

GW - 57

**GENERAL
CORRESPONDENCE**

YEAR(S):

2000 - 10/25

Kieling, Martyne

From: Kieling, Martyne
Sent: Tuesday, October 31, 2000 10:22 AM
To: 'george.friend@amec.com'
Subject: Araho Inc.

George,

I Thought I would try this method of sending you some information on Araho. We have some pictures on file that I will attach I hope you are able to open them. I will fax the maps to you. I have arrowed the road leading in and circled the approximate area. The pit is on the north side of the tanks. The Lock on the gate is now OCD's and Chris Williams of our District office has the Key. Again if at all possible I will be on site for the drilling of the Monitor well and will be available to go out to Araho with you.

We are looking for an estimate on how much it would be to remove the pit contents and liner for disposal at an OCD approved site and to back fill the hole and/or level the clean berm material on site. It is my understanding that the pit is on the ground surface and the berms were constructed above the original surface .

Investigations done by Navajo Refining showed that the ~~berm~~ has not leaked.



Pict0800.doc

Araho Inc.
Location is SE/4 Section 1, T 17 S, R 36 E

Surface is City of Lovington Contact is Bob Carter (505) 396-2884

Thanks
Martyne

New Program Initiatives – non-recurring expenditures.

SUMMARY

From 1974 to 1993 Araho Inc. operated an oilfield treating plant facility and injection well, located 5 miles south of Lovington, New Mexico, (Section 1, Township 17 south, Range 36 East, NMPM, Lea County. The facility is located above the Ogallala Formation, which is the primary source of drinking water for the city of Lovington. Groundwater is estimated to be approximately 50 feet below ground surface.

The facility contains: (see attached photos)

1. One 150 ft. by 150 ft. lined pit containing approximately 3333 cubic yards of water, sludge and oil that overflows on to the ground surface with each precipitation event;
2. Eight above ground storage tanks containing approximately 1,600 barrels of fluids and sludge;
3. Approximately 1000 feet of buried pipe; and
4. Surface trash including 15 barrels.

During a preliminary investigation in October 2000, four boreholes were drilled through the subsurface to ground water. The investigation revealed that the liner beneath the pit appears to be still intact and groundwater has not been impacted. However, when it rains the pond and an open-top tank overflow onto the ground surface. The New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division is concerned that if the facility is left in its present condition, ground water and the water supply for the city of Lovington could be impacted in the future.

PERFORMANCE GOALS

This investigation, cleanup, and restoration project would be protective of ground water supplies and therefore would advance the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division performance goal of Protection of Healthy Ecosystems. "The purpose of the healthy ecosystem program is to protect ecosystems throughout the state by identifying at-risk areas; preventing additional damage; and restoring damaged areas."

COST

The total cost for this project is estimated to be \$434,000. The cost break down is as follows:

Remove fluid/sludge from tanks and pit. Dismantle tanks and recycle/dispose of tanks, pipe, drums and pit liner. Excavate and transport 1000 cubic yards of visually known contaminated soil. Collect soil samples for analysis. \$196,000.

Excavate, transport and dispose of 6,453 cubic yards of contaminated soil from leaks below the pit, tanks and underground pipes. \$233,000.

Analysis of soil samples \$5,000.

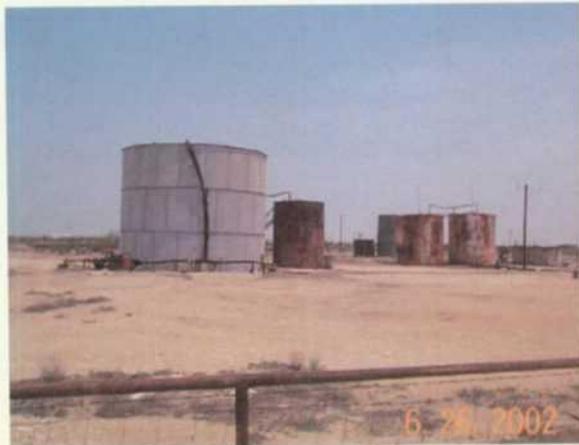


Photo 1: June 26, 2002



Photo 4: June 26, 2002



Photo 2: June 26, 2002

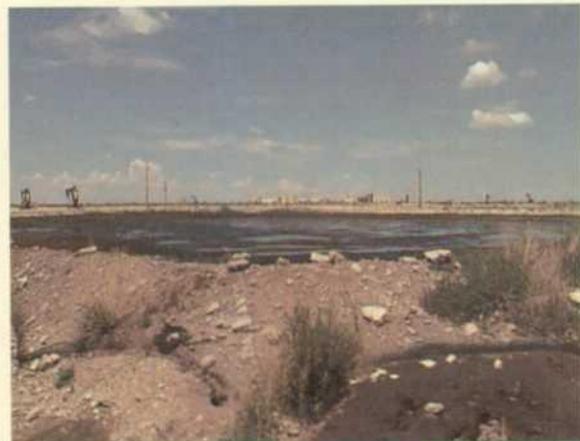


Photo 5: August 2000



Photo 3: June 26, 2002



Photo 6: August 2000



Photo 7: August 2000



Photo 10: August 2000



Photo 8: August 2000



Photo 9: August 2000

OIL CONSERVATION DIVISION

**2040 South Pacheco
Santa Fe, NM 87505
(505) 827-7133
Fax: (505) 827-8177**



(PLEASE DELIVER THIS FAX)

To: George Friend (505) 821-7371

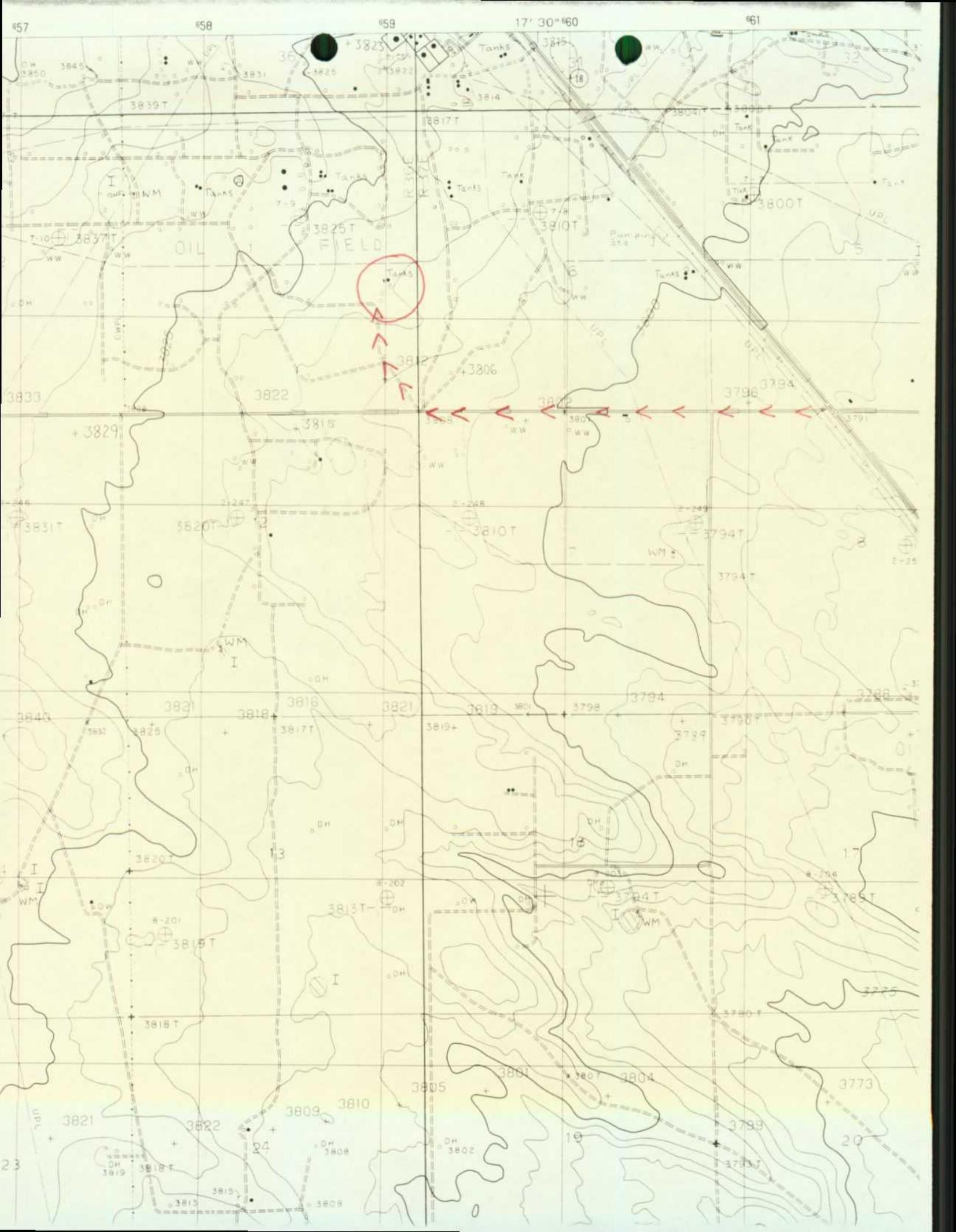
From: Martynne Kieling 505 827 7153

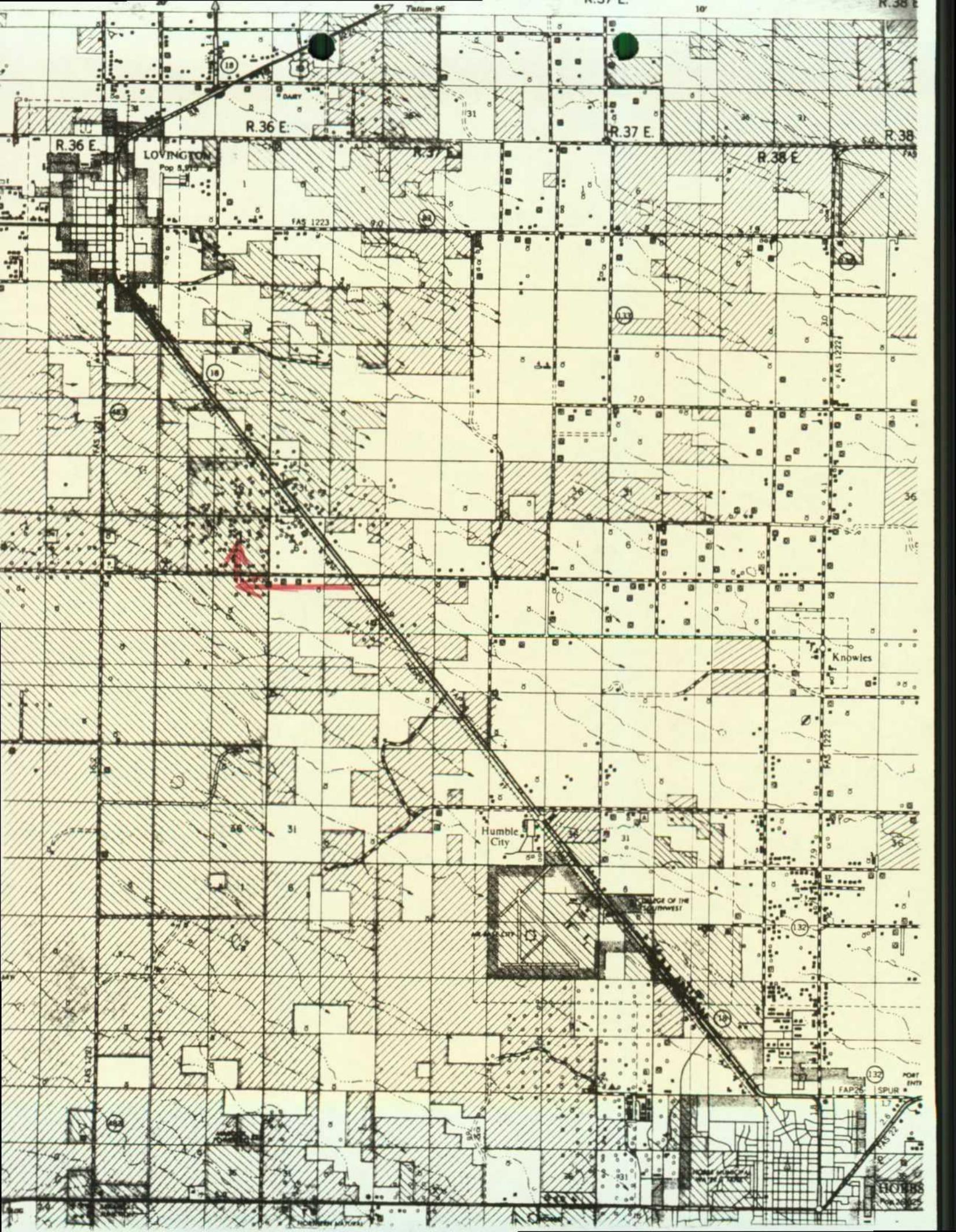
Date: 10-31-00

Number of Pages (Includes Cover Sheet) 1 of 3

Message: Araho Inc. Map

**If you have any trouble receiving this, please call:
(505) 827-7133**





R. 36 E.

R. 37 E.

R. 38 E.

LOVINGTON
Pop. 5,973

R. 38 E.

FAS 1223

FAS 1222

Knowles

Humble City

VILLAGE OF THE
SOUTHWEST

PORT
SPUR

HOBBS

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

MEMORANDUM OF MEETING OR CONVERSATION

Telephone Personal Time 8:44 Date 9-25-00
Left message

Originating Party

Martynne Kieeling

Other Parties

Bob Carter

Livingston City Manager

(505) 396-2884

Subject

Archo - That Navajo Refining will be
comming on site Oct 2nd to Drill some
Bores holes

Discussion

Conclusions or Agreements

Distribution

Signed



Photo 1 August 2000



Photo 4 August 2000



Photo 2 August 2000



Photo 5 August 2000



Photo 3 August 2000



Photo 6 August 2000



Photo 7 August 2000



Photo 10 August 2000



Photo 8 August 2000



Photo 11 August 2000



Photo 9 August 2000



Photo 12 August 2000



Photo 13 August 2000



Photo 16 August 2000



Photo 14 August 2000



Photo 17 August 2000



Photo 15 August 2000



Photo 18 August 2000

Araho, Inc.
Section 1, Township 17 South, Range 36 East
Photos Taken By Darrell Moore of Navajo

Page 4



Photo 19 August 2000



Photo 1 August 2000



Photo 4 August 2000



Photo 2 August 2000



Photo 5 August 2000



Photo 3 August 2000



Photo 6 August 2000



Photo 7 August 2000



Photo 10 August 2000



Photo 8 August 2000



Photo 11 August 2000



Photo 9 August 2000



Photo 12 August 2000



Photo 13 August 2000



Photo 16 August 2000



Photo 14 August 2000



Photo 17 August 2000



Photo 15 August 2000



Photo 18 August 2000

Araho, Inc.
Section 1, Township 17 South, Range 36 East
Photos Taken By Darrell Moore of Navajo

Page 4



Photo 19 August 2000

Kieling, Martyne

From: Darrell Moore [darrell@navajo-refining.com]
Sent: Monday, July 15, 2002 7:13 AM
To: Kieling, Martyne
Subject: RE: ARAHO Pit Investigation

Martine,

I haven't forgotten you. We just finished a week long audit and I should have some time today or tomorrow to get that info for you.

Darrell

-----Original Message-----

From: Kieling, Martyne [mailto:MKieling@state.nm.us]
Sent: Monday, July 01, 2002 2:37 PM
To: Darrell Moore
Subject: ARAHO Pit Investigation

Darrell,

This is a follow-up to our phone conversation today regarding Navajo's investigation of the Araho pit located in the SE/4 Section 1, T17S, R36E. If you could locate any data regarding Navajo's Investigation of October 2000 I would greatly appreciate it.

Thanks so much for your time and consideration in this matter.

Martyne J. Kieling
Martyne J. Kieling
Environmental Geologist

DOROTHY RUNNELS
8100 WEST ALABAMA
HOBBS, NEW MEXICO 88240
(505) 392-6223

JUL 12 2000

June 30, 2000

Mr. Roger Anderson
Environmental Bureau Chief
NM Energy, Minerals & Natural Resources Dept.
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505

Re: Araho, Inc.
SE/4 of Section 1, Township 17 South, Range 36 East,
NMPM, Lea County, New Mexico

Dear Mr. Anderson:

I received your letter of May 24, 2000 requiring an abatement plan for the aforementioned disposal facility. You mentioned that the OCD's records indicated two letters sent out in 1998 had not been answered. I only received one of those letters and while I did not personally answer it, I promptly turned it over to the City of Lovington who owns the surface rights to the property in question. I assumed, since I received no follow up correspondence from you that the matter has been taken care of.

Mr. Anderson, Araho, Inc. is a defunct corporation. It has no assets and no sources of income with which to pay for an abatement of the pollution your letter indicates is present at the site. Araho, Inc. has been closed for a number of years and all the records of the company are stored in warehouses. In my hurry to respond to your letter in the time allotted, I cannot lay my hands on them right this minute but, if you require financial statements or the last tax return of Araho, I will put forth the effort to find them.

When Araho, Inc. shut down this disposal facility I plugged the well with the help of Greenhill Petroleum and have managed to comply with the order to put netting over the pit. But, because Araho is closed and not generating any income I have not been able to secure the funds to do any major work there.

I am appealing to you and the OCD for your help in resolving this problem. I will be most amenable to any suggestions you may have.

Sincerely,

A handwritten signature in cursive script that reads "Dorothy Runnels". The signature is written in black ink and is positioned above the printed name.

Dorothy Runnels

Cc: Chris Williams
OCD District 1, Hobbs, NM

Mark Sanchez, Esq.



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

May 24, 2000

Lori Wrotenbery
Director
Oil Conservation Division

CERTIFIED MAIL
RETURN RECEIPT NO. Z-559-573-312

Ms. Dorothy Runnels
Araho, Inc.
8100 West Alabama
Hobbs, NM 88242

Re: Notice of requirement to submit abatement plan
Araho, Inc.
SE/4 of Section 1, Township 17 South, Range 36 East, NMPM
Lea County, New Mexico

Dear Ms. Runnels:

The New Mexico Oil Conservation Division ("OCD") hereby notifies you that Araho, Inc. must submit an abatement plan proposal for Araho's facility in the SE/4 of Section 1, Township 17 South, Range 36 East, NMPM, Lea County, New Mexico pursuant to the Oil and Gas Act, NMSA 1978 §§ 70-2-1 through 70-2-38 and 19 NMAC 15.A.19. The abatement plan proposal must be submitted to OCD within 60 days of receipt of this notice. The abatement plan proposal must address all aspects of site investigation including the submittal of a final investigation report.

OCD's records indicate letters dated June 11, 1998, and December 9, 1998, were sent to Araho, Inc. in care of you regarding the necessity of abating pollution at this site. OCD is not aware of any action taken at the site in response to these letters. OCD's preliminary investigation determined the Araho facility is located above the City of Lovington's city water supply. To protect public health and the environment, the Araho facility, including the lined pit, tanks, equipment, valve sumps and contaminated soils must be cleaned up. If you have any questions regarding the required abatement proposal, please contact Martyne Kieling at (505) 827-7153.

NMSA 1978 § 70-2-31 provides penalties for the violation of the Oil and Gas Act or any provision of any rule or order issued pursuant to that act.

Sincerely,

Roger C. Anderson,
Environmental Bureau Chief

xc: OCD District I, Hobbs, NM
Mark Sanchez, Esq.

Dorothy Runnels
8100 W. Alabama
Hobbs, NM 88240
Phone 392-6223
Fax 397-4993

facsimile transmittal

To: Roger Anderson

Fax: 505 827-8177

From: Dorothy Runnels

Date: 04/26/00

Re: Araho, Inc.

Pages: 10

CC:

Urgent

For Review

Please Comment

Please Reply

Please Recycle

Roger: attached is the letter and the copies of documents I spoke with you about. Also, I am sorry to relate to you that Araho has been closed for over 10 years now and there are no funds for clean-up, nor is there any source of such funds for me to draw on. Any help you can suggest is greatly appreciated. DR

Dorothy Runnels
8100 W. Alabama
Hobbs, NM 88240

April 25, 2000

Mr. Roger Anderson
Oil Conservation Division
2040 S. Pacheco
Santa Fe, NM 87505

Dear Mr. Anderson:

It has recently come to my attention that Araho, Inc. is still a viable New Mexico Corporation despite my many attempts to dissolve it.

I have filed, in duplicate, the necessary papers to dissolve this corporation (copies enclosed). For one reason or another they were returned to me twice. I complied with all new instructions and returned them with the required filing fees. I never heard from the State Corporation Commission or the new Public Regulation Commission so I assumed that the corporation had been dissolved.

Araho, Inc. has been closed since 1989. There are no assets or liabilities and there has been no activity at that location since that time. The well was plugged by Araho, Inc. and Greenhill Petroleum in 1994.

I am asking for your help in resolving this matter. If you think it would help, I am willing to come to Santa Fe and walk the necessary papers through the Public Regulation Commission.

For your information, I am faxing you this letter and copies of all my correspondence concerning the closure of this company. I would sincerely appreciate any advice you can give me in this matter.

Sincerely,

Dorothy Runnels

Anderson, Roger

From: Smith.Melissa@epamail.epa.gov[SMTP:Smith.Melissa@epamail.epa.gov]
Sent: Friday, March 31, 2000 8:55 AM
To: Anderson, Roger
Subject: update



JPEG File

Interchange.jpeg



JPEG File

Interchange.jpeg



3007.wpd

Hi Roger! I'm finally back at work (after 5 long months! I was wondering if I would still have a desk to come back to). I was planning to be back in January but my baby (Tyler) got sick and I had to keep him home for 2 more months. (of course I had to send you a couple of pictures since I'm a proud momma!)

Anyway....here is the letter (FINALLY) that I would like to send to Araho to try to clear up what's out there. Please let me know if you have any comments or suggestions.

Do you have time next week to talk about what's happening at the other sites? I'm available all week except from 10-11 on Tuesday (4/4).

Have a good weekend,
Melissa

(See attached file: 008_8.jpg)(See attached file: 023_23.jpg)(See attached file: 3007.wpd)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE
DALLAS, TEXAS 75202-2733

CERTIFIED MAIL: RETURN RECEIPT REQUESTED P xxx xxx xxx

Ms. Dorothy Runnels, President
Araho, Inc.
8100 W. Alabama
Hobbs, NM 88240

Re: Request for Information Pursuant to Section 3007 of RCRA, 42 U.S.C. §6927.

Dear Ms. Runnels:

Activities associated with the waste management practices of the Araho, Inc. ("Araho") facility, located 5 miles southeast of Lovington, New Mexico, (Section 1, Township 17S, Range 36E) have prompted the U.S. Environmental Protection Agency (EPA) to request additional information regarding the operation of that facility. Specifically, we have reviewed information obtained during a Compliance Evaluation Inspection conducted on November 3, 1998, (the "CEI") which identified some concerns about environmental conditions at the site.

Please assist us in determining the significance of these concerns by responding within 30 calendar days of the receipt of this letter to the questions listed in Enclosure A. Your responses to the questions with all available supporting documents, and an executed copy of Enclosure B should be mailed to the following address:

Carol Peters-Wagnon, Chief
ALONM Section (6EN-HS)
Compliance Assurance and Enforcement Division
U.S. Environmental Protection Agency
1445 Ross Avenue
Dallas, TX 75202-2733

ATTN: Melissa Smith

Please refer to the "Instructions" and "Definitions" portions of Enclosure A for guidance in the preparation of your responses to the Questions.

If you have any questions relating to this Information Request, you may consult with EPA prior to the time specified above. You may contact Ms. Melissa Smith at the above address and at (214) 665-7357. Ms. Marcia Moncrieffe is the attorney assigned to this matter. She may be contacted at (214) 665-7343. Thank you for your cooperation in this matter, and we look forward to working with you.

Sincerely yours,

Mark W. Potts, Chief
Hazardous Waste Enforcement Branch

Enclosure

cc: Mr. Roger Anderson
New Mexico Oil Conservation Division

Ms. Debbie Brinkerhoof
New Mexico Environment Department

6EN-HS:MLSmith:x7357:10/06/99:L:\mlsmith\pops\nm\inspecti\araho\3007.wpd

6RC-EW	6EN-HS	6EN-H
Moncrieffe	Peters-Wagnon	Morgan

ENCLOSURE A

Araho, Inc.

FIRST INFORMATION REQUEST

GENERAL

Pursuant to § 3007 of the Resource Conservation and Recovery Act of 1976 (RCRA), as amended, 42 U.S.C. § 6927, any person who generates, stores, treats, transports or otherwise handles, or has handled, hazardous wastes shall, upon request of any officer or employee of EPA, furnish information relating to such wastes.

