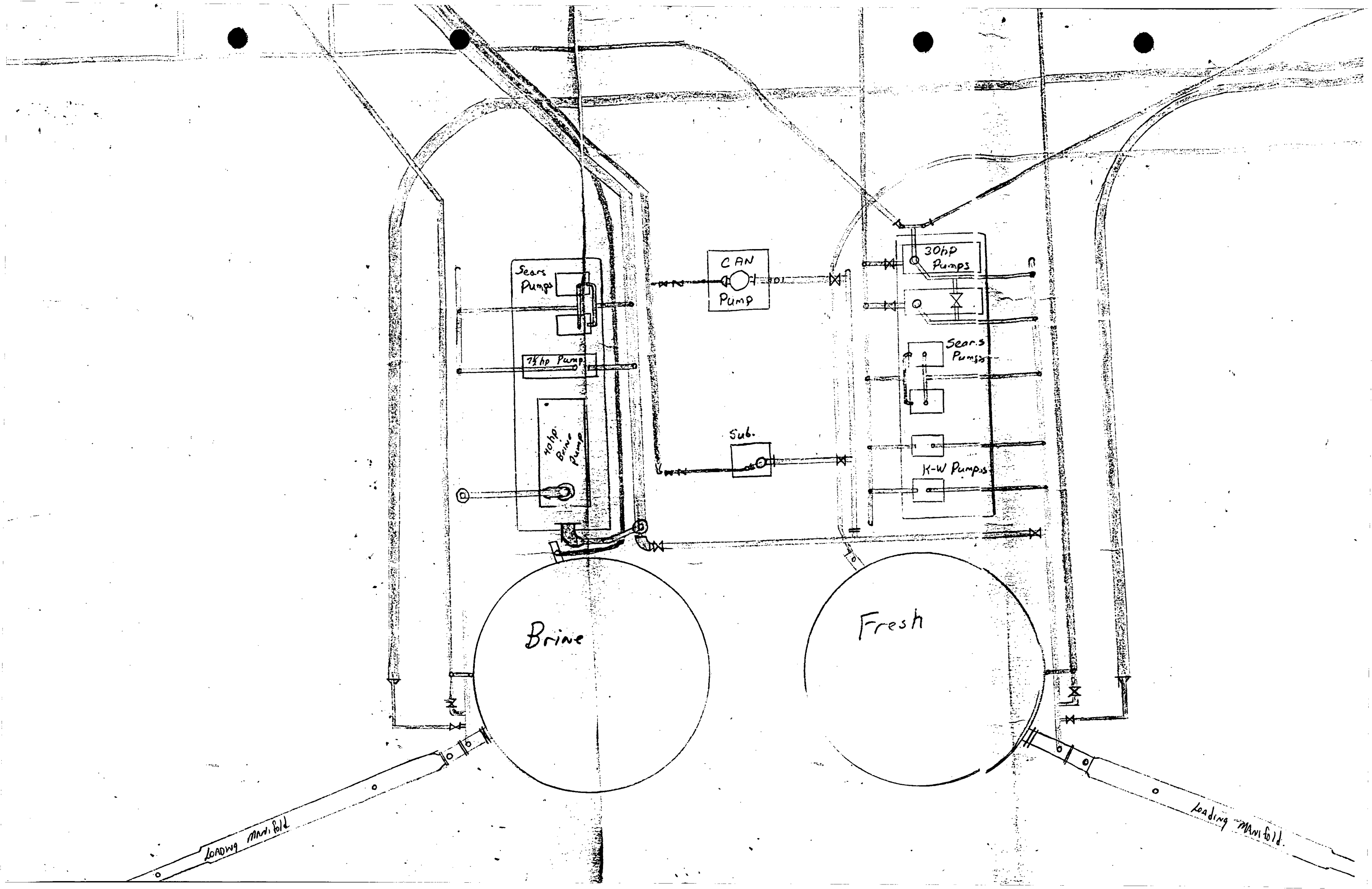
The entire facility at Marathon Road Water Station has undergone a complete rebuild with the exception of the actual Brine Well. This rebuilding process and upgrade puts this brine facility in top operational condition. A complete description of the underground piping and surface facilities are enclosed for your examination and approval. Another diagram is enclosed which shows the surface grade and direction to capture any brine spillage should any occur. The photographs can attest to the great amount of time and money spent on this facility to bring it up to your standards of operation and also show it to be aesthetically pleasing as well.

We have been extremely busy and I apologize for the delay in sending you these diagrams and photographs. If you need additional information please call or write.

Sincerely,

Gene Lee


55' EOL
6" slope
10'
brine sump
pump
return line to pit
Test well
brine line from well
Edge of Highway Right of way
75'
slope 10" in 200'
75'
Brine Storage
Brine suction
35'
Brine water pump
Brine water from well
Fresh water to brine well
140'
Pump pad
Fresh water pumps
Fresh water suction
Fresh Storage
35'
12" in 200' slope
75'
Fresh water line from well
75'
10'
55' EOL


Sears Pumps
7½ hp Pump
40hp Brine Pump
CAN Pump
Sub.
30hp Pumps
Sears Pumps
K-W Pumps
Brine
Fresh
Loading Manifold
Loading Manifold

NEW MEXICO
HEALTH AND ENVIRONMENT
DEPARTMENT

Post Office Box 968
Santa Fe, New Mexico 87504-0968

GARREY CARRUTHERS
Governor

LARRY GORDON
Secretary

CARLA L. MUTH
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

September 30, 1988

C.W. Trainer
Marathon Road Water Station
526 Sandy Mountain Drive
Sunrise Beach, TX 78643

Subject: Discharge Plan DP-361

Dear Mr. Trainer:

The Environmental Improvement Division (EID) has received your letter dated September 23, 1988, requesting a time extension from an EID deadline of September 30, 1988, stipulated in our letter dated August 29, 1988. Also, your letter provides information on the recent brine spill at your brine production facility.

Based on the available information, the EID hereby grants a thirty (30) day extension. Therefore please submit to the EID by October 31, 1988, all plans and specifications on the work done to upgrade your facility, a detailed remedial investigation plan providing a specific time-table for clean-up of existing conditions, information on repairs and maintenance to the present brine pond and any additional documentation in support of work done to correct the ground water contamination. This same information was requested in my letter of August 29, 1988.

In addition, EID requests you submit written documentation showing what steps are being taken to prevent future brine spills at your brine production facility (e.g. control access, expand spill collection system, automatic cutoff switch, etc...). Every effort must be made to minimize spills of this nature. Be advised that future brine spills of this nature or any violation of the Water Quality Act and regulations on discharge plan permit can result in criminal and civil penalties

(Section 74-6-5.0. and P. NMSA, 1978). In addition, civil penalties may be imposed for each violation of the Water Quality Act or any regulation of the Commission (Section 74-6-10.B. NMSA, 1978).

Enclosed for your information is the name and address, which you requested, of the Roswell Test Facility which does analysis on water samples. I hope they can be of assistance to you in fulfilling your monitoring requirements.

If you have any questions or wish to arrange a meeting to discuss your discharge plan, please contact me at the above address and telephone number (505) 827-2902.

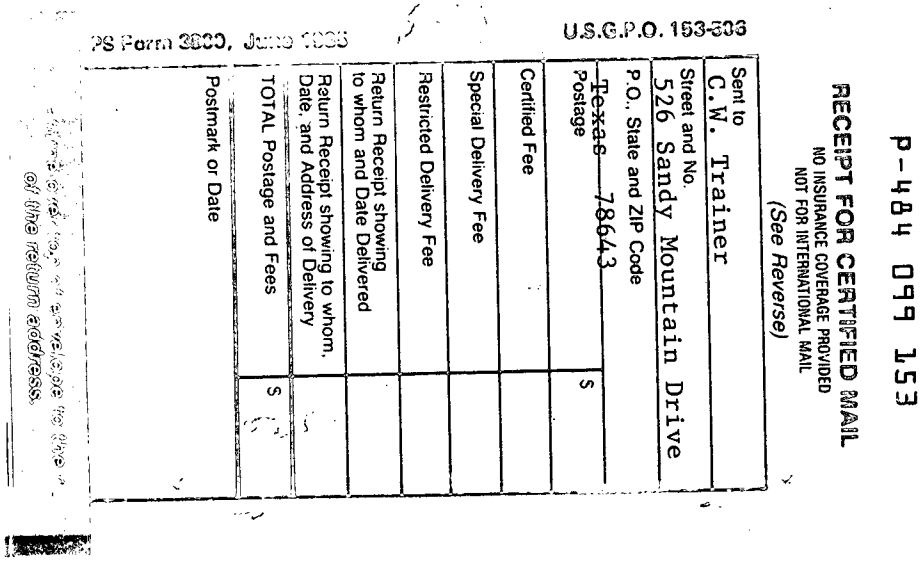
Sincerely,

Kevin A Lambert

Kevin Lambert
Ground Water Hydrologist
Ground Water Section - UIC Program

KL:tr

cc: Gene Lee, Roswell, NM
Garrison McCaslin, EID District I Mgr. Roswell
Roelf Ruffner, EID Hobbs Field Office



STATE OF NEW MEXICO
HEALTH ENVIRONMENT

MEMORANDUM OF MEETING OR CONVERSATION

☑ Telephone ☐ Personal	Time 1:58 pm	Date 9/29/88
Originating Party	Other Parties	
Kevin Lambert	C. W. Trainer MRWS	

Subject: Time extension to submit info on facility upgrade & brine contamination. Also discussed recent brine spill.

Discussion: Had heated discussion regarding the DP's terms & conditions. And MRWS failure to adequately communicate conditions at their facility, submit documentation (Plans & Specs), meet monitoring & reporting requirement, Ms. Trainer refuses to accept our authority and grasp the fact that it is his responsibility to satisfy all aspect of the regulation. The state's responsibility is to determine if the discharger as satisfied the regulation. It appears that Ms Trainer is unwilling to accept responsibility for his D.P.

Conclusions or Agreements: I told Trainer EID will be sending letter granting extension (30 days) and EID wants documentation showing what is being done to prevent future spills ie controlled access, expand spill collection system, automatic cutoff switch

Distribution

Signed

MARATHON ROAD WATER STATION
Lea County, New Mexico
Brine and Fresh Water

September 23, 1988

EID - Attn: Kevin Lambert
Box 968
Santa Fe, NM 87504-0968

Re: Discharge Plan DP-361 - Marathon Road Water Station - 8-29-88 letter

Dear Mr. Lambert:

I respectfully request an extension of time past your September 30 deadline. Our water sales are practically zero and our oil and gas wells are suddenly requiring most of our time. We are working to get the info for you.

The brine spill last Saturday night was checked by your Hobbs office with me. The whole 50 truckloads of brine was easily contained on our 5 acres. The overflow, spill capture, reclaim system worked at its capacity and returned about 2½ barrels a minute to the main pit. But the two valves put out around 35 or 40 barrels a minute total.

The street ells directed the water to the barrow ditch on Marathon road. I since pulled the north ell and opened the valve. Brine shoots about 25' high. The next vandal will get a brine bath. I am thinking of trying to catch this most of water about 6' above the ground with a homemade funnel on 6" poly pipe that will gravity it to the pit. The spill system might handle the rest.

For now we plan to let the area dry up, then work the salt and sand with a motor grader to level up, stir up, and shpe up as indicated by where the brine went. Charles from your Hobbs office is thinking about solutions too.

Sincerely,

C W Trainer

xc: Gene Lee

526 Sandy Mtn. Dr. • Sunrise Beach, Texas 78643 • Jackie Trainer, Manager • (915) 388-3674

STATE OF NEW MEXICO
ENVIRONMENT

MEMORANDUM OF MEETING OR CONVERSATION

☑ Telephone ☐ Personal	Time	Date
	8:36 am	9/20/88

Originating Party	Other Parties
Charles Ajiyan	Kevin Lambert

Subject: MRWS brine spill:

Discussion:
- Spill was confined to area between ponds & tank; ~ 1"-2" of standing brine water.
- Discharger waiting for area to dry out, Wants to know what he can do since he wants to cultivate some grasses. Suggest remove top 6" of soil or salt crust which ever and take to Landfill
- I will call discharger and discuss cleanup
- Charles sending photos & sketch

C. W. Trainer

9/23/88 Talked about brine spill and ways to prevent in the future, regrading facilities to improve drainage and look at ways to catch any brine spillage that will be directed to collection system, will discuss w/ local law enforcement to do periodic drive-by

Conclusions or Agreements:

Requested he send documentation, explaining spill, remediation, and prevention techniques for future.

Kevin Lambert

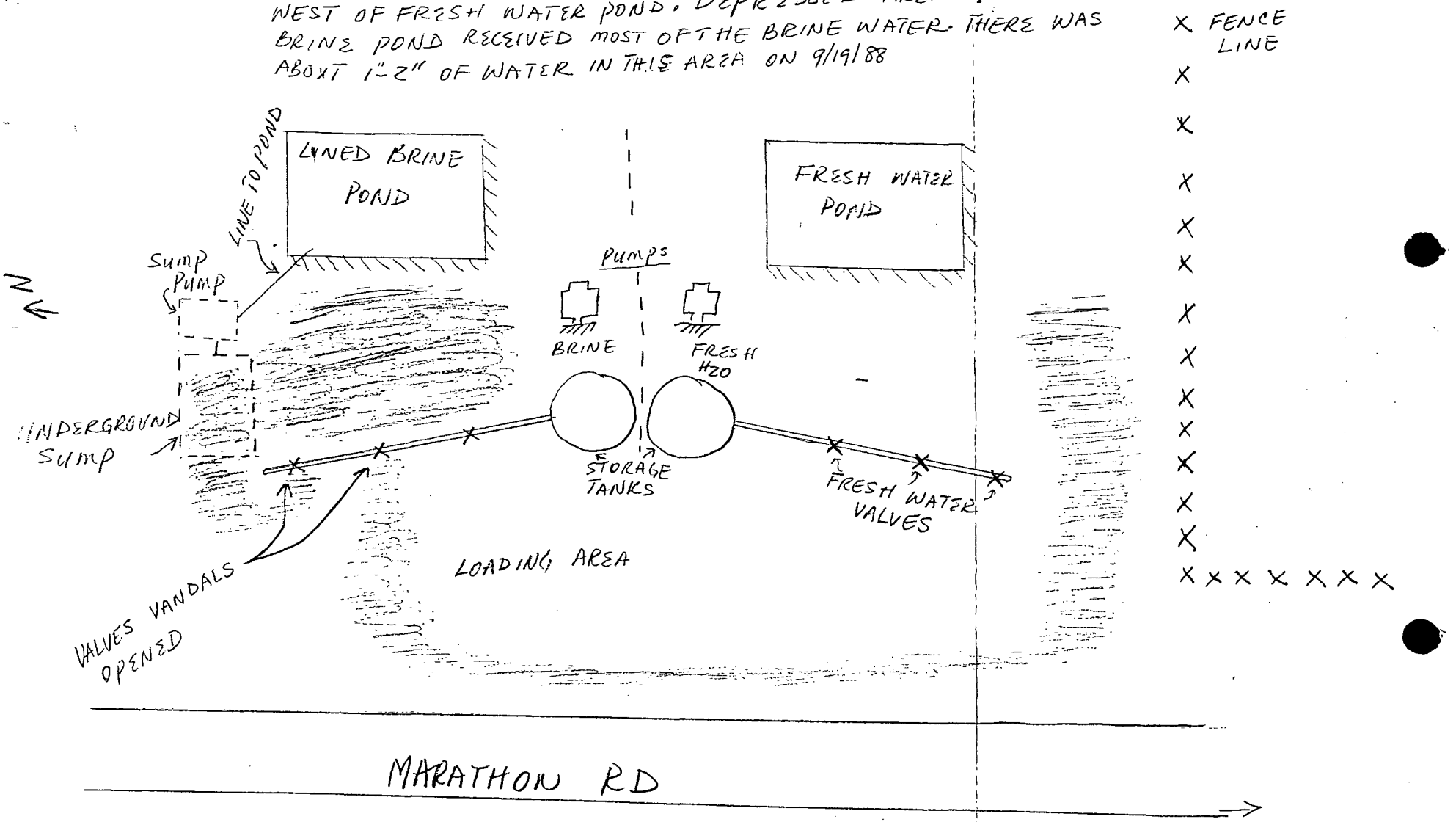
Distribution

Signed

MARATHON ROAD BRINE STATION

9/19/88

NOTE: SHADED AREAS REPRESENT BRINE WATER PATH AND POOLED AREAS. LITTLE POOLING OCCURED ON SOUTH SIDE, SOUTH WEST OF FRESH WATER POND. DEPRESSED AREA B, WEST OF BRINE POND RECEIVED MOST OF THE BRINE WATER. THERE WAS ABOUT 1"-2" OF WATER IN THIS AREA ON 9/19/88



NOT TO SCALE

STATE OF NEW MEXICO
ENVIRONMENT

MEMORANDUM OF MEETING OR CONVERSATION

[X] Telephone [ ] Personal	Time	Date
	1:51 pm	9/19/88

Originating Party	Other Parties
Kevin Lambert	C. W. Trainer - MRWS
	Hobbs Motor Inn 393-3251 Rm 123

Subject

Vandals opened valves on brine tanks ~ 6750 bbls spilled (283,500 gal); Operator is on way to site to assess problem; EID will try and get local representative to site; Call EID in Morning regarding situation; Follow with letter documenting spill & remediation so DP is up to date

Discussion

2:04 pm Called EID Hobbs/Roelf to see if field rep could visit site w/ C. W. Trainer. I talked w/ Charles Ayuzien who stated he would make attempt to get out there. Will call Trainer to make arrangements also will take photos Requested he contact me tomorrow morning w/ assessment of ~~spill~~

Conclusions or Agreements

Distribution

Signed

STATE OF NEW MEXICO
ENVIRONMENT

MEMORANDUM OF MEETING OR CONVERSATION

☑ Telephone ☐ Personal	Time 10:06 am	Date 9/9/88
Originating Party		**Other Parties**
Gene Lee / Consultant Marathon Road		Kevin Lambert

Subject

Submitting info on upgrade surface facility & remedial investigation on brine contamination on pond

Discussion

Gene stated that they are looking to pump monitor well and sample has part of cleanup I stated part of DP should become familiar and implement cleanup plan provided He stated getting copy from C.W. Trainer and would work to fulfill plan. Also P&S are being revised concerning workover facility will send when complete

Conclusions or Agreements

I informed Gene to submitt all information on P&S specs and Cleanup by Sept 30 1988 deadline stipulated in E.T.D. letter of 8/29/88 He stated is agreement and will be working deligently to meet that date

Distribution

Signed Kevin Lambert

NEW MEXICO
HEALTH AND ENVIRONMENT
DEPARTMENT

Post Office Box 968
Santa Fe, New Mexico 87504-0968

GARREY CARRUTHERS
Governor

LARRY GORDON
Secretary

CARLA L. MUTH
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

August 29, 1988

C.W. Trainer
Marathon Road Water Station
526 Sandy Mountain Drive
Sunrise Beach, TX 78643

RE: Discharge Plan DP-361

Dear Mr. Trainer:

On March 21, 1988, the Environmental Improvement Division (EID) notified you by certified mail regarding the requirement to submit information on the work being done to upgrade your brine extraction facility near Hobbs, New Mexico. This request was repeated by phone to Gene Lee, your consultant on May 16, 1988 and August 22, 1988. However, to date we have not received any details concerning the remediation of deficiencies at your operation.

Please be advised that all plans and specifications on the work done to upgrade your facility must be submitted to the EID so that your discharge plan is complete and accurate. Failure to keep the EID notified by submitting appropriate and detailed documentation to the EID constitutes a violation of your ground water discharge plan.

Also, your last two monitoring reports indicate brine contamination in the monitor well. The monitoring report, received July 25, 1988, shows a significant increase in total dissolved solids (TDS) and chloride concentration (a factor of 4.5 and 6.0 respectively) from your monitoring report received February 1, 1988. In addition the monitoring report received April 25, 1988, supports the increasing trend in TDS and chloride concentration.

It is important that you understand that if the existing concentration of any water contaminant in ground water exceeds the standards of Section 3-103 of the Water Quality Control Commission (WQCC) Regulations, no degradation of the ground water beyond the existing concentration will be allowed (WQCC Section 3-101.A.2.). Also, when a discharge plan has been approved, the discharger must operate his facility within the terms and conditions of the plan (WQCC Section 3-104).

A violation of the Water Quality Act and regulations on discharge plan permit can result in criminal and civil penalties (Section 74-6-5.0. and P. NMSA, 1978). In addition, civil penalities may be imposed for each violation of the Water Quality Act or any regulation of the Commission, as well as the cost of treating or cleaning up waters polluted (Section 74-6-10.B. NMSA, 1978).

Therefore, EID requests you initiate an investigation to determine the source of brine contamination, and take steps to remediate damage caused by the brine plume. In your discharge plan dated October 31, 1984, you outlined steps that would be taken in the event of a leak beneath your brine pond (pp. 23 to 29). EID recommends you implement the procedures in your plan immediately so that ground water contamination can be minimized.

Please submit to the EID by September 30, 1988, a detailed remedial investigation plan providing a specific time-table for clean-up of existing conditions, information on repairs and maintenance to the present brine pond and any additional documentation in support of work done to correct the ground water contamination.

If you have any questions or wish to arrange a meeting to discuss your discharge plan, please contact me at the above address and telephone number (505) 827-2902.

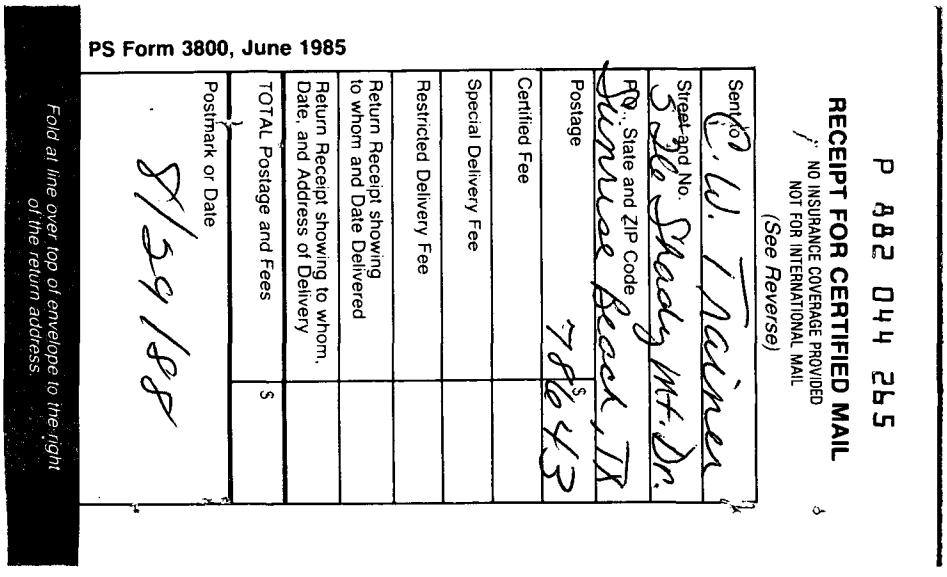
Sincerely,

Kevin A Lambert

Kevin Lambert
Ground Water Hydrologist
Ground Water Section - UIC Program

KL:dg

cc: Gene Lee, Roswell, NM
Garrison McCaslin, EID District IV Manager, Roswell, NM
Roelf Ruffner, EID Field Office, Hobbs, NM



8/22/88 Gene Lee / Consultant to Marathon Rd.
622-7355 Water Station

RE: Details on workover at facility to bring to into compliance w/ WQCC

1. Detailed Plans & Specs
   - surface facilities => tanks, pump
   - spill collection system lagoon
2. Supporting Photographs
3. Monitoring indicates significant increase in Cl (6.0x) & TDS (4.5x) [C] from Feb 1, 1988 to July 25, 1988
4. Marathon must initiate investigation and remediation according to DP & ASAP and keep EID informed

11:45 Am Will send the information P&Spec & Photos w/in week. Give call after Labor Day in event no information received say Sept 8

Kevin

5/6/88 Gene Lee / Consultant MRW's
622-7355 RE: Brine Station O & M
9:25 AM Compliance
No Answer Left Message to Return Call

5/9/88
10:30 AM No Answer

5/16/88 Gene Lee
9:28 AM He stated that information was sent two months ago. EID has not received any information. The last note to file is E.I.D's letter requesting P&S on facility upgrade

Mr Lee stated he would resubmit the information along w/ some photographs showing improvements
He had current address and felt he could get data to me this week

P-484 099 776

RECEIPT FOR CERTIFIED MAIL
NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL
(See Reverse)

Sent to C. W. Trainer	
Street and No. Marathon Road Water	
P.O., State and ZIP Code Station	
Postage 526 Sandy Mt. Drive	$
Certified Fee Sunrise Beach, TX	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date 5/21/88	

PS Form 3800, June 1985

U.S.G.P.O. 153-506

NEW MEXICO
HEALTH AND ENVIRONMENT
DEPARTMENT

Post Office Box 968
Santa Fe, New Mexico 87504-0968

GARREY CARRUTHERS
Governor

LARRY GORDON
Secretary

CARLA L. MUTH
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

March 21, 1988

C.W. Trainer
Marathon Road Water Station
526 Sandy Mountain Drive
Sunrise Beach, TX 78643

RE: Discharge Plan DP-361

Dear Mr. Trainer:

The Environmental Improvement Division (EID) conducted a site inspection of your brine extraction facility near Hobbs, New Mexico on February 29, 1988. The inspection was conducted to check compliance with your approved discharge plan and to see what steps had been taken to remediate the deficiencies observed in the operation of your facility during the EID inspection of December 2, 1987.

EID staff observed the entire brine extraction facility undergoing extensive maintenance. Gene Lee, facility representative on-site stated the entire facility would be overhauled including the removal of old tanks, repair of leaking delivery lines, upgrade of the loading area, installation of spill collection system, and general site clean-up. Mr. Lee also stated that the EID would be kept informed of the work being done to remediate the deficiencies present in the operation.

Please be advised that all plans and specifications on the work done to upgrade your facility must be submitted to the EID so that your discharge plan is complete and accurate. Failure to keep the EID notified and submit appropriate and detailed documentation to the EID constitutes a violation of your ground water discharge plan.

The EID will be conducting periodic site inspections in the future to assure that work is continuing on upgrading your facility. You will be notified prior to an inspection so that a facility representative can be present.

Thank you for your cooperation. Should you have any questions please call me at (505) 827-2902.

Sincerely,

Kevin A Lambert

Kevin Lambert
Hydrologist
Ground Water - UIC Program

KL:dg

cc: Gene Lee, Roswell, NM
John H. Brownlee, Attorney, Kingsland, TX
Garrison McCaslin, EID Dist. IV, Roswell, NM
Roelf Ruffner, EID Hobbs Field Office
Louis Rose, HED Office of General Counsel, Santa Fe, NM

No. of Samples	Ion
	Na
	K
	Ca
	Mg
	Cl
	HCO3
	CO3
	SO4
	TDS
	NO3+ NO2
	NH3
	kjeld N
	As
	Ba
	Cd
	CN
	Cr
	F
	Pb
	Hg
	Se
	Ag
	U
	V
	Ra 226
	Ra 228
	Cu
	Fe
	Mn
	Phenols
	Zn
	Al
	B
	Co
	Mo
	Ni
	pH
	Conduct.

FIELD TRIP REPORT
GROUND WATER SECTION

SLD USER CODES

County Lea

Ground Water: 59300

NO_3, HC, & Toxics: 59600

UIC: 59500

FACILITY VISITED

Name of Facility: Marathon Road Water Station

Location: Marathon Rd. State 62-180

Discharge Plan Number: DP-

Type of Operation: Brine well

ENVIRONMENTAL IMPROVEMENT DIVISION FIELD VISIT

EID Inspector(s): Baker

Date of Inspection or Visit: March 15, 1988

Discharger's Representative Present During EID Visit:

Name: Tank installment crew

Title or Position:

Purpose of Visit:

a. Evaluation of Proposed Discharge Plan Modifying plan

b. Compliance Inspection of Discharge with Approved Plan

c. Other (specify)

Inspection Activities During Field Visit:

a. Inspection of Facilities or Construction (specify)

b. Sampling of Effluents (give sampling locations)

None taken

c. Sampling of Ground Water (give names or locations of wells)

d. Evaluation of geology, soils, water levels or other physical characteristics of the location (specify)

All lagoons full of water - available freeboard.

e. Other (specify)

Observations and Information Obtained during the Visit:

Crew had installed 2 new tanks - 1 fresh H_2O 1 salt H_2O and were beginning to grade facility to meet imposed requirements.

ACTION REQUIRED

No. of Samples	Ion
	Na
	K
	Ca
	Mg
	Cl
	HCO3
	CO3
	SO4
	TDS
	NO3+ NO2
	NH3
	kjeld N
	As
	Ba
	Cd
	CN
	Cr
	F
	Pb
	Hg
	Se
	Ag
	U
	V
	Ra 226
	Ra 228
	Cu
	Fe
	Mn
	Phenols
	Zn
	Al
	B
	Co
	Mo
	Ni
	pH
	Conduct.

FIELD TRIP REPORT
GROUND WATER SECTION

SLD USER CODES

County LEA

Ground Water: 59300

NO_3, HC, & Toxics: 59600

UIC: 59500

FACILITY VISITED

Name of Facility: Marathon Road Water Station

Location: Marathon Road near Hobbs NM

Discharge Plan Number: DP- 361

Type of Operation: Brine Extraction Facility

ENVIRONMENTAL IMPROVEMENT DIVISION FIELD VISIT

EID Inspector(s): Lambert / Parker

Date of Inspection or Visit: 2/29/88

Discharger's Representative Present During EID Visit:

Name: Gene Lee

Title or Position: Consultant

Purpose of Visit:

a. Evaluation of Proposed Discharge Plan

b. Compliance Inspection of Discharge with Approved Plan

c. Other (specify)

Inspection Activities During Field Visit:

a. Inspection of Facilities or Construction (specify)

Last inspection resulted in fine. During this inspection facility was being cleaned up and deficiency pointed out were being addressed

b. Sampling of Effluents (give sampling locations)

c. Sampling of Ground Water (give names or locations of wells)

d. Evaluation of geology, soils, water levels or other physical characteristics of the location (specify)

e. Other (specify)

Observations and Information Obtained during the Visit:

Will send operator a letter regarding their efforts to correct problems w/ facility. Will be sending local EID Hobbs Personnel to check on progress of upgrading associated w/ operation.

ACTION REQUIRED

WATER QUALITY INSPECTION AND SAMPLING CHECKLIST
Reference: Regulation No. HED 86-1 (EID)

Facility Name: MARATHON Road Water Station

Facility Location: MARATHON Road & west of Hobbs

Date: 2/29/88

EID Personnel: Lambert / Parker

1	Contact Representative of Facility Yes Gene Lee
	Name of Facility Representative
2	Entry Conference Facility undergoing extensive maintenance old tanks have been removed
	Inform Facility Representative that EID has right of entry and authority: 1) to access records, 2) to inspect monitoring equipment or methods, and 3) to sample effluents under Section 74-6-9.E. of the New Mexico Water Quality Act (NMSA 1978). Appears entire station is being upgraded ~~overall overhaul~~
	Present EID identification.
	List potential or suspected violations which prompted inspection, if any. See EID Dec '87 letter result of Dec '87 inspection
3	During inspection
	Immediately advise Facility Representative, if present, of additional. potential violations.
4	Exit Conference
	Summarize preliminary field results.
	Advise if violations listed during entry conference remain under investigation.
	List other potential violations discovered during the inspection.
	Give date when EID expects to complete consideration of potential violations related to inspection.

NOTE: If a Facility Representative is not available, a written version of the exit conference shall be provided to the facility owner, operator or permittee within two weeks.

5	Water Quality Sampling
	Offer the Facility Representative a reasonable opportunity to obtain split or replicate samples or to perform simultaneous tests, measurements or photographs.
	If requested, provide a copy of the results of EID's sampling, testing, measurement or photography within ten working days after such results are in EID's possession.

2/26/88 Marathon Road Water Station
C. W. Trainer 915-388-3674
Site inspection scheduled for
4 pm Monday Feb 29th

as follow-up to our December '87 inspection which resulted in EID fining operator

Will call if schedule changes

Kevin Lambert

NEW MEXICO
HEALTH AND ENVIRONMENT
DEPARTMENT

Post Office Box 968
Santa Fe, New Mexico 87504-0968

GARREY CARRUTHERS
Governor

LARRY GORDON
Secretary

CARLA L. MUTH
Deputy Secretary

CM-RRR

P-484 097 961

RECEIPT FOR CERTIFIED MAIL
NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL
(See Reverse)

Sent to C.W. Trainer
Street and No. 526 Sandy Mt. Drive
P.O., State and ZIP Code Sunrise Beach, TX 78643

Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	2/19/88

PS Form 3800, June 1985 U.S.G.P.O. 153-803

Write over top of envelope to the right of the return address.

February 19, 1988

C.W. Trainer
Marathon Road Water Station
526 Sandy Mountain Drive
Sunrise Beach, TX 78643

RE: Discharge Plan DP-361

Dear Mr. Trainer:

The Environmental Improvement Division (EID) has received your attorney's letter, dated January 21, 1988, in response to our letter dated January 6, 1988, regarding violations of the New Mexico Water Quality Control Commission Regulations (NMWQCC). We are confident you can fulfill your commitments to operate in the future according to the terms and conditions of your approved discharge plan.

To date, we have not received the test results dated July 1987, conducted by Halibuiton mentioned in your attorney's letter. Prior to the January 1988 test results EID received February 1, 1988, the only test results received in 1987 are for the quarterly report due April 1987. The test result for the April 1987 report was received May 4, 1987, by EID. We would appreciate receiving a copy of the July 1987 test results to include in your file since any information would prove beneficial in assessing potential ground water contamination.

EID staff is scheduled to be in the Hobbs area February 29, and March 1, 1988, and plans to conduct a site inspection of your facility to check compliance with your approved discharge plan. If you or your representative wish to be present during the site inspection please contact Kevin Lambert at (505) 827-2902 or John Parker at (505) 827-0027 to arrange an acceptable time and date for both parties.

Thank you for your cooperation and if you have any questions regarding your approved discharge plan please contact Mr. Lambert or Mr. Parker at the telephone numbers listed above.

Sincerely,

Ernest C. Rebuck
Section Manager
Ground Water Section

ECR:KL:dg

cc: John H. Brownlee, Attorney at Law, Kingsland, TX
Garrison McCaslin, EID District IV Manager, Roswell, NM
Roelf Ruffner, EID Field Office, Hobbs, NM
Louis Rose, HED Office of General Counsel, Santa Fe, NM

EID BUCKSLIP

CHECK ONE:

[X] LETTER TO C.W. Trainer Marathon Road Water Station

for _____ signature

[ ] MEMO TO _____

[ ] PRESS RELEASE

[ ] OTHER

SUBJECT: EID Response to Marathon's letter addressing EID fine letter

DRAFTED BY: Kevin Lambert 2/19/88 (Date)

CONCURRENCES:

NAME:		INITIAL	DATE REC'D	DATE APPROVED
E. Rebuck	Sect. Mgr.	EJR	2/19	2/19
_____	Bur. Chief	_____	_____	_____
Kirkland Jones	Dep. Dir.	_____	_____	_____
Michael Burkhart	Director	_____	_____	_____

FINAL DECISION NEEDED BY ASAP (date) BECAUSE Planning compliance inspection Feb 29th & Need to notify discharger of visit and provide opportunity to be present

COMMENTS BY DRAFTER OR REVIEWER(S):

Richard M. signed enforcement letter (pre-litigation fine) re/ Our response to their letter addressing fine as needs to be signed by mgt.

I have provided copy of Marathon's response FYI P/s returned to me for filing

Thx Kevin

1/19/88

Marathon Road

CM-RRR

date of delivery

1/11/88

signed by C.W. Trainer

15 days from receipt

calendar 1/26/88

working 2/2/88

check w/ Tracy H for final determination

RM On
Ernie R. —
Legal — copy provided

JOHN H. BROWNLEE
ATTORNEY AT LAW
P. O. BOX 609
HWY. 1431 EAST
KINGSLAND, TX 78639

OFFICE PHONE:
915/388-4522

January 21, 1988

Richard Mitzelfelt, Chief
Ground Water Bureau
Environmental Improvement Bureau
P. O. Box 968
Santa Fe, New Mexico 87504-0968

Re: Discharge Plan DP-361 owned by C. W. Trainer

Dear Mr. Mitzelfelt:

C. W. Trainer has asked me to respond to your letter dated January 6, 1988 regarding alleged violations of the New Mexico Water Quality Act as described in your letter. In order to resolve this dispute, Mr. Trainer has agreed to pay the amount of $972.00 that you requested in your recent letter. By this payment he does not admit to any wrongdoing, but he asked me to let you know that he is taking steps to correct any problems that may exist on the site.

With specific reference to your statement in paragraph two of your letter that you have not received complete sampling results, please review the test results dated July 1987 conducted by Halliburton regarding IDS. Are there any additional results that are required other than these. If so, please let Mr. Trainer know in writing what additional testing you would require.

It is Mr. Trainer's understanding that by payment of the $972.00, this resolves and settles the disputes described in your letter dated January 6, 1988 regarding any penalties or liability. Please be assured that Mr. Trainer will make every effort to comply with the Water Quality Act and any regulations thereunder. I would appreciate it if you would advise him in advance of any specific defects and deadlines to give him an

opportunity to cooperate with you. Hopefully the improvements which Mr. Trainer plans to construct on the site will satisfy any problems which may have existed.

Very truly yours,

John H. Brownlee

JHB/bjm

cc: C. W. Trainer

CERTIFIED MAIL
Return Receipt No. P113459399

NEW MEXICO
HEALTH AND ENVIRONMENT
DEPARTMENT

Post Office Box 968
Santa Fe, New Mexico 87504-0968

ENVIRONMENTAL IMPROVEMENT DIVISION

Michael J. Burkhart
Director

GARREY CARRUTHERS
Governor

LARRY GORDON
Secretary

CARLA L. MUTH
Deputy Secretary

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

January 6, 1988

C. W. Trainer
Marathon Road Water Station
526 Sandy Mountain Drive
Sunrise Beach, TX 78643

RE:Discharge Plan DP-361

Dear Mr. Trainer:

On May 18, 1987, the Environmental Improvement Division (EID) notified you by mail regarding deficient monitoring and reporting requirements for your brine extraction facility near Hobbs, New Mexico. The EID received your letter of May 26, 1987, explaining your position and your intentions to fulfill the monitoring and reporting commitments for July 1987 and quarterly thereafter.

However, to date we have not received complete sampling results for July 1986, October 1986, January 1987, April 1987, July 1987, and October 1987. Also, EID staff inspected your facility on December 2, 1987, at which time they observed significant spillage of fluids in the loading area and around the storage tanks, leaks at the pumps and in delivery lines, poor maintenance, and no evidence of a spill collection system in place. These deviations from your approved plan are violations of Sections 1-203.A., 3-104., and 5-208.B.2.a. of the New Mexico Water Quality Control Commission Regulations (NMWQCC).

Considering the prolonged noncompliance with your monitoring and reporting requirements and the nature of the violations at your facility the EID will agree to a settlement of $972.00 in lieu of prosecuting this matter in district court. This penalty was calculated considering the number of regulations violated, threat posed to public health and the environment, days in violation, and other ~~revelant~~ relevant factors.

Please submit this amount by check payable to the State of New Mexico and mail it to the EID Ground Water Section, Attention: Kevin Lambert, within 15 days of receipt of this letter. Please be advised that if the EID must take legal action to enforce in this matter, the EID is not limited to this propsed pre-litigation penalty. In most cases, when forced to litigate, the EID will seek the maximum penalty authorized by the Water Quality Act, Sections 74-6-1 et seq NMSA 1978.

Please be reminded your next monitoring and reporting commitments are due January 31, 1988, and quarterly thereafter. Also, please remediate the deficiencies observed in the operation of your facility during the EID inspection on December 2, 1987. Attached is a copy of EID's inspection form. EID will conduct a site inspection during the first quarter of 1988 to check compliance with your approved discharge plan.

If you have any questions regarding this matter, please call Kevin Lambert at (505) 827-2902 or John Parker at (505) 827-0027.

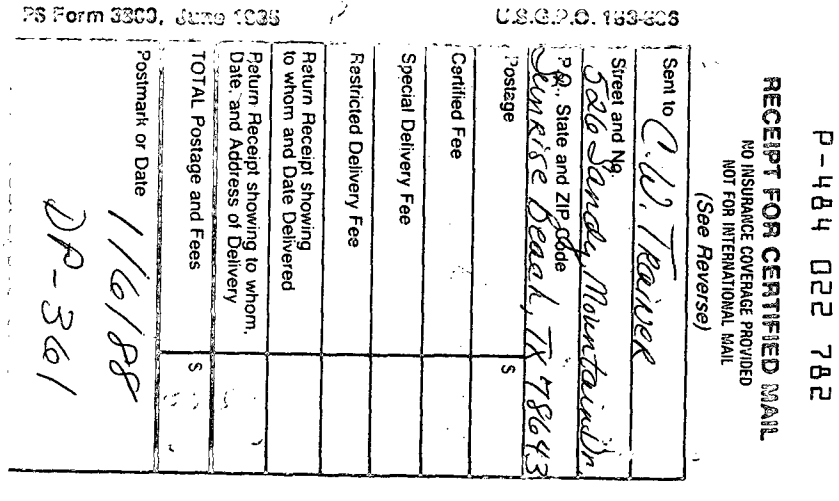
Sincerely,

Richard Mitzelfelt
Chief
Ground Water Bureau

RM:kl

enclosure

cc: Garrison McCaslin, EID District IV Manager, Roswell
Roelf Ruffner, EID Field Office, Hobbs
Louis Rose, HED Office of General Counsel, Santa Fe



BRINE STATION INSPECTION FORM

DATE 12/2 1987 EID INSPECTOR Lambert/Parker
FACILITY Marathon Rd Brine Sta LOCATION Marathon Rd - Hobbs
FACILITY REP ON SITE None COUNTY Lea

WELL OPERATION

WELL IS INJECTING: __ THROUGH ANNULUS __ THROUGH TUBING
SOURCE OF FRESH WATER
TRACE INJECTION/PRODUCTION LINES Buried lines evidence of line leak in brine supply south line
WELL HEAD PRESSURE 500 PSIG PUMP PRESSURE PSIG
LEAKS AROUND WELL OR PUMP yes evidence of leaks at ~~wellhead~~ pump + delivery lines

STORAGE AREA

FOR PONDS:
GENERAL LINER APPEARANCE OK 1 freshwater, 1 brine
General Cleanup Advised ie Remove weeds
AMOUNT OF FREEBOARD OK > 1 ft
ANY SIGN OF OVERFLOW OR LEAKS None
LEAK DETECTION SYSTEM ✓ FLUIDS __ DRY must get sample
Fresh Water line leak into brine pond

FOR TANKS:
GENERAL APPEARANCE Poor F Tanks leaking 2 out of 3 (1 not in use); can determine
LABLED PLAINLY OK __ YES __ NO
BERMED TO PREVENT RUNOFF __ YES ✓ NO
CHECK CONTENTS TO ASSURE PROPER FLUID/LABLE MATCH

NUMBER OF TANKS FOR BRINE — FRESH WATER 3 1 out of Service

LOADING AREA

PROPERLY GRADED AND BERMED TO CONTAIN SPILLAGE	__ YES	✓ NO
ANY EVIDENCE OF RECENT SPILLAGE	✓ YES	__ NO
DOES FACILITY HAVE A SPILL COLLECTION SYSTEM	__ YES	✓ NO
ANY EVIDENCE OF OIL SPILLING/DUMPING	✓ YES	__ NO

Need spill collection system AND general cleanup
Facility in need of maintenance

MONITORING WELLS

DEPTH FT STATIC WATER LEVEL FT BELOW CASING
SAMPLED THIS VISIT __ YES __ NO TEMP Ec

COMMENTS Loading area ~~is~~ has evidence of spillage brine & fresh in significant amounts Need to remove & prevent
Fresh water tanks leaking Standing water between tanks & ponds
Facility need to be cleaned up Overall need major housekeeping to improve operation

EID BUCKSLIP

CHECK ONE:

[X] LETTER TO C.W. Trainer / Marathon Road Water Station Brine Extraction Facility
for R. Mitzelfelt signature

[ ] MEMO TO _____

[ ] PRESS RELEASE

[ ] OTHER

SUBJECT: Enforcement Action due to noncompliance w/ D.P.

DRAFTED BY: Kevin Lambert 12/22/87 (Date)

CONCURRENCES:

NAME:		INITIAL	DATE REC'D	DATE APPROVED
K Lambert	Acting Sect. Mgr.	KAL	12/22	12/22
~~Tracy M. Hughes~~	Legal	~~Tmh~~	1/5	1/5
R. Mitzelfelt	Bur. Chief	RM	1/6	1/6
Kirkland Jones	Dep. Dir.			
Michael Burkhart	Director			

FINAL DECISION NEEDED BY ASAP (date) BECAUSE Dated Letter

COMMENTS BY DRAFTER OR REVIEWER(S):

This facility has prolonged noncompliance problems w/ meeting monitoring and reporting requirements and has failed to install spill collection system as required in d.p. EID has provided every opportunity to voluntarily comply but discharger has disregarded commitments. Time for action

BRINE STATION INSPECTION FORM

DATE 12/2 1987 EID INSPECTOR Lambert/Parker
FACILITY Marathon Rd Brine Sta LOCATION Marathon Rd - Hobbs
FACILITY REP ON SITE None COUNTY Lea

WELL OPERATION

WELL IS INJECTING: __ THROUGH ANNULUS __ THROUGH TUBING
SOURCE OF FRESH WATER _____
TRACE INJECTION/PRODUCTION LINES Buried lines evidence of line leak in brine supply south line
WELL HEAD PRESSURE 500 PSIG PUMP PRESSURE _____ PSIG
LEAKS AROUND WELL OR PUMP yes evidence of leaks at ~~well head~~ pump + delivery lines

STORAGE AREA

FOR PONDS:
GENERAL LINER APPEARANCE OK 1 freshwater, 1 brine
General Cleanup Advised ie Remove weeds
AMOUNT OF FREEBOARD OK > 1 ft
ANY SIGN OF OVERFLOW OR LEAKS None
LEAK DETECTION SYSTEM ✓ FLUIDS __ DRY must get sample line leak into brine pond
Fresh Water

FOR TANKS:
GENERAL APPEARANCE Poor Tanks leaking 2 out of 3 (1 not in use); can determine
LABLED PLAINLY OK __ YES __ NO
BERMED TO PREVENT RUNOFF __ YES ✓ NO
CHECK CONTENTS TO ASSURE PROPER FLUID/LABLE MATCH _____

NUMBER OF TANKS FOR BRINE — FRESH WATER 3 1 out of Service

LOADING AREA

PROPERLY GRADED AND BERMED TO CONTAIN SPILLAGE	__ YES	✓ NO
ANY EVIDENCE OF RECENT SPILLAGE	✓ YES	__ NO
DOES FACILITY HAVE A SPILL COLLECTION SYSTEM	__ YES	✓ NO
ANY EVIDENCE OF OIL SPILLING/DUMPING	✓ YES	__ NO

Need spill collection system AND general cleanup
Facility in need of maintenance

MONITORING WELLS

DEPTH _____ FT STATIC WATER LEVEL _____ FT BELOW CASING
SAMPLED THIS VISIT __ YES __ NO TEMP _____ Ec _____

COMMENTS Loading area ~~is~~ has evidence of spillage brine & fresh in significant amounts Need to remove & prevent
Fresh water tanks leaking Standing water between tanks & ponds
Facility need to be cleaned up Overall need major housekeeping to improve operation

C W Trainer
526 Sandy Itn. Dr. Sunrise Beach, Texas 78643 915-[illegible]-3674

May 26, 1987

New Mexico Health and Environment Department
Ground Water Section - Kevin Lambert, Hydrologist
Box 968
Santa Fe, NM 87504 0968

Re: Discharge Plan (DP-361) Monitoring and Reporting Reqmts.

Dear Mr. Lambert:

I cannot justify not sending you the sampling results due Oct 86, Jan 87, and April 87. This was simply neglected. Some excuses are that we have been losing money because of the drilling slump, we let Bill Owen go and he had been doing this, I didn't hear from you and consequently didn't think of it. This is a sideline business and does not get anyone's complete attention.

I hope you know it was not deliberate. We have always and will continue to do our best to comply with your rules.

I respectfully request you consider this letter as a justification. We will submit the complete report (including TDS) in July, 1987 and quarterly thereafter.

Please let me know if I need do anything more at this time. Thank you for your consideration.

Sincerely

C W Trainer

xc: Eddie Elliott

No. of Samples	Ion
	Na
	K
	Ca
	Mg
	Cl
	HCO3
	CO3
	SO4
	TDS
////////	////////////
	NO3+ NO2
	NH3
	kjeld N
////////	////////////
	As
	Ba
	Cd
	CN
	Cr
	F
	Pb
	Hg
	Se
	Ag
	U
	V
	Ra 226
	Ra 228
////////	////////////
	Cu
	Fe
	Mn
	Phenols
	Zn
////////	////////////
	Al
	B
	Co
	Mo
	Ni
////////	////////////
	pH
	Conduct.

FIELD TRIP REPORT
GROUND WATER SECTION

County Eddy. Lea

SLD USER CODES
Ground Water: 59300
NO_3, HC, & Toxics: 59600
UIC: 59500

FACILITY VISITED
Name of Facility: Loco Hills Brine Co., Semco-McCasland, Permian Brine & KTS Brine
Location: Loco Hills, Eunice, Jal, Crossroads

Discharge Plan Number: DP- 394, 326, 324, 355
Type of Operation: Brine Production Facilities

ENVIRONMENTAL IMPROVEMENT DIVISION FIELD VISIT
EID Inspector(s): Lambert and Koschal
Date of Inspection or Visit: 1/26/87 - 1/29/87
Discharger's Representative Present During EID Visit:
Name: Maloney, Patterson, ~~Hickerson~~-Price, Stern
Title or Position: Mgrs/Owners
Purpose of Visit:
a. Evaluation of Proposed Discharge Plan
b. Compliance Inspection of Discharge with Approved Plan
c. Other (specify) Pressure Test Brine Wells
Inspection Activities During Field Visit:
a. Inspection of Facilities or Construction (specify)

Ran Pressure Tests. KTS was not done due to break in fresh water line. Will do next time in area

b. Sampling of Effluents (give sampling locations)

c. Sampling of Ground Water (give names or locations of wells)

d. Evaluation of geology, soils, water levels or other physical characteristics of the location (specify)

e. Other (specify)

Observations and Information Obtained during the Visit:

Ran 3 of 4 pressure tests. Unable to run 4th due to break in fresh water line which prevents us from pressuring up. Well

ACTION REQUIRED

Also was to able to get in touch w/ a contact of Marathon Road Water Station. Will be able to commun deficiency in '86 M&R Requirements

HEALTH ENVIRONMENT department

STATE OF NEW MEXICO

ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 984-0020

TONEY ANAYA
GOVERNOR

DENISE D. FORT
DIRECTOR

February 19, 1986

CW Trainer
Marathon Road Water Station
526 Sandy Mtn. Drive
Sunrise Beach, TX 73643

Dear Mr. Trainer:

The plans you submitted to this office on February 6th for your proposed spill catchment system are hereby approved. Please notify me when the construction is completed.

Steve Sares and Greg Baker of this office visited Marathon Road Water Station on February 12th and collected a sample from your monitor well to be analyzed for major ions and the metals detectable in an ICAP scan. Please extend our thanks to Mr. Bill Owen for his help to Mr. Sares and Baker on that visit. We will notify you as soon as we have results from this sampling. In the meantime, you will be held accountable for submitting the monitor report that is due on April 15th under the terms of your discharge plan.

Sincerely,

Paige Morgan

Paige Grant Morgan
Water Resource Specialist
Ground Water Section

PGM:pgm

cc: Garrison McCaslin, EID District IV Manager
Lee Wilson & Associates

C W Trainer
526 Sandy Mtn. Dr. Sunrise Beach, Texas 78643 915-[redacted]-3674

February 6, 1986

LEE WILSON & ASSOCIATES
P. O. Box 931
Santa Fe, New Mexico 87504

Dear Lee:

We want to build a one piece combination flume, sand trap, spillway out of plywood to take spilled brine from the caliche loading area to the septic tank. We would cut the terrace with pick and shovel to fit on both sides of the small flume and seal it back with the caliche. It would be open on top from terrace to septic tank.

I will appreciate any suggestions for improvement.

Sincerely,

C W Trainer

CWT/paa

cc: Paige Grant Morgan - w/drawing.

MARATHON ROAD (PAVED)

To PAIGE GRANTMORGAN

from

C.W. TRAINER
526 Sdy. Mtn. Dr.
Sunrise Beach, Tx. 78643

DRAIN

SLOPE

~ SUMP AREA FOR RAIN WATER OFF HIGHWAY ~

NATURAL SAND AREA @ ELEV. LOWER THAN HWY & PROPOSED TERRACE

A

1000 GAL SEPTIC TANK

SUMP PUMP TO PUMP TANK OUT TO BRINE SALES PIT

NEW CALICHE BLENDED INTO OLD CALICHE DRIVE SLOPED & BUILT TO HANDLE SPILLAGE RUNOFF BY CHANNELING INTO NEW SEPTIC TANK TO BE PUMPED BACK TO BRINE PIT.

TERRACE

SLOPE

~ BERM ~

PROPOSED BERM & TERRACE

A

LOADING STATION (EXIST)

SLOPE

~ EXISTING CALICHE DRIVEWAY ~

SLOPE

LOADING STATION (EXIST)

TERRACE

ST. DRIVE

BERM

CLEANABLE SAND TRAP - Plywood 2'x2'x4' APPROX.

4'

1000 GAL SEPTIC

SECTION "A-A"

SUMP PUMP

BERM

TERRACE

2'

Plywood Plugs

SAND TRAP

4.0'

TANK

TANK

TANK

EDGED SPILLWAY. Plywood

TOP VIEW

FRESH WATER PIT

BRINE PUMPS

BRINE PIT (SALES)

2-5-86

MARATHON ROAD WATER STATION
Lea County, New Mexico
Brine and Fresh Water

No. of Samples	Ion
	Na
	K
	Ca
	Mg
	Cl
	HCO3
	CO3
	SO4
	TDS
////////	////////////
	NO3+ NO2
	NH3
	kjeld N
////////	////////////
	As
	Ba
	Cd
	CN
	Cr
	F
	Pb
	Hg
	Se
	Ag
	U
	V
	Ra 226
	Ra 228
////////	////////////
	Cu
	Fe
	Mn
	Phenols
	Zn
////////	////////////
	Al
	B
	Co
	Mo
	Ni
////////	////////////
	pH
	Conduct.

FIELD TRIP REPORT
GROUND WATER SECTION

SLD USER CODES

County LEA

Ground Water: 59300

NO_3, HC, & Toxics: 59600

UIC: 59500

FACILITY VISITED

Name of Facility: Marathon Road Brine

Location: Marathon Rd

Discharge Plan Number: DP-

Type of Operation: Brine Well

ENVIRONMENTAL IMPROVEMENT DIVISION FIELD VISIT

EID Inspector(s): Sares/Baker

Date of Inspection or Visit: 2/12/86

Discharger's Representative Present During EID Visit:

Name: None

Title or Position:

Purpose of Visit:

a. Evaluation of Proposed Discharge Plan _____

b. Compliance Inspection of Discharge with Approved Plan _____

c. Other (specify) _____

Inspection Activities During Field Visit:

a. Inspection of Facilities or Construction (specify)

b. Sampling of Effluents (give sampling locations)

c. Sampling of Ground Water (give names or locations of wells)
bailed sample from Pond monitor well. Bill owen had bailed out well the night before. Measured water Level at 22.06 Before Sample

d. Evaluation of geology, soils, water levels or other physical characteristics of the location (specify)

e. Other (specify)

Observations and Information Obtained during the Visit:

ACTION REQUIRED

RALPH JOHNSON RIG, INC.
P. O. Box 1178
Hobbs, New Mexico 88241
(505) 393-5165

I bailed the well down to 40' yesterday afternoon it should be ready for you. we have been taking the sample at about 30' feet. I will try to be back to help you by 1 or 1:30

Thank you
Bill Owen

1/23/86: Lee Wilson called to discuss the latest monitoring report submitted by CW Trainer. We agreed that there was a substantial upward trend in parameters associated with brine contamination, and also that it was hard to put much faith in the analyses submitted by Trainer's lab given the fluctuations from report to report. Wilson suggested that Trainer change labs; I said we were planning to go ahead and run a complete suite of samples through ESD. Wilson said that would be better than Trainer's trying to find a better lab by trial and error. We agreed that ESD would sample the monitor well within a month; that we would collect the first sample for major ions analysis from the first water-full, and would then bail the well down to about 30' below land surface and collect a second sample for major ions analysis. Meanwhile, Wilson said he would advise Trainer to empty the brine lagoon

↓

and check for leaks, to eliminate the most obvious source of the brine contamination, because if the lagoon is indeed leaking, the sooner it is stopped, the less ground water damage Trainer will be liable for.

Patsy Morgan

TONEY ANAYA
GOVERNOR

DENISE D. FORT
DIRECTOR

HEALTH ENVIRONMENT department

STATE OF NEW MEXICO

ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 984-0020

January 8, 1986

CW Trainer
Marathon Road Water Station
526 Sandy Mtn. Dr.
Sunrise Beach, TX 78643

Dear Mr. Trainer:

I am in receipt of your revised plans for an emergency spill catchment at your brine station. I will need answers to the following questions before I can approve these plans.

1. I believe your use of the term "berm" for the area indicated in yellow in your plans is a misnomer and that the yellow area is actually a caliche-lined ditch with a berm or raised wall, also of compacted caliche, indicated in orange, which is to serve to prevent brine from flowing into the natural sandy depression. Am I correct?

2. You show no mechanism for directing spillage into the septic tank. Do you plan to install a culvert or drain at that end of the ditch, or what?

3. Please indicate that you have planned to slope the ditch toward the septic tank.

Sincerely,

Paige Morgan

Paige Grant Morgan
Water Resource Specialist
Ground Water Section

PGM:pgm

cc: Lee Wilson, Lee Wilson & Assoc., PO Box 931, Santa Fe 87501

MARATHON ROAD WATER STATION
Lea County, New Mexico
Brine and Fresh Water

December 16, 1985

Lee Wilson
Box 931
Santa Fe, NM 87501

Dear Lee:

Another drawing for the "catchment" for spilled brine is enclosed. It uses a compacted caliche berm and terrace addition to our loading drive to divert spilled water to the tank.

I believe this will work better and cause less trouble than our pipe, plastic and paving plan.

I am sending Paige a copy also and hope she will agree with me.

Sincerely,

C W Trainer

xc: Paige Morgan
xc: Bill Owen

526 Sandy Mtn. Dr. • Sunrise Beach, Texas 78643 • Jackie Trainer, Manager • (915) 388-3674

MARATHON ROAD - PAVED

N

H4

SUMP AREA FOR RAINWATER SEE H1

SAND - Natural
LOWER than H1 & TERRACE

1000 gallon Septic tank Buried

Sump pump to pump tank out to brine sales pit

TERRACE BERM

PROPOSED BERM and Terrace-Caliche to channel Spillage runoff to underground Septic tank

TERRACE BERM

Loading Station

Loading Station

Slope Down

new caliche blended into old caliche drive to handle spillage runoff and channel into septic tank to be pumped back to brine ~~tank~~ pit.

EXISTING CALICHE DRIVEWAY

MARATHON ROAD WATER STATION
Lea County, New Mexico
Brine and Fresh Water

12-13-85
Alex Ramos

TANK TANK TANK

BRINE PUMPS

FRESH WATER PIT

BRINE PIT - SALES

MARATHON ROAD WATER STATION
Lea County, New Mexico
Brine and Fresh Water

Lee Wilson
Box 931
Santa Fe, NM 87501

Dear Lee:

I am asking Bill Owen to lower the water level below 35' with a large bailer, then let the well stand and fill up to 30' before taking his sample of top fluid. This should represent the formation water as you suggested.

We plan the next sample for the first week of January.

Sincerely,

C W Trainer

xc: Bill Owen
xc: Paige Morgan

526 Sandy Mtn. Dr. • Sunrise Beach, Texas 78643 • Jackie Trainer, Manager • (915) 388-3674

LEE WILSON & ASSOCIATES
ENVIRONMENTAL PLANNING • RESOURCE MANAGEMENT

December 2, 1985

Ms. Paige Morgan
Environmental Improvement Division
Post Office Box 968
Santa Fe, NM 87504-0968

Dear Paige,

I have received a copy of your letter to C.W. Trainer, regarding the rise in salinity between sample No. 1 and sample No. 2 at the observation well, Marathon Rd. Water Station. We appreciate and understand your concern over the change. However, please note that the data do not appear to indicate contamination. The produced brine is almost entirely NaCl with little sulfate. The following is an estimate of what would result from contamination of 99 parts of sample #1 with 1 part brine:

TDS would increase from 6300 to 9300 mg/l (this is what was found in sample #2);

Sulfate would increase from 3150 to 3155 mg/l (4650 was found);

Chloride would increase from 900 to 2800 mg/l (1400 was found).

You can see that a chloride-brine plume does not explain the changes. Indeed, the $Cl:SO_4$ ratio in both samples is identical, despite a 50 percent increase in TDS. So we are observing the mixing of two waters of similar make up, but different TDS.

The most obvious explanation is that sample #1 contained some fresh water. This would lower TDS with no major change in ion relationships. If so, then sample #2 is the more accurate representative of aquifer properties.

I've advised Mr. Trainer to take steps to ensure that sampling is consistent from quarter to quarter, and to make sure any rain water or other non-aquifer water is not included in the sample.

We can review this matter further after the next sample is taken.

Sincerely,

Lee Wilson

cc: C.W. Trainer

105 CIENEGA STREET P.O. BOX 931 SANTA FE, NEW MEXICO 87504 (505) 988-9811

TONEY ANAYA
GOVERNOR

DENISE D. FORT
DIRECTOR

HEALTH ENVIRONMENT department

STATE OF NEW MEXICO

ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 984-0020

November 20, 1985

CW Trainer
Marathon Road Water Station
526 Sandy Mtn. Dr.
Sunrise Beach, TX 78643

Dear Mr. Trainer:

Thank you for your submittal of the plans for your spill catchment system at the Marathon Road Water Station in Lea County. The basic plan appears workable to me, but please incorporate the following into your construction:

1) The edge of the plastic liner should be buried and paved over at the point that it intercepts the caliche surface, to insure that spillage does not simply flow beneath the liner.

2) The aluminum pipe drain should be slotted almost continuously on the surface, so as to function as a gutter.

3) Please be sure that the slope of the caliche surface is adequate to deliver all spillage into your catchment system.

On a separate subject: I received your monitoring report, and I appreciate your complying with this term of your discharge plan. However, over the two months since you submitted the first analysis of the water from your monitor well, there appears to have been a dramatic rise in total dissolved solids, chloride, sodium, and sulfate. There is some fluctuation in the other parameters, but that could be explained by sampling or laboratory error. The listed parameters are those one would expect to rise in a case of brine contamination.

You may wish to check these results by having another sample run at a different lab. In any case, your next quarterly sample is due on or before January 15, 1986. If the trend I have described above continues, it will be necessary for you to investigate whether the brine contamination is due to a leak in your lined brine storage lagoon.

Sincerely,

Paige Grant Morgan
Water Resource Specialist

PGM:pgm

cc: John Guinn, EID District IV Manager
Lee Wilson, Lee Wilson & Associates

MARATHON ROAD WATER STATION
Lea County, New Mexico
Brine and Fresh Water

November13, 1985

Dr. Lee Wilson
Lee Wilson & Associates
P. O. Box 931
Santa Fe, NM 87504

Re: Marathon Road Water Station, DP-361

Dear Lee:

Enclosed is drawing of proposed "catchment system" for Paige. It would be further along without the rains.

Paid invoices are enclosed for the septic tank, the 150' x 10' piece of plastic for connecting the caliche to the 7" pipe, and the Sears Sump Pump to keep the tank pumped out into the brine pit. We have the 7" aluminum pipe on hand.

I am asking Bill Owens go no further til we have a response from Paige. I believe we can catch all the spills and put them back into the brine sales pit with this arrangement.

I am sending Paige a copy of this letter and drawings. Please let us know what you think.

Sincerely,

C. W. Trainer

CWT/sl

cc: Bill Owens & Paige G Morgan

526 Sandy Mtn. Dr. • Sunrise Beach, Texas 78643 • Jackie Trainer, Manager • (915) 388-3674

PALMER MFG. & TANK, INC.

Palmer MFG. & TANK INC. GARDEN CITY, KANSAS

REMIT TO:
BOX 1195 - WEST HIGHWAY 50
GARDEN CITY, KANSAS 67846
PHONE AC 316-275-7461

REMIT TO: TEXAS LOCATION
BOX 1069 NORTH HWY. 385
ANDREWS, TEXAS 79714
PHONE AC 915-523-5904

OUTSIDE KANSAS WATTS 1-800-835-9136

INVOICE NO. A 06410

INVOICE DATE 8-26-85

S.O. NO.

SOLD TO: C.W. TRAINER
526 SANDY MOUNTAIN DRIVE
SUN RISE BEACH, TEXAS 78643

SHIP TO: CUSTOMER PICK UP
MARATHON ROAD WATER STATION

DATE ENTERED	PURCHASE ORDER NO.	☒ CASH ☐ CHARGE	SALESMAN	ORDERED BY - PHONE NO. -	SHIP VIA:	COLLECT ☐ C.O.D. ☐ PREPAID ☐	DUE DATE
8-23-85	Verbal		TR		Customer Pick up		8-26-85

QTY.	CODE	DESCRIPTION	EACH	AMOUNT
1	A	1000 Gallon Poly Septic Tank Tank Serial No. 3666		625.00

RECEIVED
NOV 18 1985
GROUND WATER/HAZARDOUS WASTE
BUREAU

Paid 8-29-85 487

- SPECIAL INSTRUCTIONS -

ALL SHIPMENTS F.O.B. PLANT UNLESS OTHERWISE STATED.

CONSIGNEE MUST FILE CLAIM WITH DELIVERING CARRIER IN CASE OF DAMAGE.

ALL RETURNED MERCHANDISE SUBJECT TO RESTOCKING CHARGE.

- TERMS -

DUE THE 10TH OF THE FOLLOWING MONTH WITH A SERVICE CHARGE OF 1½% PER MONTH (18% YR) TO BE ADDED IF NOT PAID BY THE 25TH DAY OF THE MONTH UNLESS OTHERWISE SPECIFIED.

SUB TOTAL	$	625.00
FREIGHT / POSTAGE	$	CPU
EXCISE TAX (IF ANY)	$	
CRANE CHARGE	$	
☒ SALES TAX ☐ EXEMPT	$	25.78
TOTAL INVOICE	$	650.78

THANK YOU — WE APPRECIATE YOUR BUSINESS

DIAMOND RENTAL, INC.

PHONE 505 392-6498 P.O. BOX 5275 HOBBS, N.M. 88241-5275

Inv. No. 12659

Date 9-11-85

Lease Owen Marathon Rd. Water Sta.

Well No.

TO: C.W. Trainer
526 Sandy Mt. Drive
Sunrise Beach, Tx.
78643

Field Ticket No. 06720

Dated 9-7-85

	UNIT PRICE	TOTAL
RENTAL EQUIPMENT:		
FURNISH LABOR AND MATERIAL TO LINE PIT AS INSTRUCTED.		
150X10 1500 sq. ft. plastic	.12	180.00
NM TAX 4.25%		7.65
NET TOTAL		187.65

THANK YOU.....

OK to pay 9-13-85

Paid 9-17-85
Ck. 502

MAIL ANY BILLING ERROR NOTICE TO Sears: 642 SOLEDAD ST. SAN ANTONIO TX 78205
FOR CREDIT ACCOUNT INQUIRIES PHONE: (512) 228-4418 MON-FRI 9:00AM - 5:00PM

Month	Day	Reference	TRANSACTION DESCRIPTION See reverse for detailed description of department numbers indicated below.	CHARGES	PAYMENTS & CREDITS
09	11	S025	CATALOG SALE 03	82.13	
09	11	1624	CATALOG SALE 42	284.84	

Pump for Marathon Road

9-23-85
Ck 506

"ON PURCHASES MADE AFTER THE BILLING DATE SHOWN BELOW, THE ANNUAL PERCENTAGE RATE OF THE FINANCE CHARGE WILL BE 18.0% UNTIL FURTHER NOTICE."

FINANCE CHARGE RATE(S)	ON AVERAGE DAILY BALANCE OF:	MONTHLY PERIODIC RATE(S)	ANNUAL PERCENTAGE RATE(S)
	$.01 TO $30.00	MIN. FINANCE CHARGE $.50	
	$30.01 AND ABOVE	1.658 %	19.9 %

see ACCOUNT NO. on correspondence	BILLING DATE	PREVIOUS BALANCE	NEW BALANCE	MINIMUM PAYMENT
0 80228 78155 7	SEP 16 1985	.00	366.97	15.00

To avoid a FINANCE CHARGE next month, pay the NEW BALANCE shown above within 30 days (28 days for February statements) from BILLING DATE. If you prefer to pay in installments, pay the MINIMUM PAYMENT shown above, or more, within 30 days (28 days for February statements) from BILLING DATE. *If you pay by mail, payments received prior to 1 p.m. on a banking day will be credited as of the date received. Payments received after 1 p.m. will be credited the following banking day.* The sooner you pay and the more you pay, the smaller your FINANCE CHARGE.