Compliance with this Information Request is mandatory. Failure to respond fully and truthfully to the Information Request, or to adequately justify such failure to respond, can result in enforcement action by EPA pursuant to § 3008 of RCRA. This statute permits EPA to seek the imposition of penalties of up to \$27,500 for each day of non-compliance. You are further advised that submittal of false, fictitious, or fraudulent information, or the knowing omission of pertinent information may subject you to additional penalties under § 3008(d)(3) of RCRA, 42 U.S.C. § 6928(d)(3).

This Information Request is not subject to the approval requirements of the Paperwork Reduction Act of 1980, 44 U.S.C. § 3501, *et seq.*

Instructions

1. Please provide a separate narrative response to each and every question and subpart of a question set forth in this Information Request.
2. Precede each answer with the text and the number of the question to which it corresponds.
3. Identify the person(s) answering the questions on behalf of Respondent.
4. For each and every question contained herein, identify all persons consulted in the preparation of the answer.
5. For each and every question contained herein, identify all documents consulted, examined, or referred to in the preparation of the answer or that contain information responsive to the question and provide true and accurate copies of all such documents.
6. The Affidavit in Enclosure B must be filled out and submitted along with your responses to this Information Request Letter.

7. If information or documents not known or not available to you as of the date of submission of a response to this Information Request should later become known or available to you, you must supplement your response to EPA. Moreover, should you find, at any time after the submission of your response that any portion of the submitted information is false or misrepresents the truth, you must notify EPA of this fact as soon as possible and provide EPA with a corrected response.
8. For each document produced in response to this Information Request, indicate on the document, or in some other reasonable manner, the number of the question to which it responds.
9. In accordance with § 3007 of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. § 6927, the information requested herein must be provided even though the Respondent may contend that it includes possibly confidential information or trade secrets. You may, if you desire, assert a confidentiality claim covering part or all of the information submitted in accordance with 40 C.F.R. Part 2, Subpart B [originally published in the Federal Register at 41 Fed. Reg. 36902 (September 1, 1976), and amended at 43 Fed. Reg. 40000 (September 8, 1978), and 50 Fed. Reg. 51661 (December 18, 1985)]. Unless you make a claim at the time that you submit the information, it may be made available to the public by EPA without further notice to you. If you wish to assert a business confidentiality claim, you must clearly mark each page of each document included in your claim with a legend such as "trade secret", "proprietary", or "company confidential".

If you claim information submitted in response to this request as confidential, you must also provide a redacted version of the information with all confidential business information deleted.

DEFINITIONS

The following definitions shall apply to the following words as they appear in this Enclosure A:

1. The term "you" or "Respondent" shall mean the addressee of this Request, the addressee's officers, managers, employees, contractors, trustees, partners, successors, assigns, and agents.
2. The term "person" shall have the same definition as in Section 1004 (15) of RCRA meaning an individual, trust, firm, joint stock company, corporation (including a government corporation), partnership, association, State, municipality, commission, political subdivision of a State, or any interstate body.
3. The terms "Araho" or "facility" shall mean and include the property on or about the Araho site located 5 miles southeast of Lovington, New Mexico, on Highway 18 in Section 1, Township 17S, Range 36E..

4. The term "hazardous waste" shall have the same definition as that contained in Section 1004 (5) of RCRA and 40 CFR § 261.3.
5. The term "solid waste" shall have the same definition as that contained in Section 1004 (27) of RCRA and 40 CFR §261.2.
6. With respect to a natural person, the term "identify" means to set forth the person's name, present or last known business address and business telephone number, and present or last known job title, position or business.
7. The term "identify" means, with respect to a corporation, partnership, business trust or other association or business entity (including a sole proprietorship) to set forth its full name, address, legal form (e.g. corporation, partnership, etc.), type of organization and a brief description of its business.
8. The term "identify" means, with respect to a document, to provide its customary business description, its date, its number (invoice or purchase order number) if any, the identity of the author, addressor, addressee and/or recipient, and the substance or the subject matter of the document.
9. The terms "document" and "documents" shall mean any object that records, stores, or presents information, and includes writings of any kind, formal or informal, whether or not wholly or partially in handwriting, including by way of illustration and not by way of limitation, any invoice, manifest, bill of lading, receipt, endorsement, check, bank draft, canceled check, deposit slip, withdrawal slip, order, correspondence, record book, minutes, memorandum of telephone and other conversations including meetings, agreements and the like, diary, calendar, desk pad, scrapbook, notebook, bulletin, circular, form, pamphlet, statement, journal, postcard, letter, telegram, telex, report, notice, message, analysis, comparison, graph, chart, interoffice or intraoffice communications, photostat or other copy of any documents, microfilm or other film record, any photograph, sound recording on any type of device, any punch card, disc or disc pack, any tape or other type of memory generally associated with computers and data processing (together with the programming instructions and other written material necessary to use such punch card, disc, or disc pack, tape or other type of memory and together with printouts of such punch card, disc, or disc pack, tape or other type of memory); and (a) every copy of each document which is not an exact duplicate of a document which is produced, (b) every copy which has any writing, figure or notation, annotation or the like on it, (c) drafts of each document, (d) attachments to or enclosures with any document and (e) every document referred to in any other document.
10. The terms "and" and "or" shall be construed either disjunctively or conjunctively as necessary to bring within the scope of this Information Request any information which might otherwise be construed to be outside its scope.

11. The term "arrangement" means every separate contract or other agreement between two or more persons.
12. The term "sample" means the contents of any container which are analyzed by a laboratory for chemical content. The sample can be effluent, surface water, ground water, other liquid, sludge, sediment, soil, air, etc.
13. Words in the masculine shall be construed in the feminine, and vice versa, and words in the singular shall be construed in the plural, and vice versa, where appropriate in the context of a particular question or questions.
14. All terms not defined herein shall have their ordinary meaning, unless such terms are defined in RCRA or 40 C.F.R. Parts 260 - 268, in which case the statutory or regulatory definitions shall apply.

QUESTIONS

1. Provide the legal name and address of Araho, Inc (☒ Araho☒).
2. Provide documentation showing previous and present ownership of Araho.
3. Along with date(s), list the other companies which operated at this location.
4. Provide the name and address of Araho's current registered Agent for Service.
5. Provide the date and location of incorporation of Araho in New Mexico.
6. What is the affiliation, present and past, between Araho and the property located at Section 1, Township 17S, Range 36E (☒ Property☒).
7. Provide the latitude and longitude for the Property located at Section 1, Township 17S, Range 36E, if known.
8. Provide previous and present ownership of the Property and when the present ownership began.
9. If you are not the current owner of the Property, what contractual agreement do you have with the owner of the Property? Is the contractual agreement with the owner still effective?
10. Describe any arrangements and/or agreements between Araho and the City of Lovington.

11. On what date did Araho begin operating on the Property and how long has Araho been in operation at this location (Araho Facility)?
12. Identify the EPA Identification Number for the Araho Facility.
13. Provide copies of the three (3) most recent Annual or Biennial Hazardous Waste Reports for the Araho Facility.
14. Provide copies of the following relative to the Araho Facility:
 - a. Compliance Orders;
 - b. Notice of Violation letters;
 - c. Correspondence between Araho and the New Mexico Oil Conservation Division (NMOCD) and/or the New Mexico Environment Department (NMED) regarding waste management practices;
 - d. Permits;
 - e. Records of discrepancies between incoming material identified by the source and actual material received by Araho.
15. Describe the operations conducted at the Araho Facility.
16. Describe all waste management units (e.g. tanks, pits, wells) utilized at the Araho Facility. Include the dimensions, capacities, and composition (including linings) of those structures, and the use of the structures. Include a diagram of where these structures are or were located on the site. Provide copies of engineering certifications of the structures, if available.
17. For each material stored, treated, and/or disposed at the Araho Facility please provide the following information:
 - a. Identify the source of the material, including the company's name, address, and EPA identification number;
 - b. Identify the process or manner of generation of the material;
 - c. Provide copies of all manifests, logs, invoices, bills of lading, load tickets, and/or other shipping records which accompanied the relating shipments of incoming material for the last three (3) years that operations were conducted at the Araho Facility;

- d. Specifically state the source of information used to characterize the incoming material (e.g. sampling data, process knowledge). In addition, provide documentation of any determination performed by or on behalf of Araho (sampling results and process knowledge relating thereto). Provide copies of the documentation used to make these characterizations;
 - e. Describe the method by which the incoming material is treated, stored, disposed of, or otherwise managed.
18. For all wastes generated at the Araho Facility, provide the following information:
- a. Identify the process or manner of generation of the waste;
 - b. Specifically state the source of information used to characterize the waste (e.g. sampling data, process knowledge) and provide copies of documentation used to make these characterizations;
 - c. Describe the method by which the waste is treated, stored, disposed of, or otherwise managed. If the waste is sent off-site, provide copies of all manifests, logs, invoices, bills of lading, load tickets, and/or other shipping records which accompanied the relating shipments for the last three (3) years that operations occurred.
19. Several tanks and a pit were observed during the November 3, 1998, inspection (☒ Inspection☒). For each tank and pit present at the Araho Facility at the time of the inspection, identify the contents of each, including the following information:
- a. Identify the source of the material, including the company's name, address, and EPA identification number;
 - b. Identify the process or manner of generation of the material;
 - c. Provide copies of all manifests, logs, invoices, bills of lading, load tickets, and/or other shipping records which accompanied the relating shipments of material;
 - d. Specifically state the source of information used to characterize the material (e.g. sampling data,

process knowledge). In addition, provide documentation of any determination performed by or on behalf of Araho (sampling results and process knowledge relating thereto). Provide copies of the documentation used to make these characterizations;

- e. Describe the method by which the material was and/or will be treated, stored, disposed of, or otherwise managed.
20. Provide copies of the most recent 3 years of ground water monitoring data collected at the Araho Facility.
 21. Identify the proximity of the nearest residence to the Property.
 22. Identify the proximity of the nearest agricultural land to the Property. Identify what this land is currently used for (e.g. type of crop, cattle grazing).
 23. If known, identify all wells located within 1 mile, 2 miles, and 2.5 miles of the Property. For each well, provide the following information:
 - a. The depth of the well;
 - b. The intended use of the well (e.g. Domestic, agricultural, industrial);
 24. Identify the proximity to the Property of the nearest public water supply well.
 25. Since the time of the Inspection, describe changes that have taken place regarding conditions of the Property or the Araho Facility.

ENCLOSURE B

Araho, Inc.
5 miles Southeast of Lovington, NM
Section 1, Township 17S, Range 36E

STATEMENT OF CERTIFICATION

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 this information, I believe the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

(Signature)

(Title)

(Date)

Public Regulation Commission

4/24/2000

ARAHO, INC.

MAILING ADDRESS

8100 N. ALABAMA HOBBS NEW MEXICO 88240

SCC Number: 0789362**Tax & Revenue Number: 01797247007****INCORPORATED ON DECEMBER 12, 1973 , IN NEW MEXICO.****CORPORATION IS A DOMESTIC PROFIT****CORPORATION IN THE PROCESS OF REVOCATION****PURPOSE OF THE CORPORATION
OILFIELD SERVICES****CORPORATION DATES****Taxable Year End Date: 12/31/98 Filing Date: //**
Corporate Existence Expiration Date:**SUPPLEMENTAL POST MARK DATES****Supplemental: Name Change: Purpose Change:****PRINCIPAL ADDRESS**

8100 N. ALABAMA HOBBS NEW MEXICO 88240

PRINCIPAL ADDRESS(Outside New Mexico)**REGISTERED AGENT****DOROTHY RUNNELS**

8100 N. ALABAMA HOBBS NEW MEXICO 88240

Designation date: 05/02/98 Agent Post Mark Date: Resignation date:**COOP LICENSE INFORMATION****Number: Type: Expiration Year:****INCORPORATOR(S)****RUNNELS, DOROTHY NONE****RUNNELS, DOROTHY RUNNELS, DOROTHY****DIRECTORS****Date Election of Directors: 01/02/97**

RUNNELS , DOROTHY
8100 W. ALABAMA HOBBS , NM 88240

New Search Inquiry Page

STATE OF NEW MEXICO

FACSIMILE TRANSMITTAL SHEET

TO: WAYNE PRICE	FROM: DONNA WILLIAMS
FAX NUMBER: 505-827-8177	DATE: AUGUST 19, 1999
COMPANY: NMOCD-SANTA FE	TOTAL NO. OF PAGES INCLUDING COVER: 5
PHONE NUMBER: 505-827-7155	SENDER'S REFERENCE NUMBER:
RE: ARAHO, INC.	YOUR REFERENCE NUMBER: 505-393-6161 EXT...113

 URGENT FOR REVIEW PLEASE COMMENT PLEASE REPLY PLEASE RECYCLE

NOTES/COMMENTS:

WAYNE,

I AM SENDING YOU A FAX I RECEIVED TODAY FROM WANDA WHITE, SHE IS WITH THE CITY OF LOVINGTON. SHE CLAIMS THAT THE CITY OF LOVINGTON IS THE LAND OWNER AND THAT THEY KNEW NOTHING OF THIS SITE UNTIL YESTERDAY. I TOLD HER I WOULD FAX A COPY TO YOU AND THAT ROGER ANDERSON WILL LOOK AT THIS AS WELL. SHE IS LOOKING FOR SOME FUNDING. I AM NOT SURE AS THE STAND THAT THE STATE WILL TAKE AND I FIGURE YOU OR ROGER WILL TAKE CARE OF THIS. IF YOU NEED ANYTHING FROM ME LET ME KNOW. OK

DONNA



CITY OF LOVINGTON

LOVINGTON, NEW MEXICO 88260

214 South Love
PO Box 1269
BUS: (505) 396-2884
FAX: (505) 396-6128

August 18, 1999

Carol D. Peters-Wagon, Chief ALONM Section
Hazardous Waste Enforcement Branch
United State Environmental Protection Agency Region 6
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Dear Ms. Peters-Wagon:

It has come to my attention there are significant problems with a disposal well located 5 miles southeast of Lovington, New Mexico on Highway 18 in Section 1, Township 17S, Range 36E that is owned by Araho, Inc. Dorothy Runnels is the President of Araho, Inc. but the well is located on City of Lovington property. This location for the site was approved by New Mexico Oil Conservation Division some years ago.

The disposal well is no longer in operation and Mrs. Runnels, who is a widow in her seventies, does not have funds to cleanup the site. The City of Lovington does not have a lease with Mrs. Runnels for this site. Therefore, the City of Lovington will be requesting funding for assistance in cleaning up the site and removing debris from the property.

If you can assist us in any way to resolve this matter, please let us know at the letterhead address.

Sincerely,

A handwritten signature in cursive script that reads "Bob G. Carter".

Bob G. Carter
City Manager

BGC:wkw

Capitol of Lea County - Rich in Oil, Cattle, Cotton and People



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

JUL 26 1999

Ms. Dorothy Runnels, President
Araho, Inc.
8100 W. Alabama
Hobbs, NM 88240

Dear Ms. Runnels:

Enclosed you will find a copy of the Compliance Evaluation Inspection (CEI) report as compiled by the U.S. Environmental Protection Agency (EPA) for the inspection conducted at Araho, Inc., on November 3, 1998. The inspection was conducted by a team of inspectors representing the U.S. Environmental Protection Agency (EPA), New Mexico Oil Conservation Division (NMOCD), U.S. Fish and Wildlife Service (FWS), and U.S. Bureau of Land Management (BLM). The purpose of the inspection was to follow-up on an aerial survey conducted by the FWS. The FWS previously identified the Araho site through aerial surveys as having pits or structures which, from the air, appeared to pose a threat to migratory birds. The purpose of the inspection was to follow-up on the aerial survey and determine if any pits or structures at the Araho facility pose a threat to human health or the environment (including wildlife), and to determine if any wastes were being handled at the site which may be subject to the Resource Conservation and Recovery Act (RCRA) regulations regarding hazardous waste management.

The CEI report indicates that there are some concerns about the conditions of the pits and structures at the facility. A copy of this report has also been sent to the New Mexico Oil Conservation Division (NMOCD) in Santa Fe, New Mexico. Please be advised that EPA will be consulting with the NMOCD regarding the concerns identified at your facility and will be communicating with you shortly concerning resolution of those concerns.

If you have any questions concerning the CEI conducted at your facility on November 3, 1998, you may contact Ms. Melissa Smith of my staff at (214) 665-7357.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Carol D. Peters-Wagnon".

Carol D. Peters-Wagnon, Chief
ALONM Section
Hazardous Waste Enforcement Branch

Enclosure

**Inspection Report
Araho, Inc.
Lea County, NM**

Inspection Date: November 3, 1998
EPA ID Number: none
Facility Name: Araho, Inc.
Physical Location: 5 Miles southeast of Lovington on Highway 18
N 32° 51.736' W 103° 18.060'
Section 1, Township 17S, Range 36E
Mailing Address: P.O. Box 983, Hobbs, New Mexico, 88240
Type of Ownership: private

Inspection Participants:

Lead EPA Inspector: Melissa Smith (214) 665-7357 **Initials:** MLS

Other Participants:

Roger Anderson	New Mexico Oil Conservation Division	(505) 827-7152
Doug McKenna	U.S. Fish and Wildlife Service	(505) 589-2823
Greg Stover	U.S. Fish and Wildlife Service	(505) 883-7828
Vince Balderaz	U.S. Bureau of Land Management	(505) 393-3612
Ed Moriarty	Science Applications International Corporation (SAIC)	(703) 645-6973
Tim Reeves	SAIC	(303) 382-6730

Facility Owner: Dorothy Runnels, President

Facility Description: Inactive, former commercial oilfield waste disposal site and refinery

Generator Status: Unknown

Inspection Type: Compliance evaluation inspection, EPA lead

Reason for Evaluation: General inspection

Summary of Inspection: see narrative

Checklists Completed: none

Peer Reviewed by: Laura L. Johnson

Date: 7/9/99

Compliance Evaluation Inspection Narrative
Araho, Inc.
Lea County, NM

On September 28, 1998, the Araho, Inc., facility ("facility") was identified during an aerial survey by the U.S. Fish and Wildlife Service (FWS) as being a potential problem oil pit facility. From the air, it appeared that the facility had a large oil pit and a tank which appeared to be leaking oil on to the ground. A site inspection was conducted on November 3, 1998, as a follow-up to the aerial survey. The inspection team arrived at the facility at approximately 4:30 pm. Araho, Inc., is located off of Highway 18, five miles southeast of Lovington, New Mexico (see Attachment A, photo #7). The facility has been inactive for several years.

At the time of the inspection, the facility consisted of several large tanks and a lined pit (see photo #'s 1 & 2). The tanks were located directly on the ground and were not within secondary containment. One of the tanks appeared to be leaking (see photo #3). The sump beneath the tank valve (approximately 2 feet deep as measured by a stick inserted into the sump) was full of liquid and oil (see photo #'s 4 & 5). Parts of two migratory birds (one meadowlark, and one Chihuahuan Raven) were recovered from the sump by the FWS during the inspection. The pit appeared to be lined and netted; however, the netting was almost completely submerged underneath the oil in the pit (see photo #6). The pit contents appeared to be level with the top of the berm; therefore, there was virtually no freeboard in the pit.

Areas of Concern

- Although the facility has been inactive for several years and the company no longer exists, there are still tanks and a pit on-site which appear to contain waste oil.
- The tanks are not equipped with secondary containment and one of the tanks appears to be leaking.
- Two dead migratory birds were recovered from a sump beneath one of the tanks.
- Although the pit is netted, the netting is almost completely submerged under the oil in the pit making it ineffective.
- There is no freeboard in the pit.
- The same site conditions were observed during a similar inspection conducted in September, 1997, by EPA, FWS, and NMOCD.

Attachments

- A Photograph log



**NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT**

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

December 9, 1998

CERTIFIED MAIL
RETURN RECEIPT NO. P-326-936-492

Ms. Dorothy Runnels
8100 West Alabama
Hobbs, NM 88242

**RE: Araho, Inc. Pit and Above Ground Tanks
SE/4 of Section 1, Township 17 South, Range 36 East, NMPM
Lea County, New Mexico**

Dear Ms. Runnels:

The New Mexico Oil Conservation Division did not receive a response to the OCD letter written to Araho, Inc. on June 11, 1998. The letter required a response by August 11, 1998. The OCD is hereby requiring you, as the owner/operator of record to either obtain a Rule 711 permit for this facility or close it. A response is required by December 30, 1998.

To insure the protection of public health and the environment the abandoned lined pit, tanks, valve sumps, and contaminated soils at Araho, Inc. located in Township 17 South, Range 36 East, NMPM, Lea County, New Mexico shall be closed in accordance with an OCD approved closure plan.

The following is a list of specific points that shall be addressed in the facility closure plan:

1. Removal and proper disposal of the lined pit and recycling of any usable oilfield material;
2. Removal of the nine (9) tanks located at the facility and recycling of any oilfield material remaining within the tanks;
3. Removal of buried sump barrels at tank valves and cleanup of the surrounding surface and subsurface soil; and
4. Removal and proper remediation or disposal of contaminated soils around and beneath the tanks.

The following is a list of OCD Rules and Orders that apply to this facility;

1. OCD Rule 310, "Oil shall not be stored or retained in earthen reservoirs, or in open receptacles."

2. OCD Order R-8952, "To protect migratory birds, all tanks exceeding 16 feet in diameter, exposed pits and ponds shall be screened, netted or covered. Upon written application by the operator, an exception to screening, netting or covering of a facility may be granted by the district supervisor upon showing that an alternative method will protect migratory birds or that the facility is not hazardous to migratory birds."
3. OCD Rule 711 (19 NMAC 15.1.711, as amended 1-1-96), regarding underground injection facilities. A facility that manages waste on the ground in pits must be permitted under Rule 711

If you require any further information or assistance concerning permitting/closure procedures, or would like to discuss this matter please contact me at (505) 827-7152.

Sincerely,



Roger C. Anderson
Environmental Bureau Chief

xc: Hobbs OCD Office

P 326 936 492

US Postal Service
Receipt for Certified Mail
 No Insurance Coverage Provided.
 Do not use for International Mail (See reverse)

Sent to	
Street & Number	
Post Office, State, & ZIP Code	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	

PS Form 3800, April 1995

**Inspection Report
Araho, Inc.
Lea County, NM**

Inspection Date: November 3, 1998

EPA ID Number: none

Facility Name: Araho, Inc.

Physical Location: 5 Miles southeast of Lovington on Highway 18
N 32° 51.736', W 103° 18.060'
Section 1, Township 17S, Range 36E

Mailing Address: P.O. Box 983, Hobbs, New Mexico, 88240

Type of Ownership: private

Inspection Participants:

Lead EPA Inspector: Melissa Smith (214) 665-7357 **Initials:** MLS

Other Participants:

Roger Anderson	New Mexico Oil Conservation Division	(505) 827-7152
Doug McKenna	U.S. Fish and Wildlife Service	(505) 589-2823
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Vince Balderaz	U.S. Bureau of Land Management	(505) 393-3612
Ed Moriarty	Science Applications International Corporation (SAIC)	(703) 645-6973
Tim Reeves	SAIC	(303) 382-6730

Facility Owner: Dorothy Runnels, President

Facility Description: Inactive, former commercial oilfield waste disposal site and refinery

Generator Status: Unknown

Inspection Type: Compliance evaluation inspection, EPA lead

Reason for Evaluation: General inspection

Summary of Inspection: see narrative

Checklists Completed: none

Peer Reviewed by: Laura Hutcheon

Date: 7/9/99

Compliance Evaluation Inspection Narrative
Araho, Inc.
Lea County, NM

On September 28, 1998, the Araho, Inc., facility ("facility") was identified during an aerial survey by the U.S. Fish and Wildlife Service (FWS) as being a potential problem oil pit facility. From the air, it appeared that the facility had a large oil pit and a tank which appeared to be leaking oil on to the ground. A site inspection was conducted on November 3, 1998, as a follow-up to the aerial survey. The inspection team arrived at the facility at approximately 4:30 pm. Araho, Inc., is located off of Highway 18, five miles southeast of Lovington, New Mexico (see Attachment A, photo #7). The facility has been inactive for several years.

At the time of the inspection, the facility consisted of several large tanks and a lined pit (see photo #'s 1 & 2). The tanks were located directly on the ground and were not within secondary containment. One of the tanks appeared to be leaking (see photo #3). The sump beneath the tank valve (approximately 2 feet deep as measured by a stick inserted into the sump) was full of liquid and oil (see photo #'s 4 & 5). Parts of two migratory birds (one meadowlark, and one Chihuahuan Raven) were recovered from the sump by the FWS during the inspection. The pit appeared to be lined and netted; however, the netting was almost completely submerged underneath the oil in the pit (see photo #6). The pit contents appeared to be level with the top of the berm; therefore, there was virtually no freeboard in the pit.