NOTICE: SEE REVERSE SIDE FOR IMPORTANT INFORMATION. **SEARS, ROEBUCK AND CO.**

MARATHON ROAD - PAVEMENT

LOW - SUMP AREA - SAND

BURRIED

1000 GAL SEPTIC TANK w/ SEARS ELECTRIC SUMP (SEPTIC) PUMP - WILL PUMP ALL FLUIDS FROM TANK TO LARGE BRINE PIT FOR RESALE.

7" Aluminum PIPE - SLOTTED - connected to caliche truck drive by plastic pit liner material -

BRINE LOADING STATION

BRINE LOADING STATION

CALICHE TRUCK DRIVE FOR LOADING

SLOPE

SLOPE

TICKET HOUSE

MARATHON ROAD WATER STATION
Lea County, New Mexico
Brine and Fresh Water

FRESH WATER PIT

TANKS

FRESH WATER TANK

BRINE LOADING PUMP

BRINE PIT

11-12-85

HEALTH ENVIRONMENT department

STATE OF NEW MEXICO

ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 984-0020

TONEY ANAYA
GOVERNOR

DENISE D. FORT
DIRECTOR

November 7, 1985

Dr. Lee Wilson
Lee Wilson & Associates
PO Box 931
Santa Fe, NM 87504

Re: Marathon Road Water Station, DP-361

Dear Lee:

Thank you for informing me of Mr. Trainer's intention to "analyze water samples quarterly". I will expect those samples to be bailed from the monitor well by the brine storage lagoon as described in your letter to me of September 24th; I will expect the samples to be analyzed for TDS and chloride, as indicated in the summary form attached to the discharge plan approval letter of May 16, 1985; and I will expect the results to be reported to the EID within fifteen days of the end of each calendar quarter, unless Mr. Trainer prefers a different schedule. The due dates for the quarterly analyses would thus be January 15, April 15, July 15 and October 15. The first will be due on or before January 15, 1986.

With regard to Mr. Trainer's proposed catchment system: I would recommend that I be given the opportunity to review the drawing when the plans are finalized rather than when the construction is finalized. It would save Mr. Trainer a good deal of trouble and expense to obtain EID's approval for his plans, rather than to go ahead and construct an arrangement which turns out to be unapprovable.

Sincerely,

Paige Grant Morgan
Water Resource Specialist

PGM:pgm

cc: Mr. CW Trainer
John Guinn, EID District IV Manager

LEE WILSON & ASSOCIATES
ENVIRONMENTAL PLANNING • RESOURCE MANAGEMENT

November 4, 1985

Paige Morgan
New Mexico Environmental Improvement Division
P.O. Box 968
Santa Fe, NM 87504-0968

Dear Paige,

By letter of October 29th, 1985, Mr. Trainer has advised me that he agrees to start analyzing water samples quarterly. Also, he will send you (via me) a drawing of the catchment system when it is finalized.

Sincerely,

Lee Wilson, Ph.D.

105 CIENEGA STREET P.O. BOX 931 SANTA FE, NEW MEXICO 87504 (505) 988-9811

HEALTH ENVIRONMENT department

STATE OF NEW MEXICO

ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 984-0020

TONEY ANAYA
GOVERNOR

DENISE D. FORT
DIRECTOR

October 9, 1985

Dr. Lee Wilson
Lee Wilson and Associates
PO Box 931
Santa Fe, NM 87504

Re: Marathon Road Water Station

Dear Lee:

With reference to the proposals you presented in your letter to me of September 24th, regarding monitoring arrangements and plans for an emergency spill catchment at the Marathon Road Water Station:

1) Leaving aside the question of ascertaining the accuracy of Mr. Trainer's balance, by the time that the water in the monitor well has become so much denser than its baseline value that its density increase is measurable by weighing, there will have been substantial aquifer contamination, which Mr. Trainer would be liable for cleaning up. The point of installing the monitor well was to act as a leak detection system for the brine storage pond. The point of a leak detection system is to detect leakage as soon as possible after it takes place, in order to prevent substantial damage from occurring. I'm afraid the proposal for weighing the quarterly samples to determine whether leakage has taken place will not be an acceptable means of monitoring.

   There are a number of oilfield service companies which offer free analyses for certain parameters of common interest in the Hobbs area, one of which is chloride. Mr. Trainer may be able to arrange to have his quarterly samples analyzed by such a service. If the free service is not available, an analysis for chloride is not expensive. I am not closed to the suggestion of measuring resistivity of the samples as a means of monitoring for leakage, although I would like to see a comparison between the readings obtained by the resistivity meter proposed to be used for the measurements, and a conductivity meter such as that used by the EID for field measurements, to ensure that the measurements are in fact the inverse of each other.

   The results of quarterly samples should be reported quarterly.

2) Please submit a drawing of the proposed emergency spill catchment system (is this what you mean by a "runoff-control system"?) I am unable to determine by your description whether the proposed arrangements address our concerns.

Sincerely,

Paige Grant Morgan
Water Resource Specialist

PGM:pgm

cc: John Guinn, EID District IV Manager
CW Trainer.

Marathon Road Water Station:
monitor well: PVC casing 4"
about 2' above surface, pea
gravel around well
SWL 25' below surf
- 2' casing
(23')

sample 8508221310

T: 19°C

spec cond: 94 × 100 µmhos = 9400.

pH: 6.3

7.5
× 42
150
300
315.0

5.
7.5 | 42.0
300
120
- 75
450

1.2
× 8
296 (?)
4

76.
5 | 384

CW Farmer and I discussed
doing more thorough job of
spill collection. He will
consult w/ Lee Wilson.

of Samples	Ion
/	Na
/	K
/	Ca
/	Mg
/	Cl
/	HCO3
—	CO3
/	SO4
/	TDS
/	NO3+ NO2
/	NH3
/	kjeld N
	As
	Ba
	Cd
	CN
	Cr
	F
	Pb
	Hg
	Se
	Ag
	U
	V
	Ra 226
	Ra 228
	Cu
	Fe
	Mn
	Phenols
	Zn
	Al
	B
	Co
	Mo
	Ni
/	pH
/	Conduct.

FIELD TRIP REPORT
GROUND WATER SECTION

SLD USER CODES

County Lea

Ground Water: 59300

NO_3, HC, & Toxics: 59600

UIC: (59500)

FACILITY VISITED

Name of Facility: Marathon Rd. Water Station

Location: on Marathon Rd just south of x-sec. w/ Carlsbad Hwy

Discharge Plan Number: DP-361

Type of Operation: brine mfg + sales

ENVIRONMENTAL IMPROVEMENT DIVISION FIELD VISIT

EID Inspector(s): Robert Morgan + Steve Sanchez

Date of Inspection or Visit: 8/22/85

Discharger's Representative Present During EID Visit:

Name: CW Trainer

Title or Position: owner

Purpose of Visit:

a. Evaluation of Proposed Discharge Plan ✓

b. Compliance Inspection of Discharge with Approved Plan _____

c. Other (specify) _____

Inspection Activities During Field Visit:

a. Inspection of Facilities or Construction (specify)
inspected newly constructed monitor well + bailed sample.

b. Sampling of Effluents (give sampling locations)

c. Sampling of Ground Water (give names or locations of wells)
sampled monitor well.

d. Evaluation of geology, soils, water levels or other physical characteristics of the location (specify)

e. Other (specify) Agreed about installing an emergency catchment.

Observations and Information Obtained during the Visit:

ACTION REQUIRED

Contact Lee Wilson (consultant) re: emergency catchment design + plans for pump-testing monitor well + submitting reporting schedule.

Revised June 1972

STATE ENGINEER OFFICE

WELL RECORD

Section 1. GENERAL INFORMATION Marathon Water Station Observation Well

(A) Owner of well C.M. Trainor Owner's Well No.

Street or Post Office Address 526 Sandy Mtn. Dr.

City and State Sunriser Beach, Texas 78643

Well was drilled under Permit No. CP-683 and is located in the:

a. ___ ¼ SW ¼ SW ¼ SE ¼ of Section 25 Township 19S Range 34E N.M.P.M.

b. Tract No. ___ of Map No. ___ of the ___

c. Lot No. ___ of Block No. ___ of the ___
Subdivision, recorded in Lea County.

d. X= ___ feet, Y= ___ feet, N.M. Coordinate System ___ Zone in the ___ Grant.

(B) Drilling Contractor Abbott Bros. Drilling License No. WD-46

Address P.O. Box 637, Hobbs, New Mexico 88240

Drilling Began 7/18/85 Completed 7/20/85 Type tools Cable Size of hole 8¼ in.

Elevation of land surface or ___ at well is ___ ft. Total depth of well 120 ft.

Completed well is ☒ shallow ☐ artesian. Depth to water upon completion of well 28 ft.

Section 2. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	Depth in Feet To	Thickness in Feet	Description of Water-Bearing Formation	Estimated Yield (gallons per minute)
28	31	3	Sand	1/2 gal.

Section 3. RECORD OF CASING

Diameter (inches)	Pounds per foot	Threads per in.	Depth in Feet Top	Depth in Feet Bottom	Length (feet)	Type of Shoe	Perforations From	Perforations To
4	3 Plastic	Glued	0	120	120	None	4	120

Section 4. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	Depth in Feet To	Hole Diameter	Sacks of Mud	Cubic Feet of Cement	Method o
			Cement at top.		

Section 5. PLUGGING RECORD

Plugging Contractor ___

Address ___

Plugging Method ___

Date Well Plugged ___

Plugging approved by:

___
State Engineer Representative

No.	Depth in Fee Top	Bo
1		
2		
3		
4		

Ca 1 900
pH 7.41
Ca 534
Mg 247
Na 1130
Bicarb 341
Sulphate 3150
Iron 2.4
Unichem 8-19-85

FOR USE OF STATE ENGINEER ONLY

Date Received

Quad ___ FWL ___ FSL ___

File No. ___ Use ___ Location No. ___

Section 6. LOG OF HOLE

Depth in Feet From	Depth in Feet To	Thickness in Feet	Color and Type of Material Encountered
0	5	5	Surface soil
5	16	11	Caliche
16	28	12	Sandy Clay
28	31	3	Sand
31	60	29	Purple Clay
60	120	60	Red Clay

Section 7. REMARKS AND ADDITIONAL INFORMATION

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

Murrell Abbott
Driller

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the appropriate district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1(a) and Section 5 need be completed.

INVENTORY SHEET

Name of Discharger: Marathon Road Water Station

Type of Operation/Facility: brine extraction well + associated surface facilities

Method of Discharge: Lagoon ☒ if lagoon, approx. demensions 140' x 140' x 10'

Arroyo ☐ Is lagoon lined? Yes ☒ No ☐

Dry well or injection ☒ Type of Lining 36 mil CPER Palco (PVC)

Flowing Stream ☐

Other (specify) steel water tanks for fresh water

Location of Discharge (descriptive): brine well located in SE¼ NW¼ SE¼ SE¼; brine pumped 2250 ft. to storage pond in SE¼ SE¼ SW¼

County Lea Township 19S Range 34E Section 25, ____ ¼

Type of Contaminant disposed: fresh water is injected into dry salt beds to create a brine with TDS of 321,000 mg/l which is stored in lined lagoon

Estimated flow to ~~disposal~~ storage area variable - ≈ 100 ~~gallons~~ barrels per day

Depth to water 20-50 feet? To be ascertained w/in 90 days of obtaining DP approval

Are there any wells in the vicinity (within ¼ mile) Yes ☐

No ☒

No Information ☐

Date discharge started: August 1981

Name of person submitting form Patsy Morgan Telephone: ext 206

Additional comments: This DP was developed under the terms of an Assurance of Discontinuance.

EID BUCKSLIP

CHECK ONE:

- [X] LETTER TO CW Trainer for Perkins' signature (for Director)
- [ ] MEMO TO _____
- [ ] PRESS RELEASE
- [ ] OTHER

SUBJECT: DP approval

DRAFTED BY: Patsy Morgan 5/13/85 (Date)

CONCURRENCES:

NAME:		INITIAL	DATE REC'D	DATE APPROVED
Maxine Hoad	Sect. Mgr.	MSH	5/16/85	5/16/85
Richard Perkins	Bur. Chief	RP	"	"
~~Richard Holland~~	Dep. Dir.			
~~Denise Fort~~	Director			

FINAL DECISION NEEDED BY _____ (date) BECAUSE _____

COMMENTS BY DRAFTER OR REVIEWER(S):

Second brine well DP to be completed under an Assurance of Discontinuance.

HEALTH ENVIRONMENT department

STATE OF NEW MEXICO

ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 984-0020

TONEY ANAYA
GOVERNOR

DENISE D. FORT
DIRECTOR

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

May 16, 1985

C.W. Trainer
526 Sdy Mountain Drive
Sunrise Beach, TX 78643

RE: APPROVAL OF DP-361 FOR MARATHON ROAD WATER STATION

Dear Mr. Trainer:

The discharge plan (DP-361) for Marathon Road Water Station located in Section 25, T195 R34E, Lea County, New Mexico is hereby approved. The approved discharge plan consists of the plan dated March 15, 1985.

The discharge plan was submitted pursuant to Section 5-101.B.3 of the N.M. Water Quality Control Commission Regulations. It is approved pursuant to Section 3- 109. Please note subsections 3-109.E. and 3-109.F., which provide for possible future amendment of the plan. Please be advised that the approval of this plan does not relieve you of liability should your operation result in actual pollution of surface or ground waters which may be actionable under other laws and/or regulations.

The monitoring and reporting shall be as specified in the discharge plan. These requirements are summarized on the attached sheet. Any inadvertent omissions from this summary of a discharge plan monitoring or reporting requirement shall not relieve you of responsibility for compliance with that requirement.

Please note that Section 3-104 of the regulations requires that "When a plan has been approved, discharges must be consistent with the terms and conditions of the plan."

Pursuant to subsection 3-109.G.4., this plan approval is for a period of five years. This approval will expire May 16, 1990, and you should submit an application for new approval in ample time before that date.

On behalf of the staff of the Ground Water Section, I wish to thank you and your consultant for your cooperation during this discharge plan review.

Sincerely,

Richard Stephens (for)

Denise Fort
Director

DF:PG:ps

cc: John Guinn, EID, District IV Manager
Lee Wilson, President, Lee Wilson & Associates

P 612 425 192

RECEIPT FOR CERTIFIED MAIL
NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to	C.W. Trainer
Street and No.	526 Sky Mountain Rd
P.O., State and ZIP Code	Sunset Beach, TX 78643
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	

PS Form 3800, Feb. 1982 ★ U.S.G.P.O. 1983-403-517

LEE WILSON & ASSOCIATES
ENVIRONMENTAL PLANNING • RESOURCE MANAGEMENT

May 8, 1985

Ms. Paige Morgan
Environmental Improvement Division
Post Office Box 968
Santa Fe, NM 87504-0968

Dear Paige,

Per your request I have contacted C.W. Trainer. He is agreeable to constructing the monitoring well within 90 days of EID's approval of the discharge plan.

Sincerely,

Lee Wilson, Ph.D.
President

xc. C.W. Trainer
Doug Perrin

105 CIENEGA STREET P.O. BOX 931 SANTA FE, NEW MEXICO 87504 (505) 988-9811

LEE WILSON & ASSOCIATES
ENVIRONMENTAL PLANNING • RESOURCE MANAGEMENT

March 15, 1985

Ms. Paige Morgan
Environmental Improvement Division
Post Office Box 968
Santa Fe, NM 87504-0968

Dear Paige,

Enclosed please find the final draft of Discharge Plan DP-361, for Marathon Road Water Station. By copy of this letter, I am asking Mr. Trainer to review the Plan and verify its accuracy.

In response to your letter of December, 1984, I understand that our original proposal on monitoring design is acceptable; that is, we will develop specifics after testing of the well. In response to your comments No. 2 and 3, the document has been changed with respect to the discussion of spills at the loading area, see especially pp. 27-28. Similarly, the change requested in your comment No. 4 has been made, and copies of the plugging bonds are provided.

Please let me know if you have any further questions on this matter.

Sincerely,

Lee Wilson, Ph.D.
Certified Professional Hydrogeologist
(AIH No. 220)

105 CIENEGA STREET P.O. BOX 931 SANTA FE, NEW MEXICO 87504 (505) 988-9811

HEALTH ENVIRONMENT

STATE OF NEW MEXICO

MEMORANDUM OF MEETING OR CONVERSATION

☒ Telephone ☐ Personal	Time	Date
		02-21-85

Originating Party	Other Parties
Lee Wilson	

Subject: Terms of DP approval specified in my 12/20/84 letter.

Discussion: (I discovered that I hadn't made a copy of the letter I had sent him; he subsequently had a copy hand-carried to me). With regard to point #1, he requested that the monitoring schedule be proposed on the basis of the well tests, rather than strictly on a monthly basis. #2: the switch is already set thus. #3: Trainer is much opposed to any further construction. I said a ramp draining into a collection pond would be fine, it didn't have to be a sump, but problems have occurred in many mine stations with spillage and I didn't see that this would be an exception. #4: Agreed to plugging plan. #5: agreed to send in a plugging bond.

Conclusions or Agreements:

02-25-85: I called him back after rereading DP and said they could propose a monitoring schedule after pump-testing the well - also said they should give us a figure for background at that time. He agreed - said he'd still need to discuss with Trainer about designing some spill catchment arrangement.

Distribution:

Signed: Jorge Morgan

HEALTH ENVIRONMENT department

STATE OF NEW MEXICO

ENVIRONMENTAL IMPROVEMENT DIVISION

P.O. Box 968, Santa Fe, New Mexico 87504-0968

(505) 984-0020

TONEY ANAYA
GOVERNOR

DENISE D. FORT
DIRECTOR

December 26, 1984

Dr. Lee Wilson
Lee Wilson and Associates
P.O. Box 931
Santa Fe, NM 87501

Dear Dr. Wilson:

Thank you for your October 31st submittal of a complete discharge plan (DP-361) for the Marathon Road Water Station on behalf of Mr. C.W. Trainer.

I am prepared to recommend that this discharge plan be approved if you and Mr. Trainer agree to the following conditions:

1. Construct a monitoring well as you proposed in Section IV.A. of the discharge plan. Provide this Bureau with the details of construction and testing of the well, and submit a schedule for monitoring for any leakage from the pond. The schedule should specify that the monitor well will be checked for any change in specific conductance at least once a month. Semi-annual reporting of the monthly monitoring results will be acceptable except when such monitoring indicates that there is a leak in the pond liner, in which case this Bureau shall be notified immediately(Section 1-203 of the NM Water Quality Control Commission regulations).

2. Set the existing timed shut-off switch so as to limit the amount of brine that could be spilled during loading of trucks.

3. Construct a sump beneath the loading area and dispose of fluids collected in the sump in such a way that ground water quality standards will not be exceeded. This method is preferable to berming the loading area.

4. Upon closure of the facility, the brine well shall be filled with cement from the plug at the bottom of the casing to ground surface.

5. Provide us with a copy of the bond(s) which would apply to plugging of the brine well and closure of the surface facility.

Please note also that EID inspections of the brine station during the period of discharge plan approval may involve pressure-testing the brine well. This test will not require pulling the tubing or installing a packer. Instead, the well can be shut in at operating pressure (achieved by filling the cavity with water) and a pressure recorder attached so that the pressure can be

monitored for several hours. This permits the casing, tubing, salt cavity and cement job around the base of the casing to be tested simultaneously.

Further, please note that a cement bond log will be required as a condition of renewed approval of the discharge plan for this facility. If Mr. Trainer plans to remain in operation for more than the five years permitted by approval of this discharge plan, he would be well advised to have a cement bond log run in his brine well at some point when the tubing has been pulled for maintenance.

Please let me know if the conditions for approval of this discharge plan are acceptable to you and Mr. Trainer. Thank you for your cooperation in bringing this facility into compliance with the N.M. Water Quality Control Commission regulations.

Sincerely,

Paige Grant Morgan

Paige Grant Morgan
Water Resource Specialist
Ground Water Section

PGM:jba

cc: C.W. Trainer, Marathon Road Water Station
K. Douglas Perrin, Jennings & Christy, Roswell

TONEY ANAYA
GOVERNOR

STATE OF NEW MEXICO

ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 984-0020

DENISE FORT, DIRECTOR

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

November 8, 1984

Marathon Road Water Station
C.W. Trainer, Owner
526 Sdy. Mtn. Dr.
Sunrise Beach, TX 78643

Dear Mr. Trainer:

Enclosed is a copy of the public notice pertaining to your proposed discharge which was issued by this division pursuant to New Mexico Water Quality Control Commission Regulations, Section 3-108.

If you have any questions, please do not hesitate to contact me at the above address and telephone number (ext. 279).

Sincerely,

Maxine S. Goad
Program Manager
Ground Water Section

MSG: egr

Enclosure

PS Form 3800, Feb. 1982 ★ U.S.G.P.O. 1983-403-517

Sent to	C. W. Trainer
Street and No.	526 Sdy Mtn Dr
P.O., State and ZIP Code	Sunrise Beach, TX
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	

RECEIPT FOR CERTIFIED MAIL
NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL
(See Reverse)

P 612 423 876

TONEY ANAYA
GOVERNOR

HEALTH ENVIRONMENT department

STATE OF NEW MEXICO
ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 984-0020

DENISE FORT, DIRECTOR

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

November 8, 1984

Lea County Commissioners
Lea County Courthouse
Lovington, NM 88260

Board of County Commissioners:

Enclosed is a public notice which includes notice of proposed discharge plan(s) for one or more operations located in your county.

If you have any questions, please do not hesitate to contact me at the address and telephone number given above.

Sincerely,

Maxine S. Goad

MAXINE S. GOAD
Program Manager
Ground Water Section

MSG: egr

Enclosure

PS Form 3800, Feb. 1982 ★ U.S.G.P.O. 1983-403-517

Sent to	Lea Co. Comm.
Street and No.	Lea Co. Courthouse
P.O., State and ZIP Code	Lovington, NM
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	

RECEIPT FOR CERTIFIED MAIL
NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL
(See Reverse)

P 612 423 870

November 7, 1984

TO BE PUBLISHED ON OR BEFORE November 15, 1984

PUBLIC NOTICE
NEW MEXICO ENVIRONMENTAL IMPROVEMENT DIVISION
HEALTH AND ENVIRONMENT DEPARTMENT

Notice is hereby given that pursuant to New Mexico Water Quality Control Commission Regulations, the following proposed discharge plans have been submitted for approval to the Director of the New Mexico Environmental Improvement Division, P.O. Box 968, Crown Bldg., Santa Fe, New Mexico 87504-0968; telephone (505) 984-0020.

(DP-105) EAGLE-PICHER INDUSTRIES, INC., P.O. Box 47, Joplin, Missouri 64801, has submitted a modification and renewal to the approved discharge plan (DP-105) for the disposal of washdown water from its Socorro, New Mexico lead battery manufacturing plant. The original plan was for the disposal of approximately 500 gallons per day of washdown water to two hypalon-lined evaporation ponds, located in Section 36, T2S, R1W, Socorro County, New Mexico. The proposed modification and renewal requests approval for an increase in the volume of washdown water discharged to 1,500 gallons per day and the installation of two 1,000 gallon tanks in line with the evaporation ponds for the purpose of settling out lead particulates and neutralizing the water entering the ponds. Discharge water in the ponds has a reported pH of 7.4 and a lead concentration of 10 mg/l. The ground water most likely to be affected is at a depth of approximately 70 to 90 feet with a total dissolved solids content of approximately 200 to 500 mg/l.

(DP-84) LUIZ FARM AND DAIRY, John Luiz, Owner, Rt. 1, Box 59-B, Dexter, NM 88230, proposes to renew previously approved discharge plan (DP-84) for the discharge of milking center waste and runoff from a 1,400 cow dairy 3 miles northwest of Dexter in Section 2 and 11, T13S, R25E, Chaves County, New Mexico. The wastes will be collected in lagoons and used to irrigate 223 acres of alfalfa and 70 acres of corn silage. The ground water below the site is at a depth of approximately 120 feet and has a total dissolved solids concentration of approximately 2,000 mg/l.

(DP-361) MARATHON ROAD WATER STATION, C.W. Trainer, Owner, 526 Sdy. Mtn. Dr., Sunrise Beach, TX 78643. A discharge plan has been submitted for this existing brine well and associated facilities located in the south half of Section 25, T19S, R34E, about 25 miles southwest of Hobbs in Lea County, New Mexico. Brine is produced by injecting fresh water into dry salt beds at a depth of approximately 1,900 to 2,400 feet and returning brine to the surface, where it is stored in a PVC-lined pit with a capacity of 25,700 barrels and is pumped from the pit to tank trucks for sale on demand. Chloride concentration of the brine is approximately 192,000 mg/l with total dissolved solids (TDS) of about 321,080 mg/l. Ground water most likely to be affected by this operation may occur at a depth of 20 to 50 feet and probably has a TDS concentration of approximately 3,500 mg/l.

SUBMITTALS REQUIRED BY

ASSURANCE OF DISCONTINUANCE

C. W. TRAINER

MARATHON ROAD WATER STATION

OCTOBER 31, 1984

PREPARED BY

LEE WILSON & ASSOCIATES, INC.

PREFACE

In accordance with the terms of an Assurance of Discontinuance approved by the New Mexico Water Control Commission on April 10, 1984, Mr. C.W. Trainer must provide a series of submittals to the New Mexico Environmental Improvement Divsion (EID). The first such submittal was submitted on time in May, 1984. The second submittal is due October 31, 1984. To expedite compliance, the Applicant is hereby submitting a complete draft of the Discharge Plan which is the ultimate requirement of the Assurance.

The content of the Draft Discharge Plan conforms with general guidance provided through conversations between a consultant to C.W. Trainer, Dr. Lee Wilson, and a staff member of EID, Ms. Paige Grant. However, as there are no precedents for plans of this type, the precise contents of an approvable plan are not known. This plan has been prepared to provide EID with a specific basis for making a review and providing comments; the discharger is prepared to modify the plan if and as required by EID.

CONTENTS

I. GENERAL DESCRIPTION

A. Names and addresses

The name of the facility is Marathon Road Water Station.

The name and address of the responsible party is:

C.W. Trainer
526 Sdy Mtn Dr
Sunrise Beach, TX 78643

Mr. Trainer's telephone number is: (915) 388-3674.

B. Location

The Marathon Road Water Station is located in Section 25, Township 19S, Range 34E, Lea County New Mexico. Figure 1 of these submittals reproduces the USGS topographic maps of the area (Laguna Gatuna and Monument 15 minute quadrangles) and shows the location of the facilities. [An enlarged version of this base map is available upon request.]

As indicated on the map:

the water-station tanks and lined pits are located in the southeast quarter of the southeast quarter of the southwest quarter of Section 25; this is location 19.34.25.344 using the well-location system developed by the New Mexico State Engineer;

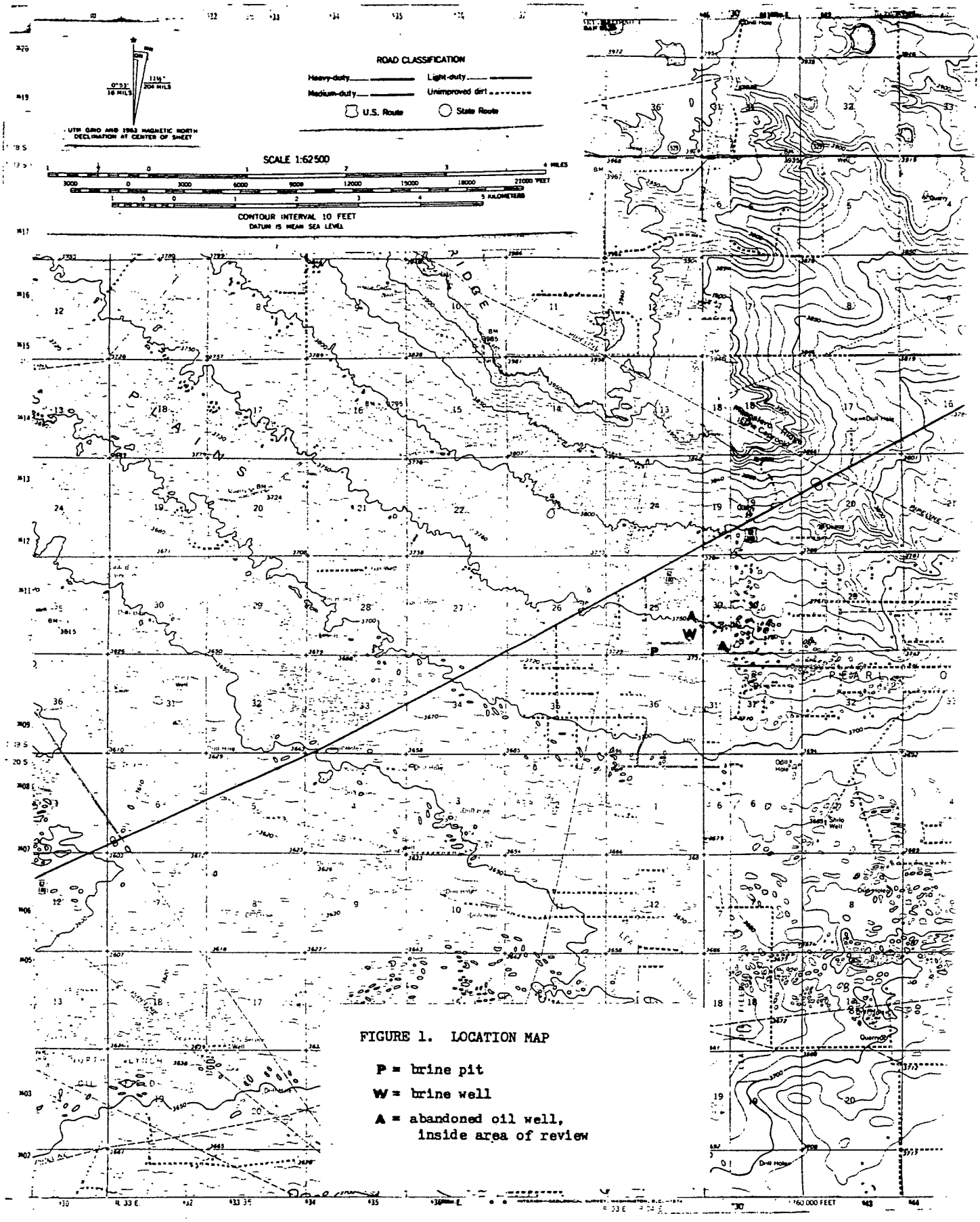


FIGURE 1. LOCATION MAP

P = brine pit

W = brine well

A = abandoned oil well, inside area of review

the in-situ brine extraction well is located in the southeast quarter of the northwest quarter of the southeast quarter of the southeast quarter of Section 25 (well location 19.34.25.4414).

C. Schematic of facility

Figure 2 is a map showing the layout of all facilities at the Marathon Road Water Station. Numbers 1 through 11 on the map refer to different facilities. The following verbal description identifies each numbered facility shown in the figure and identifies all current means and locations for measuring water flows which are related to brine activity.

1. Fresh water is delivered on demand (at rates up to 7000 barrels per day) via a fresh-water pipeline from source wells 12 miles northeast in Section 3, Township 19S, Range 36E.

2. Fresh water is stored in three interconnected (equalized) steel storage tanks, each with 500 barrels of storage capacity.

3. Fresh water is sold directly from the tanks; fresh-water flows are metered at the sale point.

4. Fresh water overflows are discharged to a lined pit. Capacity exists to pump from the pit back to the tanks.

5. On demand, fresh water is pumped from the fresh-water tanks to the brine well via a 50 HP turbine located just north of the tanks. Fresh-water flows are metered at this pump. When injection occurs, the pumping rate is 100 barrels per hour; operating pressure is 450 psi (with an equipment maximum of 600 psi).

6. The pumped fresh water is conveyed to the brine well through a buried pipeline (2 and 7/8 inch steel) approximately 2600 feet long.

7. Fresh water is injected down the casing of the brine well. It enters the Permian Salado salt beds at a depth of about 1911 feet. Salt is dissolved out by the water and the resulting brine is extracted by a tubing set at a depth of about 2400 feet. (Construction details of the brine well are provided subsequently; see discussion of Figure 3.) Circulation is reversed periodically (once each one to three months) for a few hours, to remove any salt which has accumulated in the tubing.

C. W. TRAINER
Marathon Road Water Station and Brine Well

TOWNSHIP 19 S RANGE 34 E COUNTY Lea STATE New Mexico

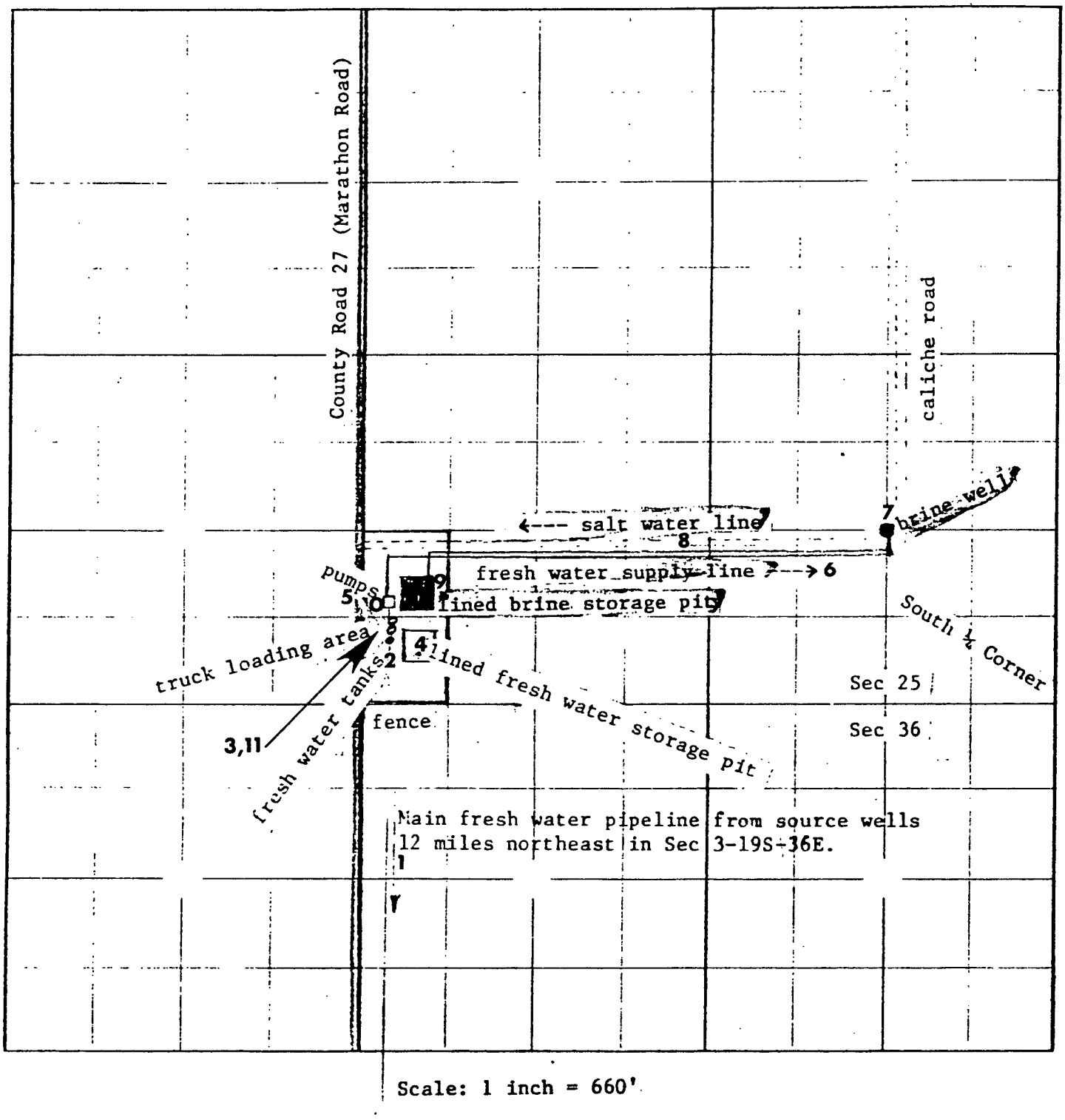


FIGURE 2. Facility layout.
See text for expanded description of each numbered facility.

8. Brine (or blowdown water) is conveyed from the well through a buried pipeline (4 inch PVC) approximately 2250 feet long.

9. Brine is stored in a lined pit, described in Section II.C.

10. Brine is pumped from the pit by a 40-HP centrifugal pump. Brine flows are metered at this pump.

11. Brine is transferred to the loading area through an 8 and 5/8 inch steel pipe. The pipe is buried for a total distance of approximately 200 feet. It surfaces at two truck-loading areas, each with two 3-inch valves, plus three feet of rubber hose. At each site, the valves are at a height of approximately 3 feet and 16 feet above ground, allowing for side-loading or top-loading of tank trucks.

D. Operational History of Injection

As discussed more fully in Section II.B, an abandoned oil well was reentered and converted to a brine extraction well in July and August, 1981. Injection began in August, 1981.

II. DESCRIPTION OF FACILITY

A. Surface facilities

The following descriptions are limited to facilities associated with surface management of produced brines.

Pipeline. All pipes used to transport brine are described in Section II.C; see items 8 and 11.

Pit. The lined pond or pit used for brine storage is approximately 140 by 140 feet and 10 feet deep. Under normal operating procedures, with 1 foot of freeboard, the pit stores 25,700 barrels (1,079,400 gallons). The side slope of the lined brine pit is about 1:1.

The pit liner is 150 by 150 feet of 36 m.l. CPER Palco liner (PVC), with nylon reinforcing strings on small mesh. It was installed in 4 pieces which were glued together. Additional information on the liner material and installation is available from Diamond Rental Inc., Hobbs NM (505-392-6498).

Both the fresh-water and brine-water holding ponds were inspected by the New Mexico Oil Conservation Division (OCD) on March 28, 1983. The pits were observed to be in good shape and lined. No spills or other contaminants were observed. A record of this inspection is in EID files. In general, documents

already on file at EID have not been incorporated into this submittal; however, if requested, the submittal will be revised to include as an attachment all such documents.

Average daily discharge/withdrawal. Records are kept regarding total brine sales, which are in close agreement with the metered discharge of water from the lined pit. Withdrawals do not occur on a daily basis. Over the past 17 months, the total brine sale has averaged 2938 barrels per month or approximately 100 barrels per day. Total production is estimated to be about 25 barrels per day more; the additional production has been discharged by evaporation or added to pit storage. The volume of brine sales is low and results in a marginal economic operation; major modifications to the facility are not feasible at this time.

B. Underground facilities

The following discussion deviates somewhat from the informal guidance provided by EID. The information is presented in logical order, based on the data which are actually available for the injection well. Additional data, such as might result from a detailed testing program, are not available.

Original well. The brine well was developed by re-entry of Cabot Corporation Federal #1, an oil well which was originally drilled in 1958 and

which was plugged and abandoned in March, 1961. OCD files indicate the following with respect to the original well (copies of OCD file documents will be submitted upon request):

- original depth was approximately 4100 feet;
- sands and shales were reported from 0 to 1800 feet; anhydrite was reported at 1800 to 1930 feet; salt and red beds were reported from 1930 to 3318 feet; and various sands, dolomites and anhydrites were found at further depths;
- no water sands were identified during the original drilling;
- the surface casing of 8-5/8" steel was set to a depth of 328 feet and cemented to the surface with 225 sacks;
- during abandonment, the production casing of 5-1/2" was cut and removed above the depth of 3382 feet;
- cement plugs were installed at five depths: at the top of the surface casing; the bottom of the surface casing; 1900 to 1960 feet (anhydrite-salt boundary); 3350 to 3362 feet (top of remant casing); and 3940 to 4100 feet (top of uppermost oil-bearing zone).

Construction specifications for brine well. Figure 3 illustrates the construction of the brine well. Information on this subject, including a copy of the daily drilling report, has previously been submitted to the EID. Information on the drilling history for the brine well is provided in the next subsection.

The following features of the well construction are of special importance with respect to the protection of good-quality ground water.

- The surface casing is from the original well; thus it is 8-5/8 inch diameter J-55 steel, with a weight of 24 pounds/foot, set to a depth of 328 ft. Based on the original records filed with OCD, the casing is cemented to the surface.

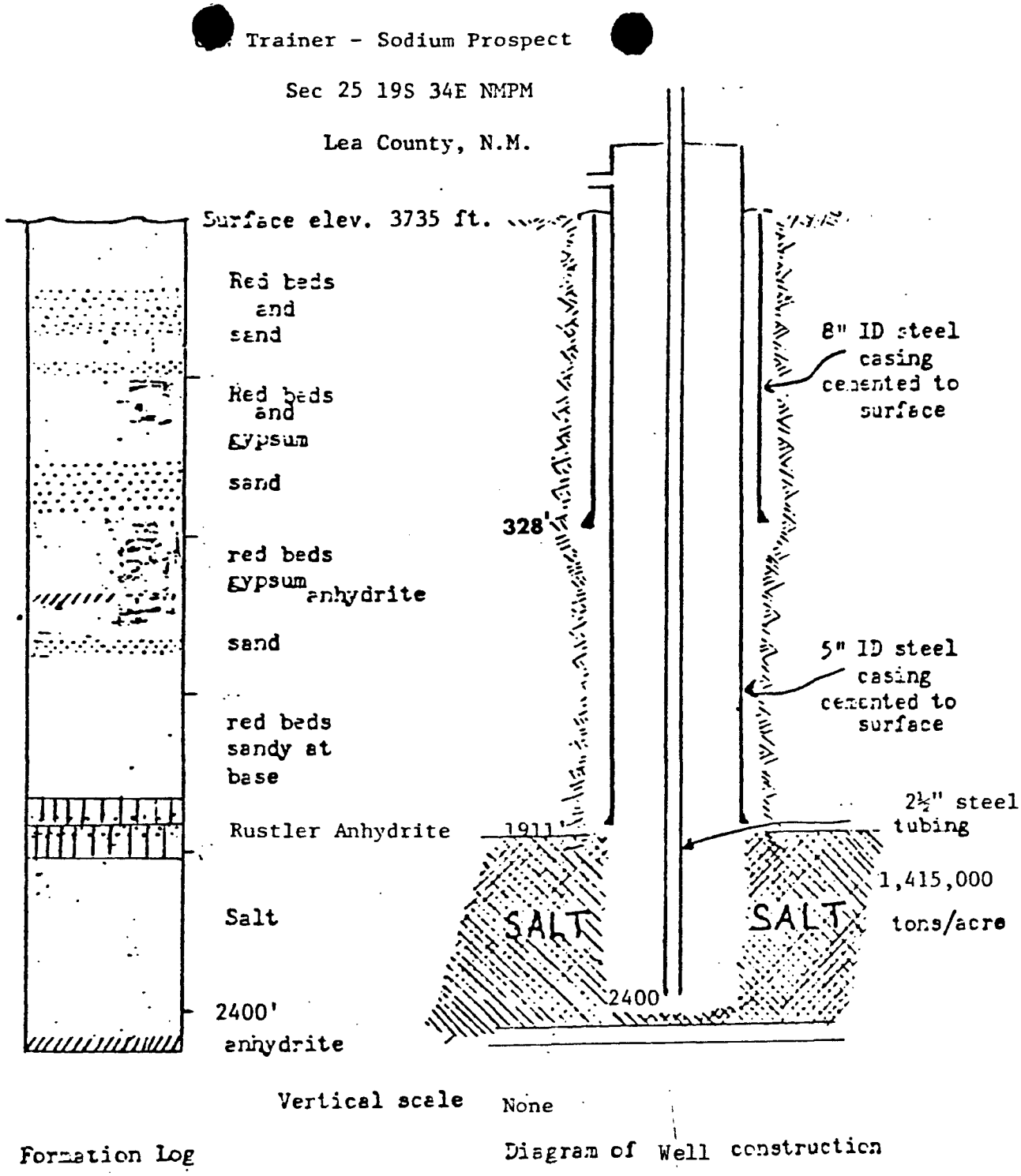


FIGURE 3. Well completion data (right diagram). See text for details. Formation log (left) is generalized from available records.

- A new production casing was installed to a depth of 1911 feet. This casing is 5-1/2 inch diameter J-55 steel, 14# to 15# per foot. The casing was cemented to the surface using 1050 sacks of Class "C" cement. Note that like other depths reported on OCD forms, the casing depth given here is measured from a point on the drilling rig (the Kelly). Actual depth of casing below ground surface is approximately 1902 feet.
- A 2-7/8 inch steel tubing, 6.5#/foot, is set to a depth of about 2400 feet. All corrosive waters produced by the well are withdrawn through the tubing (except for minor amounts of blowdown waters).

Drilling/development of brine well. The abandoned well was reentered and converted to a brine well in July and August, 1981. No plug was found at the bottom of the surface casing. After new casing was set to a depth of about 1902 feet (see above), the plug at 1900-1960 feet was drilled out and water came into the well. As water was not observed during drilling above 1900 feet, but only appeared after removal of the plug, it is evident that this water originated at a depth of below 1900 feet.

The water flow was shut off by setting a new plug at about 3114 feet. This confirms the deep origin of the flow. The daily drilling report indicates minor lost circulation problems, which is not surprising considering that the plug was set in salt beds and pumping of water would dissolve out the salt material.

Well log. Gamma ray and neutron logs for the original oil well have been provided to EID. No record remains of any additional logs obtained for the original well. No logs were developed as part of the 1981 reentry and conversion. A schematic interpretation of the log data, above 2400 feet depth, is included in Figure 3.

Pressure data. A pressure test (up to 2000 psi) was performed in September 1983, and revealed no evidence of tubing or casing leaks. An affidavit describing the test procedures and results has been submitted separately to EID. For comparison, actual injection occurs at 450 psi.

Conclusion. The following facts support a conclusion that the brine well will not cause any potential contamination of fresh ground water:

- a surface casing, cemented to the surface, provides a barrier to brine leakage to a depth of 328 feet;
- a protection casing, cemented to the surface, provides a barrier to brine leakage to a depth of 1911 feet;
- except for infrequent and minor blowdowns, all brine is produced through a plastic-coated tubing and only fresh water is circulated in the annulus between the tubing and the protection casing;
- the integrity of the tubing and protection casing has been demonstrated by pressure testing within the last year;
- actual injection is at a much lower than test pressure;
- problems of lost circulation and water entry to the well, observed during well development, are clearly related to conditions at a depth below the protection casing, and probably originate at a depth below 3100 feet;
- the water entry problem was controlled by setting a plug at about 3114 feet.

III. SITE CHARACTERISTICS

A. Geology

Data sources. The basic reference on the geology and hydrology of the area is "Geology and ground-water conditions in southern Lea County, New Mexico", a 1961 report by Alexander Nicholson Jr. and Alfred Clebsch, Jr., both of the U.S. Geological Survey; the study was published as Ground-water Report 6, New Mexico Bureau of Mines and Mineral Resources, Socorro NM. The occurrence of fresh water which could be subject to UIC protection was discussed in some detail in a 1980 report by Mike Holland, Tom Parkhill, Lee Wilson, Mark Logsdon and Mike Stahl, "Aquifer evaluation for UIC: search for a simple procedure", prepared for the New Mexico Oil Conservation Division. The latter includes an extensive literature search reflecting in part the considerable documentation of regional hydrology made as part of the WIPP project. These two documents (and the literatre cited in the second reference) are the primary basis for the characterization of geologic and hydrologic conditions at Marathon Road Water Station.

Geologic Map and Sections. Figure 4 is a portion of Plate 2 in Report 6, "Ground-water map of southern Lea County, N.Mex." The content of Figure 4 has been checked against other sources, included unpublished ground-water maps and well records on file with the New Mexico State Engineer; the figure appears to accurately represent conditions in the area.

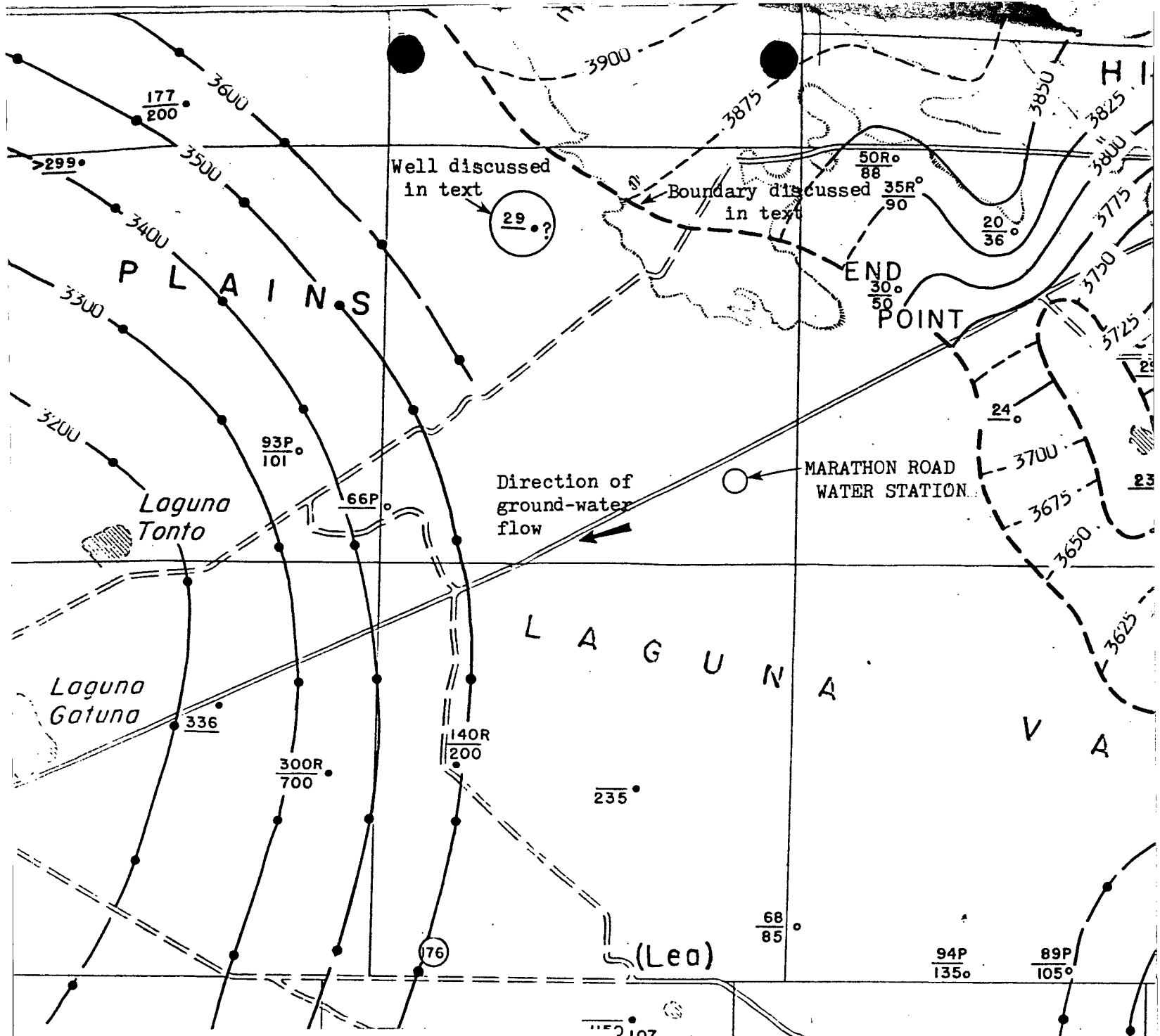
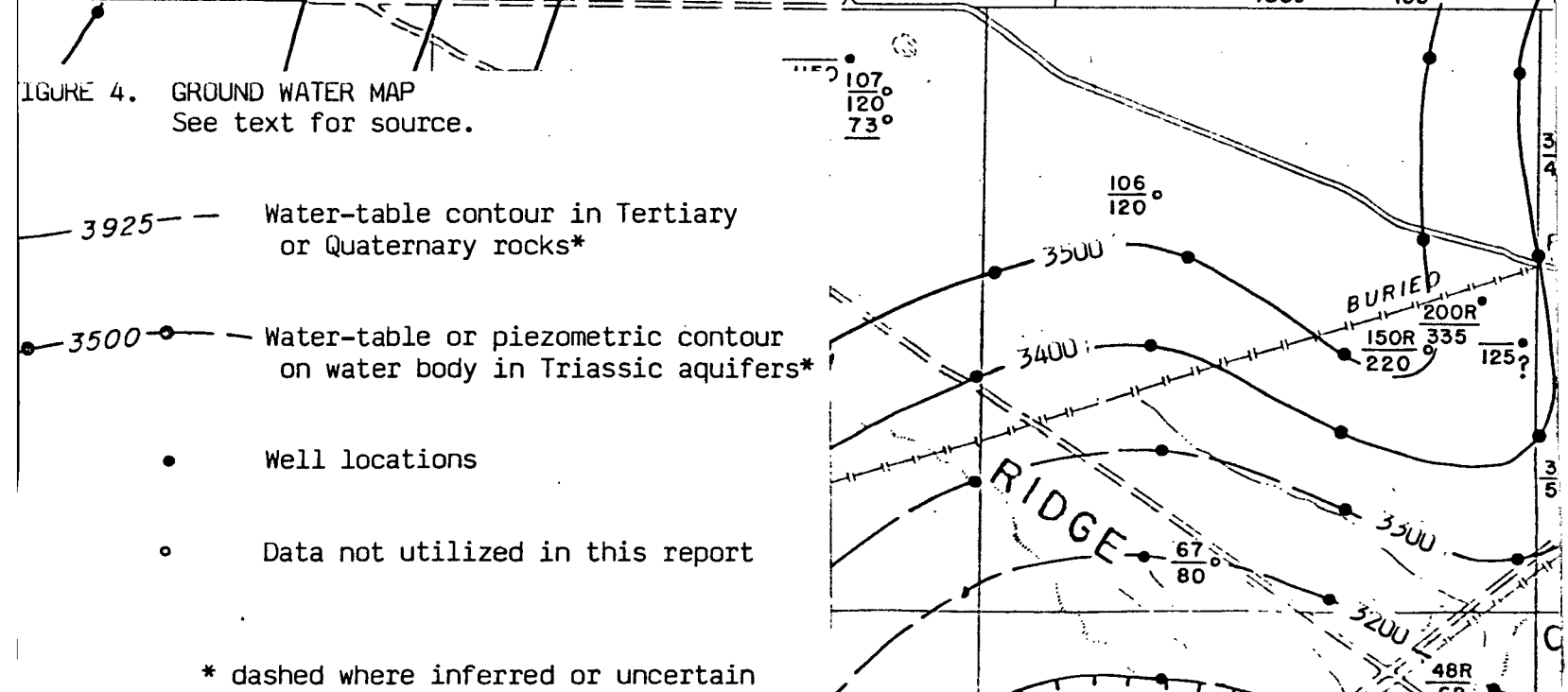


FIGURE 4. GROUND WATER MAP
See text for source.



3925 — Water-table contour in Tertiary or Quaternary rocks*

3500 — Water-table or piezometric contour on water body in Triassic aquifers*

• Well locations

∘ Data not utilized in this report

* dashed where inferred or uncertain

Figure 5 is a cross-section which shows the geology and hydrology of the area near Marathon Road Water Station. There are no known or suspected faults in the area. The stratigraphy of Figure 5 generally corresponds to the drilling log of the injection well, presented previously on Figure 3.

Geologic setting. Report 6 describes the area around the Marathon Road Water Station as part of a vast sand dune country located in the Laguna Valley. Drainage features are absent except near playa lakes which lie several miles west of the brine facilities. Typically, sand dune material is found at the ground surface, and to depths of up to 20 feet. As shown on Figure 5, the sand is locally underlain by several tens of feet of Quaternary stream and lake deposits. In all cases, the sands and/or alluvium lie atop an erosion surface developed on the top of redbeds of the Triassic Dockum Group; the Dockum includes the Chinle and Santa Rosa Formations. Below are the Rustler Anhydrite and the Salado salt; brine production occurs in the upper part of the latter unit. The Salado is underlain by an extensive sequence of Permian units associated with the Capitan Reef and related basins.

B. Hydrology

Hydrologic relationships are shown in cross-section on Figure 5 and discussed further, below.

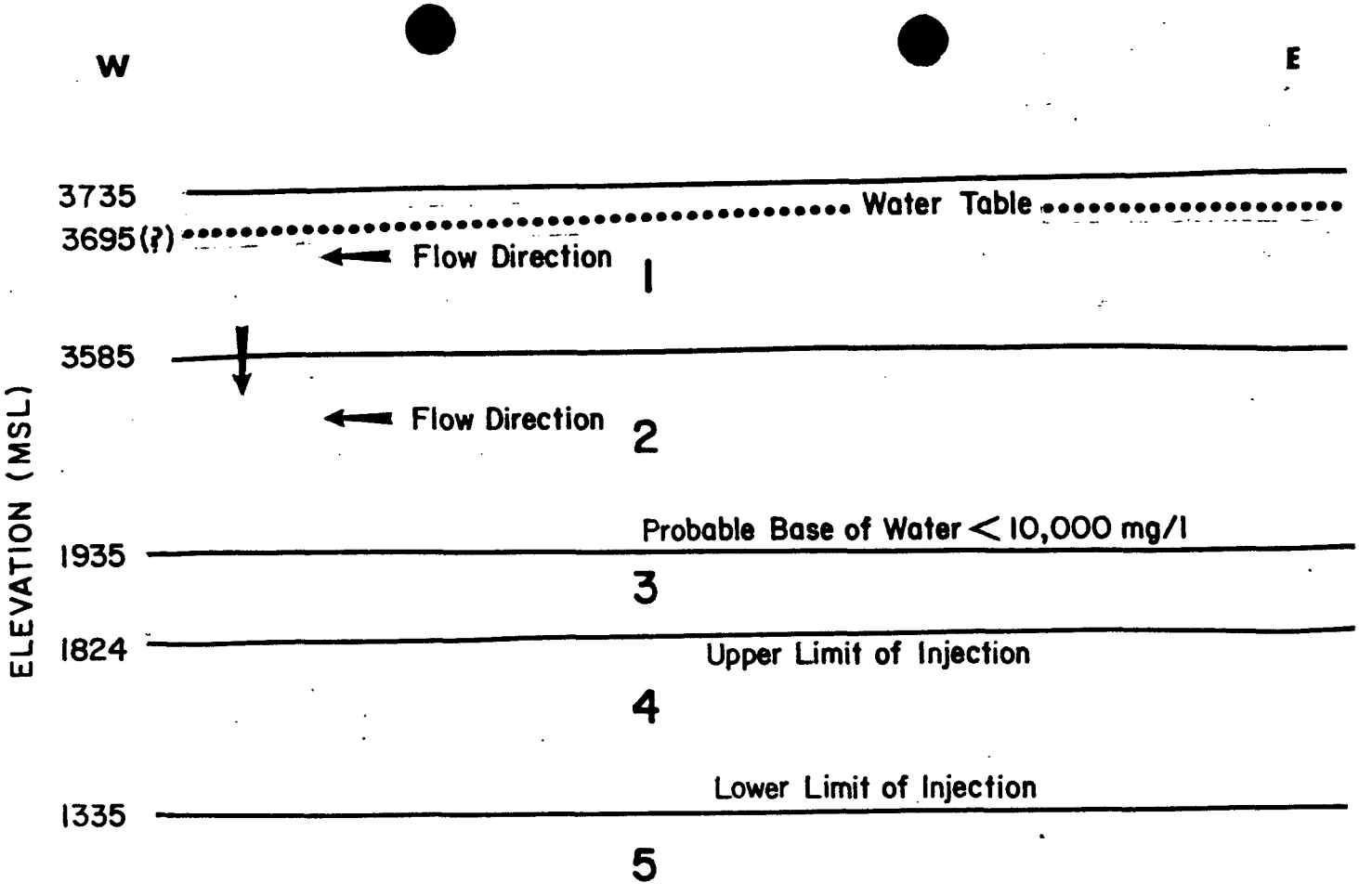


FIGURE 5. HYDROGEOLOGIC CROSS-SECTION.

Section applies to general area of Marathon Road Water Station.

Unit 1 - Quaternary alluvium (sand, gravel, clay); minor aquifer with slightly saline water. Maximum thickness = 150 feet.

Unit 2 - Triassic Dockum Group (Santa Rosa and Chinle? Formations); minor aquifer with water of unknown quality, but may be moderately saline. Dominantly a variad sandstone, cross-stratifies and commonly red in color. Thickness may be about 1650 feet.

Unit 3 - Permian (Ochoan) Rustler Formation, primarily an anhydryrite or gypsum with some halite, fine textured white dolomite, limestone,silt and sandstone. Not considerd an aquifer by any literature report. Thickness = 111 feet.

Unit 4 - Upper portion of Permian (Ochoan) Salado Formation. Dominantly halite. Top of formation marked by a leached zone composted of unconsolidated brown silt and clay with brecciated gypsum. Not considered an aquifer by any literature report. Thickness = 489 feet.

Unit 5 - Lower portion of Permian (Ochoan) Salado Formation. Inclues halite, argillaceous halite, red mudstone, sandstone, siltstone and abundant anhydrite. Not considered an aquifer by any literature report. Thickness approximately 1000 feet.

Aquifers. The prime aquifer in southern Lea County - which is a combination of the Ogallala Formation and Quaternary alluvium - lies to the northwest of the Marathon Road Water Station. (The southwestern limit of the aquifer is shown by the heavy dashed line on Figure 4.) In the vicinity of the station, ground water may occur in minor amounts in the discontinuous aquifers of the Quaternary alluvium, but in the main is found in the Santa Rosa Formation of the Dockum Group. The Santa Rosa produces from several intervals, but at best is a poor aquifer with typical specific capacities being less than 0.2 gpm/ft. Report 6 provides no significant additional data on this aquifer.

Flow system. The ground water flow system in the area of the Marathon Road Water Station is described on page 57 of Report 6. Recharge from the discontinuous alluvial aquifers and from the Ogallala Formation to the northwest moves west and southwest through the Santa Rosa, toward the Lagunas where it discharges downward into older Permian Rocks.

A simple calculation can be made based on the available data. Based on the low specific capacity, the hydraulic conductivity of the local aquifer is less than 1 foot per day. Based on Figure 4, the hydraulic gradient is on the order of 100 feet per mile. Based on Report 6, the porosity of the aquifer is about 0.13; normally effective porosity is about half total porosity. Ground-water velocity equals hydraulic conductivity times hydraulic gradient divided by effective porosity. For this situation, the velocity of ground

water flow is on the order of 100 feet per year. This should be a good first approximation of the flow rate for any brines, should contamination occur in the near surface.

Injection Zone. Injection occurs in the salt beds of the upper Salado formation. Salt is generally considered impermeable except where dissolved or fractured. For example, the WIPP studies cite hydraulic conductivity values of 10^{-7} ft/day for the Saldo. Moreover, voids and fractures tend to close by plastic flow of the salt.

The formations above and below the injection zone are low permeability units with saline beds and no possibility of producible fresh water. Therefore, potential hazards to ground water containing less than 10,000 mg/l appear to be limited to: a) migration from the injection zone through the Rustler and into the marginal resources of the Santa Rosa; b) migration through conduits (e.g. unplugged wells) to the Santa Rosa and/or alluvial aquifer.

Migration through the Rustler is considered very unlikely. Although some dolomitic horizons in the Rustler are water-bearing, all of the WIPP studies (e.g. the Safety Analysis Report) confirm the basic character of this unit as an aquiclude. For Marathon Road, an extra safeguard exists because the injected water must quickly become saline and dense, and therefore can move upward only under the presence of a strong vertical head gradient. Such a

gradient would be unlikely to be observed in non-aquifers such as the Salado and Rustler except near the point of injection. However, at that location, the brine well itself offers a ready conduit for upward movement, making migration to another location physically unlikely.

Based on the low hydraulic conductivities of the injection zone and surrounding materials, any area-of-review calculation will show an effective radius of impacts which is close to zero. (Sample calculations are on file with Lee Wilson and Associates, 105 Cienega St., Santa Fe.) Use of an area of one-quarter mile from the injection well provides a conservative basis for identifying potential conduits by which injected water might migrate upward.

Well records from several sources have been inspected. There are only two potential conduits within the area of review; both are shown on Figure 1. Abandonment records for these wells are provided in Appendix A and indicate that both are properly pplugged and abandoned.

C. Flooding potential

The risk of flood damage to the facility is remote because:

- the topographic map of the area (Figure 1) shows no significant water courses in or near the facility, indicating that any flooding would occur as the result of shallow sheet flow;

- the map further shows that the distance to the upslope drainage divide is no more than two miles, so that the drainage area which could contribute sheet flow is quite small;
- surface soils have a dominantly sandy texture (see discussion of geology, below), so that during a storm event, most precipitation would infiltrate rather than contribute to sheet flow.

D. Depth to and quality of affected ground water.

Occurrence of and depth to ground water. As shown on Figure 4, there are no data indicating the configuration of the water table in the area of the water station; indeed, there are no data to indicate that saturated conditions exist beneath the site. No windmills or other water wells are located downgradient of the water station for a distance of at least four miles. Nonetheless, the red beds are known to occur at depths of 40 feet (Report 6, Plate 1) to 150 feet (drilling record of brine well) beneath the site. Presumably, some ground water occurs in the Santa Rosa Formation at or below this depth. Minor amounts of ground water may occur in the overlying alluvium, but a vadose zone of at least 10 or 20 feet can be expected to occur beneath the site.

Page 92 of Report 6 contains a water-quality analysis for a well located about 5 miles northwest of the water station; the well record is given on Page 74 of the report. This well, shown by the number 29 on Figure 4, appears to have a hydrologic location similar to that of the water station; that is, it is southwest of the main recharge zone and about the same distance from the

Lagunas discharge zone. Consequently, it should provide a suitable analogy for conditions at the water station.

Based on page 74 of Report 6, the well is 33 feet deep and is used for stock purposes. Water is found at a depth of 28.6 feet. The water is believed to come from Triassic rocks.

Based on all available information, the depth to ground water at the site is probably 20 to 50 feet, but could be as much as 150 feet.

Water quality. Data on water quality in well 29 are provided in Table 1. The water is very hard and moderately saline.

E. Chemical analysis of injection water and produced brine

Data on the quality of the injected and produced water are also provided in Table 1. The injected water is of good quality; the produced water is a very strong sodium chloride brine, considerably more saline than sea water and undoubtedly corrosive.

TABLE 1. WATER QUALITY DATA

Data in column 1 in parts per million; other values in milligrams per liter.

Parameter	Alluvial Aquifer	Injection Water	Produced Water
hardness as $CaCO_3$	1,340	136	
total dissolved solids	3,680		321,083
sodium plus potassium	675	34	
sodium			123,180
calcium	430		1,736
magnesium	65		405
bicarbonate	189	194	61
carbonate	0	0	0
chloride	560	17	192,000
sulfate	1,680	25	3,700
nitrate (as NO_3)	139		112
silica	41		
fluoride	0.3		
specific conductance (micromhos)	4,660	419	
pH	7.1		6.69
hydroxide			0
iron (total)			2.9

Alluvial aquifer data based on records for well 29 in Report 6 (see discussion of well on page 19-20 of this report; report is cited on page 12.

Data on injection water based on well 17.32.3.140, Table 8, Report 6. This well is located in same section as wells which supply fresh water to Marathon Road Water Station and may in fact be one of the supply wells.

Brine data based on sample taken from the pit on May 18, 1984 and analyzed by Unichem International, Hobbs NM. Specific gravity of the sample was 1.26

IV. PROCEDURES TO PROTECT GROUND WATER QUALITY

For this submittal, procedures related to protecting ground water against contamination from sub-surface sources are not required.

A. During operation

Conduits. As noted previously, there are two abandoned wells within the area of review which penetrate the injection zone (Figure 1). Records of the New Mexico Oil Conservation Division indicate both wells are properly plugged. The records for these wells are provided in Appendix A.

Mechanical integrity testing. A pressure test (up to 2000 psi) was performed in September 1983, and revealed no evidence of tubing or casing leaks. An affidavit describing the test procedures and results has been submitted separately to EID. For comparison, actual injection occurs at 450 psi. As this discharge plan has a term of five years, the next pressure test will be scheduled in conjunction with the application for plan renewal.

Inflow/outflow measurements. Means and locations for measuring inflow to and outflow from the brine pit were identified in Section I.C, items 5 and 10. Between the two measuring points, water is lost by: a) retention in the brine cavity (removal of the salt creates storage space for injected water, in an amount of 1 barrel of space per 8 barrels injected); and b) evaporation from the pond.

Volume records. No detailed records have been kept which permit complete comparison of volumes of fresh water injected to the volume extracted. However, experience of the operator indicates that 7 barrels are extracted or each 8 barrels injected. The extra barrel remains in the cavity, in place of the extracted salt. If required, the applicant could maintain and submit periodic records which show the metered quantity of injection water and the metered quantity of sold water. However, this would not permit accurate comparison of volumes of fresh water injected to the volume extracted, because some of the losses described in the previous paragraph.

Sampling points for facility water. Grab samples of fresh water may be obtained at the point of sale or from the overflow pit (see Section I.C, items 3 and 4). Grab samples of brine may be obtained from the lined pit or the point of sale (see Section I.C., items 9 and 11).

Leak detection beneath pond. No leak detection devices have been installed beneath the pond. The discharger believes that special monitoring may not be appropriate because:

- the pit is lined by an essentially impermeable PVC material;
- no leakage has ever been observed from the pond (this conclusion is supported by the results of the OCD inspection, discussed previously);
- installation of leak-detection devices beneath the pond would require removal of the liner, which would risk damage to the liner integrity;
- there are no current uses of ground water in the vicinity (the water used at the station is imported from 12 miles away);

- any local aquifers are poor, both with respect to production capabilities and water quality;
- the small scale of the operation minimizes potential impacts; for example a leak of 20 percent of all produced water would be 840 gpd or 4.7 acre-feet in five years, an amount of water which might contaminate about 4 acres of aquifer (based on 40 foot thickness of brine plume and porosity of 13 percent).