Areas of Concern

- Although the facility has been inactive for several years and the company no longer exists, there are still tanks and a pit on-site which appear to contain waste oil.
- The tanks are not equipped with secondary containment and one of the tanks appears to be leaking.
- Two dead migratory birds were recovered from a sump beneath one of the tanks.
- Although the pit is netted, the netting is almost completely submerged under the oil in the pit making it ineffective.
- There is no freeboard in the pit.
- The same site conditions were observed during a similar inspection conducted in September, 1997, by EPA, FWS, and NMOCD.

Attachments

- A Photograph log

ATTACHMENT A



**NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT**

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

June 11, 1998

CERTIFIED MAIL
RETURN RECEIPT NO. P-326-936-449

Ms. Dorothy Runnels
8100 West Alabama
Hobbs, NM 88242

RE: Araho, Inc. Pit and Above Ground Tanks
SE/4 of Section 1, Township 17 South, Range 36 East, NMPM
Lea County, New Mexico

Dear Ms. Runnels:

On September 23, 1997 the New Mexico Oil Conservation Division (OCD) accompanied the U.S. Fish and Wildlife and U.S. Environmental Protection Agency on an inspection of the Araho, Inc. (Araho) abandoned lined pit and surface tanks located in the SE/4 of Section 1, Township 17 South, Range 36 East, NMPM, Lea County, New Mexico. Mr. Phil Runnels was present during the inspection and discussion of what corrective action options were available to Araho.

It was noted that the following items require corrective action:

1. One lined pit containing oilfield material filled to the top of the berm that could easily overflow allowing oil field waste to migrate from pit confines;
2. The pit was not netted or otherwise rendered non hazardous to migratory birds;
3. Nine (9) tanks are located at the facility, some may contain oil field material;
4. Buried catchment barrels at tank valves contain waste oil material and may have leaked to the subsurface;
5. Soils around and near tanks contain hardened asphalt material;

Ms. Dorothy Runnels
June 11, 1998
Page 2

The following is a list of OCD Rules and Orders that apply to this facility;

1. OCD Rule 310, "Oil shall not be stored or retained in earthen reservoirs, or in open receptacles."
2. OCD Order R-8952, "To protect migratory birds, all tanks exceeding 16 feet in diameter, exposed pits and ponds shall be screened, netted or covered. Upon written application by the operator, an exception to screening, netting or covering of a facility may be granted by the district supervisor upon showing that an alternative method will protect migratory birds or that the facility is not hazardous to migratory birds."
3. OCD Rule 711 (19 NMAC 15.I.711, as amended 1-1-96), regarding underground injection facilities. A facility that manages waste on the ground in pits must be permitted under Rule 711.

The OCD is hereby requiring you, as the owner/operator of record to either obtain a Rule 711 permit for this facility or close it. A response is required by Dorothy Runnels by August 11, 1998. Enclosed is a copy of the Order amending Rule 711, OCD's unlined surface impoundment closure guidelines, and a list of local facilities that are permitted by the OCD to recycle, remediate, and/or dispose of this type of waste.

If you require any further information or assistance concerning permitting/closure procedures, or would like to discuss this matter please contact me at (505) 827-7153.

Sincerely,



Martyne J. Kieling
Environmental Geologist

enclosures - Rule 711 Order R-10411-B, closure guidelines, and list of Waste Management Facilities.

xc: Hobbs OCD Office

PROBLEM OIL PIT INSPECTION CHECKLIST

Site Number (State-Year-Waypoint):

Araho

Checklists Completed (circle those that apply):

(A) (B) (C)

Prepared by the US Environmental Protection Agency Region VIII and US Fish and Wildlife Service Region VI

6/12/97 --Reproduced by US EPA Region VI with permission 9/19/97

This is a pre-decisional document and is, or may be protected by the deliberative process exception and attorney client privilege. Conclusions or recommendations are intended solely as preliminary information for governmental personnel. This form contains tentative conclusions and staff-level recommendations and does not create any rights, substantive or procedural, or defenses, as they are not binding on the Agency.

PROBLEM OIL PIT INSPECTION CHECKLIST

SECTION ONE: Site Information

Site Name and Waypoint: _____

Lease # and Operator: Arado

Site Location Section/Township/Range: Sec 1 T 17 S R 36 S

GPS Coordinates Obtained During Aerial Survey: _____

GPS Coordinates Obtained During Site Inspection: _____

Site Address: 8100 Alabama

City/County/State/Zip: Humble city NM 88242

USFWS Case ID #: _____

EPA Facility ID # and/or NMOCD ID #'s: _____

Contact Name/Affiliation/Phone: Bill Runnels, Dorothy Runnels

Contact Address (if different from site address): 8100 Alabama, Humble city, NM.

Site Type (production, commercial disposal, other): closed commercial disposal & refiner

SECTION TWO: Inspection Information

Inspection date and time: 9/23/97 8:45 AM

Describe weather conditions (including estimated temperature): cloudy cool recent hail event.

If known, list federal, state, or tribal programs that this site is subject to regulation under via a permit and list all permit number(s):

Inspection Team:

Inspector 1 Wayne Price Agency/Program: OCD Phone: _____

Inspector 2 Nick Chavez Agency/Program: FWS Phone: _____

Inspector 3 Greg Pashia Agency/Program: EPA Phone: _____

Inspector 4 _____ Agency/Program: _____ Phone: _____

Inspector 5 _____ Agency/Program: _____ Phone: _____

Inspector 6 _____ Agency/Program: _____ Phone: _____

SECTION FOUR: General Observations

A. PITS (complete checklist A if any of the following conditions exist)

- 1. Does accumulated oil exist on the surface of any pits, ponds, sumps, or other open-topped storage devices? Yes No
- 2. Are pits, ponds, tanks, sumps, or other devices which may accumulate oil covered with netting or are there any other wildlife exclusionary or deterrent devices in use (covers, flagging, etc.)? Yes No
- 3. Are there any dead or oiled birds or other wildlife on or near the site or any indication of oiled birds/wildlife previously at or near the site (oily tracks, etc.)? Yes No

B. DISCHARGES (complete checklist B if any of the following conditions exist)

- 1. Is there a discharge (either ongoing or one-time) from a pit, pond, tank, or other device at the site? Yes No
- 2. Is there indication of any past or potential future discharge from a pit, pond, tank, or other device at the site (soil staining, fresh dirt or gravel used as cover, 2 ft or less freeboard maintained, eroded berms, etc.)? Yes No

C. TANKS AND CONTAINERS (complete checklist C if any of the following conditions exist)

- 1. Are there any tanks or containers on site? Yes No

~~no tank ponds~~, Tanks closed
Tanks could have material in them. Don't
know what is in them. total

CHECKLIST "A" - PITS

1. If accumulated oil exists on the surface of any pits, ponds, sumps, or other open-topped storage devices, describe observed conditions including size of each pit, pond, sump, or device, percentage of area covered, and thickness of oil. Describe any other observations (visual, odor) of the material in each pit, pond, sump, or other device:

Hard asphaltic waste. some liquids mostly water

2. Describe any netting or other wildlife exclusionary or deterrent devices in use at the site. Include description of condition, coverage, netting mesh size, etc.:

no netting.

3. Describe any oiled or dead birds or other wildlife found at or near the site. Indicate the number of mortalities and the seizure tag numbers for any birds collected:

No birds

4. Describe the construction and operation of any pits or ponds located at the site. Include a description of the pond liner system, if possible. Estimate the freeboard observed at the time of the inspection:

abandoned pit with refinery waste. Lined pipeline from Navajo refinery.

Emergency overflow pit. Took production water. Permitted in 1986 as a non-haz refinery waste

5. Indicate how long any pits or ponds at the site have been in operation:

1960's to 1994

6. If a pit, pond, sump, or other device is used as a loading/unloading area at a non-production site, describe any secondary containment used:

CHECKLIST "B" - DISCHARGES AND SPILLS

1. Indicate whether or not the site has a NPDES permit and, if so, indicate the permit number and whether or not the number is posted on site:

NONE

2. Describe any ongoing discharges or one-time spills from pits, ponds, or other devices at the site. For each discharge, include a description of the source, duration, and rate (gal/min or cfs) of material discharged. For each spill, describe the amount and area of the spilled material. Also describe any observations (oil sheen, odor) regarding the type of material discharged or spilled:

3. Describe any indications (e.g. soil / vegetation staining on ground or in drainages) of past discharges or spills from pits, ponds, tanks, or other devices at the site. Include any indication of the type of material discharged or spilled (e.g. oil stain, salt brine, etc.) and when and for how long the discharge or spill occurred:

4. Identify and describe the drainage pathway (dry arroyo, ditch, stream, etc.) of any current or suspected past discharges or spills from the site. Trace the drainage pathway to a flowing waterway, if possible, and describe the extent of any oil staining. Include a description of whether the drainage is dry at the time of the inspection, contains standing water that doesn't appear to be flowing or, if flowing, the estimated flowrate (gal/min or cfs) of water and/or discharged material:

5. Identify and describe any pits, ponds, or other devices in which less than 2 ft of freeboard exists at the time of the inspection. Also describe any indications that less than 2 ft of freeboard has been maintained in the past, such as staining of pond banks or overtopping of berms, etc.:

Pit has no freeboard pit level is at top of 4' high berms. could overflow if rain was heavy

6. If possible, estimate the receipt rate or production rate (gal/day) of oil and/or produced water at the site:

NO receipt of waste

7. If possible, determine whether or not any discharges or spills from the site have been reported and, if so, describe how (letter, phone, etc.), when, and to whom (EPA, BLM, DEQ, OGCC, BIA, etc.) it was reported:

8. Describe the general housekeeping and maintenance of the facility and any conditions which could result in a discharge or spill (valves which could be opened, poorly supported pipelines, etc.):

CHECKLIST "C" - TANKS AND CONTAINERS

1. Identify whether or not the site has a Spill Prevention, Control, and Countermeasure (SPCC) Plan. If so, verify by personally viewing the plan, if possible. Has it been certified by a registered Professional Engineer?:
2. Describe the type, use, condition, maximum capacity (gal or bbl), contents, markings, and actual quantity at the time of the inspection for each tank and container on the site. Also describe any secondary containment for each tank and container, including its condition, estimated capacity, and method of precipitation removal:

Tank / Container Type and Use	Maximum Capacity	Actual Quantity	Secondary Containment	Markings	Comments (including condition)
----------------------------------	---------------------	-----------------	--------------------------	----------	-----------------------------------

5 tanks
oil water
seperator

none none

Riveted tank is largest.

Tanks used for transfer
of waste for injection

CONTINUATION SHEET (identify Section and/or Checklist continued)

PHOTO LOG

Site Number: Araho Disposal Facility

Film Type/ASA/Size: Kodak/200 ASA/135

Photographer: Wallace O'Rear

Photo Number Subject

R3E01 View of pit at Araho Disposal facility Looking NW

R3E02 View of pit & tanks, looking Southeast

R3E03 View of pit and other tanks on the north side of pit

R3E04 View of south side of pit looking northeast

ARAHO

Winds

Overcast going 9/23/97

West Sticks Road
NOL Hobbs

8:15 Runnels Pit + Treating Plant?

Ray A. Madsen, K., Wayne P., Greg Pate, Arickelous, bulky

Pit Took Refining Wastes. Phil Rowles

Full Pit to the Top. Cost of Paraffin

Emergency Overflow Pit From Refining

Tank Farm Leaking - Leander Purple Paint -

Asphalted Behind Borehole around valves

9 Tanks

Write letter Make Recommendations to

Close the pit List of Permitted

Facilities. Need Closure Plan

Check Dates of Facility 8

Class 1 Waste 1986

Non Hazardous?

when Siteged Accepting 1986.

Pit is Lined.

Met with Dorothy Rowles Son

Phil Rowles

(SELL T-17 RSGE)

8:53

END

DOROTHY RUNNELS
8100 W. ALABAMA
HOBBS, NEW MEXICO 88240
(505) 392-6223

October 25, 1995

Mr. Mark Ashley
New Mexico Oil & Gas
Conservation Division
St. Land Office Building
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Re: Araho Salt Water Disposal

Dear Mr. Ashley:

I received your certified letter of October 13, 1995 and am at a loss. We have not talked with your office since June, 1993, at which time a proposal was made for a lined pit. Since that time we have not heard anything from your office.

Also since that time, circumstances have changed and the parties involved with Araho are no longer involved. I have no means of carrying out any proposal that was made at that time.

Please inform me as to how you wish to proceed in this matter.

Sincerely,


Dorothy Runnels

Hartgraves Insurance, Inc.
P. O. Box 1657
Lovington NM 88260

STATEMENT

Page 1

ACCOUNT NO.
ARAH001

STATEMENT AS OF
11/01/95

Araho, Inc.
8100 West Alabama
Hobbs, NM 88240

Pol	Eff Date	Co	Policy	Description	Amount
				Balance Forward:	0.75
	10/02/95			ITT-DAMAGE BOND	50.00
	11/01/95			Service Charge	0.76
				Balance Due:	51.51

DOES THIS NEED TO BE
PAID?

SLO 827-5760

ORNA VILLA

Z 765 962 776



Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Sent to	
Street and No.	
P.O., State and ZIP Code	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	

PS Form 3800, March 1993

Z 765 962 767



Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Sent to	
Street and No.	
P.O., State and ZIP Code	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	

PS Form 3800, March 1993

OIL CONSERVATION DIVISION

September 8, 1995

CERTIFIED MAIL**RETURN RECEIPT NO. Z-765-962-767**

Mrs. Dorothy Runnels

Araho, Inc.

~~1621 S. Main~~ 8/30 DURBANNA
~~Lovington, NM 88260~~ HOBBS, NM 88240

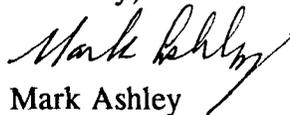
Re: Araho Class I Site Pit Closure

Dear Mrs. Runnels:

The New Mexico Oil Conservation Division (OCD) has received the pit closure correspondence from your June 7, 1995th meeting at the District I Office. In order to properly review and approve your pit closure request, could you please send a written closure plan to the OCD Santa Fe Office. Enclosed is a copy of the OCD "Unlined Surface Impoundment Closure Guidelines" and a copy of the "Pit Remediation And Closure Report" for your help.

If you have any questions regarding this matter, please feel free to call me at (505) 827-7155.

Sincerely,



Mark Ashley

Geologist

Attachments

xc: Jerry Sexton, OCD Hobbs Office
Wayne Price, OCD Hobbs Office



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT CONSERVATION DIVISION
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

'94 JUN 9 AM 8 50
RECEIVED

BRUCE KING
GOVERNOR

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88241-1980
(505) 393-6161

NMOCD Inter-Correspondence

To: Jerry Sexton-District I Supervisor

From: Wayne Price-Environmental Engineer District I

Date: June 8, 1994

Reference: Request from Jerry Sexton for recommendations on meeting held June 7, 1994-(minutes attached)

Subject: Araho Class I well site "pit closure"

Comments: Per your request I am making a recommendation that Bill Olson of our NMOCD Environmental Bureau take the lead on this project. I base this recommendation on a telephone conversation with Roger Anderson our Environmental Bureau Chief.

cc: Bill LeMay-NMOCD Director
Roger Anderson-Environmental Bureau Chief

Attachments-1



INTER-OFFICE MEMO

To file: Araho Inc.

Date: June 7, 1994
Time: 9:30 am

Telephone call: _____ Meeting: XX Other: _____

Person called or attending:

Wayne Price, Jerry Sexton- NMOCD
Mrs. Dorothy Runnels-Owner of Araho Inc.
Steve & Cindy Pearce-representing Lea Fishing Tools

REFERENCE: Minutes of Meeting held in Jerry Sexton's office.

Subject: Araho Pit Closure located at the "old" Araho class I disposal well-

Comments: Steve Pearce, a close friend of Mrs. Runnels is helping her as a friend to properly close the pit. His understanding of the oil business and apparently an association through another disposal well where he had worked on a well and became the operator of that well due to a possible default by Mrs. Runnels prompted him to assist her.

They presented a verbal plan of action where they want to remove the liquids from the pit and dispose of at the Araho SDW # 1. The remaining material would then be bioremediated. They apparently want to do all of this in house.

They ask me if this plan would be ok! I informed them that there would be a number of environmental hoops to jump through in order to make this determination. I told them that the exempt status of the pit would have to be investigated and maybe some analytical work such as "metals" might have to be run. Jerry indicated that this has already been done and it is in some file either here or Santa Fe.

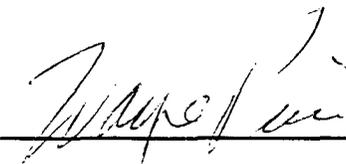
Mrs. Runnels said that the NMED has already signed off on it. She gave me a copy of a letter April 26, 1991 to her from the NMED. (see attachments)

It was pointed out during the meeting that the pit is lined with a heavy liner and is still in good shape.

It was pointed out in the meeting that if they could do it this way then everyone would benefit, the site would be cleaned up at the expense of Mrs. Runnels. If large demands are placed on this project, Mrs. Runnels was afraid her creditors might force her out of business and the site would be left to the state to clean up. She sincerely wants to do the right thing and abide by the environmental rules and regulations.

The meeting was concluded by indicating that the Santa Fe NMOCD Environmental Group would have to be involved.

Wayne Price





State of New Mexico
ENVIRONMENT DEPARTMENT
Harold Runnels Building
1190 St. Francis Drive, P.O. Box 26110
Santa Fe, New Mexico 87502
(505) 827-2850

BRUCE KING
GOVERNOR

April 26, 1991

JUDITH M. ESPINOSA
SECRETARY

RON CURRY
DEPUTY SECRETARY

Mrs. Dorothy Runnels
President
Araho, Inc.
1621 S. Main
Lovington, NM 88260

RECEIVED

JUN 07 1994

OLD NEWS
OFFICE

Dear Mrs. Runnels:

On February 15, 1990, the New Mexico Environmental Improvement Division, now the New Mexico Environment Department (NMED), conducted a hazardous waste inspection of your facility, Araho, Inc. This letter is NMED's notice that, based on our review of the information received, Araho has not violated the hazardous waste regulations.

However, with new changes in the hazardous waste regulations, EID must inform you that you may not dispose of any refinery wastes (e.g. K049 and K051) in your wells. These wastes were prohibited from land disposal on August 8, 1990 (for wastewaters; for non-wastewaters the effective prohibition date is November 8, 1990).

If you have any questions concerning this information, please call me at 827-2928.

Sincerely,

Patricia A. Ringgenberg

Patricia A. Ringgenberg
Water Resource Specialist
Hazardous and Radioactive Waste Bureau

Lynx Petroleum Consultants, Inc.

P. O. Box 1666
3325 Enterprise Drive
Hobbs, New Mexico 88241
505 392-6950

FAX NUMBER: 505/392-7886

ATTN: Mr. Dave Boyer
1 - 827-5741

LOCATION: OCD Santa Fe.

FROM: Marc Wise.

LOCATION: _____

DATE: 4/18/91

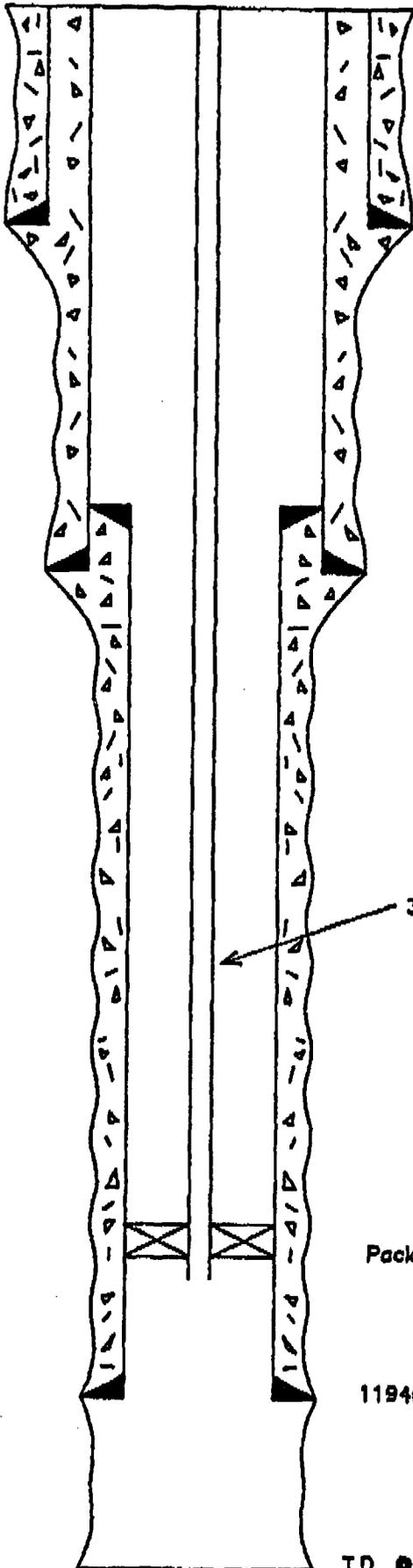
TIME: 1:00 PM

NO. OF PAGES INCLUDING INSTRUCTION SHEET 3

REMARKS I am reviewing the attached (2) disposal wells for possible usage by Navajo Refining. Please review and I will call you to find out what would be required to reclassify these well, from Class II to Class I.
Thanks
Marc.

Araho, Inc.
P.O. Box 937
Lovington, NM 88260

4/9/91



451' - 13 3/8" 48# csg.
Cemented w/450 sxs. Circulated.

Squeezed T.O.L. w/50 sxs (9/7/79)

4825' - Top of 5 1/2" Liner

4995' - 8 5/8" csg.
Cemented w/1500 sxs. Circulated.

TOC @ 2765 by TS.

Some

3 1/2" Tubing

Packer ● 11894'

11940' - 5 1/2", 17#, N-80, Liner
Cemented w/750 sxs. Circulated to top of Liner.

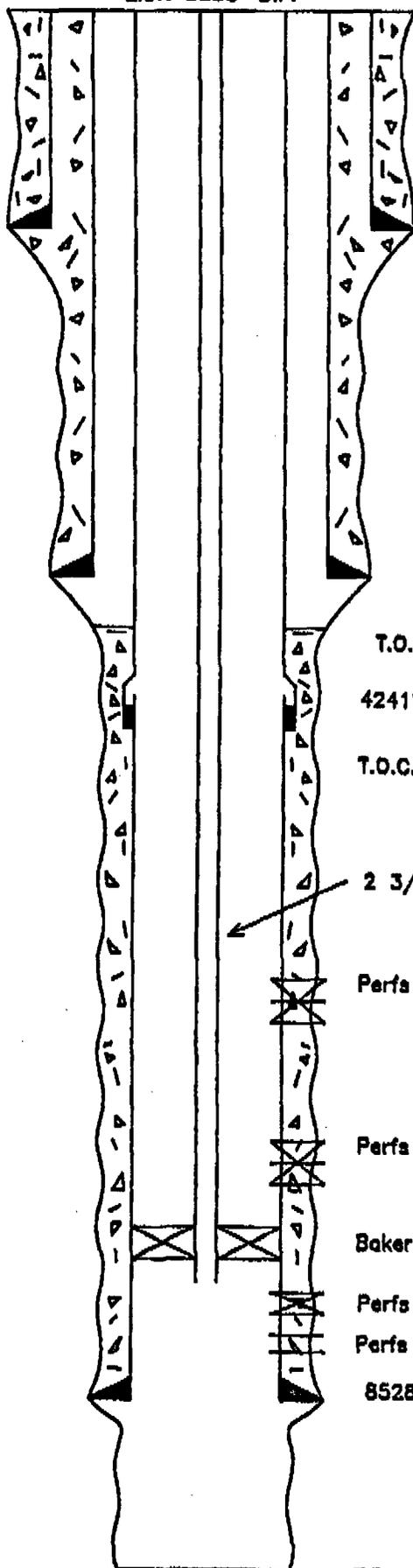
T.D. ● 12704'

L. C. State No. 1
2190' FSL & 560' FFL
Sec 1, T-17S, R-36E

Elev. 3858' D.F.

Araho, Inc.
P.O. Box 937
Lovington, NM 88260

4/9/91



349' - 13 3/8", 48#, H-40.
Cemented w/450 axs. Circulated.

3318' - 9 5/8", 36#, J-55.
Cemented w/1750 axs. Circulated.

T.O.C. ● 3890' (Cement Bond Log)

4241' - Casing Tie-back cemented w/200 axs

T.O.C. ● 4280'

2 3/8" Plastic Lined Tubing

Perfs 5845'-5968' Squeezed

Perfs 6186'-6265' Squeezed

Baker Model R Packer ● 8320'

Perfs 8378'-8404'

Perfs 8405'-8480'

8528' - 5 1/2", 17# csg.
Cemented w/1400 axs.

T.D. ● 9006'

L. C. State No. 2

1650' FNL & 2310' FWL

OIL CONSERVATION DIVISION
RECEIVED

'93 MAR 10 AM 9 25

Araho, Inc.
P. O. Box 983
Hobbs, NM 88241

May 4, 1993

Roger C. Anderson
Environmental Bureau Chief
Oil Conservation Division
P. O. Box 2088
Santa Fe, NM 87504

RE: Discharge Plan GW-37
Araho, Inc.
L. C. State Wells No. 1 and No. 2

Dear Mr. Anderson:

This letter is in response to your letter dated April 13, 1993. I understand that our current discharge plan permitting L. C. State Wells No. 1 and No. 2 as Class 1 effluent injection wells will expire on January 9, 1994 unless certain remedial work is performed on both wells (the discharge plan renewal and requirements do not affect our Class 2 SWD permit).

At this time we are not prepared to perform the remedial work on the aforementioned wells, but we do not want to close the door on later Class 1 permitting. Please let me know if I need to file any paperwork for our current OCD Class 2 SWD permit.

Also, please update your files to reflect our new mailing address at P. O. Box 983, Hobbs, NM 88241. Thank you for your help.

Cordially,

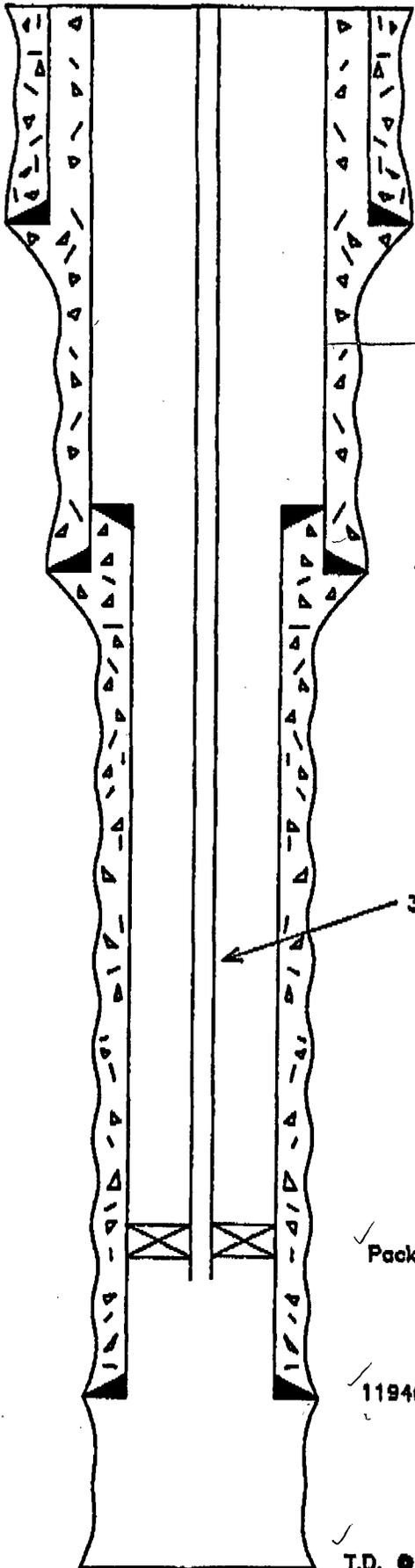


Cynthia Pearce

CP/ms

Araho, Inc.
P.O. Box 937
Lovington, NM 88260

4/9/91



✓ 451' - 13 3/8" 48# csg.
Cemented w/450 sxs. Circulated.

TOC @ 2765' (Temp. survey)

Squeezed T.O.L. w/50 sxs (9/7/79)

4825' - Top of 5 1/2" Liner

✓ 4999' - 8 5/8" csg. ✓
Cemented w/1500 sxs. Circulated.

3 1/2" Tubing

✓ Packer @ 11894'

✓ 11940' - 5 1/2", 17#, N-80, Liner
Cemented w/750 sxs. Circulated to top of Liner.

✓ T.D. @ 12704'

L. C. State No. 1

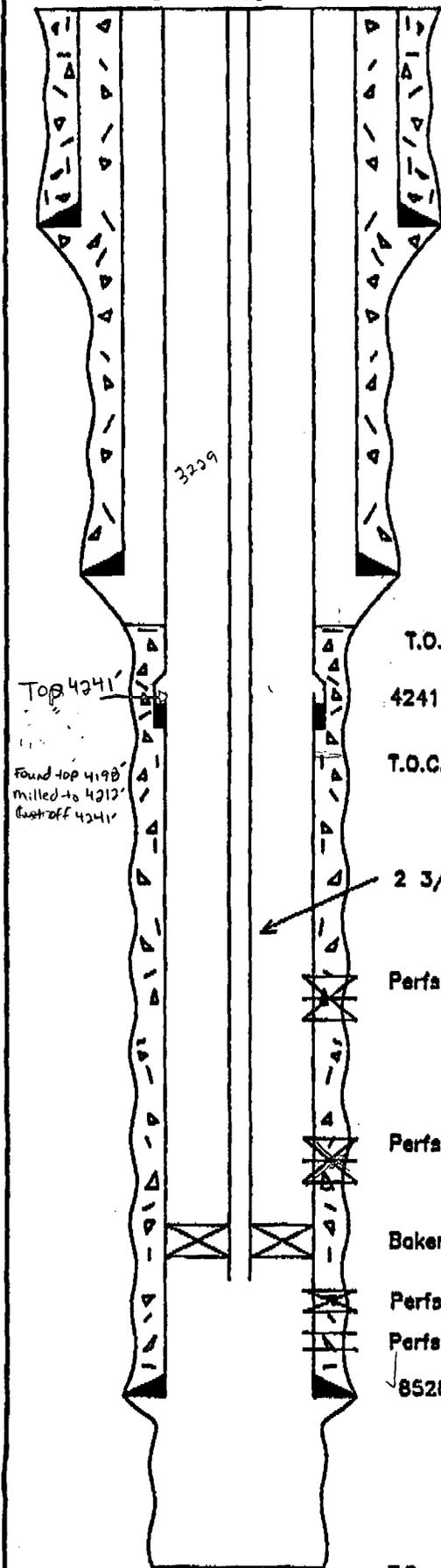
2190' FSL & 560' FEL

Sec 1, T-17S, R-36E

Elev. 3858' D.F.

Araho, Inc.
P.O. Box 937
Lovington, NM 88260

4/9/91



349' - 13 3/8", 48#, H-40.
Cemented w/450 axa. Circulated.

3318' - 9 5/8", 38#, J-55.
Cemented w/1750 axa. Circulated.

T.O.C. ● 3890' (Cement Bond Log)

4241' - Casing Tie-back cemented w/200 axa

5 1/2
1 joint 7
tie into 55' @ 4241'

T.O.C. ● 4280'

Found top 4198'
milled to 4212'
cut off 4241'

2 3/8" Plastic Lined Tubing

Perfs 5845'-5968' Squeezed

Perfs 6186'-6265' Squeezed

Baker Model R Packer ● 8320'

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8528' - 5 1/2", 17# csg.
Cemented w/1400 axa.

T.D. ● 9006'

L. C. State No. 2
1650' ENL & 2310' FWL

ARAHO OIL CO.

GW-37 (approved 1-9-87)

- 2 Wells permitted for Class I wells (L.C. State Wells)
- Need mechanical work done on both wells before operational start-up
- Old Amoco Wells - dryholes P & A
- Both wells originally permitted as Class II wells (w/c) Will retain their Class II permits

- Physical Requirements for Wells & Facility

1. Plastic-lined tubing w/ packer < 100' from csg. shoe
2. Csg-Tbg annulus filled w/ an inert fluid & kept @ minimal press. of 100 psi.
3. Cement placement between casing and hole drilled from the casing shoe up to & overlapping the previous casing string. #
4. Recording devices (charts) to continually monitor
 - injection pressure (vacuum)
 - flow rate
 - flow volume
 - annulus pressure
5. Automatic equipment to interrupt flow to the facility in case of overflow
6. Proper surface conditions for pits, tanks (berms)
7. Proper securing of surface equipment (gates, locks, etc.)
8. Pressure limiting switch limiting well head pressure to no more than hydrostatic pr. from storage tanks

- Tests to Run Prior to Start-Up

1. Static -fluid level determination
2. Mechanical integrity test (set packer ^{pull the})
3. Analysis of fluid injected (see addendum)
4. Bond or temperature survey log.

- Continual Monitoring

1. Monthly reports of disposed produced waters (R. 704 R. 1120)
2. Monthly reports (kept for 2 yrs) of all wastes, not being produced waters (source, location, type, volume, date, transportation) ^{WOC 3-107A}
3. Quarterly and yearly reports of fluid analysis
4. Yearly MIT (witnessed by OCS)
5. Monthly avg, min & max values for pr., rate, vol.
6. Any well workovers

Contingency Plan

1. If 1 well fails divert its fluids to other well
2. Waste oil & sludges taken to oil reclamation plants or Pollution Control (Laguna Gatuna)

Well No. 1

- inj into Fusselman Fm
@ 12,100' to 12,700' (Dolomite)

- Disperse water in all dir^s

Fm.s TDS \approx 45,000 ppm

Discharge TDS \approx 1200 to 45000 ppm

Groundwater @ 60' with TDS \approx 892 ppm
(50-300')

- No wells w/in $\frac{1}{2}$ mi penetrating
injection zone (all completed shallower)

- max. inj. pr. 12 lb/in² same

- Plant (refinery) responsible
for all disposal requirements

- MIT tests 9-85 lost 31-33%

Well No. 2

- inj into Abo Fm. (Dolomite)

@ 8528' to 8900'

- Disperse water to east

- 3 wells w/in $\frac{1}{2}$ mile penetrate
injection zone (Class II inj. wells)

- Inj. into Abo (8330-9000' No 22)

- MIT passed after tbg. repaired
9-85

Tanks, Pit lined & w/ leak detection

Plant: Southern Union Refinery / Farnass Ref.

-6000 to 10000 bpd to wells via pipeline

- Main problem is cement lacking

btw. 5 $\frac{1}{2}$ " lining & hole from

(8273' to 4999')

Open hole injection

- Open hole inj. 8510' to 8889'

ADDENDUM

Araho, Inc.

RE: Discharge Plan Application GW-37
L.C. State Well #1 and #2

The following tests will be performed on the effluent by the plant as soon as the effluent becomes available and quarterly and yearly thereafter as indicated.

Yearly:

1. Aromatic and halogenated hydrocarbon scan by EPA methods 601 and 602. This analysis will determine concentrations of Benzene, Toluene, Xylene and the presence of Chlorinated solvents.
2. General water chemistry, to include: Calcium, Magnesium, Potassium, Sodium, Bicarbonate, Chloride, Sulfate, Carbonate, TDS, pH and conductivity.
3. Heavy metals (by ICAP scan) to include Aluminum, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Silver, Strontium, and Zinc.
4. Heavy metals by atomic absorption to include As and Hg.

Quarterly:

1. Chlorides, pH, TDS, Chromium and Lead.
2. Aromatic and halogenated Hydrocarbon scan by EPA methods 601 and 602.

Other tests will be run and reported as directed by OCD.

Dorothy Rummel

ADDENDUM

Araho, Inc.

RE: Discharge Plan Application GW-37
L.C. State Well #1 and #2

The following tests will be performed on the effluent by the plant as soon as the effluent becomes available and quarterly and yearly thereafter as indicated.

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4. Heavy metals by atomic absorption to include As and Hg.

Quarterly:

1. Chlorides, pH, TDS, Chromium and Lead.
2. Aromatic and halogenated Hydrocarbon seen by EPA methods 601 and 602.

Other tests will be run and reported as directed by OCD.



ADDENDUM

Araho, Inc.

RE: Discharge Plan Application GW-37
L.C. State Well #1 and #2

The following tests will be performed on the effluent by the plant as soon as the effluent becomes available and quarterly and yearly thereafter as indicated.

Yearly:

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2. General water chemistry, to include: Calcium, Magnesium, Potassium, Sodium, Bicarbonate, Chloride, Sulfate, Carbonate, TDS, pH and conductivity.
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Quarterly:

1. Chlorides, pH, TDS, Chromium and Lead.
2. Aromatic and halogenated Hydrocarbon scan by EPA methods 601 and 602.

Other tests will be run and reported as directed by OCD.



OIL CONSERVATION DIVISION
CASING-- DENHEAD TEST

PT 4-29-88

OPERATOR: Arako Inc Pool/FM OH 11940-12000
 Lease Name State L C Well# 1 Unit Letter Sec 1 Twp 17 Rge 36
 Footage _____ Inj. Press Limit _____ Order # SND 154

Test Date 3-2-88 Oper. Rep. _____ OCD Rep. Szden

TOC	CASING STRING	Size	Set At	Cemented	Pressure	Remarks
	SURFACE	13 3/8	451'	450 ^c	0#	Annulus Press Test Attempt to test S/LINER
	INTERMEDIATE					
	PRODUCTION	8 3/8	4999'	1500 ^c		Pumped 130 bbls, ON VAC
	Liner	5 1/2	4825' 11940	750 ^c	VAC.	all the way
	TUBING	3 1/2	11894'	Pkr	12" VAC	

19 87
0
0 Puff
30" Vac

If well is on Vacuum: SI _____ Min. Tbg Press _____ Csg: Vacuum _____ Static _____
 Test Reviewed by: _____

Remarks 84- operator claims annulus had never been loaded prior to Aug 9 test & that air was trapped causing bleedoff. Took approx 2 hrs 9-5-84 to load & bleed off prior to test after SI & began Rep. #2 after shut in & began repairs to
 Oper. Rep. Arako & hauling WOOD Rep. _____

TOC	CASING STRING	Size	Set At	Cemented	Pressure	Remarks
	SURFACE	13 3/8	451'	450 ^c		Annulus Press Test
	INTERMEDIATE					
	PRODUCTION	8 3/8	4999'	1500 ^c		
	Liner	5 1/2	4825' 11940	750 ^c		
	TUBING	3 1/2	11894'	Pkr		

gave permission as per well permit, that shut it in

If well is on Vacuum: SI _____ Min. Tbg Press _____ Csg: Vacuum _____ Static _____
 Test Reviewed by: _____

Remarks: _____
 Test Date _____ Oper. Rep. _____ OCD Rep. _____

TOC	CASING STRING	Size	Set At	Cemented	Pressure	Remarks
	SURFACE					
	INTERMEDIATE					
	PRODUCTION					
	TUBING					

If well is on Vacuum: SI _____ Min. Tbg. Press _____ Csg: Vacuum _____ Static _____
 Test Reviewed by: _____

Remarks: _____

NEW MEXICO OIL CONSERVATION DIVISION
CASING--BRADENHEAD TEST

OIL CONSERVATION DIVISION
RECEIVED

'91 APR 2 AM 9 30

OPERATOR: ARAHO, INC
LEASE: STATE WELL # 2 --
POOL: ABO UNIT LTR F
FOOTAGE 1650-N SECTION 2 TWN 17 S RANGE 36 E
FOOTAGE 2310-W PRESS LMT 100 TYPE LEASE . TYPE WELL S
ORDER NO. R-5251 DATE INJ. BEGAN .

=====

TEST DATE	24-Feb-89	TEST TYPE	BHT	PASS/FAIL	BSO1
OPERATOR REP:	ROLAND	OCD REP:	TURNACLIFF		
CASING SIZE	SET AT	TOP CMT	CEMENTED	PRESSURE	REMARKS
SURFACE	13 3/8	349	Ø 450SX		
INTERM-1	9 5/8	3318	Ø 1750SX	>	NO RISER
INTERM-2	.	.	.	>	TSTM 1 1/2 MIN TO Ø-2 G
PROD	5 1/2	8452	Ø 1400SX	>	8 7 SEC TO Ø-AIR
LINER	

TUBING 3 1/2 8320 PKR TSTM LIGHT PRESS--NOT IN
IF WELL IS ON VACUUM: SI. MIN. TBG PRESS.
CSG: VACUUM ., STATIC . APPROX. HRS/DAY WELL 24 HRS-4
REMARKS: 77-5 1/2 PULLED FROM 4198-WHEN WELL WAS PLUGGED. SNC NO
REPAIR LETTER DATE . DATE REPAIR .

=====

TEST DATE	23-Mar-90	TEST TYPE	BHT	PASS/FAIL	BSO1
OPERATOR REP:	WADE	OCD REP:	TURNACLIFF		
CASING SIZE	SET AT	TOP CMT	CEMENTED	PRESSURE	REMARKS
SURFACE	13 3/8	349	Ø 450SX	>	VAC
INTERM-1	9 5/8	3318	Ø 1750SX	>	
INTERM-2	.	.	.	>	NO RISER
PROD	5 1/2	8452	Ø 1400SX		Ø BLOW AIR TO Ø-2 SE
LINER	

TUBING 3 1/2 8320 PKR 5 TSTM--NOT INJ
IF WELL IS ON VACUUM: SI. MIN. TBG PRESS.
CSG: VACUUM ., STATIC . APPROX. HRS/DAY WELL 24 HRS A
REMARKS: . SNC NO
REPAIR LETTER DATE . DATE REPAIR .

=====

TEST DATE	2-27-91	TEST TYPE	BHT	PASS/FAIL	BSO1
OPERATOR REP:	WADE	OCD REP:	LYLE		
CASING SIZE	SET AT	TOP CMT	CEMENTED	PRESSURE	REMARKS
SURFACE	13 3/8	349	Ø 450SX	>	NO RISER
INTERM-1	9 5/8	3318	Ø 1750SX	>	UNABLE TO GUAGE 1 BBL SALT WATER TO Ø 3 MIN.
INTERM-2	.	.	.	>	
PROD	5 1/2	8452	Ø 1400SX	>	TSTM AIR TO Ø IN 2 MIN.
LINER	.	.	.	>	12" VAC.
TUBING	3 1/2	8320 PKR			

IF WELL IS ON VACUUM: SI 20 MIN. TBG PRESS 0
CSG: VACUUM - STATIC 0 APPROX. HRS/DAY WELL 24 HRS. Auto
REMARKS: SNC 10
REPAIR LETTER DATE DATE REPAIRED

3/7/91 copy to Jerry
3/8/91 - Eddie will have rechecked.



U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF DRINKING WATER
INVENTORY OF INJECTION WELLS
(This information is collected under the authority of the Safe Drinking Water Act.)

I. DATE PREPARED (mo., day, & year)

05 05 87

II. FACILITY I.D. NUMBER

NMS6W37

III. TRANSACTION TYPE ('X' one)
 1. DELETION
 2. FIRST TIME ENTRY
 3. CHANGE OF ENTRY

IV. FACILITY NAME AND LOCATION

01 ARATHO INC.

B. STREET ADDRESS OR ROUTE NUMBER

02 sec. 1 T127S R36E N4M

C. CITY OR TOWN

LEA

D. ST. E. ZIP CODE

NM 4041 4243 - 47

F. COUNTY

LEA

G. INDIAN LAND (mark 'X')

V. LEGAL CONTACT: TYPE, NAME, PHONE, MAILING ADDRESS, AND OWNERSHIP

04 1. OWNER 2. OPERATOR
 B. NAME (last, first, & middle initial)
 RUMINELS, DOROTHY

D. ORGANIZATION

E. STREET OR P.O. BOX

06 PO BOX 937

F. CITY OR TOWN

07 LONJINGTON

G. ST. H. ZIP CODE

NM 8260

I. OWNERSHIP ('X' one)

P. PRIVATE M. PUBLIC O. OTHER (specify)
 S. STATE F. FEDERAL

VI. WELL INFORMATION

WELL OPERATION STATUS:
 PA = PERMANENTLY ABANDONED AND APPROVED BY STATE AC = ACTIVE TA = TEMPORARILY ABANDONED
 AN = PERMANENTLY ABANDONED AND NOT APPROVED BY STATE

C	A. CLASS AND TYPE	B. TOTAL NO. OF WELLS	C. WELL OPERATION STATUS			
			UC	AC	TA	AN
08	17	2		2		
14 15 16	16 17	18 - 21	22 - 24 25 - 27 28 - 30 31 - 33 34 - 36			
09						
14 15 16	16 17	18 - 21	22 - 24 25 - 27 28 - 30 31 - 33 34 - 36			
10						
14 15 16	16 17	18 - 21	22 - 24 25 - 27 28 - 30 31 - 33 34 - 36			
11						
14 15 16	16 17	18 - 21	22 - 24 25 - 27 28 - 30 31 - 33 34 - 36			
12						
14 15 16	16 17	18 - 21	22 - 24 25 - 27 28 - 30 31 - 33 34 - 36			
13						
14 15 16	16 17	18 - 21	22 - 24 25 - 27 28 - 30 31 - 33 34 - 36			
14						
14 15 16	16 17	18 - 21	22 - 24 25 - 27 28 - 30 31 - 33 34 - 36			

D. COMMENTS (optional)

REFINERY EFFLUENT AND PRODUCED WATER
 DISPOSAL WELLS. PERMITTED THROUGH
 GROUND WATER DISCHARGE PLAN GW-37

ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISIONGARREY CARRUTHERS
GOVERNOR

January 9, 1987

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-5800CERTIFIED MAIL
RETURN RECEIPT REQUESTEDMrs. Dorothy Runnels, President
Araho, Inc.
P. O. Box 937
Lovington, New Mexico 88260RE: DISCHARGE PLAN (GW-37)
ARAHO, INC.
L. C. STATE WELLS NO. 1 AND NO. 2

Dear Mrs. Runnels:

The ground water discharge Plan (GW-37) for the Araho, Inc., L. C. State Wells No. 1 and No. 2, Class I effluent (non-hazardous) injection wells, and associated surface facilities located in the SE/4 of Section 1, Township 27 South, Range 36 East (NMPM) is hereby approved with the following provisions:

1. To prevent corrosion and provide maximum protection for the casing, injection shall be through plastic lined tubing with a packer set no more than 100 feet from the bottom of the long-string casing.
2. The casing-tubing annulus shall be filled with an inert fluid, and a minimum pressure of 100 psi maintained pursuant to WQCC 5-206.B.2.
3. Continuous monitoring devices shall be installed to provide a record of injection pressure (vacuum), flow rate, flow volume and annular pressure, pursuant to N.M. WQCC 5-207.B.2. Such devices shall be installed prior to injection of any industrial effluent.
4. Monthly reports of the disposal of produced water shall be submitted in accordance with Rules 704 and 1120 of the Division Class II Rules and Regulations.
5. For wastes other than produced water, the operator shall keep and make available for inspection, records for each calendar month on the source, location, volume and type of waste, date of disposal and pipeline or hauling company that disposes of fluids or materials in the facility. Such records shall be maintained for a period of two years from the date of disposal.

This requirement is pursuant to WQCC 3-107.A. and is needed to track the types and volumes of waste received by the facility.

6. The operator shall provide a representative analysis of the injected fluids quarterly pursuant to WQCC 5-208.A.2(a) and Apollo letter of January 8, 1987.
7. Mechanical integrity for each effluent disposal well shall be demonstrated yearly during the life of the well pursuant to WQCC 5-207.A. and the discharge plan dated October 15, 1986. The type of test shall be approved by the Division and witnessed by an OCD representative.
8. The injection well or system shall be equipped with a pressure limiting switch or acceptable substitute which will limit the wellhead pressure on the injection well to no more than the hydrostatic pressure from the injection storage tanks exerted at the wellhead.
9. The operator shall immediately notify the supervisor of the Division's Hobbs district office of the failure of the tubing, casing, or packer in the wells or the leakage of water from around said wells, or associated surface facility, and take such steps as may be timely and necessary to correct such failure or leakage pursuant to WQCC 5-208.A.1.
10. Pursuant to WQCC 5-208.2, the following quarterly reports will be submitted to the Director:
 - a) The analyses as required in (6) above.
 - b) Monthly average, maximum and minimum values for injection pressure, flow rate and volume, and annular pressure.
 - c) Any well workover.
11. L. C. State No. 1 well shall not be used for disposal of industrial effluent prior to the completion of remedial repairs as specified in the OCD correspondence of November 10, 1986.