However, the discharger understands that some type of leak detection system may be required as a condition of approval for this discharge plan. One alternative is to routinely perform a detailed mass balance in which leakage would be calculated as a residual, based on direct measurement of other factors. However, as leakage is likely to be among the smallest components of the balance, this method is not considered particularly accurate. A second method would involve installation of moisture-sensing devices at the pond margin. However, the relatively permeable nature of the vadose zone would promote vertical movement of leaked water; monitors at the pond margin would not detect leaks unless there is significant shallow lateral flow.

Consequently, if leak detection is required, the discharger would construct a monitoring well adjacent to the brine pond, located just south of the the mid-point of the west (down-gradient) side. If the State Engineer approves, a conventional water-supply well would be completed but without any associated water rights. Alternately, the well would be a 2-inch or 4-inch diameter monitoring well. In either case, the well would penetrate to the redbeds and would be perforated over the bottom 40 feet (if 40 feet of saturated thickness is found). Based on what is known about local hydrology,

any dense brine leaking from the pond would generally move downward to the top of the red beds and then westward toward the Lagunas. Pumping of the monitoring well would produce a drawdown cone which should intercept the brine plume. Thus periodic pumping of the well, at rates designed to produce flow from beneath the pond to the well, should ensure capture of at least a portion of the leaked brine.

If such a monitoring well is required, the discharger proposes to use specific conductance as the principal basis for defining water quality. Background values for conductance would be obtained by sampling accessible windmills within several miles of the site. The expectation is that values would be substantially less than 10,000 micromhos. The monitoring well will be pumped for several days upon completion and conductance values compiled; also, a water sample will be collected for detailed analysis.

Conductance values at the monitoring well are expected to be stable (or to decrease with pumping) and to resemble the background levels. If t7e pond has leaked as much as 500 gpd since construction, then there would be a brine plume of about one-half to one acre present in the bottom 40 feet of the aquifer. This plume is expected to be intercepted by the monitoring well and, even assuming 10:1 dilution (not likely given close proximity of the well to the potential brine source), the conductance would exceed 40,000 micromhos. A value of this order (or larger) would evidence pond leakage.

Based on the initial water quality a decision will be made with respect to the management of the produced water. If the water can be used for fresh water or for injection water, water rights will be obtained and the water applied to such beneficial use. In the alternative, if the water is of background quality it will be discharged to a new, unlined pit. If the water is sufficiently saline to indicate possible leakage problems, the contingency plan will be implemented (see subsequent discussion).

During the initial well pumping phase, data will be gathered to estimate well yield and specific capacity and aquifer transmissivity; storage coefficient will be estimated from the well log data. Simple Theis calculations will be made to calculate: a) the cone of influence of the well; b) the probable velocity of water which moves to the well from the zone immediately below the brine pond. For monitoring purposes, a pumping schedule will be developed which optimizes the potential for the interception of any plume which might exist beneath the pond.

If water movement is slow and the well influence local, then it will be appropriate to pump the monitoring well for relatively short periods on a relatively frequent basis; for example, pumping may occur for two days each month. This approach will allow the natural movement of the ground water to bring any leaked brine into the zone of influence of the well. If the data indicate a rapid capture of ground water, the well may be pumped for a longer period (e.g. two weeks) once or twice a year. For all pumping periods, the

well will be pumped until conductance values stablize or show a consistent trend of improving quality.

The results of the initial testing program will be provided to EID along with the specific proposed pumping schedule and the design basis for that schedule. If approved, the schedule will be implemented with data being provided to EID on a semi-annual basis.

Prevention of leaks and spills. The principal potential leakage point is the brine storage facility. Leaks from this facility are protected against by the presence of the PVC liner. To provide additional protection, the discharger proposes to reduce the freeboard of the brine by six inches to one foot.

Leaks from the brine pipeline are protected against by the fact that the pipe is PVC under relatively low pressure.

The principal potential spill site would be at the truck loading area, in the event of an overflow during loading. Such spills are generally small and have not produced any significant problems on the pavement or adjacent soil. (See OCD inspection report, cited previously.) A timed shut off switch exists and can be set such that it will shut off after delivering an average truckful of brine.

Assuming that shut off occurs within 1 minute of the start of the hypothetical spill, the total water loss would be very small (approximately 400 gallons). In the event that a significantly larger spill occurs, such that salt water is discharged over a soil area of at least 2000 square feet, evaporation of the water would be expected to produce a salt crust. If visual inspection of the site on a monthly basis ever results in identification of such a large crust, the discharger will implement the contingency plan discussed below.

Contingency plans. In the event that there is any evidence of a leak from the brine pond, the discharger will empty the pond by: a) pumping to the lined fresh water pond; or b) hauling to a non-leaking pond which has an approved discharge plan. The pond will be inspected and repaired. EID will be advised of each action and, in particular, restart of the operation will not occur until EID has been offered an opportunity to inspect the repaired facility.

In the event that there is any evidence of a potentially significant spill at the loading area (e.g. salt crust), the discharger would advise EID of the need for a field inspection. Based on the best available evidence, a determination would be made as to whether or not the spill is of such a magnitude as to represent a significant threat to ground-water quality and a program for additional monitoring or aquifer restoration would be developed. The most likely cleanup procedure would involve pumping of the monitoring well, if such is constructed.

If spills appear to be a recurring problem, containment berms may be constructed at the loading area. These berms would contain spills within the paved portion of the area so that all water would be consumed by evaporation, leaving a salt residual which could be removed and disposed of in the brine pit or other safe location. Alternatively, a sump would be constructed beneath the loading area and spills pumped to the brine pit.

Failure of the injection well (e.g. as evidenced by a loss of production) would lead to a shut-down of the well and well testing by procedures which include: pressure test; casing inspection log. The need for aquifer restoration would be evaluated in conjunction with EID and a plan for such restoration prepared. If contamination is in the alluvial aquifer, restoration would most likely involve removal of the affected water by the monitoring well. Decontamination of the Santa Rosa, if warrented, would most likely be accomplished by conversion of a nearby abandoned oil well to a pumping water well perforated in the affected horizon.

B. Post-operational commitments

Brine pit. No less than thirty days prior to an anticipated closure, the discharger will advise and confer with EID as to the currently accepted practices regarding appropriate measures. If required, the discharger will remove the pit liner and dispose of it in a manner acceptable to EID; remove any salt crusts and dispose of the salt material in a manner acceptable to

EID; and fill in the pit and otherwise restore the area to its original contours.

Brine well. The injection well will be abandoned as follows: 1) the cavity in the Salado salt will be filled with brine, injected down the well; 2) the tubing will be pulled; 3) a cement plug will be installed at the bottom of the casing; 4) a cement plug will be installed at the top of the casing; 5) the casing and its cement collar will be left in place.

Financial ability. Pursuant to Rule 101 of the New Mexico Oil Conservation Division, the discharger currently holds two plugging bonds with Hartford Insurance which collectively provide coverage of $75,000 for the plugging and abandonment of wells in New Mexico. The estimated cost of the brine well abandonment cited above is $2,000. Financial statements from the discharger can be provided if necessary to further demonstrate the ability to implement the operational and post-operational committments.

APPENDIX A

WELL RECORDS

Dec 1973 ROSWELL DISTRICT COPY Budget Bureau No. 42-R1424

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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 Form 9-331-C for such proposals.)

1. oil well ☒ gas well ☐ other

2. NAME OF OPERATOR
St. Clair ~~Energy~~ Corporation

3. ADDRESS OF OPERATOR
501 First Nat'l Bank Bldg., Midland, Tx 79701

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: Unit I, 1980' FSL & 660'
AT TOP PROD. INTERVAL: FEL Sec. 25, T-19-S,
AT TOTAL DEPTH: R-34-E

5. LEASE
29-000086

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Superior Federal

9. WELL NO.
8-I

10. FIELD OR WILDCAT NAME
Pearl Seven Rivers

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 25, T-19-S, R-34-E

12. COUNTY OR PARISH
Lea

13. STATE
New Mexico

14. API NO.

15. ELEVATIONS (SHOW DF, KDB, AND WD)
3762 KDB

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:		SUBSEQUENT REPORT OF:
TEST WATER SHUT-OFF	☐	☐
FRACTURE TREAT	☐	☐
SHOOT OR ACIDIZE	☐	☐
REPAIR WELL	☐	☐
PULL OR ALTER CASING	☐	☐
MULTIPLE COMPLETE	☐	☐
CHANGE ZONES	☐	☐
ABANDON*	☐	☒
(other)		

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

TD 5150 PBTD 4218

1) Set 25 Sx Bottom plug over perf 3967-4075'
2) Set 25 Sx plug @ 2100' in 5½ casing. Base salt.
3) Shot 5½ casing @ 1750' & pulled out.
4) Set 35 Sx plug @ 1750' - Top salt.
5) Tag plug @ 1600'
6) Set 40 Sx plug @ 267' Bottom of 8 5/8" surface casing
7) Set 10 Sx plug @ surface 5-6-83
8) Weld cap on casing
9) Place well marker
10) Well site ready for final inspection

Cement applied by pump.
Well filled with mud-laden fluid by pump.

BUREAU OF LAND MANAGEMENT RECEIVED JUL 22 1983 DIST. 6 N. M. ROSWELL, NEW MEXICO

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify ~~that~~ the foregoing is true and correct

SIGNED George Van Hoose TITLE Agent DATE July 21, 1983

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Form C-103
(Revised 3-55)

NEW MEXICO OIL CONSERVATION COMMISSION
MISCELLANEOUS REPORTS ON WELLS
(Submit to appropriate District Office as per Commission Rule 1106)

HOBBS OFFICE OCC
1959 OCT 21 AM 1:07

COMPANY Cactus Drilling Company, Box 1826, Hobbs, N.M.
(Address)

LEASE Gulf-State "B" WELL NO. 1 UNIT M S 30 T 19 R 35

DATE WORK PERFORMED August 21, 1959 POOL Undesignated

This is a Report of: (Check appropriate block)

- [ ] Beginning Drilling Operations
- [x] Plugging
- [ ] Results of Test of Casing Shut-off
- [ ] Remedial Work
- [ ] Other

Detailed account of work done, nature and quantity of materials used and results obtained.

This well was plugged and abandoned in the following manner:

1. Set 10 sacks cement at T.D.
2. Filled hole with cement to bottom of casing at 4833'.
3. Cut 7" at 3421' and set 10 sacks at stub.
4. Set 10 sacks at 5350' (base of salt).
5. Set 15 sacks at 1900' (top of salt).
6. Set 10 sacks at top of 13 3/8" casing.
7. Welded standard dry hole marker to outside of 13 3/8" casing.
8. Cleaned up location.

Location is ready for inspection.

FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY

Original Well Data:

DF Elev. _____ TD _____ PBD _____ Prod. Int. _____ Compl Date _____

Tbng. Dia _____ Tbng Depth _____ Oil String Dia _____ Oil String Depth _____

Perf Interval (s) _____

Open Hole Interval _____ Producing Formation (s) _____

RESULTS OF WORKOVER:	BEFORE	AFTER
Date of Test		
Oil Production, bbls. per day		
Gas Production, Mcf per day		
Water Production, bbls. per day		
Gas-Oil Ratio, cu. ft. per bbl.		
Gas Well Potential, Mcf per day		

Witnessed by _____ _____ (Company)

OIL CONSERVATION COMMISSION

Name _____

Title Geologist

Date OCT 21 1959

I hereby certify that the information given above is true and complete to the best of my knowledge.

Name Lee Baker

Position Vice-President

Company Cactus Drilling Company

HEALTH ENVIRONMENT department

STATE OF NEW MEXICO
ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 984-0020
STEVEN ASHER, Director

TONEY ANAYA
GOVERNOR

Joseph Goldberg
SECRETARY
Ted Guambana
DEPUTY SECRETARY

JOSEPH F. JOHNSON
DEPUTY SECRETARY

July 20, 1984

John Guinn, Manager
EID District IV
200 East Fifth St.
Roswell, NM 88201

Dear Mr. Guinn:

Enclosed please find some materials which should fill in the background for you on the C.W. Trainer Marathon Road Water Station and the process of bringing it into compliance with the Water Quality Control Commission Regulations. If you have any further questions, please give me a call.

Sincerely,

Paige Grant
Water Resource Specialist
Ground Water Section

PG:egr

Enclosures

mgz

HEALTH ENVIRONMENT department

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JOSEPH F. JOHNSON
DEPUTY SECRETARY

July 13, 1984

Dr. Lee Wilson
Lee Wilson and Associates
P.O. Box 931
Santa Fe, NM 87501

Dear Lee:

Thank you for your submittal on May 31st on behalf of Mr. C.W. Trainer, of the first portion of the discharge plan required for the Marathon Road Water Station, as stipulated in Mr. Trainer's Assurance of Discontinuance. I have the following comments and questions on the material you submitted. You may respond to these remarks at the time that you send in the next portion of Mr. Trainer's discharge plan.

1. Section II.A., under "Pit":

   On a visit to the Marathon Road Water Station on Monday, May 14th, I noted signs that the brine in the pit had occasionally washed very near the top. One foot may not be sufficient freeboard; I would suggest increasing it by six inches to a foot. (No spillage was noted on the May visit as a result of the shallow freeboard.) Is there really nothing in Mr. Trainer's files regarding manufacturer's specifications for the PVC liner in the pit? I am concerned as to whether the material is resistant to ultraviolet radiation and to temperature extremes.

2. Section IV.A., under "Leak detection beneath pond":

   Although the pond has not been observed to leak, and aquifers at the site are believed to be poor in terms of production and water quality, and there are no wells in the vicinity of the Marathon Road Water Station, Mr. Trainer will be required to have some means other than visual observation to confirm that the pond is sound. The reasons are as follows:

   (a) The Water Quality Control Commission regulations are designed to protect ground water for present and foreseeable future use. It is for this reason that ground water containing dissolved solids of up to 10,000 mg/l is protected: we can foresee a future in which ground water presently viewed as undrinkable will be tapped and deionized for use, when other ground water reserves have dwindled or disappeared.

   (b) Leak detection by visual observation or volume comparison is full of uncertainties. A three-inch vertical drop in the brine level in the pond corresponds to a loss of some 650 gallons. Given the fluctuation in the pond level due to sales and added storage, evaporation, and even the creation of

wavelets by wind action obscuring a steady decline, I strongly suspect that a change of three inches or less in pond level would not be detected by visual observation. And a steady leak of 650 gallons could have a highly significant effect on local aquifers.

(c) It is necessary to have a leak detection system that is verifiable by the regulatory agency. It is impractical for EID and no doubt disadvantageous to Mr. Trainer to shut down all additions and sales of brine from his pond for, say, three days to allow an EID inspector to read the level of brine in the pond at the beginning and end of the 72-hour period; and there would remain the issue of how much of any fluid level decline to explain as lost to evaporation.

My recommendation is that you explore techniques of indirect measurement of soil moisture and propose a monitoring system for leaks at the brine pond. I believe that measurement of conductance or resistivity of the soil beneath the pond may prove the most reliable and inexpensive way to monitor for increased soil moisture as a result of a leak - particularly since the leak would be of brine, which would cause a strong increase in conductance. At a minimum, the monitoring scheme should allow for placement of the measurement devices approximately three feet below the bottom of the pond, and approximately even with the bottom of the pond. There should be at least one measurement device on each side of the pond, and in close proximity to it.

Any leak detected by these monitoring devices would be deemed to be significant. If a leak were to be detected, the EID must be notified within 48 hours, the pond evacuated within a period of time to be specified by EID, and the pond relined with material of known specifications, or some other storage facility developed in agreement with EID.

3. Under "Prevention of leaks and spills": I agree that there was no evidence of a spill of any magnitude at the Marathon Road Water Station as of May 14th of this year. However, numerous spills have taken place at other brine facilities in the Hobbs area as a result of inattention by the truck drivers while loading brine. It is strongly recommended that Mr. Trainer install a timed shut-off switch on the pump that delivers brine to the loading area, such that the pump will cut off after delivering an average tankful of brine. The pump could then be reactivated to top off a large truck, if necessary; but chances of a sustained overflow would be much reduced.

If spills appear to be a recurring problem, a sump beneath the loading area, which could be pumped out to the brine pond or other EID-approved collection site, would be preferable to containment berms. Berms would have the effect of ponding the brine to increase the head and create saturated conditions, making it more likely for the brine to percolate to ground water.

4. Under "Contingency plans": the intention of this section is to plan a cleanup response once a spill or leak of significant proportions is known to have occurred. You have proposed a monitoring scheme to investigate the scope of the problem. This may be a necessary component of cleanup, but at any rate the first step would be to stop the leak at its source, e.g. empty the brine pond. If the monitoring system that I have asked you to propose is sensitive enough, the speedy removal of the source of the leak, and repair of the facility, should be all that's required by way of a contingency plan. If, however, Mr. Trainer were to rely on visual observation to recognize a leak, and continued discharging by way of the leak for several months while making volume comparisions to ascertain whether his visual observation was correct, the likelihood of contamination of underlying aquifers would be very great. In the absence of background information on the chemistry of aquifers underlying the Marathon Road Water Station, we would require that the aquifer likely to have been affected beneath the brine pond be restored to ground water standards (ref. NM Water Quality Control Commission regulations Sections 3-103 and 1-101.UU). If you believe that background chemistry of the ground water is in excess of standards, you must provide us with evidence to that effect by drilling an observation well into the first aquifer at the site and sampling for those constituents named in the ground water standards.

   The contingency plan should also cover cleanup of a major spill at the loading area. However, if Mr. Trainer plans to install a timed shut-off swich at the pump, I would anticipate very little opportunity for a major spill at that point. Should such an event occur, the EID must be notified within 48 hours, and we can confer at that time as to the appropriate response.

Again, thank you for your timely submittal of the material required under the first phase of Mr. Trainer's discharge plan. If you or Mr. Trainer have any questions regarding the above remarks, please give me a call.

Sincerely,

Paige Grant

Paige Grant
Hydrologist
Ground Water Section

PG:cm

cc: CW Trainer
Douglas Perrin
EID District IV Manager, John Guinn

MSR

DRAFT

SUGGESTED OUTLINE FOR DISCHARGE PLAN **SUBMITTAL:**

Brine Extraction Facilities

I. GENERAL DESCRIPTION

✓ A. Name of facility **and name and address of responsible party**

✓ B. Location: county, township, range **and ¼¼ Section** or **latitude/longitude coordinates (3-106.C.2)**
-indicate on USGS topo map, 7½' or 15' quad

✓ C. Schematic of facility
-include short verbal description of process, including transportation elements (e.g., loading trucks)

✓ D. **Operational** history of **injection and production at** facility **(5-203.C.4)**
-include dates of well construction and beginning of injection

II. DESCRIPTION OF FACILITY

A. Surface Facilities

✓ 1. Dimension of pond(s)/tank(s)
-include side slope angle for ponds

✓ 2. Length and type of pipe(s) carrying brine **from well to pond(s)/tank(s)**

✓ 3. Average daily discharge and withdrawal from pond/tank **(3-106.C.1)**

✓ 4. Type of pond liner, if any
-include ~~manufacturer's specs,~~ technique used to seal seams

unknown

B. Underground Facilities

unavailable; Could ask if C.W. retains anything in his files on this

✓ 1. Depth, diameter, **production and protection** casing and tubing specs of well(s)
-include schematic drawings **(5-210.B.13; 5-205.A.3.d.)**

✓ 2. Construction procedures, including cementing and casing program, logging procedures, deviation checks **(5-205.A.4.a)**, and a drilling, testing and coring program **(5-210.B.14; 5-204.B.2.b; 5-205.A.3.d,e)**. Include logs and results of tests for all new and worked-over wells **(5-205.A.4)**.

NA 3. Stimulation program **(5-210.B.11)**. Note: **5-206** limitations.

4. Maximum and average ✓ injection pressures, injection volume, and other injection procedures **(5-210.B.12; 5-203.B.1; 5-205.A.3.b,f)**.

tested to 2000psi

skip max op. pres.

If one well is to be used for injection and extraction, is brine to be pumped up annulus or central tubing? Give rationale **for method used (5-210.B.12).**

NA 5. Notification prior to drilling, casing etc. **(5-205.A.5).**

III. SITE CHARACTERISTICS

NA A. Soils **(This section need only be submitted if unlined surface impoundments are proposed or in use. Additional ground water monitoring may be required for facilities using unlined surface impoundments. If impoundments do not adequately protect ground water, they will not be approved for use.)**

1. Texture class

2. **Soil Conservation Service** (SCS) assessment of capability/limitations

3. Percolation test

B. Geology **(5-203.C.3)**

1. Stratigraphic section (drilling log) of **well(s) on** the site, indicating depth, thickness and chemical characteristics of water-bearing strata and lithology **3-106.C.3,6; 5-205.A.3.j)**, and stressing permeability of the strata immediately above and below the salt beds. Also give the lithology, stratigraphy, and fracture pressure of salt beds and confining zones **(5-205.A.3.i).**

2. Maps and cross-sections detailing the geology and geologic structures of the local area, including faults (known or suspected) **(5-210.B.6 & 7).** Are the faults **known** conduits or barriers to ground water flow?

C. Hydrology **(5-203.C.3)**

1. Maps and cross-sections indicating the general vertical and lateral limits of all ground water having 10,000 mg/l or less TDS within one mile of the site, the position of such ground water within this area relative to the injection formation, and the direction of water movement, where known, in each zone of ground water which may be affected by the proposed injection operation **(5-210.B.5).**

2. A map showing the **brine well(s)** which are to be constructed and the number, name, and location of all producing wells, injection wells, abandoned wells, dry holes, surface bodies of water, springs, mines, quarries, residences and roads, and any other pertinent surface features that are within **a quarter-mile radius**

of the brine well or well field (5-202.B.3; 5-210.B.2.)

3. Flooding potential of the site **(3-106.C.4).**

4. Depth to and quality of ground water most likely to be affected by spills/leaks **(3-106.C.3).** Analysis should include **sodium (Na^+), potassium (K^+), calcium (Ca^{++}), magnesium (Mg^{++}), bicarbonate (HCO_3^-), carbonate ($CO_3^=$), chloride (Cl^-), sulfate ($SO_4^=$), and nitrate (NO_3^-).**

need this time? no

5. Analysis **or description** of water used for injection (if different from III.C.4, above) **(3-106.C.1; 5-203.C.1).** Include density, corrosiveness and temperature **(5-205.A.3.g),** as well as above constituents. Analyses to be submitted at least quarterly **(5-207.C.1), unless the source is such that a change in makeup is very unlikely (e.g. a city water system).**

6. Chemical analysis of brine (if facility is presently in operation) **(3-106.C.1,3).** Analysis should include those constituents indicated in III.C.4. Once in operation, reports to be submitted quarterly **(5-207.C.1), ~~unless~~ there is no change in the analysis** substantial after three reports,

IV. PROCEDURES TO PROTECT GROUND WATER QUALITY

A. During Operation

1. Identify those abandoned wells/shafts or other conduits in the area of review which penetrate the injection zone and which, through being improperly sealed, completed or abandoned, provide a pathway for migration of contaminants. Detail what corrective action (e.g. plugging open holes) will be taken to prevent any movement of contaminants into ground water of less than/equal to 10,000 mg/l TDS through such conduits due to the proposed injection activity **(5-203.A, B.1).** Include completion and plugging records of **such wells/shafts (5-203.C.5.).**

2. In the event that operations have begun before information comes to light regarding such a conduit that will require plugging, injection pressure will be **required to be** limited to avoid movement of contaminants through such a conduit into protected ground water **(5-203.B.2).**

3. Mechanical integrity testing, such as:

   a. pressure test prior to start of operation **(5-204.B.1.a).**

   b. monitoring of annulus pressure **(5-204.B.1.b; 5-204.C.)**

4. Means and locations for measuring inflow to and outflow from the pond/tank (locations may be indicated on the schematic required under I.C) **(3-106.C.2, 5).**

5. Compare volumes of fresh water injected to volume of brine extracted to detect underground losses **(3-107.A.1).** May be done by recording injection pressure and either flow rate or volume every two weeks, or by metering and daily recording of fluid volumes **(5-207.C.2).**

6. Location and design of site(s) and method(s) for sampling for quality of fresh water and brine at facility **(3-106.C.5).**

7. Leak detection system under pond: drains, lysimeters, other? **(3-107.A.1,3,9).**

8. Monitoring **to detect any** deterioration of ground water quality in area-do you have access to water well(s) within _____ (distance) down-gradient from the facility, in order to do quality analyses? If not, may need to put in observation wells **(3-107.A.2,9; 5-205.C);** and make periodic quality reports **(5-207.C.2.b,c). Also, identify wells in the area for which the potential contamination from your brine operation is very low, which can serve to indicate "background" levels of water quality parameters in the area.**

9. How will spillage/leakage be prevented during truck loading or at transfer points within the facility?

10. Contingency plans in the event of:

    a. leak/spill from surface facilities;

    b. loss of mechanical integrity of injection well. How will ground water be protected from contamination or treated if contamination has occurred?

B. Post-operational **commitments required prior to plan approval**

1. Plugging and abandonment

    a. Plug and cap wells. Procedure must conform to that specified in 5-209, **and be approved in advance.**

    b. Demonstrate financial ability **(5-210.B.17)** to:

        i. plug well and prepare for proper abandonment;

        ii. restore protected ground water if contaminated by your brine extraction activities.

2. **Pond closure**

   a. Remove liner, if any, from pit **(3-107.A)**

   b. Remove salt crust from unlined pit and surrounding area **(3-107.A.4, 11)**

   c. Restore area to original contours

V. SIGN-OFF REQUIREMENT

Responsible official must certify as follows:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibilitv of fine and imprisonment. (5-101.H.2).

PG:egr

SUBMITTALS REQUIRED BY

ASSURANCE OF DISCONTINUANCE

C. W. TRAINER

MARATHON ROAD WATER STATION

RECEIVED

MAY 31 1984

GROUND WATER/HAZARDOUS WASTE
BUREAU

MAY 31, 1984

(hand-delivered)

PREPARED BY

LEE WILSON & ASSOCIATES, INC.

PREFACE

In accordance with the terms of an Assurance of Discontinuance approved by the New Mexico Water Control Commission on April 10, 1984, Mr. C.W. Trainer must provide a series of submittals to the New Mexico Environmental Improvement Divsion (EID). The first such submittals are due on or before May 31, 1984 and must include:

A. plans and specifications of the in-situ extraction well;

B. a proposal outlining measures to be taken to correct any possible violation of the Water Quality Control Commission Regulations resulting from surface activities.

The specific information requirements associated with these two submittals were identified through conversations between a consultant to C.W. Trainer, Dr. Lee Wilson, and a staff member of EID, Ms. Paige Grant. This document provides the appropriate information, organized in such a way that the information can readily be incorporated into the final Discharge Plan which must be submitted on or before March 1, 1985.

CONTENTS

I. GENERAL DESCRIPTION

A. Names and addresses

The name of the facility is Marathon Road Water Station.

The name and address of the responsible party is:

C.W. Trainer
Route 3, Box 607
Marble Falls, Texas 78654

Mr. Trainer's telephone number is: (512) 598-6659.

B. Location

The Marathon Road Water Station is located in Section 25, Township 19S, Range 34E, Lea County New Mexico. Figure 1 of these submittals reproduces the USGS topographic maps of the area (Laguna Gatuna and Monument 15 minute quadrangles) and shows the location of the facilities. [An enlarged version of this base map is available upon request; in the final discharge plan, the enlarged map will be used to show well locations near the water station.]

As indicated on the map:

the water-station tanks and lined pits are located in the southeast quarter of the southeast quarter of the southwest quarter of Section 25; this is location 19.34.25.344 using the well-location system developed by the New Mexico State Engineer;

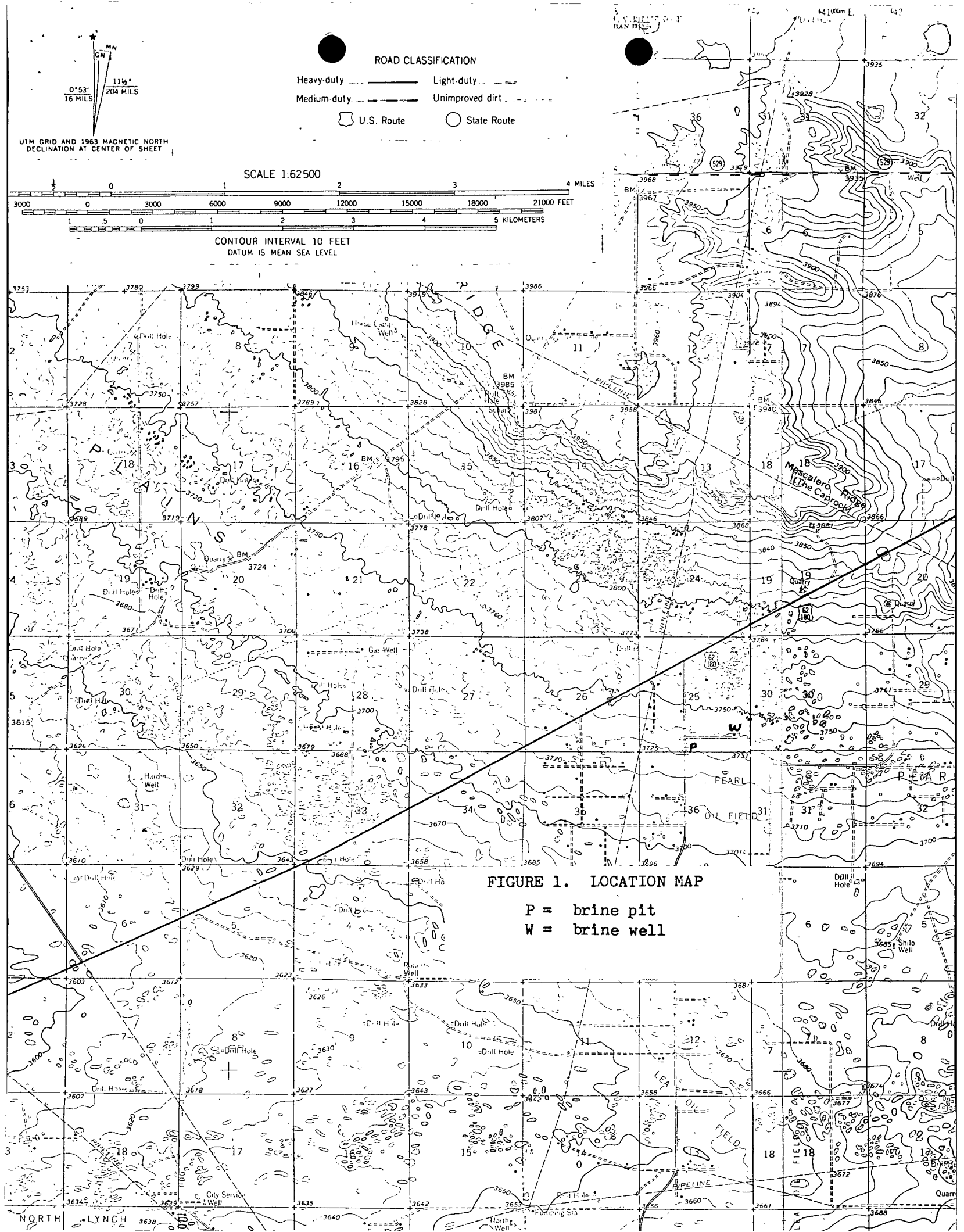

FIGURE 1. LOCATION MAP

P = brine pit

W = brine well

the in-situ brine extraction well is located in the southeast quarter of the northwest quarter of the southeast quarter of the southeast quarter of Section 25 (well location 19.34.25.4414).

C. Schematic of facility

Figure 2 is a map showing the layout of all facilities at the Marathon Road Water Station. Numbers 1 through 11 on the map refer to different facilities. The following verbal description identifies each numbered facility shown in the figure and identifies all current means and locations for measuring water flows which are related to brine activity.

1. Fresh water is delivered on demand (at rates up to 7000 barrels per day) via a fresh-water pipeline from source wells 12 miles northeast in Section 3, Township 19S, Range 36E.

2. Fresh water is stored in three interconnected (equalized) steel storage tanks, each with 500 barrels of storage capacity.

3. Fresh water is sold directly from the tanks; fresh-water flows are metered at the sale point.

4. Fresh water overflows are discharged to a lined pit. Capacity exists to pump from the pit back to the tanks.

5. On demand, fresh water is pumped from the fresh-water tanks to the brine well via a 50 HP turbine located just north of the tanks. Fresh-water flows are metered at this pump. When injection occurs, the pumping rate is 100 barrels per hour; pressure is 450 psi.

6. The pumped fresh water is conveyed to the brine well through a buried pipeline (2 and 7/8 inch steel) approximately 2600 feet long.

7. Fresh water is injected down the casing of the brine well. It enters the Permian Salado salt beds at a depth of about 1911 feet. Salt is dissolved out by the water and the resulting brine is extracted by a tubing set at a depth of about 2400 feet. (Construction details of the brine well are provided subsequently; see discussion of Figure 3.) Circulation is reversed periodically (once each one to three months) for a few hours, to remove any salt which has accumulated in the tubing.