The discharge plan was submitted pursuant to Section 3-106 of the New Mexico Water Quality Control Commission Regulations. It consists of the application dated October 6, 1986, and supplements dated October 15, 1986, December 2, 1986, and January, 1987. It is approved pursuant to Section 3-109.C. which provides for the possible future amendments 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.

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 Section 3-107.C., you are required to notify the Director of any facility expansion or process modification that would result in any change in the discharge of water quality or volume. You are further required to notify the Director prior to the receipt of any industrial effluent.

On behalf of the staff of the Oil Conservation Division, I wish to thank you and your staff for your cooperation during this discharge plan review.

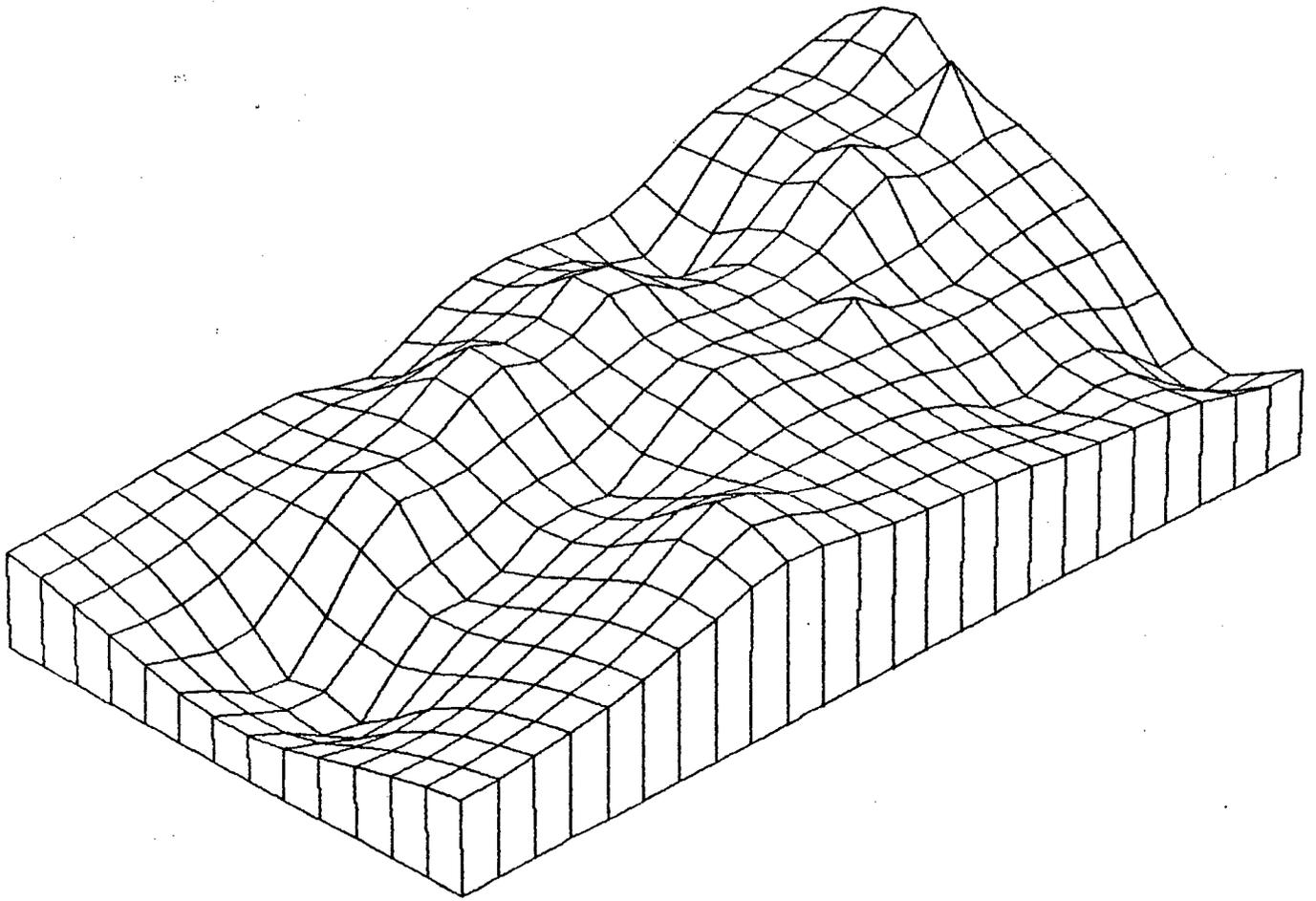
Sincerely,



CHARLES ROYBAL
Acting Director

CR:RCA:dp

cc: OCD, Hobbs
Southern Union Refinery



Top of the Abo



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

TONY ANAYA
GOVERNOR

December 29, 1986

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501-2088
(505) 827-5800

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mrs. Dorothy Runnels, President
Araho, Inc.
P. O. Box 937
Lovington, New Mexico 88260

RE: DISCHARGE PLAN APPLICATION GW-37
ARAHO, INC.
L. C. STATE WELLS NO. 1 AND NO. 2

Dear Mrs. Runnels:

We have received and are in the process of reviewing your addendum, dated December 2, 1986, to your discharge plan application. The information contained in the submittals adequately addresses the requirements of the WQCC Rules and Regulations and applicable OCD Rules and Regulations.

An item of clarification needs to be addressed concerning constituent testing of the effluent waste stream. As you already know the source of industrial effluent you will be receiving, the following constituents need to be analyzed for as soon as the effluent is available, and yearly thereafter:

1. Aromatic and halogenated hydrocarbon scan by EPA Methods 601 and 602. This analysis will determine the concentration of benzene, toluene, and xylene, and the presence of chlorinated solvents. The latter are considered "hazardous wastes" and should not be in the refinery's waste stream.
2. General water chemistry, to include calcium, magnesium, potassium, sodium, bicarbonate, chloride, sulfate, carbonate, TDS, pH and conductivity.
3. Heavy metals (by ICAP Scan) to include aluminum, barium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese molybdenum, nickel, silver, strontium, and zinc.
4. Heavy metals by atomic absorption to include As, Hg.

The following constituents need to be analyzed for quarterly:

1. chloride, pH, TDS, chromium and lead.

2. Aromatic and halogenated hydrocarbon scan by EPA Methods 601 and 602.

A written commitment from you to have analyses of these constituents performed on the above schedule will expedite our review process.

If you have any questions, please do not hesitate to call me at (505) 827-5885.

Sincerely,

A handwritten signature in black ink that reads "Roger C. Anderson" followed by a horizontal flourish.

ROGER C. ANDERSON
Environmental Engineer

RCA:dp

cc: OCD, Hobbs



DOROTHY RUNNELS
Chairman of the Board

January 8, 1987

Mr. Roger Anderson
Environmental Engineer
Energy and Minerals Department
Post Office Box 2088
State Land Office Building
Santa Fe, New Mexico 87501-2088

Re: Discharge Plan Application GW-37
Araho, Inc.
L.C. State Wells No. 1 and No. 2

Dear Mr. Anderson:

Enclosed is the additional information you requested to be added to our discharge plan.

If you need any additional information, please don't hesitate to call. I am sending the original and three copies, should you need the copies.

Yours truly,


Dorothy Runnels

DR/jh

enc.

via Federal Express

RUNCO, INC.
RUNNELS MUD COMPANY
P. O. Box 937 • Lovington, New Mexico 88260
Phone (505) 396-3663 • (505) 393-2813

ADDENDUM

Araho, Inc.

RE: Discharge Plan Application GW-37
L.C. State Well #1 and #2

The following tests will be performed on the effluent by the plant as soon as the effluent becomes available and quarterly and yearly thereafter as indicated.

Yearly:

1. Aromatic and halogenated hydrocarbon scan by EPA methods 601 and 602. This analysis will determine concentrations of Benzene, Toluene, Xylene and the presence of Chlorinated solvents.
2. General water chemistry, to include: Calcium, Magnesium, Potassium, Sodium, Bicarbonate, Chloride, Sulfate, Carbonate, TDS, pH and conductivity.
3. Heavy metals (by ICAP scan) to include Aluminum, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Silver, Strontium, and Zinc.
4. Heavy metals by atomic absorption to include As and Hg.

Quarterly:

1. Chlorides, pH, TDS, Chromium and Lead.
2. Aromatic and halogenated Hydrocarbon scan by EPA methods 601 and 602.

Other tests will be run and reported as directed by OCD.



NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

RECEIVED		
NOTIFICATION		
3.		
OFFICE		
OPERATOR		

5a. Indicate Type of Lease
State Fee

5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. OIL WELL GAS WELL OTHER: Salt Water Disposal

2. Name of Operator: Rice Engineering & Operating, Inc.

3. Address of Operator: P. O. Box 1142, Hobbs, New Mexico 88240

4. Location of Well: UNIT LETTER C 2310 FEET FROM THE west LINE AND 990 FEET FROM THE north LINE, SECTION 2 TOWNSHIP 17S RANGE 36E NMPM.

7. Unit Agreement Name: Abo SWD

8. Farm or Lease Name: Abo SWD

9. Well No.: 2

10. Field and Pool, or Wildcat: Lovington Abo

15. Elevation (Show whether DF, RT, GR, etc.): 3863' N.B.

12. County: Lea

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOB <input type="checkbox"/>	OTHER <u>Install tubing</u> <input checked="" type="checkbox"/>

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

10-19-74:
Run 3,317' (268 jts.)-3½" OD plastic-lined tubing w/packer on bottom & loaded casing-tubing annulus with chromate water. Injecting produced water down 3½" OD plastic-lined tubing under vacuum and casing-tubing annulus is pressured to 150 psi.

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

ORIGINAL SIGNED BY
SIGNED L. B. GOODHEART TITLE Division Manager DATE Nov. 11, 1974

APPROVED BY De D. Ramey TITLE Dist. I. Supv. DATE 11/11/74

CONDITIONS OF APPROVAL, IF ANY:

The Ohio Oil Company

(Company or Operator)

State B-4286 "A"

(Lease)

Well No. 1, in NE 1/4 of NW 1/4, of Sec. 2, T. 17 S, R. 36 E, NMPM.

Lovington-Abo

Pool,

Lea

County.

Well is 2310 feet from West line and 990 feet from North line

of Section 2 If State Land the Oil and Gas Lease No. is B-4286

Drilling Commenced December 12, 1953 Drilling was Completed February 8, 1954

Name of Drilling Contractor Company tools, Rig #2

Address Hobbs, New Mexico

Elevation above sea level at Top of Tubing Head The information given is to be kept confidential until 19

OIL SANDS OR ZONES

No. 1, from to No. 4, from to

No. 2, from to No. 5, from to

No. 3, from to No. 6, from to

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from to feet.

No. 2, from to feet.

No. 3, from to feet.

No. 4, from to feet.

CASING RECORD

SIZE	WEIGHT PER FOOT	NEW OR USED	AMOUNT	KIND OF SHOE	CUT AND PULLED FROM	PERFORATIONS	PURPOSE
13-3/8"	48	New	375'	Baker guide shoe			
9-5/8"	36	New	3330'	3" Baker differential collar			
5-1/2"	17	New	8572'	11" Baker "	float " & guide shoe		
2-3/8"	4.7	New	8505'	3"			

MUDDING AND CEMENTING RECORD

SIZE OF HOLE	SIZE OF CASING	WHERE SET	NO. SACKS OF CEMENT	METHOD USED	MUD GRAVITY	AMOUNT OF MUD USED
17 1/2"	13-3/8"	396	350	B J Cementing Co.		
12"	9-5/8"	3348	1750	B J Cementing Co.		
8-3/4"	5-1/2"	8530	1350	B J Cementing Co.		
	2-3/8"	8465		torp. end.		

RECORD OF PRODUCTION AND STIMULATION

(Record the Process used, No. of Qts. or Gals. used, interval treated or shot.)

Washed w/750 gallon acid before testing, after acid 528 BOPD, on 22/64" choke.

Perforated tbg. from 8444' to 8468' w/6 shots per ft. 168 - 1/2" holes.

Acidized thru perforation in 5 1/2" casing from 8440' to 8468' w/750 gal. mud acid.

Result of Production Stimulation

NEW MEXICO OIL CONSERVATION COMMISSION
APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OPERATOR Amoco Production Company		ADDRESS P. O. Box 68 - Hobbs, NM 88240	
LEASE NAME State "E" Tract 18	WELL NO. 22	FIELD Lovington Abo	COUNTY Lea
LOCATION UNIT LETTER G ; WELL IS LOCATED 1650 FEET FROM THE North LINE AND 1650 FEET FROM THE East LINE. SECTION 2 TOWNSHIP 17-S RANGE 36-E NMPM.			

CASING AND TUBING DATA					
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	13-3/8"	270'	275	Surface	Circulated
INTERMEDIATE	9-5/8"	3287'	300	Unknown	Cemented with DV tool at 2106'
LONG STRING	5-1/2"	8330'	835 sx originally will squeeze 450 sx Approx. 4150'		Temp Survey
TUBING	3-1/2"	Approx. 8331'	NAME, MODEL AND DEPTH OF TUBING PACKER Guiberson Uni Packer VI - 3-1/2" - 8300'		

NAME OF PROPOSED INJECTION FORMATION Abo		TOP OF FORMATION 8350'	BOTTOM OF FORMATION 9250'
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? Internally Coated Tubing	PERFORATIONS OR OPEN HOLES? 8330' - 9000'	PROPOSED INTERVAL(S) OF INJECTION 8330' - 9000'	
IS THIS A NEW WELL DRILLED FOR DISPOSAL? No	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? Producing Well	HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? Yes	

LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH
8338' - 8340' 75 sx sloslet; 8292' - 8316' 150 sx Class H

DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA 80'	DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA 6800'	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA 9500'	
ANTICIPATED DAILY INJECTION VOLUME (BBLS.) MINIMUM 6,000 MAXIMUM 10,000	OPEN OR CLOSED TYPE SYSTEM Closed	IS INJECTION TO BE BY GRAVITY OR PRESSURE? Pressure	APPROX. PRESSURE (PSI) 1650#
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE -	WATER TO BE DISPOSED OF Yes	NATURAL WATER IN DISPOSAL ZONE Yes	ARE WATER ANALYSES ATTACHED? Yes

NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND)
City of Lovington, New Mexico

LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL

- Marathon Oil Company - P. O. Box 2409 - Hobbs, NM 88240**
- Cities Service Company - P. O. Box 1919 - Midland, TX 79702**
- Getty Oil Company - P. O. Box 730 - Hobbs, NM 88240**
- Amerada Hess Corporation - P. O. Box 2040 - Tulsa, OK 74102**
- Phillips Petroleum Company - 4001 Penbrook - Odessa, TX 79701**

HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?	SURFACE OWNER Yes	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL Yes	THE NEW MEXICO STATE ENGINEER Yes
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)	PLAT OF AREA Yes	ELECTRICAL LOG No	DIAGRAMMATIC SKETCH OF WELL Yes

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

Bob Laws
(Signature)

Administrative Analyst
(Title)

June 20, 1980
(Date)

NOTE: Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.

NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OPERATOR Amoco Production Company		ADDRESS P. O. Box 68 - Hobbs, NM 88240	
LEASE NAME State "E" Tract 13	WELL NO. 22	FIELD Lovington Abo	COUNTY Lea
LOCATION UNIT LETTER <u>G</u> : WELL IS LOCATED <u>1650</u> FEET FROM THE <u>North</u> LINE AND <u>1650</u> FEET FROM THE <u>East</u> LINE, SECTION <u>2</u> TOWNSHIP <u>17-S</u> RANGE <u>36-E</u> NMPM.			

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	13-3/8"	270'	275	Surface	Circulated
INTERMEDIATE	9-5/8"	3287'	300	Unknown	Cemented with DV tool at 2106'
LONG STRING	5-1/2"	8330'	835 sx originally will squeeze 450 sx Approx. 4150'		Temp Survey
TUBING	3-1/2"	Approx. 8331'	NAME, MODEL AND DEPTH OF TUBING PACKER Guiberson Uni Packer VI - 3-1/2" - 8300'		
NAME OF PROPOSED INJECTION FORMATION Abo			TOP OF FORMATION 8350'	BOTTOM OF FORMATION 9250'	
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? Internally Coated Tubing		PERFORATIONS OR OPEN HOLES? 8330' - 9000'	PROPOSED INTERVAL(S) OF INJECTION 8330' - 9000'		
IS THIS A NEW WELL DRILLED FOR DISPOSAL? No	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? Producing Well		HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? Yes		
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH 8338' - 8340' 75 sx slosset; 8292' - 8316' 150 sx Class H					
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA 80'		DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA 6800'		DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA 9500'	
ANTICIPATED DAILY INJECTION VOLUME (BBLS.)	MINIMUM 6,000	MAXIMUM 10,000	OPEN OR CLOSED TYPE SYSTEM Closed	IS INJECTION TO BE BY GRAVITY OR PRESSURE? Pressure	APPROX. PRESSURE (PSI) 1650#
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE -			WATER TO BE DISPOSED OF Yes	NATURAL WATER IN DISPOSAL ZONE Yes	ARE WATER ANALYSES ATTACHED? Yes
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) City of Lovington, New Mexico					
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL					
Marathon Oil Company - P. O. Box 2409 - Hobbs, NM 88240					
Cities Service Company - P. O. Box 1919 - Midland, TX 79702					
Getty Oil Company - P. O. Box 730 - Hobbs, NM 88240					
Amerada Hess Corporation - P. O. Box 2040 - Tulsa, OK 74102					
Phillips Petroleum Company - 4001 Penbrook - Odessa, TX 79701					
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?	SURFACE OWNER Yes		EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL Yes		THE NEW MEXICO STATE ENGINEER Yes
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)	PLAN OF AREA Yes		ELECTRICAL LOG No		DIAGRAMMATIC SKETCH OF WELL Yes

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

Bob Laws
(Signature)

Administrative Analyst
(Title)

June 20, 1980
(Date)

NOTE: Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.

NO. OF COPIES RECEIVED	
DISTRIBUTION	
SANTA FE	
FILE	
U.S.G.S.	
LAND OFFICE	
OPERATOR	

5a. Indicate Type of Lease
State Fee

5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO REPERM OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT TO DRILL OR REPERM" FOR SUCH PROPOSALS.

1. <input type="checkbox"/> OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER- Injection		7. Unit Agreement Name
2. Name of Operator Amoco Production Company		8. Farm or Lease Name State "E" Tract 18
3. Address of Operator P. O. Box 68, Hobbs, New Mexico 88240		9. Well No. 22
4. Location of Well UNIT LETTER <u>G</u> <u>1650</u> FEET FROM THE <u>North</u> LINE AND <u>1650</u> FEET FROM THE <u>East</u> LINE, SECTION <u>2</u> TOWNSHIP <u>17-S</u> RANGE <u>36-E</u> N.M.P.M.		10. Field and Pool, or adjacent Lovington ABO
15. Elevation (Show whether DF, RT, CR, etc.) 3852' RDB		12. County Lea

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data
NOTICE OF INTENTION TO: SUBSEQUENT REPORT OF:

PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input checked="" type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOBS <input type="checkbox"/>	

17. Describe Processes or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

Moved in service unit 3-10-82. Pulled tubing and packer. Ran a retrievable bridge plug, packer and tubing. Set bridge plug at 8235' and packer at 8225'. Tested bridge plug to 1000 psi and tested okay. Tested casing and packer to 2500 psi and tested okay. Pulled tubing and packer. Ran a casing inspection log 8150' to surface. Ran a casing bond log 8150-3600'. Perforated 3700' with 2 SPF. Ran packer and tubing and spotted 14' of sand on bridge plug. Pulled tubing and packer. Circulated 9-5/8" casing with 280 bbl. water and dye. Cement squeezed casing with 1500 sacks class C cement. Drilled out cement 3624'-3745'. Pressure tested casing to 1000 psi and tested okay. Pulled tubing and tools. Ran a retrieving tool and tubing. Washed sand off retrievable bridge plug. Pulled tubing and retrievable bridge plug. Ran packer and 2-7/8" tubing. Set packer at 8239'. Moved out service unit 3-21-82. Returned well to injection.

0+4-NMOC, H 1-Hou 1-Susp 1-CLF

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

SIGNED Cathy L. Forman TITLE Assist. Admin. Analyst DATE 3-29-82

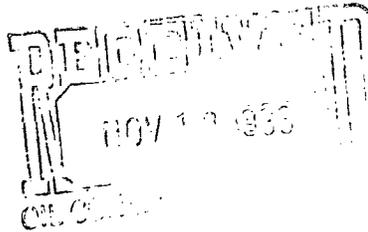
ORIGINAL SIGNED BY
APPROVED BY _____ TITLE _____ DATE MAR 31 1982
CONDITIONS OF APPROVAL, IF ANY, LISTED BELOW.



**UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE**

Field Supervisor
Ecological Services, USFWS
Post Office Box 4487
Albuquerque, New Mexico 87196

November 10, 1986



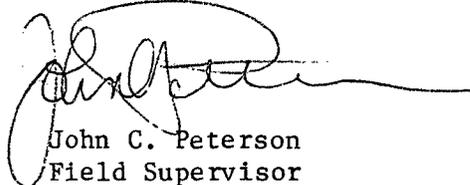
R. L. Stamets, Director
Oil Conservation Division
State of New Mexico
State Land Office Building
P. O. Box 2088
Santa Fe, New Mexico 87504-2088

Dear Mr. Stamets:

We have reviewed the proposed discharge plan for reclassification of GW-37, Araho Incorporated, Lovington, New Mexico to class I effluent disposal (non-hazardous) wells. The disposal facility is located in SE $\frac{1}{4}$ of Section 1, T17S, R36E (NMPM) Lea County. The discharge plan is for the injection of up to 420,000 gallons/day of produce water with a total dissolved solids concentration up to 45,000 ppm into two deep wells.

We have not identified any significant fish and wildlife resources or their habitats that would be impacted by reclassification of these wells. These comments represent the views of the Fish and Wildlife Service. Thank you for the opportunity to comment on the proposed plan. If you have any questions concerning our comments please contact Tom O'Brien at (505) 883-7877 or FTS 474-7877.

Sincerely yours,



John C. Peterson
Field Supervisor

cc:

Director, New Mexico Department of Game and Fish, Santa Fe, New Mexico
Director, New Mexico Health and Environment Department, Environmental Improvement Division, Santa Fe, New Mexico
Regional Administrator, Environmental Protection Agency, Dallas, Texas
Regional Director, FWS, FWE, Albuquerque, New Mexico

All USGS

observation wells in
area of injection wells
are completed in the
Ogallala fm.

TABLE 3. STRATIGRAPHIC UNITS IN SOUTHERN LEA COUNTY, N. MEX.

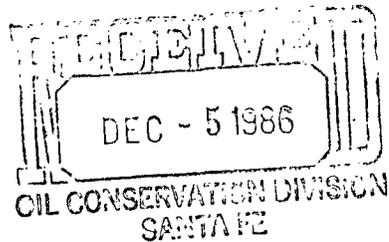
GEOLOGIC AGE	GEOLOGIC UNIT	THICKNESS (ft)	GENERAL CHARACTER	WATER-BEARING PROPERTIES	
Cenozoic Quaternary	Recent	Sand	0-30±	Dune sand, unconsolidated stabilized to drifting, semiconsolidated at depth; fine- to medium-grained.	Above the zone of saturation, hence, does not yield water to wells. Aids recharge to underlying formations by permitting rapid infiltration of rain-water.
	and Pleistocene	Alluvium	0-400±	Channel and lake deposits; alternating thickbedded calcareous silt, fine sand, and clay; thickest in San Simon Swale; less than 100 feet thick in most places.	Saturated and highly permeable in places in east end of Laguna Valley. Forms continuous aquifer with Ogallala formation. Wells usually yield less than 30 gpm. Locally above the water table.
Cenozoic Tertiary	Pliocene	Ogallala	0-300±	Semiconsolidated fine-grained calcareous sand capped with thick layer of caliche; contains some clay, silt, and gravel.	Major water-bearing formation of the area. Unsaturated in many localities, such as north side of Grama Ridge, west side of Eunice Plain, Antelope Ridge area, and Rattlesnake Ridge. Greatest saturated thickness along east side of Eunice Plain, west of Monument Draw, where wells yield up to 30 gpm. Highest yields, up to 700 gpm, obtained from wells along south edge of Eunice Plain, east of Jal.
Mesozoic Cretaceous		Undifferentiated	35±	Small isolated and buried residual blocks of limestone, about 3 miles east of Eunice.	Possibly small isolated bodies of water locally.
Mesozoic Triassic Dockum group		Chinle formation	0-1,270±	Claystone, red and green; minor fine-grained sandstones and siltstones; underlies all of eastern part of southern Lea County area; thins westward; absent in extreme west.	Yields small quantities of water from sandstone beds. Yields are rarely over 10 gpm. Water has high sulfate content.
		Santa Rosa sandstone	140-300±	Sandstone, chiefly red but locally white, gray, or greenish-gray; fine- to coarse-grained; exposed in extreme west; underlies Cenozoic rocks in western part of area, and is present at depth in eastern part.	Yields small quantities of water over most of the area. Some wells are reported to yield as much as 100 gpm. Water has high sulfate content.
Paleozoic Permian or Triassic		Undifferentiated	90-400+	Siltstone, red, shale, and sandstone; present at depth under all of southern Lea County.	No wells are known to be bottomed in the red beds. Probably can yield very small quantities of high-sulfate water.
Paleozoic Ordovician through Permian			6,500-17,000±	Thick basin deposits ranging in character from evaporites to coarse clastics; thinnest on the east side of the area over the Central basin platform, thickest toward the southwest.	No presently usable water supply available from these rocks. Source of highly mineralized oil-field waters.
Precambrian				Granite, granodioritic and other igneous and metamorphic rocks; complex structure.	Not hydrologically significant.

TABLE 1. -- WATER LEVELS IN THE TATUM-LOVINGTON-HOBBS AREA, LEA AND CHAVES COUNTIES, N. MEX., IN WINTER 1979, CHANGE FROM WINTER 1978 TO WINTER 1979, IN FEET, AND HIGHEST AND LOWEST RECORDED WINTER WATER LEVEL, IN FEET, REFERENCED TO LAND SURFACE DATUM.

LOCATION	OWNER NAME	SOURCE	79 WATER LEVEL	DATE	CHANGE	HIGH	YR	LOW	YR	YEARS OF RECORD
165 36E 23 241	T.M. MONTEITH	OGLL	-59.07	1-04	-0.52	-46.68	55	-62.59	72	54-58,60-63,65-79
165 37E 01 311	WILKS	OGLL	-81.99	1-03	-0.55	-34.99	50	-81.99	79	50-79
145 37E 02 211	HARADA	OGLL	-78.26	1-03	-0.96	-38.33	50	-78.26	79	50-79
145 37E 07 114	BEAL GLEASON	OGLL	-63.36	1-04	-0.72	-32.32	50	-63.36	79	50-79
165 37E 11 111	R.J. TAYLOR	OGLL	-78.84	1-03	-0.22	-31.93	49	-75.64	79	49-79
165 37E 25 111	A.C. DAVIS	OGLL	-64.70	1-05	-	-64.70	79	-64.63	75	75
165 38E 05 333	STATE OF N. MEX.	OGLL	-44.35	1-04	-0.36	-24.60	56	-44.35	79	50-79
165 38E 27 111	WOODY'S ACRES INC.	OGLL	-80.84	1-03	-1.07	-52.85	50	-82.34	79	50-79
165 38E 30 211	MITCHELL	OGLL	-62.93	1-03	+2.09	-34.82	51	-65.02	78	51-54,57-79
165 38E 34 131	WOODY'S ACRES INC.	OGLL	-102.76	1-03	+1.56	-62.39	59	-104.32	78	52,58-79
165 39E 29 233	SIMS AND HOLDER	OGLL	-92.08	1-03	-2.66	-54.25	50	-92.08	79	50-56,60-79
175 33E 13 341	POTASH CO. OF AMERICA	OGLL	-171.04	1-04	-1.22	-146.05	53	-171.04	79	52-79
175 34E 28 223	SOUTHWEST POTASH	OGLL	-153.48	1-04	-1.05	-133.01	69	-153.48	79	68-79
175 34E 35 130	STATE OF N. MEX.	OGLL	-124.32	1-04	-1.32	-59.88	53	-124.32	79	40-79
175 36E 27 131	DOROTHY SCHARBAUER	OGLL	-39.81	1-04	-0.47	-33.05	49	-39.31	79	47-79
175 37E 10 211	S.M. REILAND	OGLL	-60.08	1-03	-1.22	-32.87	49	-60.08	79	49-79
175 37E 12 111	LEE STILES	OGLL	-75.12	1-03	-0.30	-40.69	50	-75.12	79	50-79
175 37E 34 111	C.G. GOODWIN	OGLL	-60.96	1-03	-0.01	-42.13	57	-69.74	73	57-79
175 38E 02 311	H.V. LAWRENCE	OGLL	-79.94	1-03	-2.17	-43.65	51	-79.94	79	49-79
175 38E 07 111	L.R. SEBRINGS	OGLL	-68.36	1-03	-0.37	-35.59	52	-68.36	79	51-79
175 38E 08 211	J.J. HANDLEY JR.	OGLL	-70.92	1-03	-0.66	-36.46	50	-70.92	79	50-57,59-79
175 38E 24 133	H.V. LAWRENCE	OGLL	-53.02	1-03	-1.20	-41.30	50	-57.00	70	50-58,60-64,66-79
175 38E 31 311	G.L. BEENE	OGLL	-52.09	1-03	+2.61	-26.71	49	-54.70	73	48-71,74-79
175 38E 34 113	W.E. BUSBY	OGLL	-54.62	1-03	-1.12	-24.78	44	-54.62	79	43-79
185 34E 22 343	COMOCO OIL CO.	OGLL	-110.45	1-04	-	-109.22	67	-110.62	72	65-77,79
185 35E 17 144	INT MIN AND CHEM CORP	OGLL	-75.05	1-04	-0.25	-69.46	56	-75.05	79	53-79
185 36E 27 111	STATE OF N. MEX.	OGLL	-47.30	1-04	-1.40	-38.13	43	-47.30	79	39-79
195 36E 32 321	F.K. TURNER	ALVM	-26.75	1-04	-	-24.05	76	-27.33	71	71,74-77,79
195 37E 34 111	UNKNOWN	OGLL	-18.85	1-04	-	-18.85	79	-22.33	74	74-77,79
195 38E 30 121	UNKNOWN	OGLL	-29.66	1-04	+0.88	-28.53	76	-30.54	76	74-79
195 38E 34 222	J.D. COURSEY	OGLL	-52.14	1-04	-2.27	-42.27	49	-55.05	72	49-59,61-79

Araho, Inc.

P. O. Box 937 / Lovington, New Mexico 88260 / Phone (505) 396-3663



December 2, 1986

Mr. David Boyer
Energy and Minerals Department
Land Office Building
Room 206
Santa Fe, New Mexico 87504

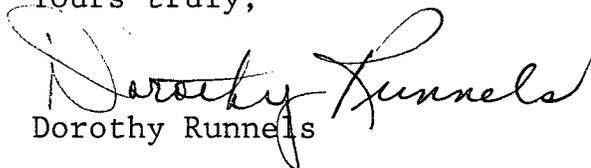
Dear Mr. Boyer:

Enclosed is the addendum to our Discharge plan. Hopefully, this will complete our package. If not, please let us know what additional information you need.

I have also included two copies of the addendum for Mr. R. L. Stamets, Chairman of OCD, and Ms. Denise Fort, WQCC Chairman. Will you please see that they get these copies?

Thank you for all your help in this matter.

Yours truly,


Dorothy Runnels

DR/jh

enc.

ARAO, INC.

Plugging and Abandonment Plan

For: L.C. STATE WELLS #1 AND #2

If for any reason these wells are to be abandoned the following procedures will be followed.

As both wells, to meet Class I disposal requirements, will require casings to be cemented, we therefore will not attempt to recover casing during plugging procedures. Salt Gel made with 10 lb. brine and 35 lb. of Gel/BBL. hereafter referred to as Gel will be used between plugs. Cement plugs will be 25 sacks or 100 ft. whichever is greater.

L.C. STATE #1:

A cast iron bridge plug will be set at 12,050', bottom of long string with 25 sacks of cement on top. Gel fill to top of Devonian, plug set at 11,716', Gel fill to top of Strawn, plug set at 10,300', Gel fill to top of Penn, plug set at 10,055', Gel fill to top of Abo, plug set at 8,304', Gel fill to top of Glorietta, plug set at 6,017', Gel fill to casing shoe, plug set at 7,949', tag plug to verify Gel fill to top of San Andres, plug set at 4,607', Gel fill to top of Queen, plug set at 3,601', Gel fill to top of Salt Zone, plug set at 1,990', Gel fill to surface plug, permanent marker welded to casings.

L.C. STATE #2:

A cast iron bridge plug will be set at 8,500', bottom of long string, with 25 sacks cement on top. Gel fill to top of Glorietta, plug set at 6,095', Gel fill to top of San Andres, plug set at 4,708', Gel fill to top of Queen, plug set at 3,670', Gel fill to casing shoe, plug set at 3,368', tag to verify, Gel fill to top of Salt Zone, plug set at 2,078', Gel fill to surface cement plug with permanent marker welded to casings.

Both locations upon plugging will have all tanks, pipe and connections removed along with fence wires and posts. Surface caliche will be leveled. Locations will be plowed and seeded before abandonment. Cattleguards will be removed and fence replaced where necessary.

This plugging and abandonment plan is for guidelines only and may be revised by OCD as regulations or requirements change.

Tabulation of Wells:

L.C. State #1 records indicate no wells within $\frac{1}{2}$ mile that penetrate #1's injection zone. All surrounding wells are completed in higher formations.

L.C. State #2 records indicate that only three wells located within $\frac{1}{2}$ mile penetrate the injection zone. All three of these wells are Class II SWD wells and all three wells are on vacuum. Rice Engineering's #1 is located $\frac{1}{8}$ mile North of #2. Apollo Oil's #21 and #22 are located $\frac{1}{4}$ mile Northeast and East respectively of Araho #2. Copies of OCD form C-104 for each of these three well are enclosed.

WaterCourses:

There are no true watercourses located within one mile of either disposal site. There is one small dirt stockwater tank located $\frac{1}{2}$ mile East of #2. The topography in this area is relatively flat with occasional depressions and little to no long range drainage. No true watercourses or bodies of water would be affected by accidental or unauthorized release of effluent on the surface.

Since no pumps are set up to pressurize the disposal wells, the maximum pressure to the well will be hydrostatic head from the tanks (approximately 12 lbs./in.²) to a vacuum of 30 in. of mercury. As both wells have taken large quantities of water for several years I can see no pressure changes in the foreseeable future.

Formation fluid displacement seems to occur readily to justify the tremendous rates at which the wells take water. The Abo formation of #2 water well disperse generally to the East. The Fusselman formation of #1 probably disperses in all directions.

Contingency Plans:

In the event of one of the wells failing, flow of the effluent will be diverted to the other until the failure can be repaired. In the event of well failure fresh water will be placed so as to displace all effluent in the tubing and/or casing to prevent escape of the effluent into other zones.

The system is checked more than three times daily. Morning, noon and night and as more often as necessary. Small leaks and leaks outside of the berms will be detected visually. Leaks outside of the bermed area immediately after detection will be sucked up by vacuum trucks and returned to the system.

All fluids including oils, sludges and tank bottoms received will be sold to oil reclamation plants. What fluids they will not take will be trucked to pollution control (Latuna Laguna).

Compliance Plans:

The plant anticipates only producing 2,000 BBLs./day of effluent for the first few months, therefore we propose to perform the cement bond log, static fluid level, placement of any cement required, installation of all automatic equipment and the mechanical integrity test within sixty days of approval of the discharge plan on #2 well only. As the plant is responsible for all expenses in meeting #1 disposal requirements this timetable will of course depend on them. Since the plant has said they will not start up until this discharge plan is approved, we will not be able to obtain an analysis of the effluent prior to this discharge plan approval. We propose to obtain this analysis immediately upon start up of the plant.

All other requirements will be met on #2 within 180 days of start up of plant. All requirements on #1 well will be met before effluent injection from the plant is turned into it. I wish we could give you more accurate dates and times but at this time we are unable to do so. If you have any other questions please contact us and we will attempt to answer them.

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 possibility of fine and imprisonment.

Submitted by:

A handwritten signature in cursive script, appearing to read "Dorothy Runnels". The signature is written in dark ink and is positioned to the right of the typed name and title.

Dorothy Runnels
President
Araho, Inc.



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

TONY ANAYA
GOVERNOR

November 10, 1986

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501-2088
(505) 827-5800

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mrs. Dorothy Runnels, President
Araho, Inc.
P. O. Box 937
Lovington, New Mexico 88260

RE: Discharge Plan Application GW-37
Araho, Inc.
L. C. State Wells No. 1 and No. 2

Dear Mrs. Runnels:

The Oil Conservation Division has received and is in the process of reviewing the above-referenced discharge plan application. The plan submittal, dated October 15, 1986, was received by the OCD on October 16, 1986. The following comments and requests for additional information are based on our review of the data provided in the plan. A site inspection field trip will be conducted in the near future and may produce additional comments and a further need for additional information. The discharge plan review and evaluation is pursuant to the requirement to bring the subject wells and their associated surface equipment into compliance with Part 3 (Discharges to Groundwater) and Part 5 (Underground Injection Control) of the New Mexico Water Quality Control Commission (WQCC) Regulations.

General Comments

Our review of the discharge plan and a review of the OCD well files for the subject wells indicate that submission of additional information as detailed below is required for further review. Specific monitoring, operating and reporting requirements need to be addressed and clarified.

Although the subject wells fulfill the requirements to be permitted as Class II SWD wells, their construction does not meet the requirements for Class I effluent disposal wells. Certain remedial work and corrective actions will be required prior to injection of any industrial effluent.

Specific Comments

- 1) The certification signature sheet as required pursuant to Sec. 5-101.H.2 of the WQCC regulations was omitted. Please supply this page as a supplement to your discharge plan application.
- 2) A plugging and abandonment plan was omitted. Please supply a plan pursuant to WQCC Section 5-209.

- 3) A tabulation of all wells within one-half mile of each injection well that penetrate the injection zone is required as per Section 5-210.B.3 and 5-210.B.4.
- 4) A general description of the geologic and hydrologic conditions and specific maps and cross sections were omitted from the application. However, in lieu of the submission of these items, the following references as researched by the OCD staff will be incorporated in your discharge plan where available and appropriate:
 - a. Sidney R. Ash, Ground-Water Conditions in Northern Lea County, Hydrologic investigations Atlas HA-62, USGS, 1963, satisfies the requirement for maps and cross sections indicating the general vertical and lateral limits of all ground waters having 10,000 mg/l or less TDS within the area of review.
 - b. Cross section prepared by J. Bailey, OCD, using OCD well files, drillers logs and log files, satisfies the requirement for maps and cross sections detailing the geology and geologic structure of the local area. A copy of this review will be placed in your discharge plan.
- 5) Please supply the following additional information:
 - a. Locations of any watercourse or body of water within one mile of the discharge site that would be impacted by any accidental and/or unauthorized release of effluent on the surface.
 - b. Information on expected pressure changes, formation fluid displacement, and direction of movement of injected fluids in the injection zone.
 - c. Contingency plans for well failures or shut-ins to prevent movement of fluids to zones other than the approved injection zone.
- 6) Descriptions and schematics of the surface facilities and a monitoring system were submitted in the plan. Please submit the following information and clarifications:
 - a. Contingency plans for any unauthorized release resulting from leaks or rupture of a flow line not contained by the proposed berm. How will any small leaks be detected? How often will the system be physically checked? .
 - b. What will be the disposition of fluids including oils, sludges and tank bottoms that may be received but cannot be injected?
- 7) As mentioned previously, the subject Class II SWD wells do not meet the more stringent Class I effluent disposal well construction requirements.

The following are the minimum requirements for conversion of your Class II SWD wells to Class I effluent disposal (non-hazardous) wells and for associated surface facilities. Additional requirements may be identified and added based on a site inspection, test results, and/or public response following public notification. Please submit plans for compliance including expected dates of completion.

Not all items listed below need be completed before injection of industrial effluent. However, prior to such injection, those items listed in Section (a) below must be completed and the results evaluated by OCD prior to injection approval. As Araho already has an agreement to receive industrial effluent from Southern Union Refining Company, the items listed in Section (b) below must be completed within six months of discharge plan approval. If the agreement is no longer in effect at the time of approval, the items listed in Section (b) must be completed within six months of any subsequent agreement to receive any industrial effluent. The items listed in Section (c) below will be performed from onset of injection throughout the period the well is used for injection of industrial effluent.

a. Prior to injection of any industrial effluent:

1. Static fluid level determination.
2. Mechanical Integrity Test.
3. Installation of continuous monitoring equipment to provide a record of injection pressure (vacuum), flow rate, flow volume, and pressure on the annulus.
4. An analysis of the fluid injected.

b. Completed within six months:

1. Placement of cement in the annulus between the drilled hole and each string of casing extending from the bottom of the pipe to within the previous string of casing where such cement may not now be present.
2. A bond log or temperature survey verifying all casing is cemented so as to fulfill the requirement in b.1 above.
3. Performance of a Mechanical Integrity Test after remedial work in b.1 above.
4. Automatic equipment shall be installed to interrupt the flow to the facility in the event of tank overflow.
5. Any pits on the facility shall conform to the OCD "Guidelines".

c. During the period the well is used for injection of industrial effluent:

1. Inject through plastic lined tubing with a packer set

no more than 100 feet from the bottom of the long-string casing.

2. Surface equipment will be secured to prevent unauthorized operation.
3. Surface equipment shall be maintained and have proper berms to contain any leaks or spills.
4. Continuous monitoring of injection pressure (vacuum), flow rate, flow volume, and pressure on the annulus with a monthly summary report to the Division.
5. A quarterly chemical analysis of the injected fluids for those constituents representative of fluid characteristics and required by OCD.

Enforcement Agreement (Prior to Discharge Plan Approval)

The wells proposed for reclassification can retain their Class II SWD permit and can continue to be used for produced water disposal pursuant to OCD Rules and Regulations. In the event you receive industrial effluent for disposal prior to discharge plan approval, the enforcement agreement as negotiated between the OCD, Araho and Southern Union will take effect.

If you have any questions, please do not hesitate to call me at (505) 827-5885.

Sincerely,



ROGER C. ANDERSON
Environmental Engineer

RCA:dp

cc: OCD-Hobbs

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

Notice is hereby given that pursuant to New Mexico Water Quality Control Commission Regulations, the following proposed discharge plan has been submitted for approval to the Director of the Oil Conservation Division, State Land Office Building, P. O. Box 2088, Santa Fe, New Mexico 87504-2088, Telephone (505) 827-5800.

(GW-37) Araho, Inc., Dorothy Runnels, President, P. O. Box 937, Lovington, N.M. 88260, proposes to reclassify their State L.C. Well No. 1 and Well No. 2 from Class II salt water disposal wells to Class I effluent disposal (non-hazardous) wells. The disposal facility is located in the SE/4 of Section 1, Township 17 South, Range 36 East (NMPM), Lea County, New Mexico. Up to 10,000 barrels (420,000 gallons) per day of produced water and/or non-hazardous refinery effluent will be disposed of through the two disposal wells. Well No. 2 injects into the Abo formation at a depth from 8528 to 8900 feet, and Well No. 1 injects into the Fusselman formation at a depth from 12,100 to 12,700. Discharge concentrations are expected to range between 1200 and 45,000 mg/l total dissolved solids. The approximate total dissolved solids concentration of formation fluids is 45,000 mg/l. The discharge plan addresses current and proposed construction, operation and monitoring of the wells and associated surface facility, and provides a contingency plan in the event of spills, leaks and other unauthorized discharges to ground water. Protectable ground water most likely to be affected in the event of unauthorized discharge is at a depth of approximately 60 feet with a total dissolved solids concentration of approximately 892 mg/l.

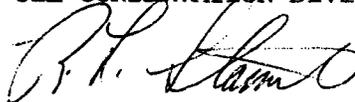
Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. Prior to ruling on any proposed discharge plan or its modification, the Director of the Oil

Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and a public hearing may be requested by any interested person. Requests for a public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed plan based on information available. If a public hearing is held, the Director will approve or disapprove the proposed plan based on information in the plan and information submitted at the hearing.

GIVEN Under the Seal of the New Mexico Oil Conservation Commission at Santa Fe, New Mexico on this 22nd day of October, 1986. To be published on or before October 31, 1986.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION



R. L. STAMETS
Director

S E A L

Affidavit of Publication

STATE OF NEW MEXICO)
) ss.
COUNTY OF LEA)

Joyce Clemens being first duly sworn on oath deposes and says that he is Adv. Director of THE LOVINGTON DAILY LEADER, a daily newspaper of general paid circulation published in the English language at Lovington, Lea County, New Mexico; that said newspaper has been so published in such county continuously and uninterruptedly for a period in excess of Twenty-six (26) consecutive weeks next prior to the first publication of the notice hereto attached as hereinafter shown; and that said newspaper is in all things duly qualified to publish legal notices within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico.

That the notice which is hereto attached, entitled

Notice Of Publication

and numbered in the Court of Lea County, New Mexico, was published in a regular and entire issue of THE LOVINGTON DAILY LEADER and not in any supplement thereof, once each week on the same day of the week, for one (1)

consecutive weeks, beginning with the issue of October 28, 1986

and ending with the issue of 19.....

And that the cost of publishing said notice is the sum of \$ 22.99

which sum has been (Paid) (~~Assessed~~) as Court Costs

Joyce Clemens
Subscribed and sworn to before me this 12th

day of November, 19 86

Mr. Jean Serier
Notary Public, Lea County, New Mexico

My Commission Expires Sept. 28, 1990

LEGAL NOTICE
NOTICE OF PUBLICATION
STATE OF NEW MEXICO
ENERGY AND MINERALS
DEPARTMENT

OIL CONSERVATION DIVISION
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STATE OF NEW MEXICO
OIL CONSERVATION DIVISION
R.L. STAMETS,
Director

Seal
Published in the Lovington Daily Leader October 28, 1986.

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STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
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(GW-37) Arahco, Inc., Dorothy Runnels, President, P.O. Box 937, Lovington, N.M. 88260, proposes to reclassify their State L.C. Well No. 1 and Well No. 2 from Class II salt water disposal wells to Class I effluent disposal (non-hazardous) wells. The disposal facility is located in the SE/4 of Section 1, Township 17 South, Range 36 East (NMPM), Lea County, New Mexico. Up to 10,000 barrels (420,000 gallons) per day of produced water and/or non-hazardous refinery effluent will be disposed of through the two disposal wells. Well No. 2 injects into the Abo formation at a depth from 8528 to 8900 feet, and Well No. 1 injects into the Fusselman formation at a depth from 12,100 to 12,700. Discharge concentrations are expected to be between 1200 and 45,000 mg/l total dissolved solids. The approximate total dissolved solids concentration of formation fluids is 45,000 mg/l. The discharge plan addresses current and proposed construction, operation and monitoring of the wells and associated surface facility, and provides a contingency plan in the event of spills, leaks and other unauthorized discharges to ground water. Protectable ground water most likely to be affected in the event of unauthorized discharge is at a depth of approximately 60 feet with a total dissolved solids concentration of approximately 892 mg/l.

Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. Prior to ruling on any proposed discharge plan or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and a public hearing may be requested by any interested person. Requests for a public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed plan based on information available. If a public hearing is held, the Director will approve or disapprove the proposed plan based on the information submitted at the hearing.

GIVEN Under the Seal of the New Mexico Oil Conservation Commission at Santa Fe, New Mexico on this 22nd day of October, 1986. To be published on or before October 31, 1986.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION
s/R.L. STAMETS
Director
Journal October 30, 1986

STATE OF NEW MEXICO } ss
County of Bernalillo }
THOMAS J. SMITHSON

..... being duly sworn declares and
says that he is NAT'L ADV. MGR. of the Albuquerque Journal, and that this newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Session Laws of 1937, and that payment therefore has been made or assessed as court costs; that the notice, a copy of which is hereto attached, was published in said paper in the regular daily edition,
for times, the first publication being on the day
of , 1986, and the subsequent consecutive
publications on , 1986.

NOTARIAL SEAL
RICHARD MONTOYA

Notary Public, State of New Mexico
My Comm. Expires 9-18-90
Richard Montoya

Thomas J. Smithson
Sworn and subscribed to before me, a Notary Public in and for the County of Bernalillo and State of New Mexico, this day of , 1986.

PRICE
Statement to come at end of month.
ACCOUNT NUMBER C80930

AFFIDAVIT OF PUBLICATION

State of New Mexico,
County of Lea.

I, _____

Robert L. Summers

of the Hobbs Daily News-Sun, a daily newspaper published at Hobbs, New Mexico, do solemnly swear that the clipping attached hereto was published once a week in the regular and entire issue of said paper, and not in a supplement thereof for a period

of _____

One weeks.

Beginning with the issue dated

October 28, 19 86

and ending with the issue dated

October 28, 19 86

Robert L. Summers
Publisher.