C. W. TRAINER
Marathon Road Water Station and Brine Well

TOWNSHIP 19 S RANGE 34 E COUNTY Lea STATE New Mexico

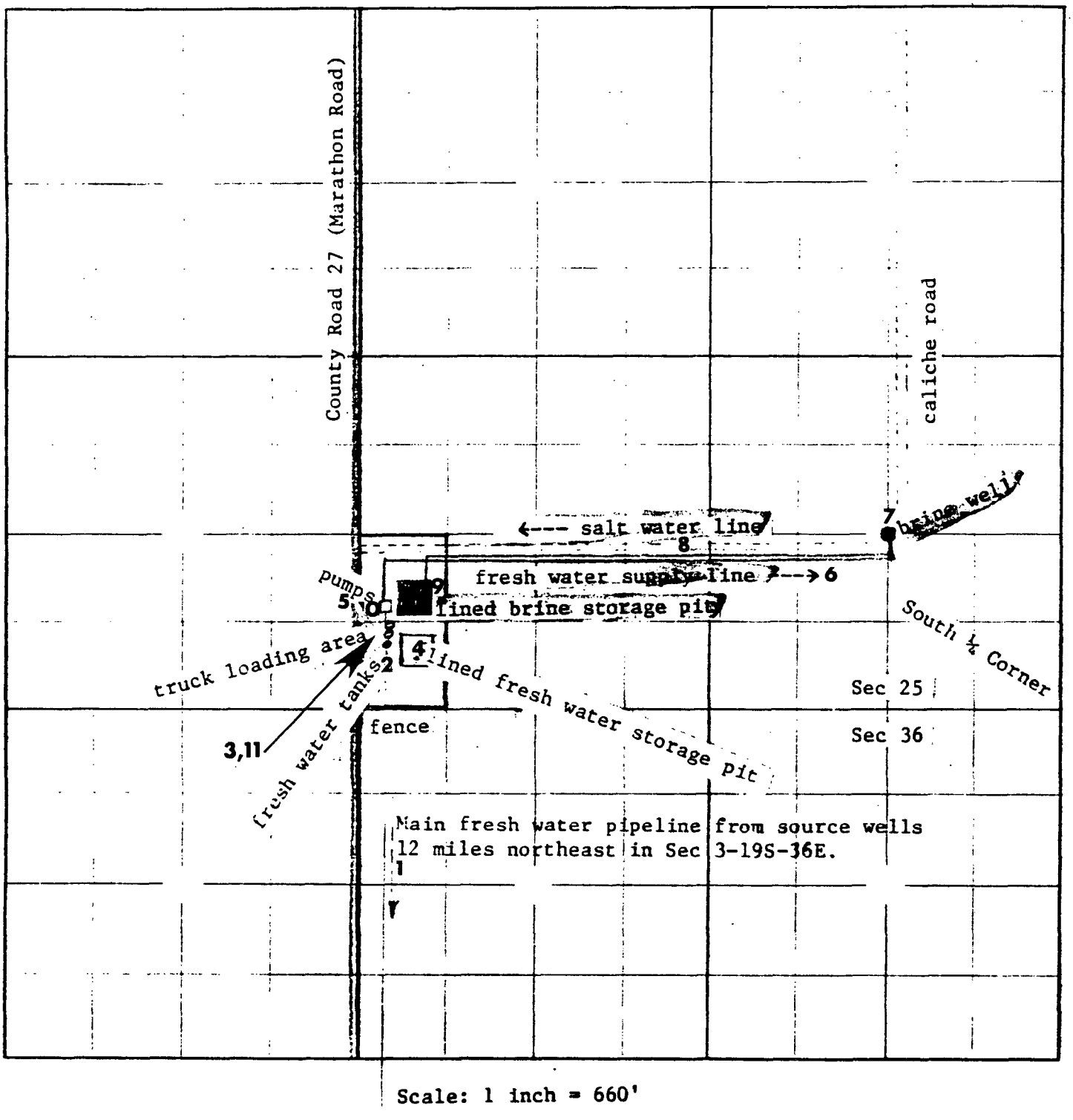

FIGURE 2. Facility layout.
See text for expanded description of each numbered facility.

8. Brine (or blowdown water) is conveyed from the well through a buried pipeline (4 inch PVC) approximately 2250 feet long.

9. Brine is stored in a lined pit, described in Section II.C.

10. Brine is pumped from the pit by a 40-HP centrifugal pump. Brine flows are metered at this pump.

11. Brine is transferred to the loading area through an 8 and 5/8 inch steel pipe. The pipe is buried for a total distance of approximately 200 feet. It surfaces at two truck-loading areas, each with two 3-inch valves, plus three feet of rubber hose. At each site, the valves are at a height of approximately 3 feet and 16 feet above ground, allowing for side-loading or top-loading of tank trucks.

II. DESCRIPTION OF FACILITY

A. Surface facilities

The following descriptions are limited to facilities associated with surface management of produced brines.

Pipeline. All pipes used to transport brine are described in Section II.C; see items 8 and 11.

Pit. The lined pond or pit used for brine storage is approximately 140 by 140 feet and 10 feet deep. Under normal operating procedures, with 1 foot of freeboard, the pit stores 25,700 barrels (1,079,400 gallons). The side slope of the lined brine pit is about 1:1.

The pit liner is 150 by 150 feet of PVC, 39 mils thick with nylon reinforcing strings on small mesh. It was installed in 3 pieces which were glued together. No additional information on the liner is available.

Both the fresh-water and brine-water holding ponds were inspected by the New Mexico Oil Conservation Division (OCD) on March 28, 1983. The pits were observed to be in good shape and lined. No spills or other contaminants were observed. A record of this inspection is in EID files. In general, documents

already on file at EID have not been incorporated into this submittal; however, if requested, the submittal will be revised to include as an attachment all such documents.

Average daily discharge/withdrawal. Records are kept regarding total brine sales, which are in close agreement with the metered discharge of water from the lined pit. Withdrawals do not occur on a daily basis. Over the past 17 months, the total brine sale has averaged 2938 barrels per month or approximately 100 barrels per day. Total production is estimated to be about 25 barrels per day more; the additional production has been discharged by evaporation or added to pit storage. The volume of brine sales is low and results in a marginal economic operation; major modifications to the facility are not feasible at this time.

B. Underground facilities

Original well. The brine well was developed by re-entry of Cabot Corporation Federal #1, an oil well which was originally drilled in 1958 and which was plugged and abandoned in March, 1961. OCD files indicate the following with respect to the original well (copies of OCD file documents will be submitted upon request):

- original depth was approximately 4100 feet;

- sands and shales were reported from 0 to 1800 feet; anhydrite was reported at 1800 to 1930 feet; salt and red beds were reported from 1930 to 3318 feet; and various sands, dolomites and annydrites were found at further depths;
- no water sands were identified during the original drilling;
- the surface casing of 8-5/8" steel was set to a depth of 328 feet and cemented to the surface with 225 sacks;
- during abandonment, the production casing of 5-1/2" was cut and removed above the depth of 3382 feet;
- cement plugs were installed at five depths: at tne top of the surface casing; the bottom of the surface casing; 1900 to 1960 feet (anhydrite-salt boundary); 3350 to 3362 feet (top of remant casing); and 3940 to 4100 feet (top of uppermost oil-bearing zone).

Construction specifications for brine well. Figure 3 illustrates tne construction of the brine well. Information on this subject, including a copy of the daily drilling report, has previously been submitted to the EID. Information on the drilling history for the brine well is provided in tne next subsection.

The following features of the well construction are of special importance with respect to the protection of good-quality ground water.

- The surface casing is from the original well; thus it is 8-5/8 inch diameter J-55 steel, with a weight of 24 pounds/foot, set to a depth of 328 ft. Based on the original records filed with OCD, the casing is cemented to the surface.
- A new production casing was installed to a depth of 1911 feet. Tnis casing is 5-1/2 inch diameter J-55 steel, 14# to 15# per foot. The casing was cemented to the surface using 1050 sacks of Class "C" cement. Note that like other depths reported on OCD forms, the casing deptn given here is measured from a point on the drilling rig (the Kelly). Actual depth of casing below ground surface is approximately 1902 feet.

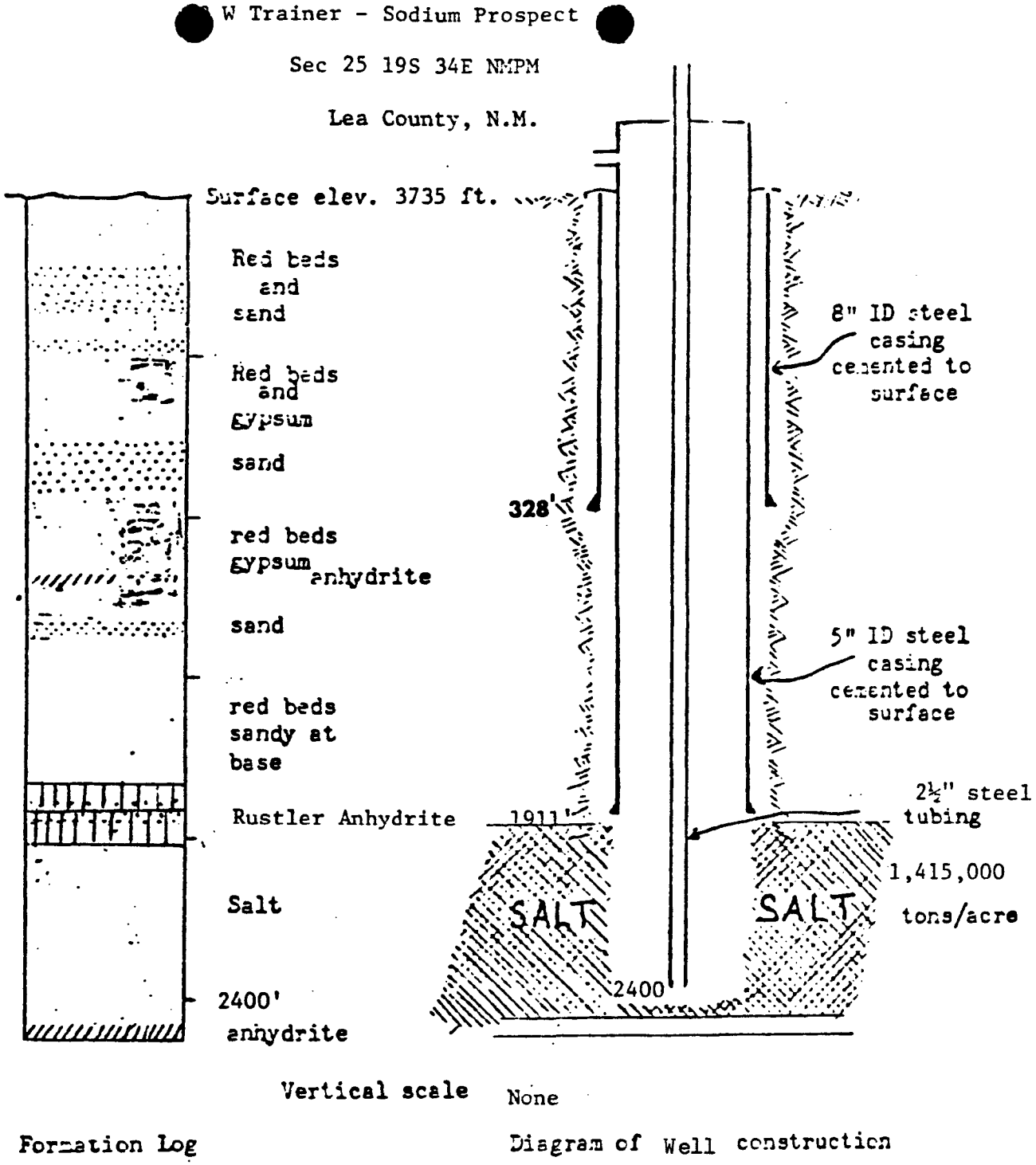

FIGURE 3. Well completion data (right diagram). See text for details. Formation log (left) is generalized from available records.

- A 2-7/8 inch steel tubing, 6.5#/foot, is set to a depth of about 2400 feet. All corrosive waters produced by the well are withdrawn through the tubing (except for minor amounts of blowdown waters).

Drilling/development of brine well. The abandoned well was reentered and converted to a brine well in July and August, 1981. No plug was found at the bottom of the surface casing. After new casing was set to a depth of about 1902 feet (see above), the plug at 1900-1960 feet was drilled out and water came into the well. As water was not observed during drilling above 1900 feet, but only appeared after removal of the plug, it is evident that this water originated at a depth of below 1900 feet.

The water flow was shut off by setting a new plug at about 3114 feet. This confirms the deep origin of the flow. The daily drilling report indicates minor lost circulation problems, which is not surprising considering that the plug was set in salt beds and pumping of water would dissolve out the salt material.

Well log. Gamma ray and neutron logs for the original oil well have been provided to EID. No record remains of any additional logs obtained for the original well. No logs were developed as part of the 1981 reentry and conversion. A schematic interpretation of the log data, above 2400 feet depth, is included in Figure 3.

Pressure test. A pressure test (up to 2000 psi) was performed in September 1983, and revealed no evidence of tubing or casing leaks. An affidavit describing the test procedures and results has been submitted separately to EID.

Conclusion. The following facts support a conclusion that the brine well will not cause any potential contamination of fresh ground water:

- a surface casing, cemented to the surface, provides a barrier to brine leakage to a depth of 328 feet;
- a protection casing, cemented to the surface, provides a barrier to brine leakage to a depth of 1911 feet;
- except for infrequent and minor blowdowns, all brine is produced through a plastic-coated tubing and only fresh water is circulated in the annulus between the tubing and the protection casing;
- the integrity of the tubing and protection casing has been demonstrated by pressure testing within the last year;
- problems of lost circulation and water entry to the well, observed during well development, are clearly related to conditions at a depth below the protection casing, and probably originate at a depth below 3100 feet;
- the water entry problem was controlled by setting a plug at about 3114 feet.

III. SITE CHARACTERISTICS

For this submittal, details on site soils, geology and ground-water hydrology are not required.

A. Flooding potential

The risk of flood damage to the facility is remote because:

- the topographic map of the area (Figure 1) shows no significant water courses in or near the facility, indicating that any flooding would occur as the result of shallow sheet flow;
- the map further shows that the distance to the upslope drainage divide is no more than two miles, so that the drainage area which could contribute sheet flow is quite small;
- surface soils have a dominantly sandy texture (see discussion of geology, below), so that during a storm event, most precipitation would infiltrate rather than contribute to sheet flow.

B. Depth to and quality of affected ground water.

Data source. For this submittal, all information on potentially affected ground water has been obtained from "Geology and ground-water conditions in southern Lea County, New Mexico", a 1961 report by Alexander Nicholson Jr. and Alfred Clebsch, Jr., both of the U.S. Geological Survey; the study was published as Ground-water Report 6, New Mexico Bureau of Mines and Mineral Resources, Socorro NM.

Figure 4 is a portion of Plate 2 in Report 6, "Ground-water map of southern Lea County, N.Mex." The content of Figure 4 has been checked against other sources, included unpublished ground-water maps and well records on file with the New Mexico State Engineer; the figure appears to accurately represent conditions in the area. The following discussion is based on the text of Ground Water Report 6, on data tabulated in that report, on Plate 1 of the report (geologic map) and on Plate 2 (Figure 4 in this submittal).

Geologic setting. Report 6 describes the area around the Maratnon Road Water Station as part of a vast sand dune country located in the Laguna Valley. Drainage features are absent except near playa lakes which lie several miles west of the brine facilities. Typically, sand dune material is found at the ground surface, and to depths of up to 20 feet. In some locations the sand is underlain by several tens of feet of Quaternary stream and lake deposits. In all cases, the sands and/or alluvium lie atop an erosion surface developed on the top of redbeds of the Triassic Dockum Group; the Dockum includes the Chinle and Santa Rosa Formations. A number of formations occur at greater depths, but generally are not considered significant as water-supply sources.

Aquifers. The prime aquifer in southern Lea County - which is a combination of the Ogallala Formation and Quaternary alluvium - lies to the northwest of the Marathon Road Water Station. (The southwestern limit of the aquifer is shown by the heavy dashed line on Figure 4.) In the vicinity of

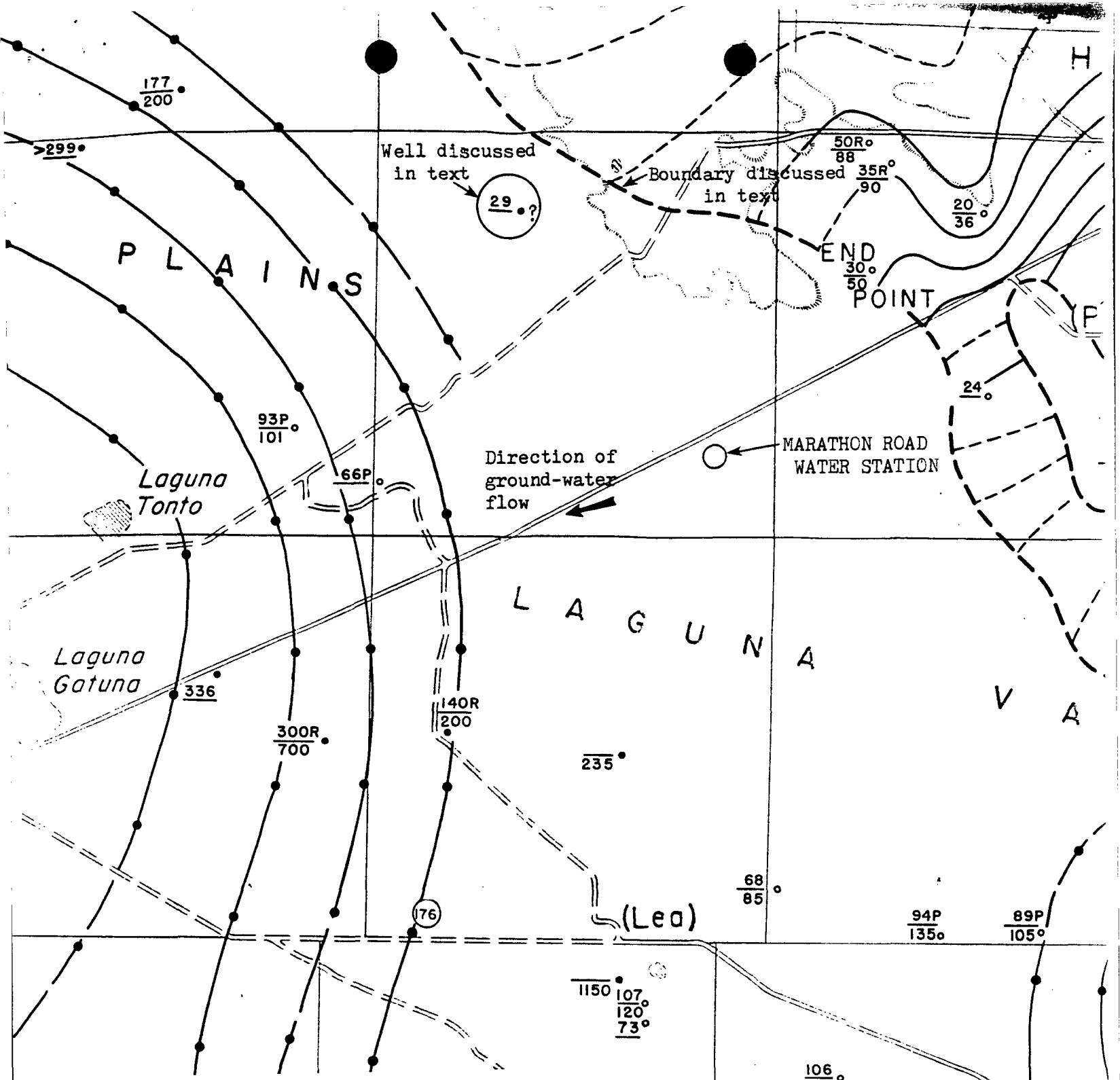

FIGURE 4. Ground-water map.
See text for source.

Water-table or piezometric contour on water body in Triassic aquifers

• Well locations

∘ Data not utilized in this report

the station, ground water may occur in minor amounts in the discontinuous aquifers of the Quaternary alluvium, but in the main is found in the Santa Rosa formation. The Santa Rosa produces from several intervals, but at best is a poor aquifer with typical specific capacities being less than 0.2 gpm/ft. The report provides no significant additional data on this aquifer.

Flow system. The ground water flow system in the area of the Marathon Road Water Station is described on page 57 of Report 6. Recharge from the discontinuous alluvial aquifers and from the Ogallala Formation to the northwest moves west and southwest through the Santa Rosa, toward the Lagunas where it discharges downward into older Permian Rocks.

A simple calculation can be made based on the available data. Based on the low specific capacity, the hydraulic conductivity of the local aquifer is less than 1 foot per day. Based on Figure 4, the hydraulic gradient is on the order of 100 feet per mile. Based on Report 6, the porosity of the aquifer is about 0.13; normally effective porosity is about half total porosity. Ground-water velocity equals hydraulic conductivity times hydraulic gradient divided by effective porosity. For this situation, the velocity of ground water flow is on the order of 100 feet per year. This should be a good first approximation of the flow rate for any brines, should contamination occur.

Occurrence of and depth to ground water. As shown on Figure 4, there are no data indicating the configuration of the water table in the area of the

water station; indeed, there are no data to indicate that saturated conditions exist beneath the site. No windmills or other wells are located downgradient of the water station for a distance of at least four miles. Nonetheless, the red beds are known to occur at depths of 40 feet (Report 6, Plate 1) to 150 feet (drilling record of brine well) beneath the site. Presumably, some ground water occurs in the Santa Rosa Formation at or below this depth. Minor amounts of ground water may occur in the overlying alluvium, but a vadose zone of at least 10 or 20 feet can be expected to occur beneath the site.

Page 92 of Report 6 contains a water-quality analysis for a well located about 5 miles northwest of the water station; the well record is given on Page 74 of the report. This well, shown by the number 29 on Figure 4, appears to have a hydrologic location similar to that of the water station; that is, it is southwest of the main recharge zone and about the same distance from the Lagunas discharge zone. Consequently, it should provide a suitable analogy for conditions at the water station.

Based on page 74 of Report 6, the well is 33 feet deep and is used for stock purposes. Water is found at a depth of 28.6 feet. The water is believed to come from Triassic rocks.

Based on all available information, the depth to ground water at the site is probably 30 to 50 feet, but could be as much as 150 feet.

Water quality. Based on well 29, the water is very hard (1,340 parts per million, as $CaCO_3$) and has a total dissolved solids content of 3,680 ppm. Data are available for parameters which are of particular interest to the review of a discharge plan:

- sodium (Na^+) plus potassium (K^+): 675 ppm
- calcium (Ca^+): 430 ppm
- magnesium (Mg^+): 65 ppm
- bicarbonate (HCO_3^-): 189 ppm
- carbonate ($CO_3^=$): 0 ppm
- chloride (Cl^-): 560 ppm
- sulfate ($SO_4^=$): 1680 ppm
- nitrate (NO_3^-): 139 ppm

19.34.9.11-7
33'

Other data given in Report 6 are: silica = 41 ppm; fluoride = 0.3 ppm; specific conductance = 4,660 micromhos; and pH = 7.1.

(א.ד)=3262 TDS

C. Chemical analysis of brine

A sample of brine was taken from the pit on May 18, 1984 and analyzed by Unichem International, Hobbs NM. The results are as follows:

		MEQ/L
. sodium (Na^+):	123,180 mg/l	5358.33
. potassium (K^+):	not determined	-
. calcium (Ca^+):	1736 mg/l	86.63
. magnesium (Mg^+):	405 mg/l	33.32
. bicarbonate (HCO_3^-):	61 mg/l	1.00
. carbonate ($CO_3^=$):	0 mg/l	-
. chloride (Cl^-):	192,000 mg/l	5416.32
. sulfate ($SO_4^=$):	3700 mg/l	77.07
. nitrate (NO_3^-):	112 mg/l	1.81

Other data obtained are: hydroxide = 0 mg/l; iron (total) = 2.9 mg/l; specific gravity = 1.216; total dissolved solids = 321,083 mg/l; pH = 6.69.

The data demonstrate that the water is a typical strong sodium chloride.

IV. PROCEDURES TO PROTECT GROUND WATER QUALITY

For this submittal, procedures related to protecting ground water against contamination from sub-surface sources are not required.

A. During operation

Inflow/outflow measurements. Means and locations for measuring inflow to and outflow from the brine pit were identified in Section I.C, items 5 and 10.

Sampling points for facility water. Grab samples of fresh water may be obtained at the point of sale or from the overflow pit (see Section I.C, items 3 and 4). Grab samples of brine may be obtained from the lined pit or the point of sale (see Section I.C., items 9 and 11).

Leak detection beneath pond. No leak detection devices have been installed beneath the pond. The discharger does not believe that the installation of such devices is appropriate at this time for the following reasons:

- the pit is lined by an essentially impermeable PVC material;
- no leakage has ever been observed from the pond (this conclusion is supported by the results of the OCD inspection, discussed previously);
- installation of leak-detection devices beneath the pond would require removal of the liner, which would risk damage to the liner integrity;

- due to the recent installation of the facility, the presence of an unsaturated zone, and the slow rate of ground-water movement, there is no realistic possibility that any contamination has occurred so far at the site boundaries;
- there are no current uses of ground water in the vicinity (the water used at the station is imported from 12 miles away);
- any local aquifers are poor, both with respect to production capabilities and water quality;
- if there ever were an indication of possible leakage from the pond, ground-water monitoring could be accomplished by installing a shallow observation well immediately downgradient (just north of southwest corner) of the pit.

Prevention of leaks and spills. The principal potential leakage point is the brine storage facility. Leaks from this facility are protected against by the presence of the PVC liner. The discharger believes that the present practice of periodically inspecting the pit is a sufficient basis for monitoring; any leak of significant amounts of water would result in an observable lowering of the water level in the pit. In such a case, the discharger would implement the contingency plan discussed below.

Leaks from the brine pipeline are protected against by the fact that the pipe is PVC under relatively low pressure.

The principal potential spill site would be at the truck loading area, in the event of an overflow during loading. Such spills are generally small and have not produced any significant problems on the pavement or adjacent soil. (See OCD inspection report, cited previously.)

Assuming that shut off occurs within 1 minute of the start of the hypothetical spill, the total water loss would be very small (approximately 400 gallons). In the event that a significantly larger spill occurs, such that salt water is discharged over a soil area of at least 2000 square feet, evaporation of the water would be expected to produce a salt crust. If visual inspection of the site on a monthly basis ever results in identification of such a large crust, the discharger will implement the contingency plan discussed below.

Contingency plans. In the event that there is any evidence of a leak from the brine pit, the discharger will advise EID and implement a mass balance monitoring program which will gather the following data on a monthly basis:

- the volume of fresh-water flow to the brine well;
- the volume of brine-water sales;
- the total volume of water stored in the brine pit, at the beginning and end of the period;
- the estimated rate of pond evaporation, based upon extrapolation of data from the Avalon weather station near Carlsbad.

These data would be submitted to EID on a monthly basis and would be interpreted by the discharger and/or his consultant. In the event that all water sent to the brine well cannot be accounted for on the basis of brine sales, evaporation, and changes in storage, and if required by EID, the discharger would drill an observation well just north of the southwest corner of the brine pit. The well would have a total depth at least 50 feet into the

saturated zone. Total dissolved solids levels significantly in excess of 5,000 mg/l would indicate a potential leakage problem. In the event such a problem is observed, the discharger will consult with EID to identify any necessary measures to further define and/or rectify the problem.

In the event that there is any evidence of a potentially significant spill at the loading area, the discharger would advise EID of the need for a field inspection. Based on the best available evidence, a determination would be made as to whether or not the spill is of such a magnitude as to represent a significant threat to ground-water quality. In the event a positive determination is made, and if required by EID, the discharger would drill an observation well downgradient of the spill area. The well would have a total depth at least 50 feet into the saturated zone. Total dissolved solids levels significantly in excess of 5,000 mg/l would indicate a potential problem. In the event such a problem is observed, the discharger will consult with EID to identify any necessary measures to further define and/or rectify the problem.

If spills appear to be a recurring problem, containment berms may be constructed at the loading area.

B. Post-operational commitments

For this submittal, the post-operational commitment of concern relates to closure of the brine storage pit. No less than thirty days prior to an anticipated closure, the discharger will advise and confer with EID as to the currently accepted practices regarding appropriate measures. If required, the discharger will remove the pit liner and dispose of it in a manner acceptable to EID; remove any salt crusts and dispose of the salt material in a manner acceptable to EID; and fill in the pit and otherwise restore the area to its original contours.

MARATHON ROAD WATER STATION
Lea County, New Mexico
Brine and Fresh Water

Dear Ms Grant,

We moved to Marble Falls a year ago, and changed our address and purchased new stationary. It is difficult to answer your requests promptly sometimes because of the delay. Could you please help us?

Sincerely,
Jackie Trainer

RECEIVED
JUN 15 1984
GROUND WATER/HAZARDOUS WASTE
BUREAU

C.W. TRAINER
ROUTE 3, BOX 607
MARBLE FALLS, TEXAS 78654

HEALTH ENVIRONMENT department

STATE OF NEW MEXICO
ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 984-0020
STEVEN ASHER, Director

TONEY ANAYA
GOVERNOR

Joseph Goldberg
SECRETARY

Ted Guambana
DEPUTY SECRETARY

JOSEPH F. JOHNSON
DEPUTY SECRETARY

June 5, 1984

C.W. Trainer
Marathon Road Water Station
9205 Highway 71 West
Austin, Texas 78736

RE: ASSURANCE OF DISCONTINUANCE FOR MARATHON ROAD WATER STATION

Dear Mr. Trainer:

Thank you for sending in one signed copy of your Assurance. Richard Holland, Acting Director of EID in Steven Asher's absence, has signed the copy you sent to us. We will retain the copy with both original signatures; a photo-copy is enclosed for you.

I have received the first submittal specified in your Schedule of Compliance from Lee Wilson. I will keep you informed of our response to your discharge plan as it is received in chapters from Dr. Wilson.

Sincerely,

Paige Grant

Paige Grant
Water Resource Specialist
Ground Water Section

PG/ps

cc: Lee Wilson
Douglas Perrin

mse

LAW OFFICES OF
JENNINGS & CHRISTY
1012 SECURITY NATIONAL BANK BUILDING
P.O. BOX 1180
ROSWELL, NEW MEXICO 88202-1180

TELEPHONE 622-8432
AREA CODE 505

JAMES T. JENNINGS
SIM B. CHRISTY IV
K. DOUGLAS PERRIN
PHIL T. BREWER
VICTORIA ARENDS
A. D. "DIRK" JONES

May 22, 1984

Ms. Paige Grant
Environmental Improvement Division
Post Office Box 968
Santa Fe, New Mexico 87504-0968

Re: C. W. Trainer
Marathon Road Water Station

Dear Paige:

I apologize for the long delay in getting this to you, but I finally have, and enclosed herewith, the completed, executed Assurance of Discontinuance from C. W. Trainer.

Your attention to filing this appropriately is appreciated.

Very truly yours,

JENNINGS & CHRISTY

K. Douglas Perrin

KDP:lt

cc: Dr. Lee Wilson
Mr. C. W. Trainer

Enclosure

ASSURANCE OF DISCONTINUANCE

WHEREAS, on January 4, 1983, The Director of the Environmental Improvement Division (EID) requested C. W. Trainer to submit a Discharge Plan pursuant to §§ 3-104 and 5-101.B.3 of the New Mexico Water Quality Control Commission (Commission) Regulations for discharges from the brine facility and brine well known as the Marathon Road Water Station located in Section 25, Township 19 South, Range 34 East, N,M,P,M, Lea County, New Mexico; and

WHEREAS, neither the regulations nor an extension to discharge without an approved Discharge Plan issued by the Director, nor any Court Order, allows C. W. Trainer to operate an injection well and associated surface facilities beyond December 20, 1982, and

WHEREAS, recent pressure tests of the brine well indicate good casing integrity, and all brine at the facility is discharged into lined pits, such that no contamination of drinking water sources is believed to have occurred due to operations at the Marathon Road Water Station and;

WHEREAS, C. W. Trainer has committed to the Commission to proceed with all diligence to prepare and secure an approved Discharge Plan; and

WHEREAS, the Commission and C. W. Trainer deem it appropriate to enter into this Assurance of Discontinuance.

C.W. Trainer assures the Commission as follows:

1. ASSURANCE: All unapproved discharges at the Marathon Road Water Station Brine Facility shall be discontinued as set forth in Paragraph 2 of the Assurance of Discontinuance.

2. SCHEDULE OF COMPLIANCE: It is agreed that the Discharge Plan shall comply with the following schedule:

A. C. W. Trainer shall submit plans and specifications of the in situ extraction well to the EID	on or before May 31, 1984
B. C. W. Trainer shall submit a proposal outlining measures to be taken to correct any possible violation of the Water Quality Control Commission Regulations resulting from surface activities	on or before May 31, 1984
C. EID shall complete review of materials submitted under Paragraph 2.A and B by July 16, 1984, and EID shall provide comments to C. W. Trainer	on or before July 16, 1984
D. C. W. Trainer shall submit the information listed in	

Signed and acknowledged this 14th day of May, 1984.

C. W. Trainer

STATE OF TEXAS)
) ss.
COUNTY OF Llano)

The foregoing instrument was acknowledged before me this 14th day of May, 1984, by C. W. Trainer.

My Commission Expires:
12-18-87

Notary Public

APPROVED:

WATER QUALITY CONTROL
COMMISSION

By
Steven Asher, Chairman
Water Quality Control
Commission

STATE OF NEW MEXICO)
) ss.
COUNTY OF Santa Fe)

The foregoing instrument was acknowledged before me this 31 day of May, 1984, by Steven Asher, Chairman of the Water Quality Control Commission, on behalf of the Water Quality Control Commission.

My Commission Expires:
10-25-86

Notary Public

HEALTH & ENVIRONMENT — STATE OF NEW MEXICO

MEMORANDUM OF MEETING OR CONVERSATION

☒ Telephone ☐ Personal	Time	Date
	1:45	5/4/84

Originating Party	Other Parties
Paige Grant	CW Trainer

Subject: Assurance

Discussion: I called to remind him to send in 2 signed copies of the Assurance. He said he just hadn't been able to get to it lately, but would do so and send them in next week.

Conclusions or Agreements

Distribution

Signed: Paige Grant.

LAW OFFICES OF
JENNINGS & CHRISTY
1012 SECURITY NATIONAL BANK BUILDING
P. O. BOX 1180
ROSWELL, NEW MEXICO 88202-1180

TELEPHONE 622-8432
AREA CODE 505

JAMES T. JENNINGS
SIM B. CHRISTY IV
K. DOUGLAS PERRIN
PHIL T. BREWER
VICTORIA ARENDS
A. D. "DIRK" JONES

April 11, 1984

Mr. C. W. Trainer
Marathon Road Water Station
9205 Highway 71 West
Austin, Texas 78736

RE: Environmental Improvement Division

Dear C. W.:

Enclosed are two originals and one copy of the Assurance of Discontinuance. You need to sign both originals and return them either to me or directly to Paige Grant at her address in Santa Fe. The copy is for your files.

If you send the documents straight to Paige, please copy me with your transmittal letters so I will know what has transpired.

It was good to see you in Santa Fe, and I am enjoying working for you again.

Very truly yours,

JENNINGS & CHRISTY

By Doug Perrin
K. Douglas Perrin

KDP/rl

Enclosures:

CC: Dr. Lee Wilson
Ms. Paige Grant

HEALTH ENVIRONMENT department

STATE OF NEW MEXICO
ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 984-0020
STEVEN ASHER, Director

TONEY ANAYA
GOVERNOR

SECRETARY

DEPUTY SECRETARY

JOSEPH F. JOHNSON
DEPUTY SECRETARY

April 11, 1984

Lee Wilson
P.O. Box 931
Santa Fe, NM 87501

Dear Lee:

I enclose the draft outline for brine well discharge plans. Please be in touch if I can help to clarify any of it.

Sincerely,

Paige

Paige Grant
Hydrologist
Ground Water Section

PG:egr

Enclosure

ms

STATE OF NEW MEXICO
HEALTH ENVIRONMENT department

MEMORANDUM

DATE: 4/10/84

TO: file

FROM: Paige Hunt

SUBJECT: CO Trainer Assurance

Trainer is saying Doug Perin had not incorporated the changes we'd discussed by phone for the third Whereas. The Commission approved the Assurance given that change; so Perin will redraft the Assurance, have Trainer sign before a notary and send it in to us for Usher to sign.