Sworn and subscribed to before

me this 28 day of

October, 19 86

Vera Murphy
Notary Public.

My Commission expires _____

Nov. 14, 19 88

(Seal)

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

LEGAL NOTICE

**NOTICE OF PUBLICATION
STATE OF NEW MEXICO
ENERGY AND MINERALS
DEPARTMENT
OIL CONSERVATION
DIVISION**

Notice is hereby given that pursuant to New Mexico Water Quality Control Commission Regulations, the following proposed discharge plan has been submitted for approval to the Director of the Oil Conservation Division, State Land Office Building, P.O. Box 2088, Santa Fe, New Mexico 87504-2088, Telephone: (505) 827-5800.

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If no public hearing is held, the Director will approve or disapprove the proposed plan based on information available. If a public hearing is held, the Director will approve or disapprove the proposed plan based on information in the plan and information submitted at the hearing.

GIVEN Under the Seal of the New Mexico Oil Conservation Commission at Santa Fe, New Mexico on this 22nd day of October, 1986, to be published on or before October 31, 1986.

STATE OF
NEW MEXICO
OIL CONSERVATION
DIVISION
R.L. STAMETS
Director
(Seal)



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

TONEY ANAYA
GOVERNOR

October 17, 1986

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-5800

Mr. Eugene N. Dubay
Vice President and Treasurer
Southern Union Company
1800 InterFirst Two
Dallas, Texas 75270

Re: Araho Disposal Wells

Dear Mr. Dubay:

Enclosed for your signature is the Enforcement Agreement to allow for continued use of the Araho SWD wells for disposal of Southern Union refinery effluent during the discharge plan processing. The changes and additions discussed in our telephone conversation have been incorporated in the agreement as well as changes to reflect OCD receipt of the discharge plan application. No changes were made to the exhibits.

If the changes meet with your approval, please forward the signed agreement to Mrs. Runnels for her signature.

Please feel free to call me if any other questions arise.

Sincerely,

R. L. STAMETS,
Director

enclosure

ENFORCEMENT AGREEMENT

This Agreement is made and entered into this _____ day of _____, 1986 by and among the New Mexico Oil Conservation Division of the Energy and Minerals Department (hereinafter "OCD"); Araho, Inc.; and Southern Union Refining Company (hereinafter Southern Union):

WHEREAS Southern Union is the owner of a refinery located approximately five miles southeast of Lovington, New Mexico in Section 36, Township 16 South, Range 36 East, and Section 31, Township 16 South, Range 37 East, NMPM; and

WHEREAS Araho, Inc. is the owner and operator of two Class II disposal wells, being the State LC Well No. 1, located in Section 1, Township 17 South, Range 36 East and the State LC Well No. 2, located in Section 2, Township 17 South, Range 36 East, NMPM; and

WHEREAS the above-referenced wells have historically been utilized for disposal of wastewater effluent from the Southern Union Refinery which disposal is exclusively authorized in the discharge plan for the refinery approved by the OCD in 1984; and

WHEREAS the OCD has notified Araho, Inc. of the need to file a discharge plan for the subject wells to bring such wells into compliance with Part 3 (Discharges to Ground Water) and Part 5 (Underground Injection Control) of the New Mexico Water Quality Control Commission (WQCC) Regulations, if they are to continue to be used for refinery effluent disposal in the future; and

WHEREAS Araho, Inc. has filed a discharge plan application with the OCD to obtain approval for disposal of industrial waste water effluent into the subject wells; and

WHEREAS no violation of WQCC Regulations occurs unless such discharge actually occurs; and

WHEREAS no such discharge has occurred since Araho, Inc. was notified of the need to file a discharge plan application; and

WHEREAS by regulation a certain amount of time is necessary prior to OCD making a decision on the application to provide for public comment and permit review; and

WHEREAS the OCD has determined that limited continued use of the subject wells presents no hazard to fresh water; and

WHEREAS, the parties to this Agreement desire to set forth the minimum conditions upon which the wells may be utilized for future refinery effluent disposal.

NOW THEREFORE, the parties mutually agree as follows:

1. Araho Inc. will be granted a 90 (ninety) day period to allow disposal of effluent from the Southern Union Refinery, such period to be extended to six months duration upon request of Araho, Inc. and a satisfactory showing of progress towards discharge plan approval. During the period that this agreement is in force, Araho Inc. shall accept industrial effluent only from the Southern Union Refinery.

2. During this limited period Araho, Inc. will perform such upgrading operations as are necessary to bring the subject wells into compliance with discharge plan requirements pursuant to Parts 3 and 5 of the WQCC Regulations, such upgrading to include at least those items listed in Exhibit A, attached hereto and made a part hereof.

3. Southern Union will apply to the OCD to amend its existing discharge plan in such a manner as to make explicit the requirement that all refinery effluent is to be disposed of into approved effluent disposal wells, or other approved disposal facility.

4. A penalty of up to 100 dollars per day shall be paid for any day during which injection of plant effluent takes place in said wells prior to final discharge plan approval. Such penalty shall be waived in event of delay by OCD beyond the times allowed in the WQCC Regulations for review of the application, or in the event of additional time required if a public hearing on the application is necessary. The actual penalty amount will be determined at the completion of discharge plan processing, and will be dependent on the completeness of the initial application, time taken to comply with the items specified in Exhibit A, prompt and complete response to OCD questions and comments on the application submitted, and on other items that show a willingness to promptly come into compliance.

5. During the period of this Agreement, OCD will take no further enforcement action against Araho, Inc., for utilizing subject wells for disposal of refinery effluent, provided Araho complies with those items in Exhibit B, attached hereto and made a part hereof.

6. This Agreement shall terminate on date of discharge plan approval, or no later than six months following receipt of discharge plan application, or by mutually agreeable consent of the parties.

ARAHO, INC. DATE

OIL CONSERVATION DIVISION DATE

SOUTHERN UNION REFINING COMPANY DATE

EXHIBIT A

Below are the minimum requirements for conversion of your Class II SWD wells to Class I effluent disposal (non-hazardous) wells and for associated surface facilities. Additional requirements may be identified and added based on a physical site inspection, test results, and/or public response following public notification. Final discharge plan approval will be based on the application meeting applicable sections of Part 3 and 5 of the WQCC Regulations.

State LC Well No. 1, Sec. 1, T-17-S, R-36-E

State LC Well No. 2, Sec. 2, T-17-S, R-36-E

- (1) Placement of cement in the annulus between the drilled hole and each string of casing extending from the bottom of the pipe to within the previous string of casing where such cement may not now be present.
- (2) A bond log or temperature survey verifying all casing is cemented so as to fulfill the requirements in (1) above.
- (3) Performance of a Mechanical Integrity test prior to injection after remedial work and yearly thereafter.
- (4) Provide analyses of the injected fluids quarterly for constituents determined by the Director.
- (5) Install continuous monitoring devices to provide a record of injection pressure (Vacuum), flow rate, flow volume, and pressure on the annulus.
- (6) Inject through plastic lined tubing with a packer set no more than 100 feet from the bottom of the long string casing.
- (7) Surface equipment will be secured to allow no unauthorized operation.
- (8) Surface equipment shall be maintained and have proper berms to contain any leaks or spills.
- (9) Automatic equipment shall be installed to interrupt the flow to the facility in the event of tank overflow.

(10) Any pits on the facility shall conform to the
OCD "Guidelines," attached.

EXHIBIT B

- A. Prior to injecting any industrial effluent pursuant to this Agreement the following will be required:
- (1) Static fluid level determination.
 - (2) Mechanical Integrity Test.
 - (3) Installation of surface monitoring equipment.
 - (4) An analyses of the fluid injected.
- B. During the period of this Agreement, the following will be required:
- (1) Injection of fluids on a vacuum.
 - (2) Continuous monitoring of injection pressure (vacuum), flow rate, flow volume, and pressure on the annulus with a monthly summary report to the Division.
 - (3) A quarterly chemical analysis of the injected fluids for those constituents representative of fluid characteristics and required by OCD.

Araho, Inc.

P. O. Box 937 / Lovington, New Mexico 88260 / Phone (505) 396-3663

DISCHARGE PLAN

For: L. C. State well #1, Located 2190' FSL, 560'FEL, Sec. 1, Twp.17S, Rge 36E
L. C. State well #2, Located 2310' FWL, 1650'FNL, Sec. 2, Twp. 17S, Rge. 36E
Lea County, New Mexico.

Effluent Source: Southern Union Refining Company (The Plant)

The plant is located in Sec. 36, Twp. 16S, Rge. 36E, of Lea County, New Mexico, and has water supply wells for cooling purposes. Locations of the plant and disposal wells, as well as adjacent oil wells and SWD wells and fresh water supply wells, are shown in enclosure 1 - 1.

The quantity of the discharge normally ranges from 6,000 barrels per day to 10,000 barrels per day total fluid. The discharge reaches the well sites via pipeline at temperatures of 80 degrees plus, but freezes readily when left stagnant for short periods of time with daily temperatures below freezing. The discharge has some scaling tendencies, but can be controlled with scale inhibitors. The quality of the discharge will be similar to the water analysis shown in enclosures 2 - 1 and 2 - 2. The flow characteristics of the discharge will be consistent with fresh water.

The fresh water supply in this area is the west edge of the Ogallala Basin. The ground water zone ranges from 50 feet to 300 feet below ground level in this part of Lea County, New Mexico. This is the only known ground water zone that the discharge would increase in TDS concentration if allowed to co-mingle. All other known ground water stratas have greater TDS concentrations than the discharge.

The overall drainage of both well sites is generally good and will be controlled by berms built around both sites. These sites will be designed to evacuate accumulated waters down the disposal wells themselves, thereby precluding any hazard of runoff contamination. (See enclosures 3 - 1 and 3 - 2).

Prior to discharge injection, both wells will have a cement bond log to insure cement between drilled hole annulus and each string of casing extends from bottom of casing to the bottom of the previous string of casing. While doing this, static fluid levels will be determined by the log and wireline equipment. The tubing, which is 3 1/2" plastic lined, will be reinstalled with packers set in each well within 100' of the bottom of each longstring casing. At this time the annulus between tubing and casing will be filled with fresh water and packer fluid, and pressure tested to 350# for 30 minutes. This test will be witnessed by OCD designated representatives. This mechanical integrity test will be repeated annually. If the bond log shows cement to be deficient from requirements of WQCC, then remedial work will be performed to meet requirements.

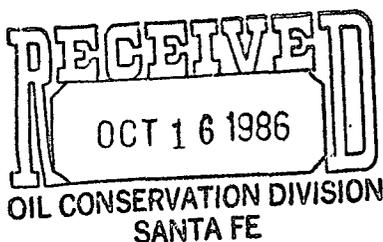
Analysis of discharge fluids and fresh water supply wells will be taken quarterly, and records of these kept for inspection of WQCC personnel. A 3" Halliburton meter will be placed on well #1, and a 1 1/2" Halliburton meter will be placed on well #2. These meters will provide flow rates and total flow volumes, which will be recorded daily. Pressure (vacuum) gauges will be installed on each well and will be recorded daily.

All surface equipment will be sealed to preclude unauthorized operation. A float operated warning will be installed on overflow pits to warn the plant of failure of storage facilities to accept more fluids. Their 24 hour manning will then shut down flow of discharge to the wells. The overflow pits will conform to OCD regulations. Application to install these pits shown in enclosures 3 - 1 and 3 - 2 will be forthcoming.

This discharge plan is for "guidelines" only and may be added to or subtracted from as dictated by Water Quality Control Commission and/or the Oil Conservation Division of the State of New Mexico.

SUBMITTED BY:

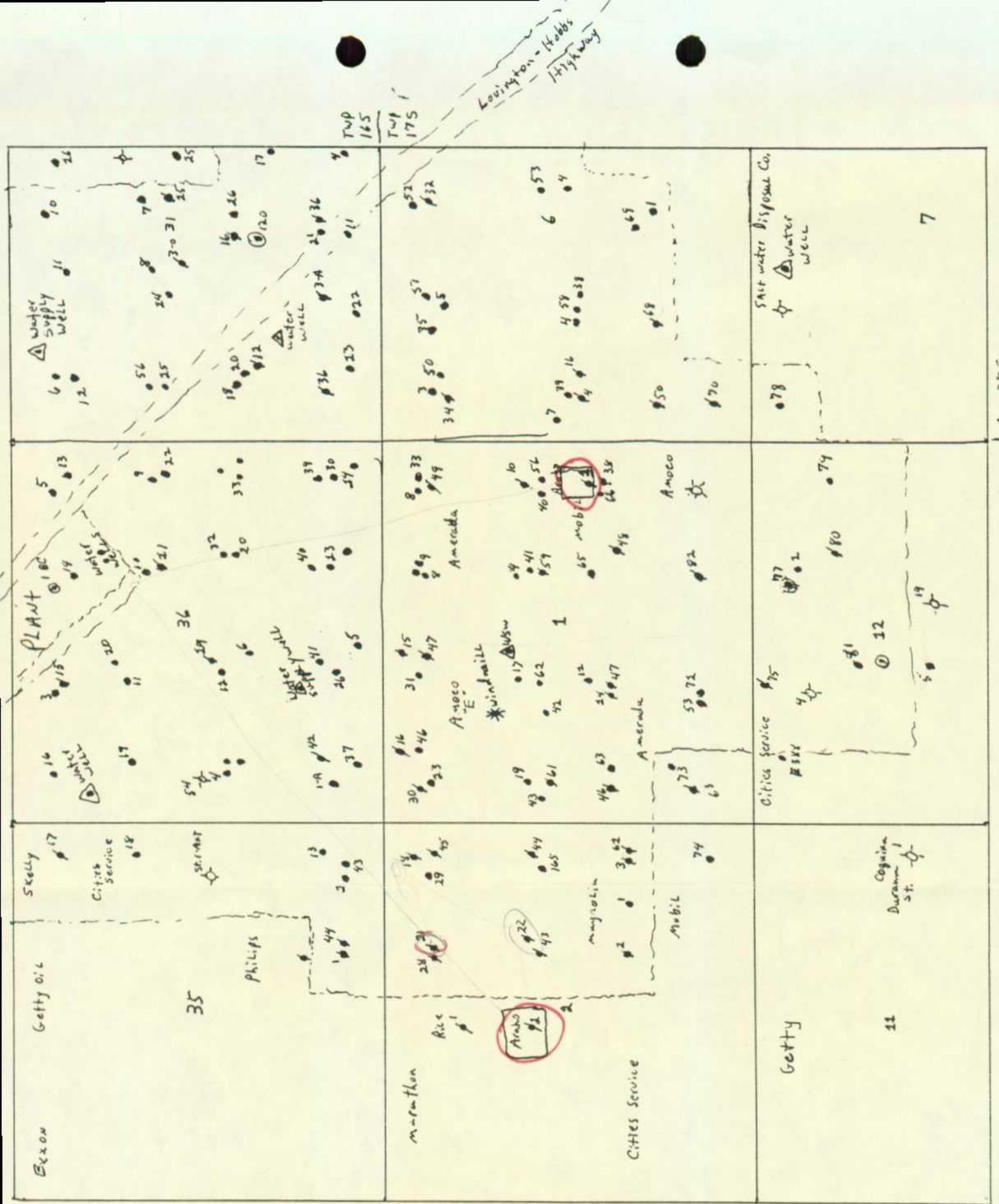
Dorothy Runnels
President: Araho, Inc.



4 N

1 - 1

Rgc-36E | Rgc-37E



Araho, Inc.

P. O. Box 937 / Lovington, New Mexico 88260 / Phone (505) 396-3663

WATER ANALYSIS

Samples taken: Date 9/17/81
Time 10:30 a.m.

		WELL WATER	WASTE WATER
Part A			
Arsenic	mg/l	0.01	0.1
Barium	mg/l	0.3	0.5
Cadmium	mg/l	< 0.001	< 0.001
Chromium	mg/l	0.001	0.053
Cyanide	mg/l	< 0.1	260
Flouride	mg/l	1.0	1.7
Lead	mg/l	< 0.001	0.005
Total Mercury	mg/l	< 0.0004	0.0009
Nitrate (NO ₃ as N)		3.5	0.8
Selenium	mg/l	< 0.01	< 0.01
Silver	mg/l	< 0.01	< 0.01
Uranium	mg/l	< 5	14
Radioactivity p ^{Ci} /l			
Radium-226		< 0.6	< 0.6
Radium-228		4.2 + 3.0	3.1 + 2.3
Part B			
Chloride	mg/l	79	505
Copper	mg/l	0.002	0.005
Iron	mg/l	0.02	4.6
Manganese	mg/l	0.002	0.11
Phenols	mg/l	< 0.001	0.327
Sulfate	mg/l	74.5	292
TDS	mg/l	453	1300
Zinc	mg/l	< 0.1	0.1
pH*	--	7.1	9.8
Part C			
Aluminum	mg/l	< 0.1	< 0.1
Boron	mg/l	0.2	2.0
Cobalt	mg/l	< 0.01	< 0.01
Molybdenum	mg/l	0.001	0.001
Nickel	mg/l	< 0.01	< 0.01
Toxic Pollutants			
Benzene			< 1.0
Ethybenzene			< 1.0

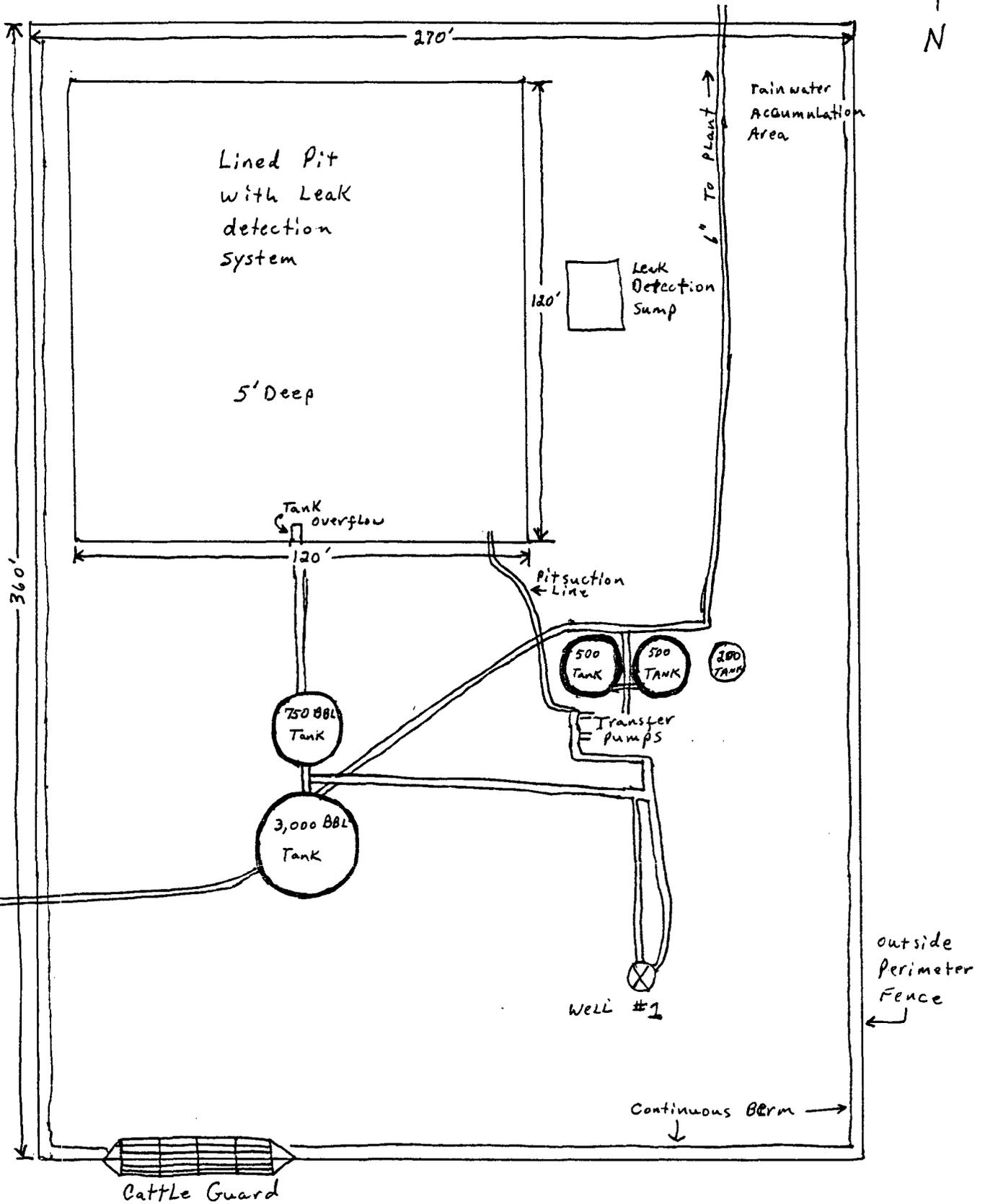
Notes:

* pH determined at the site

< less than symbol: presence of the chemical not detected at the lowest sensitivity of the test.

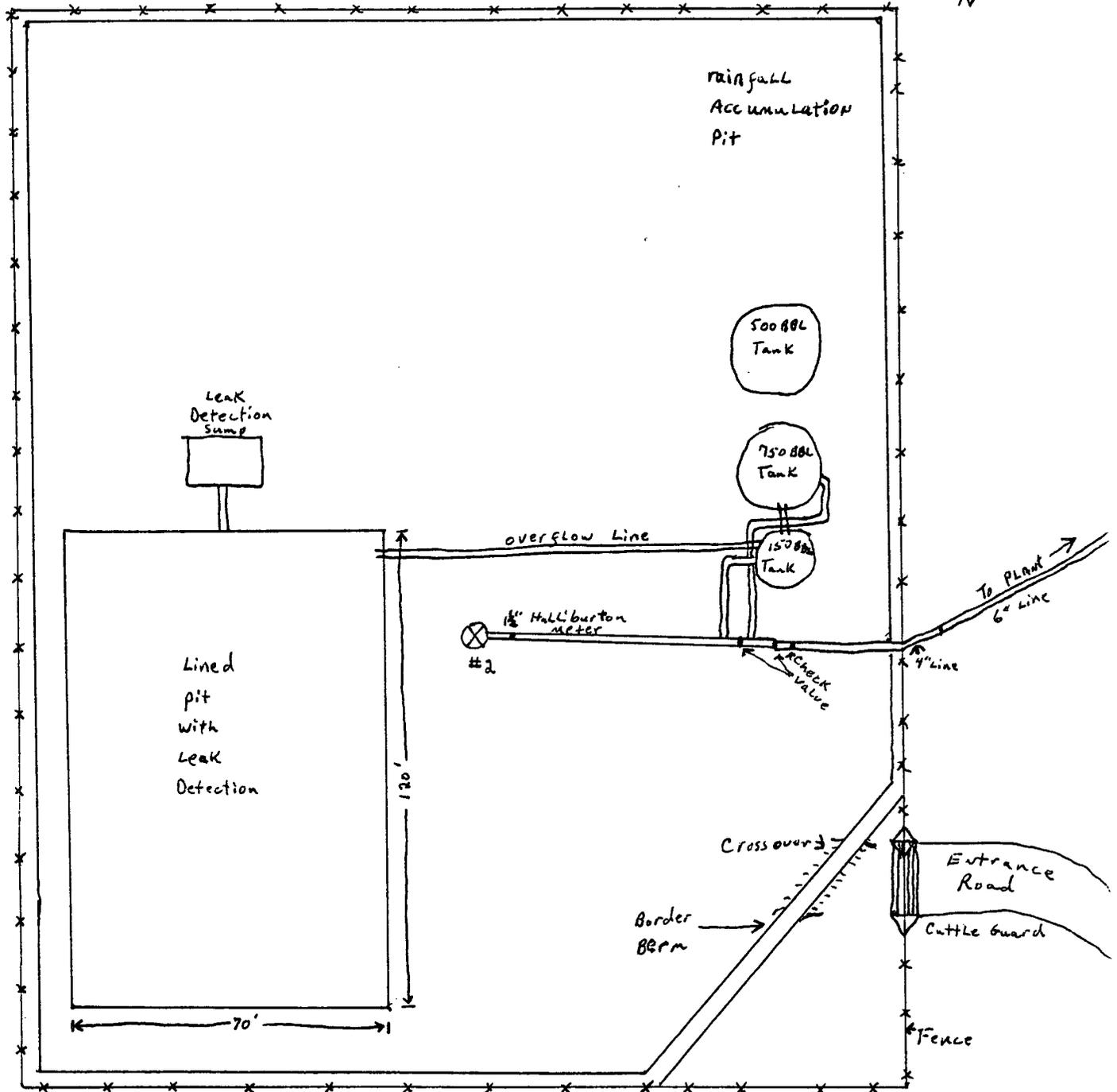
ARAHO INC.