Note: in conversation w/ Perin, Trainer and Lee Wilson they said Trainer should have a copy of Assurance w/ Steve's original signature, hence need 2 signed copies from Trainer. - Left message with Perin's secretary to that effect.

Trainer

ASSURANCE OF DISCONTINUANCE

WHEREAS, on January 4, 1983, the Director of the New Mexico Oil Conservation Division (OCD)/Environmental Improvement Division (EID) requested C. W. Trainer to submit a Discharge Plan pursuant to §§ 3-104 and 5-101.B.3 of the New Mexico Water Quality Control Commission (Commission) Regulations for discharges from the brine facility and brine well _____ located in Section 25, Township 19 ~~North~~/South, Range 34 East/~~West~~, N.M.P.M., Lea County, New Mexico; and

WHEREAS, neither the regulations nor an extension to discharge without an approved Discharge Plan issued by the Director, nor any Court Order, allows C. W. Trainer to operate an injection well and associated surface facilities beyond December 20, 1982, and

WHEREAS, recent water quality analysis of nearby and adjacent wells (and/or such other proofs as may apply) do not indicate any present contamination of drinking water sources due to operations at the site; and

WHEREAS, C. W. Trainer has committed to the Commission to proceed with all diligence to prepare and secure an approved Discharge Plan; and

WHEREAS, the Commission and C. W. Trainer deem it appropriate to enter into this Assurance of Discontinuance.

C. W. Trainer assures the Commission as follows:

1. ASSURANCE: All unapproved discharges at the Marathon Road Water Station Brine Facility shall be discontinued as set forth in Paragraph 2 of the Assurance of Discontinuance.

2. SCHEDULE OF COMPLIANCE: It is agreed that the Discharge Plan shall comply with the following schedule:

changed as presented in 3/27/84 memo

A. C. W. Trainershall submit plans and specifications of the in situ extraction well to the EID on or before May 31, 1984.

B. C. W. Trainershall submit a proposal outlining measures to be taken to correct any possible violation of the Water Ouality Control Commission Regulations resulting from surface activities on or before May 31, 1984.

C. EID shall complete review of materials submitted under Paragraph 2.A and B by July 16, 1984, and EID shall provide comments to C. W. Trainer on or before July 16, 1984.

D. C. W. Trainer shall submit the information listed in § 5-102.B.1d and the information listed in § 5-203.A of the Water Quality Control Commission Regulations to the EID on or before October 31, 1984.

E. EID shall complete review of materials submitted under Paragraph 2.D herein and EID shall provide comments to C. W. Trainer on or before December 31, 1984.

F. C. W. Trainer shall submit a complete Discharge Plan which shall address all applicable requirements of the Water Quality Control Commission Regulations, Parts 3 and 5 on or before March 1, 1985.

G. EID shall complete review of Discharge Plan Application and EID shall provide comments to C. W. Trainer on or before May 15, 1985.

H. C. W. Trainer shall submit responses to the EID comments on or before July 15, 1985.

I. EID Director's approval or disapproval of Discharge Plan Application shall be promulgated on or before September 15, 1985.

If a public hearing is scheduled by the EID Director pursuant to §3-108 of the Commission's Regulations, all deadlines in Paragraphs 2.G through 2.I shall be 45 days later.

3. MUTUAL COOPERATION: C. W. Trainer and the EID shall mutually cooperate in accomplishing on a timely basis the matters contemplated by this Assurance. In this respect, direct communication among C. W. Trainer's representatives and EID personnel is encouraged.

4. MEETINGS: It is understood that C. W. Trainerand the EID shall meet on at least two occasions to discuss the progress during the initial 240 days of the Compliance Schedule. The first meeting shall take place on approximately the 90th day, and the second meeting on approximately the 150th day, as the parties may mutually and reasonably agree. EID shall endeavor to communicate any concerns which might necessitate additional information so as to allow C. W. Trainer sufficient time to respond.

5. EXTENSIONS FOR GOOD CAUSE: It is expressly agreed and understood by the parties hereto that events not reasonably foreseeable on the date of execution of this Assurance may occur which will make it impossible or extremely difficult for C. W. Trainerto comply in a timely fashion with those compliance dates set out in numbered paragraph 2. In the event such unforeseen events do occur, C. W. Trainer may apply to the ~~Commission~~ Director for an extension for an additional reasonable period of time to comply with such tasks in numbered paragraph 2. The additional reasonable period of time, if granted, shall in all cases be governed by the relevant circumstances.

6. ENFORCEMENT: The Commission shall not undertake enforcement against C. W. Trainer for the continuation of current discharges occurring during the pendency of this Assurance without first giving C. W. Trainer 15 days prior written notice by the Director that C. W. Trainer is in violation of the terms of this Assurance. This Paragraph shall not preclude appropriate action by the Director or the Commission under § 74-6-11 N.M.S.A. 1978.

Failure by C. W. Trainerto comply with any condition of this Assurance of Discontinuance shall be actionable as a violation of the Water Quality Act and of this Assurance under §§ 74-6-5 and -10 N.M.S.A. 1978, as applicable.

Nothing in this Assurance of Discontinuance shall relieve C. W. Trainer from the responsibility for complying with all the provisions of the Water Quality Act, the regulations promulgated thereunder or any other provision of law except as otherwise specifically provided herein.

7. NO ADMISSION: The terms, execution and any conduct in accordance herewith shall not constitute an admission of any kind by C. W. Trainer relating to matters under the Water Quality Act, Commission Regulations, or any other matters relating to health or environment.

Signed and acknowledged this 10th day of April, 1984.

C W Trainer

STATE OF NEW MEXICO)
: SS
COUNTY OF SANTA FE)

The foregoing instrument was acknowledged before me this 10th day of April, 1984, by C. W. Trainer d/b/a _____

My Commission Expires:
11/29/86

Notary Public

APPROVED:

WATER QUALITY CONTROL COMMISSION

By _____

Steven Asher, Chairman

Water Quality Control Commission

STATE OF NEW MEXICO)

: SS

COUNTY OF SANTA FE)

The foregoing instrument was acknowledged before me this _____ day of _____, 19___, by Steven Asher, Chairman of the Water Quality Control Commission, on behalf of the Water Quality Control Commission.

My Commission Expires:

_____

_____

Notary Public

SW of Town of Monument,
≈ 20 mi sw of Hobbs

TRAINER: (NOTES FOR PRESENTATION AT COMMISSION MEETING)

1. OCD inspection report of 3/28/83 indicates surface reclamation is clean

2. met at about that time w/ Ramey + staff; was not able to receive guidance to prepare thorough discharge plan

3. re: complaint from Squires Ranch:
Ranch well in Sec. 19 - surface elev. 60' higher than Trainer facility ≈ 1 mi. away - assume ground water gradient does not slope from Trainer's site toward Sec 19. well

Sec 26 well same elev. to 10' lower, ≈ 1 mi away. Calculate that leakage from Trainer well would take approx 50 yrs to reach Snyder's Sec 26 well, with worst-case assumptions

Both wells cased, both ≈ 220' deep

3. cont.

Snyder Ranch caliche pond within ≈ ½ mi. of well, ¼ mi. fr. Trainer pond, across road. Holds rainwater for "a long time" (acc. to Larry Snyder) – chances of leakage from well or pond through caliche appear slim; overflow from brine pond would be diverted by road berm

Conclusion: no present or near-future affect on Snyder Ranch wells / pond

at 2000 psi

4. Pressure tests show good casing integrity, no leaks. Moderate (450 psi) injection pressure used, less than pump capacity

5. Brine extracted through tubing. Blowdown brine goes into brine pit. Pit is PVC-lined.

6. Water brought in from distance because there is none of sufficient quality in area to use to make brine

Notified of location of units Tasker + his lawyer

LAW OFFICES OF
JENNINGS & CHRISTY
1012 SECURITY NATIONAL BANK BUILDING
P. O. BOX 1180
ROSWELL, NEW MEXICO 88202-1180

TELEPHONE 622-8432
AREA CODE 505

JAMES T. JENNINGS
SIM B. CHRISTY IV
K. DOUGLAS PERRIN
PHIL T. BREWER
VICTORIA ARENDS
A. D. "DIRK" JONES

April 5, 1984

Paige Grant
Environmental Improvement Division
Post Office Box 968
Santa Fe, New Mexico 87504-0968

Re: C. W. Trainer

Dear Paige:

Please find enclosed an Affidavit by Mr. C. W. Trainer to the effect that he is not, nor will he, discharge any brine waters into an unlined pit.

If you feel that anything else will be required prior to the Hearing, please don't hesitate to call me.

Thank you for your assistance and cooperation in this matter.

Very truly yours,

JENNINGS & CHRISTY

By A. D. Jones
A. D. Jones

ADJ:lt

Enclosure

AFFIDAVIT

STATE OF TEXAS)
: SS
COUNT OF ~~BURNET~~ LLANO)

C. W. Trainer, being first duly sworn, states upon his oath the following:

1. That he is the ~~General Partner~~ OWNER of Marathon Road Water Station.

2. That in his capacity as ~~General Partner~~ OWNER of Marathon Road Water Station, he has caused to be installed a brine facility and brine well in Section 25, Township 19 South, Range 34 East, N.M.P.M., Lea County, New Mexico.

3. That neither he nor his agents or employees are currently, or will in the future, discharge or cause to be discharged any brine waters into an unlined pit.

4. Further, Affiant sayeth not.

C. W. Trainer,
~~General Partner~~
OWNER

SUBSCRIBED AND SWORN before me this 2 day of April, 1984.

Julia M. Kelly
Notary Public

My Commission Expires:

12-13-87

LAW OFFICES OF
JENNINGS & CHRISTY
1012 SECURITY NATIONAL BANK BUILDING
P. O. BOX 1180
ROSWELL, NEW MEXICO 88202-1180

TELEPHONE 622-8432
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JAMES T. JENNINGS
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K. DOUGLAS PERRIN
PHIL T. BREWER
VICTORIA ARENDS
A. D. "DIRK" JONES

April 4, 1984

Paige Grant
Environmental Improvement Division
P. O. Box 968
Santa Fe, New Mexico 87504-0968

RE: C. W. Trainer

Dear Paige:

Please find enclosed an Affidavit by H. E. (Gene) Lee. Mr. Lee conducted a pressure test on Mr. Trainer's brine well and the results are attached to the Affidavit.

Please don't hesitate to call if you require any more information prior to the hearing or if I can be of further assistance to you.

Very truly yours,

JENNINGS & CHRISTY

By Dirk Jones
A. D. Jones

ADJ/rl

Enclosures:

RECEIVED

APR 05 1984

GROUND WATER/HAZARDOUS WASTE
BUREAU

AFFIDAVIT

STATE OF NEW MEXICO)
: SS
COUNTY OF CHAVES)

H. E. (Gene) Lee, being first duly sworn, states upon his oath the following:

1. That he is an independent drilling consultant doing business in the State of New Mexico.

2. That in his capacity as an independent drilling consultant he has, at the request of C. W. Trainer, personally conducted a pressure leak-off test on the 5½ inch casing of a certain brine well located in Section 25, Township 19 South, Range 34 East, N.M.P.M., Lea County, New Mexico.

3. That the above described pressure leak-off test was conducted in a manner in accordance with generally accepted practices and procedures utilized in conducting such tests.

4. That the said pressure leak-off test rendered results which are reflected in the calibrated chart attached hereto as Exhibit "A".

5. That he is qualified to interpret attached Exhibit "A".

6. That the calibrated chart reflects that the 5½ inch casing sustained a pressure test of 650 lbs. for 55 minutes and that the casing maintained it's integrity for the duration of the test without any indication of leakage or failure of the casing.

7. Further, Affiant sayeth not.

By: H. E. Gene Lee
H. E. (Gene) Lee

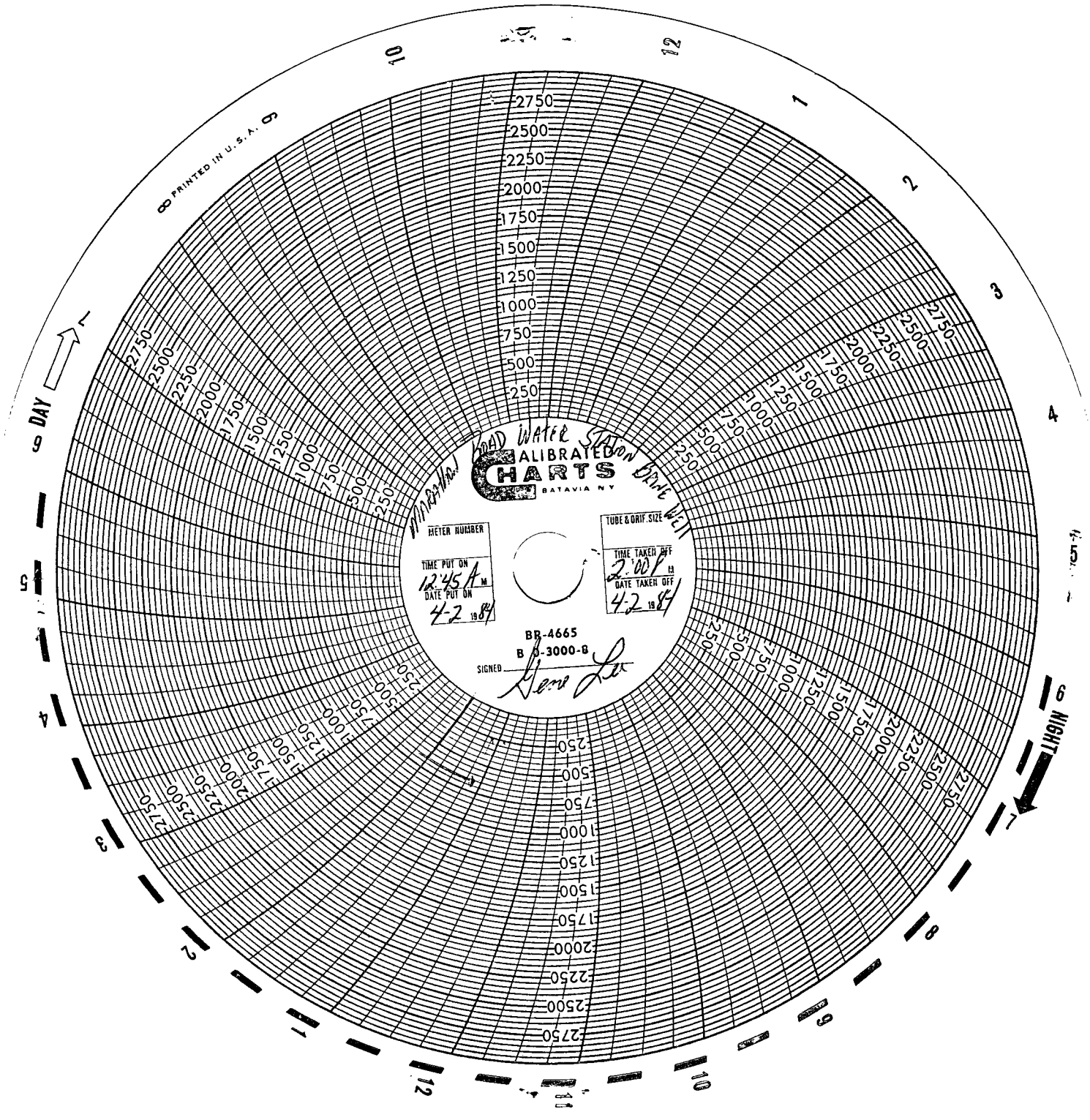
SUBSCRIBED AND SWORN before me this 3rd day of April, 1984.

A. D. Lamar
Notary Public

My Commission Expires:

12/21/87

EXHIBIT "A"


DAY
NIGHT
PRINTED IN U.S.A.
CALIBRATED CHARTS
BATAVIA N.Y.
METER NUMBER
TIME PUT ON
12:45 A M
DATE PUT ON
4-2 1984
TUBE & ORIF. SIZE
TIME TAKEN OFF
2:00 P M
DATE TAKEN OFF
4-2 1984
BR-4665
B 0-3000-B
SIGNED

STATE OF NEW MEXICO
HEALTH & ENVIRONMENT

MEMORANDUM OF MEETING OR CONVERSATION

☒ Telephone ☐ Personal | Time 1:45 | Date 4/4/84

Originating Party	Other Parties
Paige Grant	C.W. Trainer
	(512) 598-6659

Subject questions about drilling log (preparing Trainer's case before WQCC)

Discussion Trainer explained the well was a reworked abandoned oil well - explains remark on 3rd day of drilling log about "washing hole" - they drilled where they had to to ream out the old hole or drill through plugs, otherwise just washed hole w/ water.

2nd day log notes: "200 bbl mud did not fill hole" - probably migrated into Santa Rosa water sand ("fresh" water)

Both casing and tubing are round-threaded "float shoe" - a type of check valve so that cement can't reenter casing when it's been circulated to the surface and the pressure shut off

Note: 83 sacks cement in excess after circulating cement to surface

Conclusions or Agreements

Water that entered well was ~~from~~ brine associated with an old oil well.

Distribution

Signed Paige Grant.

HEALTH ENVIRONMENT department

STATE OF NEW MEXICO
ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 984-0020
STEVEN ASHER, Director

TONEY ANAYA
GOVERNOR

Joseph Goldberg
SECRETARY

Ted Guambana
DEPUTY SECRETARY

JOSEPH F. JOHNSON
DEPUTY SECRETARY

March 30, 1984

Mr. A.D. Jones
Jennings & Christy
P.O. Box 1180
Roswell, NM 88202-1180

Dear Mr. Jones:

I am sending you a copy of my memo to the Water Quality Control Commission, which includes the change we discussed for Mr. C.W. Trainer's Assurance of Discontinuance.

As we also discussed during our telephone conversation of Tuesday, March 27th, by the time of the Commission meeting I will expect to receive an affidavit to the effect that all brine at Mr. Trainer's Marathon Road Water Station is discharged into lined pits; and a copy of the report giving the results of the pressure test on Mr. Trainer's brine well, or an affidavit of same. I will be in touch with Mr. Trainer directly to clear up some other questions on the material he sent me with his letter of March 19th.

I look forward to meeting you or your colleague and Mr. Trainer at the Commission meeting on April 10th.

Sincerely,

Paige Grant

Paige Grant
Hydrologist
Ground Water Section

PG:egr

Enclosure

cc: C.W. Trainer
Lee Wilson

mse

HEALTH ENVIRONMENT department

STATE OF NEW MEXICO
ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 984-0020
STEVEN ASHER, Director

TONEY ANAYA
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DEPUTY SECRETARY

JOSEPH F. JOHNSON
DEPUTY SECRETARY

MEMORANDUM

TO: Water Quality Control Commissioners

FROM: Paige Grant, Water Resource Specialist, EID Ground Water Section APG

SUBJ: Assurances of Discontinuance from three brine well owner/operators

DATE: March 27, 1984

Attached hereto are three proposed Assurances of Discontinuance relating to brine in situ extraction facilities. Please note that they are based on the same format (form enclosed) and are very similar to each other, with the principal differences being in names, locations, and dates in the schedule of compliance. The Quality Brine Assurance is to be reviewed as it stands. The Assurance of C.W. Trainer and of Ernie Hegwer are changed from the attached drafts, as noted below:

C.W. Trainer Assurance of Discontinuance: the third "Whereas" is changed to read as follows:

> WHEREAS, recent pressure tests of the brine well indicate good casing integrity, and all brine at the facility is discharged into lined pits, such that no contamination of drinking water sources is believed to have occurred due to operations at the C.W. Trainer facility; (and...)

Ernie Hegwer Assurance of Discontinuance: the third "Whereas" is changed to read as follows:

> WHEREAS, there are no nearby and adjacent water wells to supply the brine well, so that Mr. Hegwer is having to pipe city water in from Carlsbad, New Mexico; and pressure tests have been made to indicate good casing integrity in the well, such that no contamination of drinking water sources is believed to be occurring as a result of Mr. Hegwer's operation; (and...)

In addition, Mr. Hegwer plans to amend the language of numbered paragraph 5, the "Good Cause" clause, to the language in the enclosed "Assurance" form. Both Mr. Trainer and Mr. Hegwer will have final drafts of their Assurances of Discontinuance incorporating these changes when they appear before the Commission on April 10th.

PG:egr

Enclosures

LAW OFFICES OF
JENNINGS & CHRISTY
1012 SECURITY NATIONAL BANK BUILDING
P.O. BOX 1180
ROSWELL, NEW MEXICO 88202-1180

TELEPHONE 622-8432
AREA CODE 505

JAMES T. JENNINGS
SIM B. CHRISTY IV
K. DOUGLAS PERRIN
PHIL T. BREWER

VICTORIA ARENDS
A. D. "DIRK" JONES

March 22, 1984

Paige Grant
Environmental Improvement Division
P.O. Box 968
Santa Fe, New Mexico 87504-0968

Re: C. W. Trainer (Marathon Road Water Station)

Dear Paige:

Please find enclosed an Assurance Of Discontinuance which we have prepared on behalf of Mr. Trainer.

Confirming our telephone conversation earlier today, in which you advised me that it would not be necessary for Mr. Trainer to sign the above described document prior to submission, but, rather, it would be acceptable for Mr. Trainer to sign the document on April 10th, the date of the hearing. I have been advised that Mr. Trainer does intend to be present at the hearing on April 10th and will sign the Assurance Of Discontinuance on that date.

Thank you for your cooperation and assistance in this matter.

Very truly yours,

JENNINGS & CHRISTY

By A. D. Jones

Attorneys for C. W. Trainer

ADJ/awd

Enclosure

xc: C. W. Trainer
Marathon Road Water Station
P.O. Box 607
Marble Falls, Texas 78654

ASSURANCE OF DISCONTINUANCE

WHEREAS, on January 4, 1983, the Director of the New Mexico Oil Conservation Division (OCD)/~~Environmental Improvement Division (EID)~~ requested C. W. Trainer to submit a Discharge Plan pursuant to §§ 3-104 and 5-101.B.3 of the New Mexico Water Quality Control Commission (Commission) Regulations for discharges from the brine facility and brine well _____ _____ located in Section 25, Township 19 ~~North~~/South, Range 34 East/~~West~~, N.M.P.M., Lea County, New Mexico; and

WHEREAS, neither the regulations nor an extension to discharge without an approved Discharge Plan issued by the Director, nor any Court Order, allows C. W. Trainer to operate an injection well and associated surface facilities beyond December 20, 1982, and

PLEASE NOTE CHANGE IN WORDING OF THIS "WHEREAS" IN COVER MEMO

WHEREAS, recent water quality analysis of nearby and adjacent wells (and/or such other proofs as may apply) do not indicate any present contamination of drinking water sources due to operations at the site; and

WHEREAS, C. W. Trainer has committed to the Commission to proceed with all diligence to prepare and secure an approved Discharge Plan; and

WHEREAS, the Commission and C. W. Trainer deem it appropriate to enter into this Assurance of Discontinuance.

C. W. Trainer assures the Commission as follows:

1. ASSURANCE: All unapproved discharges at the Marathon Road Water Station Brine Facility shall be discontinued as set forth in Paragraph 2 of the Assurance of Discontinuance.

2. SCHEDULE OF COMPLIANCE: It is agreed that the Discharge Plan shall comply with the following schedule:

A. C. W. Trainershall submit plans and specifications of the in situ extraction well to the EID on or before May 31, 1984.

B. C. W. Trainershall submit a proposal outlining measures to be taken to correct any possible violation of the Water Ouality Control Commission Regulations resulting from surface activities on or before May 31, 1984.

C. EID shall complete review of materials submitted under Paragraph 2.A and B by July 16, 1984, and EID shall provide comments to C. W. Trainer on or before July 16, 1984.

D. C. W. Trainer shall submit the information listed in § 5-102.B.1d and the information listed in § 5-203.A of the Water Quality Control Commission Regulations to the EID on or before October 31, 1984.

E. EID shall complete review of materials submitted under Paragraph 2.D herein and EID shall provide comments to C. W. Trainer on or before December 31, 1984.

F. C. W. Trainer shall submit a complete Discharge Plan which shall address all applicable requirements of the Water Quality Control Commission Regulations, Parts 3 and 5 on or before March 1, 1985.

G. EID shall complete review of Discharge Plan Application and EID shall provide comments to C. W. Trainer on or before May 15, 1985.

H. C. W. Trainer shall submit responses to the EID comments on or before July 15, 1985.

I. EID Director's approval or disapproval of Discharge Plan Application shall be promulgated on or before September 15, 1985.

If a public hearing is scheduled by the EID Director pursuant to §3-108 of the Commission's Regulations, all deadlines in Paragraphs 2.G through 2.I shall be 45 days later.

3. MUTUAL COOPERATION: C. W. Trainer and the EID shall mutually cooperate in accomplishing on a timely basis the matters contemplated by this Assurance. In this respect, direct communication among C. W. Trainer's representatives and EID personnel is encouraged.

4. MEETINGS: It is understood that C. W. Trainer and the EID shall meet on at least two occasions to discuss the progress during the initial 240 days of the Compliance Schedule. The first meeting shall take place on approximately the 90th day, and the second meeting on approximately the 150th day, as the parties may mutually and reasonably agree. EID shall endeavor to communicate any concerns which might necessitate additional information so as to allow C. W. Trainer sufficient time to respond.

5. EXTENSIONS FOR GOOD CAUSE: It is expressly agreed and understood by the parties hereto that events not reasonably foreseeable on the date of execution of this Assurance may occur which will make it impossible or extremely difficult for C. W. Trainer to comply in a timely fashion with those compliance dates set out in numbered paragraph 2. In the event such unforeseen events do occur, C. W. Trainer may apply to the Commission for an extension for an additional reasonable period of time to comply with such tasks in numbered paragraph 2. The additional reasonable period of time, if granted, shall in all cases be governed by the relevant circumstances.

6. ENFORCEMENT: The Commission shall not undertake enforcement against C. W. Trainer for the continuation of current discharges occurring during the pendency of this Assurance without first giving C. W. Trainer 15 days prior written notice by the Director that C. W. Trainer is in violation of the terms of this Assurance. This Paragraph shall not preclude appropriate action by the Director or the Commission under § 74-6-11 N.M.S.A. 1978.

Failure by C. W. Trainer to comply with any condition of this Assurance of Discontinuance shall be actionable as a violation of the Water Quality Act and of this Assurance under §§ 74-6-5 and 10 N.M.S.A. 1978, as applicable.

Nothing in this Assurance of Discontinuance shall relieve C. W. Trainer from the responsibility for complying with all the provisions of the Water Quality Act, the regulations promulgated thereunder or any other provision of law except as otherwise specifically provided herein.

7. NO ADMISSION: The terms, execution and any conduct in accordance herewith shall not constitute an admission of any kind by C. W. Trainer relating to matters under the Water Quality Act, Commission Regulations, or any other matters relating to health or environment.

Signed and acknowledged this _____ day of _____, 19___.

_____

STATE OF NEW MEXICO)

: SS

COUNTY OF SANTA FE)

The foregoing instrument was acknowledged before me this _____ day of _____, 19___, by _____ d/b/a _____

My Commission Expires:

_____ _____

Notary Public

APPROVED:

WATER QUALITY CONTROL COMMISSION

By _____

Steven Asher, Chairman

Water Quality Control Commission

STATE OF NEW MEXICO)

: SS

COUNTY OF SANTA FE)

The foregoing instrument was acknowledged before me this _____ day of _____, 19___, by Steven Asher, Chairman of the Water Quality Control Commission, on behalf of the Water Quality Control Commission.

My Commission Expires:

_____

_____

Notary Public

MARATHON ROAD WATER STATION
Lea County, New Mexico
Brine and Fresh Water

March 19, 1984

State of New Mexico
Environmental Improvement Division - Paige Grant
Box 968
Santa Fe, NM 87504

Dear Paige Grant:

Thank you for your February 28 letter. Our response to your 7 questions follows:

1. Welex log, well schematic and daily drilling reports are enclosed.
2. We pressured up to 2000 psi on both tubing and casing with no signs of leaks in September 1983.
3. We inject fresh water at 450 psi @ 100 barrels an hour. Our turbine will only develop 600 psi maximum.
4. We take our brine from the central tubing to keep only fresh water in the casing. We reverse the flow, with our wellhead manifold valves, monthly, for a few hours to remove any salt accumulation.
5. Our casing is 5½" 8R J55, some 14#/' & some 15½#/'.
6. We blew the brine well down about 4 times in 1983. We discharge into our brine pit by switching the wellhead manifold valves.
7. Our brine pit ground elevation is 3735'. Brine wellhead elevation is 3740'.

Lee Wilson has agreed to help me. I look forward to meeting you before long.

Sincerely,

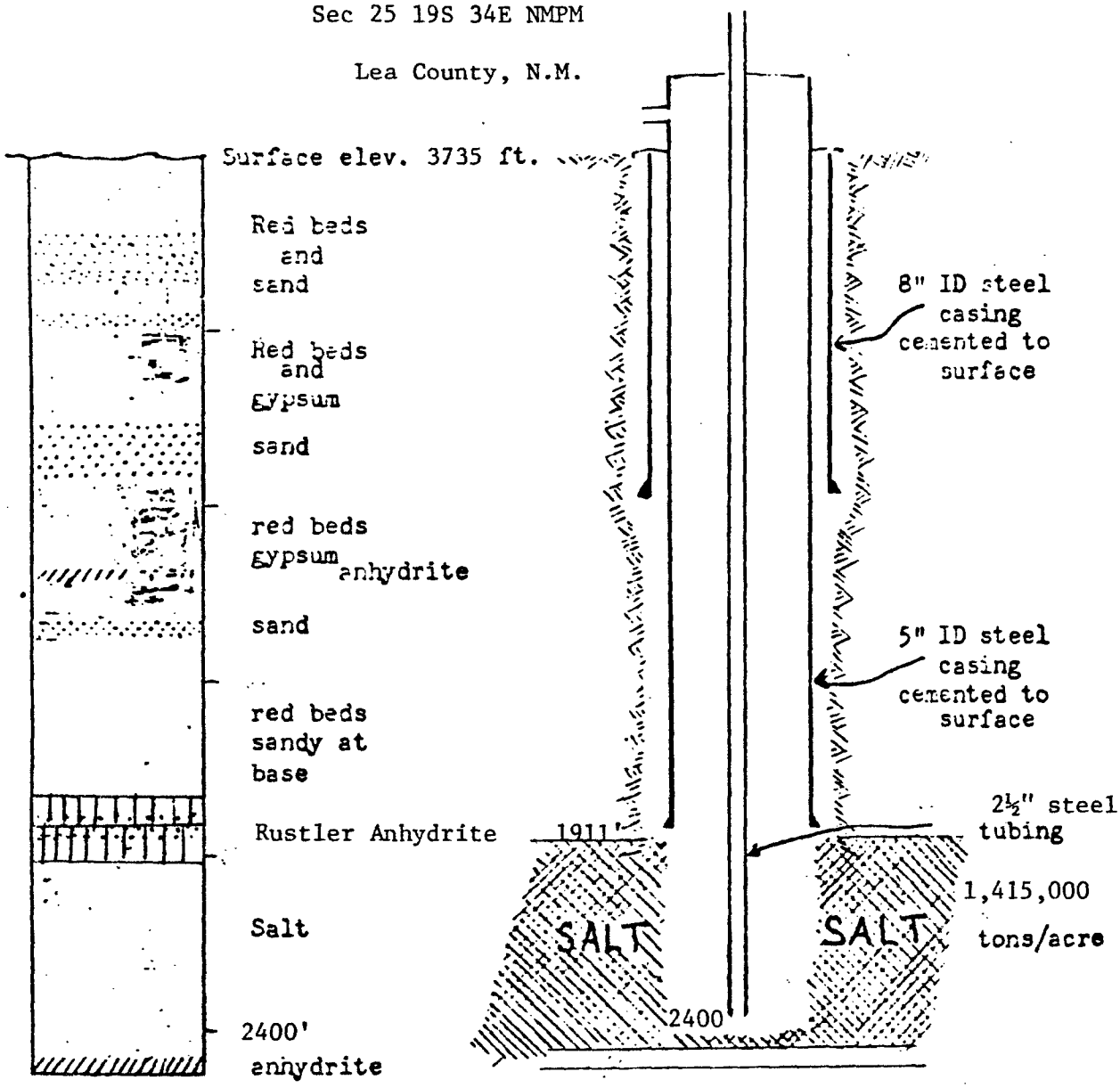
C W Trainer

xc: Lee Wilson and Doug Perrin

W Trainer - Sodium Prospect

Sec 25 19S 34E NMPM

Lea County, N.M.



Vertical scale None

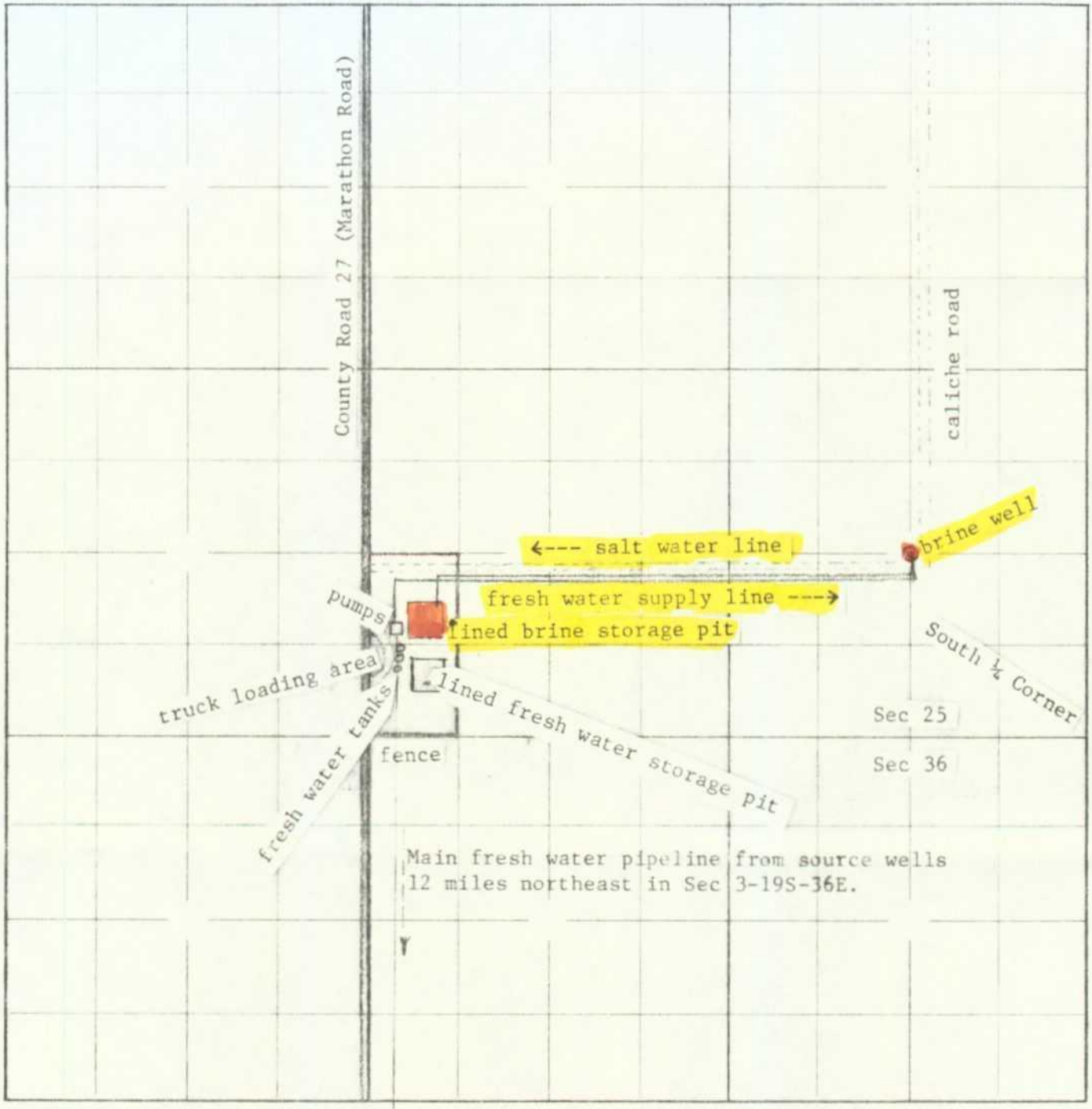
Formation Log

Diagram of Shaft construction

EXHIBIT A

C. W. TRAINER
Marathon Road Water Station and Brine Well

TOWNSHIP 19 S RANGE 34 E COUNTY Lea STATE New Mexico



Scale: 1 inch = 660'

C. W. Trainer

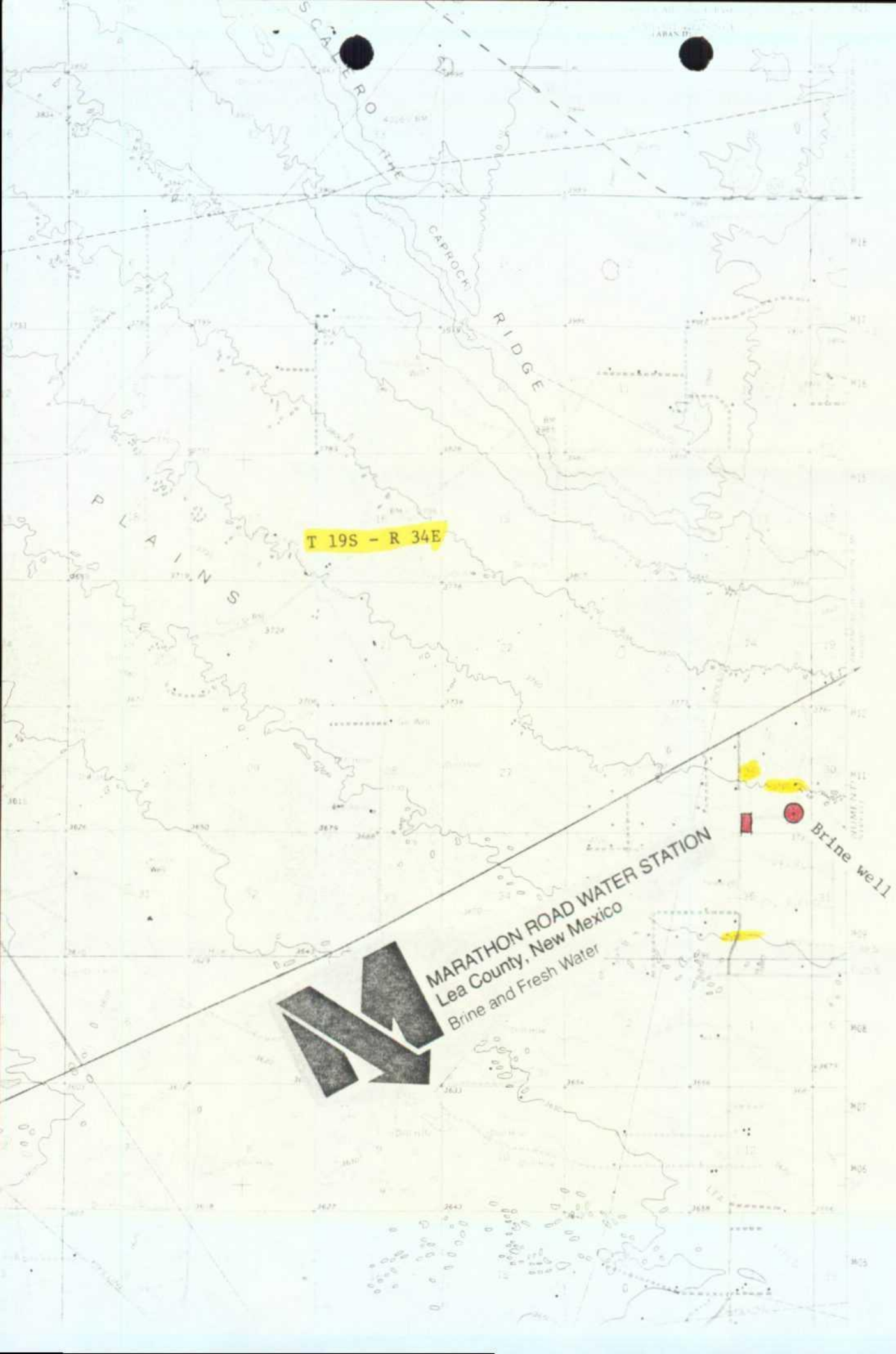
(512) 28[redacted]613 9205 Hy. 71 W Austin, [redacted] 78736

Daily Drilling Report
Federal No. 1, Lea Co., N. M.
Page _____

Sec 25-19S-34E

Report Date	Description
7-14-81	MI Backhoe ;dug out cellar. RU Rathole machine & drlg. out "dry hole" marker & cmt. Welder cut off 8 5/8".
7-15-81	MIRU Yucca Drlg. Co., Rig #4. Dug pits. Ran 7 7/8" bit & started drlg. w/ air. No cmt. in bottom of 8 5/8" 0-960' w/ air. Had to mud up at 960'. First 200 Bbl. mud did not fill hole.
7-16-81	Mixed another 200 Bbl. mud. Filled hole & started drlg. Washed hole dwn. to 2100' depth. Circ. hole to run csg. Started out w/ drill pipe.
7-17-81	Finished POH w/ DP. Ran 66 jts. 5 1/2", 14# & 15.5# 8 RT csg. w/ 5 1/2" Float Shoe. Total of 1902.10' set at 1911.10' KB. RU western & cmt. csg. w/ 1050 sx. Class "C" neat cmt. Circ. to surface about 83 sx. cmt. Float did not hold. SD for cmt. to set. Had 1 jt. extra 5 1/2" csg.
7-18-81	Ran 2 7/8" 6.5# used Seal Locke ~~Tbg.~~ reamed w/ 4 1/4" Tri-cone welded on bottom joint. Found 40' cmt. above plug. Drlg. out cmt. & plug w/ air. As soon as shoe was drilled out, water came in. Tried to Circ. dwn. w/ air, but water was coming in too fast. Ran Tbg. in w/out Circ. to 2300' hit bridge. Put on mud pump & Tbg. went again. It appears water is coming in from bottom of well. Ran 78 jts. Tbg. & landed at 2400' depth. SD air rig & moved off. Waiting on well service rig to spot cmt. plug at about 3200' for water shut off.
8-08-81	RU Pengo Rig #106. Picked up 23 jts. 2 7/8" Non-upset Seal Loke Tbg. Ran it & stopped going at 3114' bottom. SDFN.
8-09-81	SD Sunday
8-10-81	RU Western Co. Tied onto 2 7/8" Tbg. Pumped 18 Bbl. Fresh water in & loaded Tbg. Pumped another 14 Bbl. before we broke circulation. Circulated 10 BW at 300 psi & 2 BPM. Mixed 2 sx. salt gel in 20 Bbl. salt wtr. Pumped ahead of cmt. Mixed 150 sx. Class "C" cmt. w/ 1% $CaCl_2$ dwn. Tbg. Displaced cmt. w/ 18 Bbls. salt wtr. Shut dwn. Released press. & flowed back 2 Bbl. Fluid equalized. POH w/ 24 jts. 2 7/8" Tbg. Hooked up Western & circulated Tbg. w/ 80 Bbl. fresh wtr. SDFN.
8-11-81	Crew to loc. Ran 18 jts. Tbg. back in hole. Tagged solid cmt. at 2992'. Had 122' fillup. Laid dwn. 23 jts. Tbg. Landed Tbg. in well head. Bottom of 2 7/8" at 2400'. RD Pengo & moved off. Well ready to circ. fresh wtr.

8-11-81 NOTE For file - Tight place in hole with about 2350' tubing in well. Pulled about 10,000 # and could not come up. Went down freely. Probably a keyseat in an anhydrite ledge catching bit. We decided to leave it alone and see if the circulation of fresh water might not wash it out in time.


SCALEROTIE
CAPROCK
RIDGE
PLAINS
T 19S - R 34E
Brine well
MARATHON ROAD WATER STATION
Lea County, New Mexico
Brine and Fresh Water

HEALTH ENVIRONMENT department

STATE OF NEW MEXICO
ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 984-0020
STEVEN ASHER, Director

TONEY ANAYA
GOVERNOR

ROBERT McNEILL
SECRETARY

ROBERT L. LOVATO, M.A.P.A.
DEPUTY SECRETARY

JOSEPH F. JOHNSON
DEPUTY SECRETARY

February 28, 1984

C.W. Trainer
Marathon Road Water Station
Route 3, Box 607
Marble Falls, TX 78654

Dear Mr. Trainer:

As per your request received February 15, 1984, you will find enclosed (a) a partial list of consultant hydrogeologists who are acquainted with the technical requirements of the underground injection control program, and (b) a copy of the discharge plan submitted by Brunson and McKnight for the Salty Dog facility, which was approved by OCD.

I have also enclosed a copy of a letter I wrote to Mr. Brunson, in which I explained that since his discharge plan was approved before December 20, 1982, he had been required to incorporate only those elements in Part 3 of the WQCC Regulations into his plan - but that when he came in for renewal of his permit he would have to prepare a much more thorough plan incorporating the terms of Part 5 of the regulations as well as Part 3. Since no discharge plan has ever been approved for the Marathon Road Water Station, you will need to prepare a complete Part 3 and Part 5 discharge plan the first time around.

In response to the third request in your letter, our definition of "discharge" is simply the dictionary definition, which includes (to quote from Webster's New Collegiate Dictionary, 8th edition, page 322): "to pour forth fluid or other contents," and "a flowing or issuing out." "Discharge plan" is defined on page 2 of the WQCC Regulations, of which a copy was sent to you with my February 2nd letter.

To answer the last point you raised, it is possible that an observation well or wells will be adequate to monitor your pond for potential seepage. However, you must demonstrate to us in your discharge plan that such a monitoring system would provide sufficient protection for ground water that contains less than 10,000 mg/l TDS. It is for this very reason that a discharge plan is required for such facilities as yours.

The third enclosure you will find with this letter is an Assurance of Discontinuance with a proposed schedule of compliance, which you might wish to use as a model. I hope this assists you and your attorney in preparing such

an Assurance to submit to the Water Quality Control Commission at their April 10, 1984 meeting. In order for it to be put on the agenda for that meeting, it must be in to me by Monday afternoon, March 26, 1984. I hope that you will meet that deadline, as a gesture that you are committed to coming into compliance with the New Mexico WQCC Regulations.

In order for me to support your Assurance before the Commission, however, I need to be confident that your activities are not threatening ground water that contains less than 10,000 mg/l TDS. To this end, within the next couple of weeks, please send me:

1. The drilling log for your brine well.

2. The date and results of your most recent pressure test.

3. The average and maximum pressure at which you inject fresh water and extract brine.

4. Do you extract brine up a central tubing or up the casing?

5. What are the specifications on your casing?

6. Is it necessary to "blow down" your well? How often? Where do you discharge the blow down water?

7. What is the ground elevation of your pond? Of your wellhead?

The answers to these questions will help me to decide whether I can recommend to the Commission that your Assurance be approved.

I look forward to hearing from you soon.

Sincerely,

Paige Grant

Paige Grant
Hydrologist
Ground Water Section

PG:egr

Enclosures

MSL

The following is a partial list of consultant hydrogeologists who are experienced in responding to the technical requirements of the Underground Injection Control program.

Ken E. Davis and Associates
3121 San Jacinto, Suite 102
Houston, TX 77004
(713) 522-5784

Golden Strataservices, Inc.
1100 Milan St., Suite 2000
Houston, TX 77002
(713) 759-9764

Randall T. Hicks
Geoscience Consultants
222 Copper Square
500 Copper Ave. NW
Albuquerque, NM 87102
(505) 842-0001

Bob Kent
Underground Resources Management, Inc.
508 Powell St.
Austin, TX 78703
(512) 478-2339

Lee Wilson and Associates
P.O. Box 931
Santa Fe, NM 87501
(505) 988-9811

STATE OF NEW MEXICO
HEALTH & ENVIRONMENT

MEMORANDUM OF MEETING OR CONVERSATION

☒ Telephone ☐ Personal | Time 8:40 | Date 2/17/84

Originating Party	Other Parties
Larry Squires Snyder Ranch, Lea County	Paige H.

Subject
- in response to my phone request yesterday for more information on this complaint about Trainer's operation.

Discussion
The locations of this well + the pond referred to in this letter are:

well: in NW¼ SW¼ Sec 19 T19 R35
≈ 220' deep, used to fill 3 stock tanks adjacent to well + in 2 other pastures ≈ 1 mile away

well: in SE¼ Sec 26 T19 R34
≈ 220' deep, also for stock watering
both wells cased.

pond: caliche pit across the Hwy. fr Trainer's brine station, SW¼ Sec 25 T19 R34
catches rain water, holds for a long time

Conclusions or Agreements
I told him I needed this information to evaluate whether there was potential for groundwater damage from Trainer's operation. He said Trainer should be shut down - disclosed his (Squires) connection with Salty Dog. In that connection, asked for an explanation

OVER →

Distribution
Trainer file
Salty Dog file

Signed Paige Grant.

see over →

OCD -

In my letter to permitted brine wells about needing to prepare a Part V portion of their ~~permit~~ d.p. when they come up for renewal. He asked for a copy of the outline of the brine well d.p. when ready.

MARATHON ROAD WATER STATION
Lea County, New Mexico
Brine and Fresh Water

RECEIVED

FEB 15 1984

GROUND WATER/HAZARDOUS WASTE
BUREAU

State of New Mexico
Environmental Improvement Division - Paige Grant, Hydrologist
Box 968
Santa Fe, New Mexico 87504

Dear Mr. Grant:

Thank you for your certified letter. It found us at our new address. We respectfully request the following:

1. Your list of qualified Hydrologists.
2. If possible, the discharge plan filed by "Salty Dog", ie; Snyder Ranches, or Larry Squires. They are our competitors 10 miles east and lodged the protest against us after they were required to install some "sensors" under their brine pit before it was built.
3. Your definition of the word "discharge" as it applies here. According to my definition we have zero discharge except for our sales which have been the same or less than our expenses lately. If we are trying to detect leakage and contamination, I suggested an observation well below any fresh water, bottomed in the red bed, to be sampled periodically. This would be more effective and cheaper than tunneling under our large pit to install sensors. The pit does not leak and the tunneling could cause a leak.

We intend to comply with New Mexico law. We appreciate the cooperation you are extending us and trust we will be able to resolve this matter to our mutual satisfaction soon.

Sincerely,

C W Trainer

xc: Jerry Sexton & Joe Ramey

Route 3, Box 607 • Marble Falls, Texas 78654 • Jackie Trainer, Manager • (512) 598-6659

HEALTH & ENVIRONMENT department

STATE OF NEW MEXICO

ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 984-0020

Steven Asher, Director

TONEY ANAYA
GOVERNOR

ROBERT McNEILL
SECRETARY

ROBERT L. LOVATO, M.A.P.A.
DEPUTY SECRETARY

JOSEPH F. JOHNSON
DEPUTY SECRETARY

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

February 2, 1984

C.W. Trainer
Marathon Road Water Station
9205 Hwy. 71 West
Austin, TX 78736

Dear Mr. Trainer:

Since your last contact in July, 1983, with the Oil Conservation Division (OCD) of New Mexico regarding your brine well operation in the Hobbs area, responsibility for regulating this type of injection/extraction facility has passed to the Environmental Improvement Division (EID).

We are doing our best to minimize inconvenience to brine well operators during this administrative transition; but please bear with me if I must ask for information which you already supplied to OCD.

I understand that you submitted a discharge plan in mid-February last year, and that Oscar Simpson of OCD contacted you by phone and told you that the information in your submittal was incomplete. I gather that you, Mr. Simpson and Joe Ramey of OCD had a meeting a month or two later, and that Mr. Ramey suggested that you be given some examples of discharge plans for you to model yours after. Mr. Simpson told me he had not been able to find time to help you in that fashion.

We have an OCD inspection report of your facility including photographs, and a letter from you to Mr. Ramey dated April 14, 1982, in which you request that you not be required to install a leak detection system at your facility.

All of this information is necessary to include in a discharge plan; but, as it stands, it does not constitute a discharge plan. I apologize that you have not been able to obtain the answers you need in order to prepare an approvable discharge plan; but to continue to operate without such a plan is in violation of the laws of the state of New Mexico. The process of brine extraction can have considerable potential for damage to drinking water aquifers, depending on the location. We hope to obtain your voluntary compliance with the Water Quality Control Commission (WQCC) Regulations (copy enclosed), in order to prevent any environmental harm due to your operation.

The information which must be included in a discharge plan for a brine in situ extraction well is detailed in Part 3 and Part 5 of the enclosed WQCC Regulations. Admittedly, the requirements appear lengthy and complex; but without this detailed information, we cannot be confident that underground injection of fluids will not damage drinking water supplies. Because of the technical complexity of the information required, you would be well advised to hire a consultant hydrologist to put together a discharge plan for your facility. I would be glad to provide you with a list of hydrologists who are well acquainted with the underground injection control program, if that would be helpful.

Mr. Simpson indicated to me that your facility is on federal land. If so, you may have received the impression from a representative of BLM that you are exempt from state environmental regulations. That is not the case. I have written Mr. James Murdock of BLM's Carlsbad office to clarify this matter with him. If you are engaged in mining on federal land, you must obtain mineral rights from the federal government and comply with certain of their regulations, such as those protecting archaeological evidence. However, the state has the responsibility to protect drinking water supplies from damage by underground injection activities throughout New Mexico.

Please contact me immediately to inform me of the status of your operation, so that we can begin the process of bringing your brine extraction activities into compliance with state regulations.

Sincerely,

Paige Grant

Paige Grant
Hydrologist
Ground Water Section

PG:egr

cc: John Guinn, EID District IV, Roswell
Joe Ramey, OCD, Santa Fe
EID Field Office, Carlsbad

Enclosure: WQCC Regulations

mst

P 506 253 714

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to C.W. Trainer	
Street and No. 9205 Hwy 71 West	
P.O. State and ZIP Code Austin, TX 78736	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return Receipt Showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	

PS Form 3800, Feb. 1982

From list inherited from OCD of brine well files, labelled.

"Brine Anstin (sic) Extraction Wells & Facalities (sic) Notified to Submit Discharge Plans Under Part 5 of the WQCC Regs"

NOTIFIED

NAME	LOCATION	DATE NOTIFIED	STATUS
(3) C. W. TRAINER 9205 HIGHWAY 71 WEST AUSTIN, TEXAS 78736 FEDERAL LAND FACALITY NAME PARTS 3+5 OF THE WQCC REGS	25, T19S, R34E	1-4-83	RECIEVED RESPONCE 2-15-83 WK OF 2-21-83 INFORMED BY PHONE INFORMATION WAS NOT COMPLETE - HE SHOULD GET TECHNICAL HELP HAD A MEETING IN MARCH OR APRIL OF 83, JOE RAMEY WANTED ME TO DOE THE APPLICATION FOR MR. TRAINER BY GIVING HIM EXAMPLES. MY RESPONCIE WAS WHEN I GET TIME I WOULD. INSPECTED FACALITY ON 7-22-83

NEW MEXICO OIL CONSERVATION COMMISSION
FIELD TRIP REPORT

INSPECTION	CLASSIFICATION	FACILITY	HOURS	QUARTER HOURS

Name RONALD M. CASTLEBERRY Date 3-28-83 Miles _____ District _____

Time of Departure _____ Time of Return _____ Car No. _____

In the space below indicate the purpose of the trip and the duties performed, listing wells or leases visited and any action taken.

Signature _____

Brine Facility--C.W. Trainer Marathon Road Water Station in Sec 25, T19, R34.

Seven photos were taken on an inspection of the above facility and water well supply located 23 miles west of Hobbs on the Marathon Road and Carlsbad highway.

The construction company and workers that are working on the Carlsbad highway project are camped near the above water station. The company using the fresh water is KNC Inc. P.O. Box 14627 Albuquerque NM or P.O. Box 5089, Hobbs, NM, and construction foreman in charge is Mr. Bob Spyes.

Both fresh water and brine water holding ponds are in good shape and lined with a PVC liner. The outer area of the water station, including the workers mobil homes, appear to be fairly good shape and no spills or other contaminants were observed.

Additional photos were taken of the Gulf Oil Corp. Pearl Queen Water supply #1 in 3-19-36, and a photo of the St. Clair Superior Fed lease SWD #7 in 25-19-34. This well is approximately 1/4 mile north of Marathon Road water station.

Photos have a brief statement as to what is pictured.

Mileage	Per Diem	Hours
UIC _____	UIC _____	UIC _____
RFA _____	RFA _____	RFA _____
Other _____	Other _____	Other _____

TYPE INSPECTION PERFORMED

H = Housekeeping
P = Plugging
C = Plugging Cleanup
T = Well Test
R = Repair/Workover
F = Waterflow
M = Mishap or Spill
W = Water Contamination
O = Other

INSPECTION CLASSIFICATION

U = Underground Injection Control - Any inspection of or related to injection project, facility, or well or resulting from injection into any well. (SWD, 2ndry injection and production wells, water flows or pressure tests, surface injection equipment, plugging, etc.)

R = Inspections relating to Reclamation Fund Activity

O = Other - Inspections not related to injection or The Reclamation Fund

E = Indicates some form of enforcement action taken in the field (show immediately below the letter U, R or O)

NATURE OF SPECIFIC WELL OR FACILITY INSPECTED

D = Drilling
P = Production
I = Injection
C = Combined prod. inj. operations
S = SWD
U = Underground Storage
G = General Operation
F = Facility or location
M = Meeting
O = Other

Contamination Complaint

SNYDER RANCHES, LTD.
P. O. BOX 726
LOVINGTON, NEW MEXICO 88260

LARRY C. SQUIRES
Partner

Telephone
505 393-7544

March 14, 1983

Mr. Joe Ramey
Energy and Minerals Department
Oil Conservation Division
Post Office Box 2088
Santa Fe, New Mexico 87501

Dear Mr. Ramey:

It has come to my attention that Marathon Water Station, located SW/4, SE/4 of Section 25, Township 19 South, Range 34 East, Lea County, New Mexico, is operating a lined brine pit without an approved leak detection system required by your office.

It is my understanding that the New Mexico Oil Conservation Division requires a permit to install such a facility to insure that no leakage will occur, or be able to recognize it when in fact a leak does occur, so it can be repaired immediately.

Mr. C. W. Trainer, owner of Marathon Water Station, tells me that he did not install such a system, and that it is not needed, because he can tell whether or not it leaks. It is my opinion that he cannot tell when a leak occurs, nor does he care if it does occur.

We have two water wells and one surface water facility in the immediate area that needs the added protection of a leak detection system.

Mr. Trainer's brine well located approximately in the SE/4, SE/4 of Section 25, Township 19 South, Range 34 East, has an unlined pit located adjacent to it where he routinely blows down his brine well. This practice is destroying the vegetation on the surface and also jeopardizes the fresh water aquifers in the area.

Other water station operators in the area have gone to considerable expense putting in leak detection systems and lining emergency pits in order to obtain the proper

permits. I do not understand why he is not being required to follow the same rules.

Please have your field people check the pits. If detection equipment has not been installed as required, we hereby request that the Department see that Mr. Trainer's installation complies with the law. This is necessary in order to protect our ranch properties.

I would appreciate your comments on this matter at your earliest convenience.

Very truly yours

SNYDER RANCHES, LTD.

By: Jim Squires

Larry C. Squires, Manager

LCS/b

cc: Mr. Jerry Sexton
cc: Mr. Oscar Simpson
cc: Mr. Jim McCormick
cc: Mr. C. W. Trainer

MARATHON ROAD WATER STATION
Lea County, New Mexico
Brine and Fresh Water

February 10, 1983

State of New Mexico
Energy and Minerals Department
Oil Conservation Division
Post Office Box 2088
Santa Fe, NM 87501

Mr. Joe Ramey, Division Director

RE: Your letter of January 4, 1983-Request for Discharge Plan for our Brine Facility and Well(s) in Section 25, Township 19 South, Range 34 East, NMPM, Lea County, NM

Dear Joe:

This letter is to transmit our "proposed discharge plan" to comply with the Water Quality Control Commission regulations Section 3-106(c).

1. Quantity, quality and flow characteristics of the discharge--We have no intentional discharge. We make brine water and intend to sell every barrel. So far we have not spilled any brine water. Our brine pit is lined with 39 mil nylon reinforced plastic that does not leak. We check the pit level daily to be sure it does not leak. It is large enough that we have no danger of overflow. Our brine well and pipeline have no leaks either.

2. We have no discharge. We have a new fresh water storage pit beside our brine pit. There are no other bodies of water, water courses, ground water discharge site, existing or proposed wells within one mile of our 240 acres. (SE/4 and E/2 SW/4 Sec. 25-19S-34E)

3. There is no ground water in this area. Our water wells are 15 miles east.

4. There is no flood hazard at our site.

5. Our lined pit is 140' square and 10' deep and holds 25,700 barrels in the bottom 9'. We know it does not leak because the level does not change between withdrawals or fillups. We sample at our truck loading facility.

6. Depth of Red Bed is about 150'; no Ogallalla water sands are present.

7. We have no additional information.

8. We don't need any disposal or extraction wells.

We trust this is all the information required to file our discharge plan. Thank you for your help.

Sincerely,

C. W. Trainer

CC: Oscar Simpson
Jerry Sexton-Hobbs Disctrict Office
Terry Jan Trainer-Marathon Road Water Station

answering service — Is this #

9205 Highway 71 West • Austin, Texas 78735-8099 • ~~(512)288-3423~~ or (512)443-4257 or (512)288-2613
C. W. Trainer, general partner • Randall Mark Trainer, managing partner

STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

January 4, 1983

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

C. W. Triner
9205 HWY 71 West
Austin, Texas 78736

RE: Request for Discharge Plan for your Brine Facility and Well(s) in Section 25, Township 19 South, Range 34 East, NMPM, Lea County, NM

Dear Sir:

Under the provisions of the Water Quality Conrol Commission (WQCC) regulations, you are hereby notified that the filing of a discharge plan for your brine well is required.

On September 20, 1982, Part 5, Water Quality Control -- Underground Injection, pages 41-70, a new section to the WQCC regulations became effective.

The Oil Conservation Division classifies your type of operation as an in situ extraction process whereby injection well(s) are used for mineral (salt) extraction. Please refer to the definition of "in situ extraction well" in Section 1-101.cc. page 4 of the regulations.

On pages 24 and 25 of the Water Quality Control Commission regulations (WQCC) in Section 3-106 (c) there are eight questions that must be addressed and incorporated in your discharge plan. Please follow the outline by supplying a descriptive and detailed narrative for each of these items. You will have to comply with Parts 3 and 5. The other operators only had to comply with Part 3 because their discharge plans could be approved before December 20, 1982. A 90-day grace period was given to existing operators in which to submit and have approved a discharge plan. This 90-day period allowed present operators to come under only Part 3 instead of both 3 and 5.

If you have any questions on this matter, please do not hesitate to call Oscar Simpson at (505) 827-5822. Mr. Simpson has been assigned the responsibility for review of all discharge plans and can be very helpful with any filing you make.

Sincerely,

Joe D. Ramey
Division Director

JDR/OS/dp

Enc.

cc: Hobbs District Office

MARATHON ROAD WATER STATION
Lea County, New Mexico
Brine and Fresh Water

April 14, 1982

Oil Conservation Commission
Box 2088
Santa Fe, NM 87501

Attn: Mr. Joe Ramey

Dear Mr. Ramey:

Enclosed is the "Windmill Map" we discussed in the vicinity of our brine pit, water station, and brine supply well. I think the locations are accurate to within ¼ mile. I spotted them by eyeball from nearby oilwells with proper location signs. I don't know if any of them are producing water now or not, but two or three of them were turning.

It has always been common knowledge in this area that there is practically no shallow water. Mark Smith, rancher, lives a few miles northwest, and ranches west and southwest. I am pretty sure he will agree. He invited us to pipe water across any of his pastures so he could get stock water from us.

We respectfully request that we not be required to install the sensors. Our pit does not leak and never has. It now has a thick layer of salt deposited on the plastic liner. This protective layer of salt would tend to seal any leak that might occur. Our pit liner is 39 mils thick with nylon reinforcing strings on small mesh. It is the most expensive, and supposedly the best we could buy. It was installed in 3 pieces, but is now permanently glued together into one 150' square piece. We would be inviting future leaks to try to remove it to install the sensors.

Perhaps we could periodically test for leaks for you by carefully observing the pit level for a period of time with no additions or withdrawals from the pit.

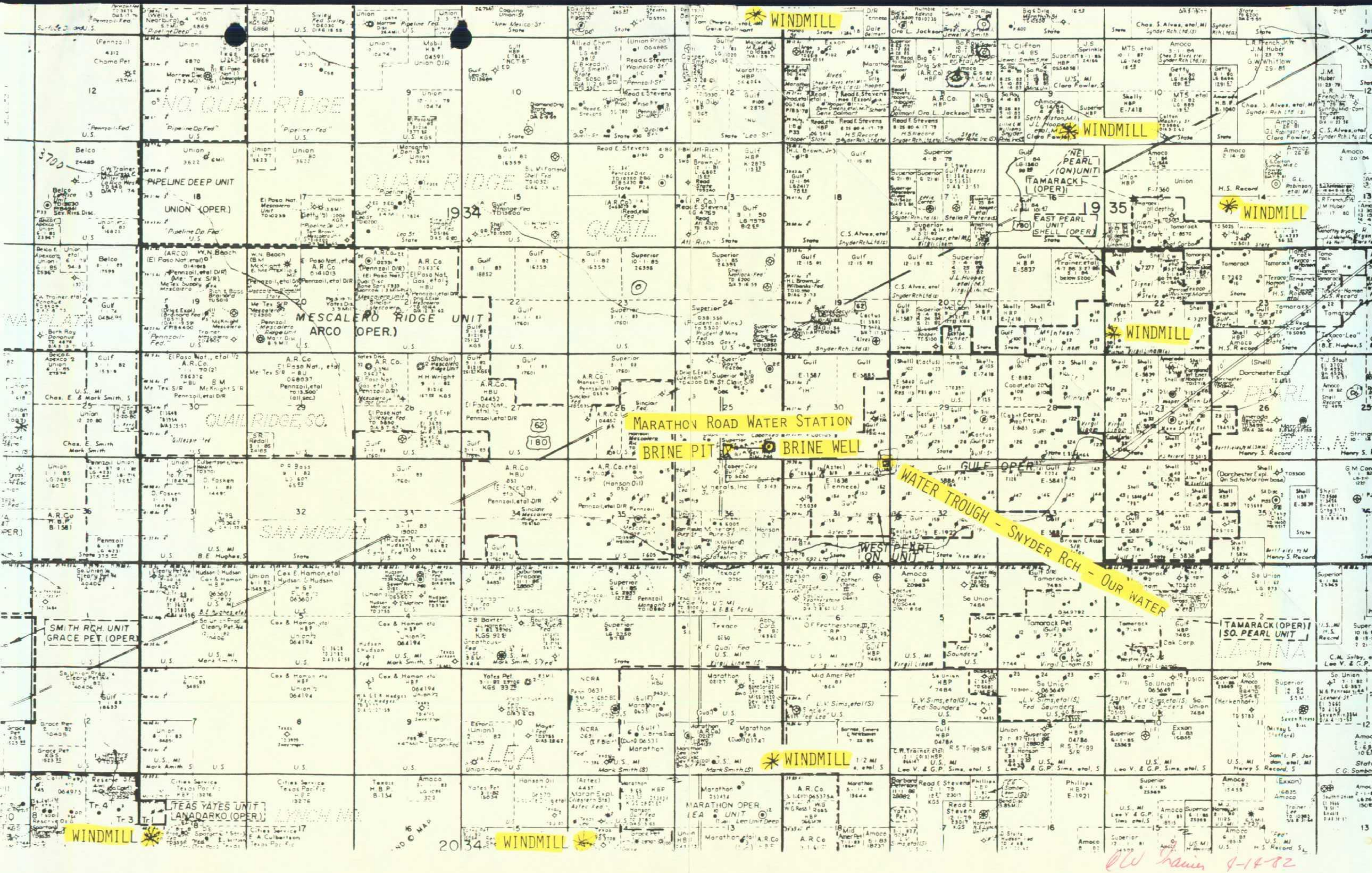
Thank you for any consideration you give our request.

Sincerely,

C W Trainer

Enclosures
xc: Les Clements
John Burleson

9205 Highway 71 West • Austin, Texas 78735-8099 • (512)288-3423 or (512)443-4257 or (512)288-2613
C. W. Trainer, general partner • Randall Mark Trainer, managing partner


WINDMILL
NO. QUAIL RIDGE
PIPELINE DEEP UNIT
UNION (OPER.)
QUAIL RIDGE
1934
QUAIL
NE PEARL (ON) UNIT
TAMARACK (OPER.)
EAST PEARL UNIT
SHELL (OPER.)
1935
MESCALERO RIDGE UNIT
ARCO (OPER.)
QUAIL RIDGE, SO.
Marathon Road Water Station
BRINE PIT
BRINE WELL
WATER TROUGH - SNYDER RCH - OUR WATER
GULF (OPER.)
WEST PEARL ON UNIT
SAN MIGUEL
PEARL
SMITH RCH. UNIT
GRACE PET. (OPER.)
TAMARACK (OPER.)
SO. PEARL UNIT
LEA
TEAS YATES UNIT
LANADARKO (OPER.)
MARATHON OPER.
LEA UNIT
2034
OW Haines 9-14-82

SNYDER RANCHES, LTD.

LARRY C. SQUIRES
Partner

P. O. BOX 726
LOVINGTON, NEW MEXICO 88260

Telephone
505 393-7544

March 14, 1983

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Energy and Minerals Department
Oil Conservation Division
Post Office Box 2088
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I would appreciate your comments on this matter at your earliest convenience.

Very truly yours

SNYDER RANCHES, LTD.

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