L.C. STATE # 1



Tanks and lines are in place. Pits are in place, but do not have leak detection system installed. Application for pit reconstruction will be forthcoming.

ARAHO INC.
L.C. STATE #2



Tanks and lines are in place. Pits are in place, but do not have leak detection system installed. Application for pit reconstruction will be forthcoming.

FORMATION RECORD

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation
0	6	6	Cellar				
6	300	294	Caliche, Red Shale & Sand				
300	700	400	Red Sand				
700	1930	1230	Red Shale & Sand				
1930	1990	60	Anhydrite				
1990	2900	910	Salt				
2900	4600	1700	Anhydrite & Shale				
4600	6000	1400	Dolomite				
6000	6850	850	Dolomite & Sand				
6850	7750	900	Dolomite				
7750	7875	125	Dolomite & Sand				
7875	10130	2255	Dolomite				
10130	10300	170	Lime, Chert, & Dolomite				
10300	10510	210	Dolomite				
10510	10710	200	Shale				
10710	10755	45	Lime				
10755	10860	105	Sand & Shale				
10860	10925	65	Lime & Chert				
10925	11555	630	Lime				
11555	11710	155	Shale				
11710	11850	140	Lime & Dolomite				
11850	12704	854	Dolomite				

Araho, Inc.

P. O. Box 937 / Lovington, New Mexico 88260 / Phone (505) 396-3663

October 15, 1986

Mr. David Boyer
Energy and Minerals Department
Land Office Building
Room 206
Santa Fe, New Mexico 87504

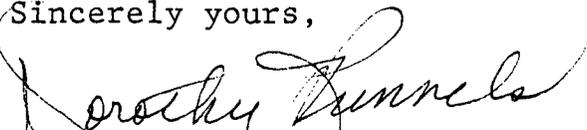
Dear Mr. Boyer:

Enclosed is all the material that we feel is necessary at this time. The Discharge Plan and all supporting documentation from Roland Caudill is enclosed. If you need any further information, please let me know.

Hopefully, this thing will get off the ground... we in Lea County definitely need it.

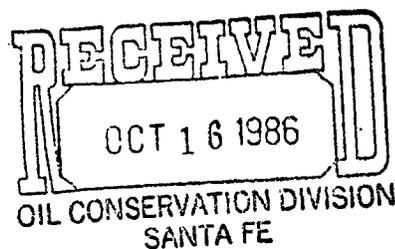
Thank you for all your assistance in this matter.

Sincerely yours,


Dorothy Runnels

P.S. I am enclosing two additional copies for Mr. R. L. Stamets, Chairman of OCD, and Ms. Denise Fort, WQCC Chairman. Will you please see that they get these copies. Again, thank you.

enc.



ARAHO, INC.

Plugging and Abandonment Plan

For: L.C. STATE WELLS #1 AND #2

If for any reason these wells are to be abandoned the following procedures will be followed.

As both wells, to meet Class I disposal requirements, will require casings to be cemented, we therefore will not attempt to recover casing during plugging procedures. Salt Gel made with 10 lb. brine and 35 lb. of Gel/BBL. hereafter referred to as Gel will be used between plugs. Cement plugs will be 25 sacks or 100 ft. whichever is greater.

L.C. STATE #1:

A cast iron bridge plug will be set at 12,050', bottom of long string with 25 sacks of cement on top. Gel fill to top of Devonian, plug set at 11,716', Gel fill to top of Strawn, plug set at 10,300', Gel fill to top of Penn, plug set at 10,055', Gel fill to top of Abo, plug set at 8,304', Gel fill to top of Glorietta, plug set at 6,017', Gel fill to casing shoe, plug set at 7,949', tag plug to verify Gel fill to top of San Andres, plug set at 4,607', Gel fill to top of Queen, plug set at 3,601', Gel fill to top of Salt Zone, plug set at 1,990', Gel fill to surface plug, permanent marker welded to casings.

L.C. STATE #2:

A cast iron bridge plug will be set at 8,500', bottom of long string, with 25 sacks cement on top. Gel fill to top of Glorietta, plug set at 6,095', Gel fill to top of San Andres, plug set at 4,708', Gel fill to top of Queen, plug set at 3,670', Gel fill to casing shoe, plug set at 3,368', tag to verify, Gel fill to top of Salt Zone, plug set at 2,078', Gel fill to surface cement plug with permanent marker welded to casings.

Both locations upon plugging will have all tanks, pipe and connections removed along with fence wires and posts. Surface caliche will be leveled. Locations will be plowed and seeded before abandonment. Cattleguards will be removed and fence replaced where necessary.

This plugging and abandonment plan is for guidelines only and may be revised by OCD as regulations or requirements change.

Tabulation of Wells:

L.C. State #1 records indicate no wells within $\frac{1}{2}$ mile that penetrate #1's injection zone. All surrounding wells are completed in higher formations.

L.C. State #2 records indicate that only three wells located within $\frac{1}{2}$ mile penetrate the injection zone. All three of these wells are Class II SWD wells and all three wells are on vacuum. Rice Engineering's #1 is located $\frac{1}{8}$ mile North of #2. Apollo Oil's #21 and #22 are located $\frac{1}{4}$ mile Northeast and East respectively of Arah #2. Copies of OCD form C-104 for each of these three well are enclosed.

WaterCourses:

There are no true watercourses located within one mile of either disposal site. There is one small dirt stockwater tank located $\frac{1}{2}$ mile East of #2. The topography in this area is relatively flat with occasional depressions and little to no long range drainage. No true watercourses or bodies of water would be affected by accidental or unauthorized release of effluent on the surface.

Since no pumps are set up to pressurize the disposal wells, the maximum pressure to the well will be hydrostatic head from the tanks (approximately 12 lbs./in.²) to a vacuum of 30 in. of mercury. As both wells have taken large quantities of water for several years I can see no pressure changes in the foreseeable future.

Formation fluid displacement seems to occur readily to justify the tremendous rates at which the wells take water. The Abo formation of #2 water well disperse generally to the East. The Fusselman formation of #1 probably disperses in all directions.

Contingency Plans:

In the event of one of the wells failing, flow of the effluent will be diverted to the other until the failure can be repaired. In the event of well failure fresh water will be placed so as to displace all effluent in the tubing and/or casing to prevent escape of the effluent into other zones.

The system is checked more than three times daily. Morning, noon and night and as more often as necessary. Small leaks and leaks outside of the berms will be detected visually. Leaks outside of the bermed area immediately after detection will be sucked up by vacuum trucks and returned to the system.

All fluids including oils, sludges and tank bottoms received will be sold to oil reclamation plants. What fluids they will not take will be trucked to pollution control (Latuna Laguna).

Compliance Plans:

The plant anticipates only producing 2,000 BBLs./day of effluent for the first few months, therefore we propose to perform the cement bond log, static fluid level, placement of any cement required, installation of all automatic equipment and the mechanical integrity test within sixty days of approval of the discharge plan on #2 well only. As the plant is responsible for all expenses in meeting #1 disposal requirements this timetable will of course depend on them. Since the plant has said they will not start up until this discharge plan is approved, we will not be able to obtain an analysis of the effluent prior to this discharge plan approval. We propose to obtain this analysis immediately upon start up of the plant.

All other requirements will be met on #2 within 180 days of start up of plant. All requirements on #1 well will be met before effluent injection from the plant is turned into it. I wish we could give you more accurate dates and times but at this time we are unable to do so. If you have any other questions please contact us and we will attempt to answer them.

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 possibility of fine and imprisonment.

Submitted by:

A handwritten signature in cursive script, appearing to read "Dorothy Runnels". The signature is written in dark ink and is positioned to the right of the typed name and title.

Dorothy Runnels
President
Araho, Inc.

RECEIVED		
DIVISION		
3.		
OFFICE		
OPERATOR		

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease
State Fee
5. State Oil & Gas Lease No.

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

1. OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER- Salt Water Disposal	7. Unit Agreement Name Abo SWD
2. Name of Operator Rice Engineering & Operating, Inc.	8. Farm or Lease Name Abo SWD
3. Address of Operator P. O. Box 1142, Hobbs, New Mexico 88240	9. Well No. 2
4. Location of Well UNIT LETTER <u>C</u> <u>2310</u> FEET FROM THE <u>west</u> LINE AND <u>990</u> FEET FROM THE <u>north</u> LINE, SECTION <u>2</u> TOWNSHIP <u>17S</u> RANGE <u>36E</u> NMPM.	10. Field and Pool, or Wildcat Lovington Abo
15. Elevation (Show whether DF, RT, GR, etc.) 3863' K.B.	12. County Dea

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK
TEMPORARILY ABANDON
PULL OR ALTER CASING
OTHER _____

PLUG AND ABANDON
CHANGE PLANS

SUBSEQUENT REPORT OF:

REMEDIAL WORK
COMMENCE DRILLING OPNS.
CASING TEST AND CEMENT JOBS
OTHER Install tubing

ALTERING CASING
PLUG AND ABANDONMENT

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

10-19-74:
Run 8,317' (268 jts.)-3 1/2" OD plastic-lined tubing w/packer on bottom & loaded casing-tubing annulus with chromate water. Injecting produced water down 3 1/2" OD plastic-lined tubing under vacuum and casing-tubing annulus is pressured to 150 psi.

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

ORIGINAL SIGNED BY
SIGNED L. B. GOODHEART TITLE Division Manager DATE Nov. 11, 1974

APPROVED BY Joe D. Ramey TITLE Dist. I, Supv. DATE _____
CONDITIONS OF APPROVAL, IF ANY:

AREA 640 ACRES
LOCATE WELL CORRECTLY

The Ohio Oil Company
(Company or Operator)

State 4286 "A"
(Lease)

Well No. 1, in NE 1/4 of NW 1/4, of Sec. 2, T. 17 S, R. 36 E, NMPM.
Lovington-Abo Pool, Lea County.

Well is 2310 feet from West line and 990 feet from North line
of Section 2. If State Land the Oil and Gas Lease No. is B-4286

Drilling Commenced December 12, 1953 Drilling was Completed February 8, 1954

Name of Drilling Contractor: Company tools, Rig #2

Address: Hobbs, New Mexico

Elevation above sea level at Top of Tubing Head: The information given is to be kept confidential until
....., 19.....

OIL SANDS OR ZONES

No. 1, from to No. 4, from to
No. 2, from to No. 5, from to
No. 3, from to No. 6, from to

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from to feet.
No. 2, from to feet.
No. 3, from to feet.
No. 4, from to feet.

CASING RECORD

SIZE	WEIGHT PER FOOT	NEW OR USED	AMOUNT	KIND OF SHOE	CUT AND PULLED FROM	PERFORATIONS	PURPOSE
13-3/8"	48	New	375'	Baker guide shoe			
9-5/8"	36	New	3330'	3" Baker differential collar			
5-1/2"	17	New	8572'	11" Baker "	float " & guide shoe		
2-3/8"	4.7	New	8505'	3"			

MUDDING AND CEMENTING RECORD

SIZE OF HOLE	SIZE OF CASING	WHERE SET	NO. SACKS OF CEMENT	METHOD USED	MUD GRAVITY	AMOUNT OF MUD USED
17 1/2"	13-3/8"	396	350	B J Cementing Co.		
12"	9-5/8"	3348	1750	B J Cementing Co.		
8-3/4"	5-1/2"	8530	1350	B J Cementing Co.		
	2-3/8"	8465		torp. end.		

RECORD OF PRODUCTION AND STIMULATION

(Record the Process used, No. of Qts. or Gals. used, interval treated or shot.)

Washed w/750 gallon acid before testing, after acid 528 BOPD, on 22/64" choke.

Perforated tbg. from 8444' to 8468' w/6 shots per ft. 168 - 1/2" holes.

Acidized thru perforation in 5 1/2" casing from 8440' to 8468' w/750 gal. mud acid.

Result of Production Stimulation.....

NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OPERATOR Amoco Production Company		ADDRESS P. O. Box 68 - Hobbs, NM 88240	
LEASE NAME State "E" Tract 18	WELL NO. 22	FIELD Lovington Abo	COUNTY Lea
LOCATION UNIT LETTER <u>G</u> ; WELL IS LOCATED <u>1650</u> FEET FROM THE <u>North</u> LINE AND <u>1650</u> FEET FROM THE <u>East</u> LINE, SECTION <u>2</u> TOWNSHIP <u>17-S</u> RANGE <u>36-E</u> NMPM.			

CASING AND TUBING DATA					
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	13-3/8"	270'	275	Surface	Circulated
INTERMEDIATE	9-5/8"	3287'	300	Unknown	Cemented with DV tool at 2106'
LONG STRING	5-1/2"	8330'	835 sx originally will squeeze 450 sx Approx. 4150'		Temp Survey
TUBING	3-1/2"	Approx. 8331'	NAME, MODEL AND DEPTH OF TUBING PACKER Guiberson Uni Packer VI - 3-1/2" - 8300'		

NAME OF PROPOSED INJECTION FORMATION Abo		TOP OF FORMATION 8350'	BOTTOM OF FORMATION 9250'
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? Internally Coated Tubing	PERFORATIONS OR OPEN HOLE? 8330' - 9000'	PROPOSED INTERVAL(S) OF INJECTION 8330' - 9000'	
IS THIS A NEW WELL DRILLED FOR DISPOSAL? No	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? Producing Well	HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? Yes	

LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH
8338' - 8340' 75 sx slosset; 8292' - 8316' 150 sx Class H

DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA 80'	DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA 6800'	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA 9500'			
ANTICIPATED DAILY INJECTION VOLUME (BBLs.) 6,000	MINIMUM 6,000	MAXIMUM 10,000	OPEN OR CLOSED TYPE SYSTEM Closed	IS INJECTION TO BE BY GRAVITY OR PRESSURE? Pressure	APPROX. PRESSURE (PSI) 1650#
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE -		WATER TO BE DISPOSED OF Yes	NATURAL WATER IN DISPOSAL ZONE Yes	ARE WATER ANALYSES ATTACHED? Yes	

NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND)
City of Lovington, New Mexico

LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL

- Marathon Oil Company - P. O. Box 2409 - Hobbs, NM 88240
- Cities Service Company - P. O. Box 1919 - Midland, TX 79702
- Getty Oil Company - P. O. Box 730 - Hobbs, NM 88240
- Amerada Hess Corporation - P. O. Box 2040 - Tulsa, OK 74102
- Phillips Petroleum Company - 4001 Penbrook - Odessa, TX 79701

HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING? Yes	SURFACE OWNER Yes	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL Yes	THE NEW MEXICO STATE ENGINEER Yes
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B) Yes	PLAT OF AREA Yes	ELECTRICAL LOG No	DIAGRAMMATIC SKETCH OF WELL Yes

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

Bob Davis
(Signature)

Administrative Analyst
(Title)

June 20, 1980
(Date)

NOTE: Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.

NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OPERATOR Amoco Production Company		ADDRESS P. O. Box 68 - Hobbs, NM 88240	
LEASE NAME State "E" Tract 18	WELL NO. 22	FIELD Lovington Abo	COUNTY Lea
LOCATION UNIT LETTER <u>G</u> ; WELL IS LOCATED <u>1650</u> FEET FROM THE <u>North</u> LINE AND <u>1650</u> FEET FROM THE <u>East</u> LINE, SECTION <u>2</u> TOWNSHIP <u>17-S</u> RANGE <u>36-E</u> NMPM.			

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	13-3/8"	270'	275	Surface	Circulated
INTERMEDIATE	9-5/8"	3287'	300	Unknown	Cemented with DV tool at 2106'
LONG STRING	5-1/2"	8330'	835 sx originally will squeeze 450 sx Approx. 4150'		Temp Survey
TUBING	3-1/2"	Approx. 8331'	NAME, MODEL AND DEPTH OF TUBING PACKER Guiberson Uni Packer VI - 3-1/2" - 8300'		
NAME OF PROPOSED INJECTION FORMATION Abo			TOP OF FORMATION 8350'	BOTTOM OF FORMATION 9250'	
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? Internally Coated Tubing		PERFORATIONS OR OPEN HOLE? 8330' - 9000'	PROPOSED INTERVAL(S) OF INJECTION 8330' - 9000'		
IS THIS A NEW WELL DRILLED FOR DISPOSAL? No	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? Producing Well		HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? Yes		
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH 8338' - 8340' 75 sx slosset; 8292' - 8316' 150 sx Class H					
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA 80'		DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA 6800'		DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA 9500'	
ANTICIPATED DAILY INJECTION VOLUME (BBLs.)	MINIMUM 6,000	MAXIMUM 10,000	OPEN OR CLOSED TYPE SYSTEM Closed	IS INJECTION TO BE BY GRAVITY OR PRESSURE? Pressure	APPROX. PRESSURE (PSI) 1650#
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE -			WATER TO BE DISPOSED OF Yes	NATURAL WATER IN DISPOSAL ZONE Yes	ARE WATER ANALYSES ATTACHED? Yes
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) City of Lovington, New Mexico					
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL					
Marathon Oil Company - P. O. Box 2409 - Hobbs, NM 88240					
Cities Service Company - P. O. Box 1919 - Midland, TX 79702					
Getty Oil Company - P. O. Box 730 - Hobbs, NM 88240					
Amerada Hess Corporation - P. O. Box 2040 - Tulsa, OK 74102					
Phillips Petroleum Company - 4001 Penbrook - Odessa, TX 79701					
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?	SURFACE OWNER Yes		EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL Yes		THE NEW MEXICO STATE ENGINEER Yes
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)	PLAT OF AREA Yes		ELECTRICAL LOG No		DIAGRAMMATIC SKETCH OF WELL Yes

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

Bob Davis
(Signature)

Administrative Analyst
(Title)

June 20, 1980
(Date)

NOTE: Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.

NO. OF COPIES RECEIVED	
DISTRIBUTION	
SANTA FE	
FILE	
U.S.G.S.	
LAND OFFICE	
OPERATOR	

5a. Indicate Type of Lease
State Fee
5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER- Injection	7. Unit Agreement Name
2. Name of Operator Amoco Production Company	8. Farm or Lease Name State "E" Tract 18
3. Address of Operator P. O. Box 68, Hobbs, New Mexico 88240	9. Well No. 22
4. Location of Well UNIT LETTER <u>G</u> <u>1650</u> FEET FROM THE <u>North</u> LINE AND <u>1650</u> FEET FROM THE <u>East</u> LINE, SECTION <u>2</u> TOWNSHIP <u>17-S</u> RANGE <u>36-E</u> N.M.P.M.	10. Field and Pool, or adjacent Lovington ABO
15. Elevation (Show whether DP, RT, GR, etc.) 3852' RDB	12. County Lea

10. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input checked="" type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOB <input type="checkbox"/>	

17. Describe Proceed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

Moved in service unit 3-10-82. Pulled tubing and packer. Ran a retrievable bridge plug, packer and tubing. Set bridge plug at 8235' and packer at 8225'. Tested bridge plug to 1000 psi and tested okay. Tested casing and packer to 2500 psi and tested okay. Pulled tubing and packer. Ran a casing inspection log 8150' to surface. Ran a casing bond log 8150-3600'. Perforated 3700' with 2 SPF. Ran packer and tubing and spotted 14' of sand on bridge plug. Pulled tubing and packer. Circulated 9-5/8" casing with 280 bbl. water and dye. Cement squeezed casing with 1500 sacks class C cement. Drilled out cement 3624'-3745'. Pressure tested casing to 1000 psi and tested okay. Pulled tubing and tools. Ran a retrieving tool and tubing. Washed sand off retrievable bridge plug. Pulled tubing and retrievable bridge plug. Ran packer and 2-7/8" tubing. Set packer at 8239'. Moved out service unit 3-21-82. Returned well to injection.

0+4-NMOCD, H 1-Hou 1-Susp 1-CLF

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

SIGNED Cathy L. Ferman TITLE Assist. Admin. Analyst DATE 3-29-82

APPROVED BY _____ TITLE _____ DATE MAR 31 1982

CONDITIONS OF APPROVAL ARE AVAILABLE ANYTIME AT THE DISTRICT OFFICE.

Araho, Inc.

P. O. Box 937 / Lovington, New Mexico 88260 / Phone (505) 396-3663

October 15, 1986

Mr. David Boyer
Energy and Minerals Department
Land Office Building
Room 206
Santa Fe, New Mexico 87504

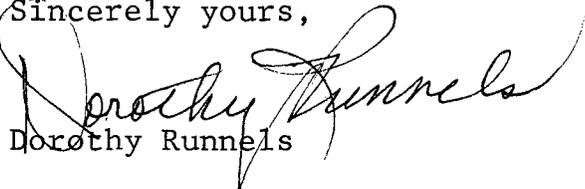
Dear Mr. Boyer:

Enclosed is all the material that we feel is necessary at this time. The Discharge Plan and all supporting documentation from Roland Caudill is enclosed. If you need any further information, please let me know.

Hopefully, this thing will get off the ground... we in Lea County definitely need it.

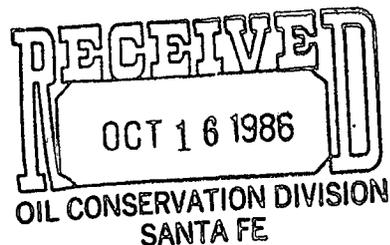
Thank you for all your assistance in this matter.

Sincerely yours,


Dorothy Runnels

P.S. I am enclosing two additional copies for Mr. R. L. Stamets, Chairman of OCD, and Ms. Denise Fort, WQCC Chairman. Will you please see that they get these copies. Again, thank you.

enc.



Araho, Inc.

P. O. Box 937 / Lovington, New Mexico 88260 / Phone (505) 396-3663

DISCHARGE PLAN

For: L. C. State well #1, Located 2190' FSL, 560' FEL, Sec. 1, Twp. 17S, Rge 36E
L. C. State well #2, Located 2310' FWL, 1650' FNL, Sec. 2, Twp. 17S, Rge. 36E
Lea County, New Mexico.

Effluent Source: Southern Union Refining Company (The Plant)

The plant is located in Sec. 36, Twp. 16S, Rge. 36E, of Lea County, New Mexico, and has water supply wells for cooling purposes. Locations of the plant and disposal wells, as well as adjacent oil wells and SWD wells and fresh water supply wells, are shown in enclosure 1 - 1.

The quantity of the discharge normally ranges from 6,000 barrels per day to 10,000 barrels per day total fluid. The discharge reaches the well sites via pipeline at temperatures of 80 degrees plus, but freezes readily when left stagnant for short periods of time with daily temperatures below freezing. The discharge has some scaling tendencies, but can be controlled with scale inhibitors. The quality of the discharge will be similar to the water analysis shown in enclosures 2 - 1 and 2 - 2. The flow characteristics of the discharge will be consistent with fresh water.

The fresh water supply in this area is the west edge of the Ogallala Basin. The ground water zone ranges from 50 feet to 300 feet below ground level in this part of Lea County, New Mexico. This is the only known ground water zone that the discharge would increase in TDS concentration if allowed to co-mingle. All other known ground water stratas have greater TDS concentrations than the discharge.

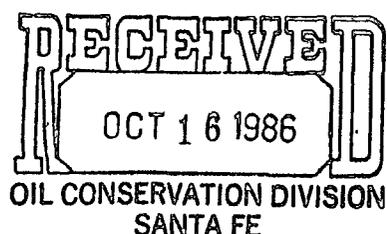
The overall drainage of both well sites is generally good and will be controlled by berms built around both sites. These sites will be designed to evacuate accumulated waters down the disposal wells themselves, thereby precluding any hazard of runoff contamination. (See enclosures 3 - 1 and 3 - 2).

Prior to discharge injection, both wells will have a cement bond log to insure cement between drilled hole annulus and each string of casing extends from bottom of casing to the bottom of the previous string of casing. While doing this, static fluid levels will be determined by the log and wireline equipment. The tubing, which is 3 1/2" plastic lined, will be reinstalled with packers set in each well within 100' of the bottom of each longstring casing. At this time the annulus between tubing and casing will be filled with fresh water and packer fluid, and pressure tested to 350# for 30 minutes. This test will be witnessed by OCD designated representatives. This mechanical integrity test will be repeated annually. If the bond log shows cement to be deficient from requirements of WQCC, then remedial work will be performed to meet requirements.

Analysis of discharge fluids and fresh water supply wells will be taken quarterly, and records of these kept for inspection of WQCC personnel. A 3" Halliburton meter will be placed on well #1, and a 1 1/2" Halliburton meter will be placed on well #2. These meters will provide flow rates and total flow volumes, which will be recorded daily. Pressure (vacuum) guages will be installed on each well and will be recorded daily.

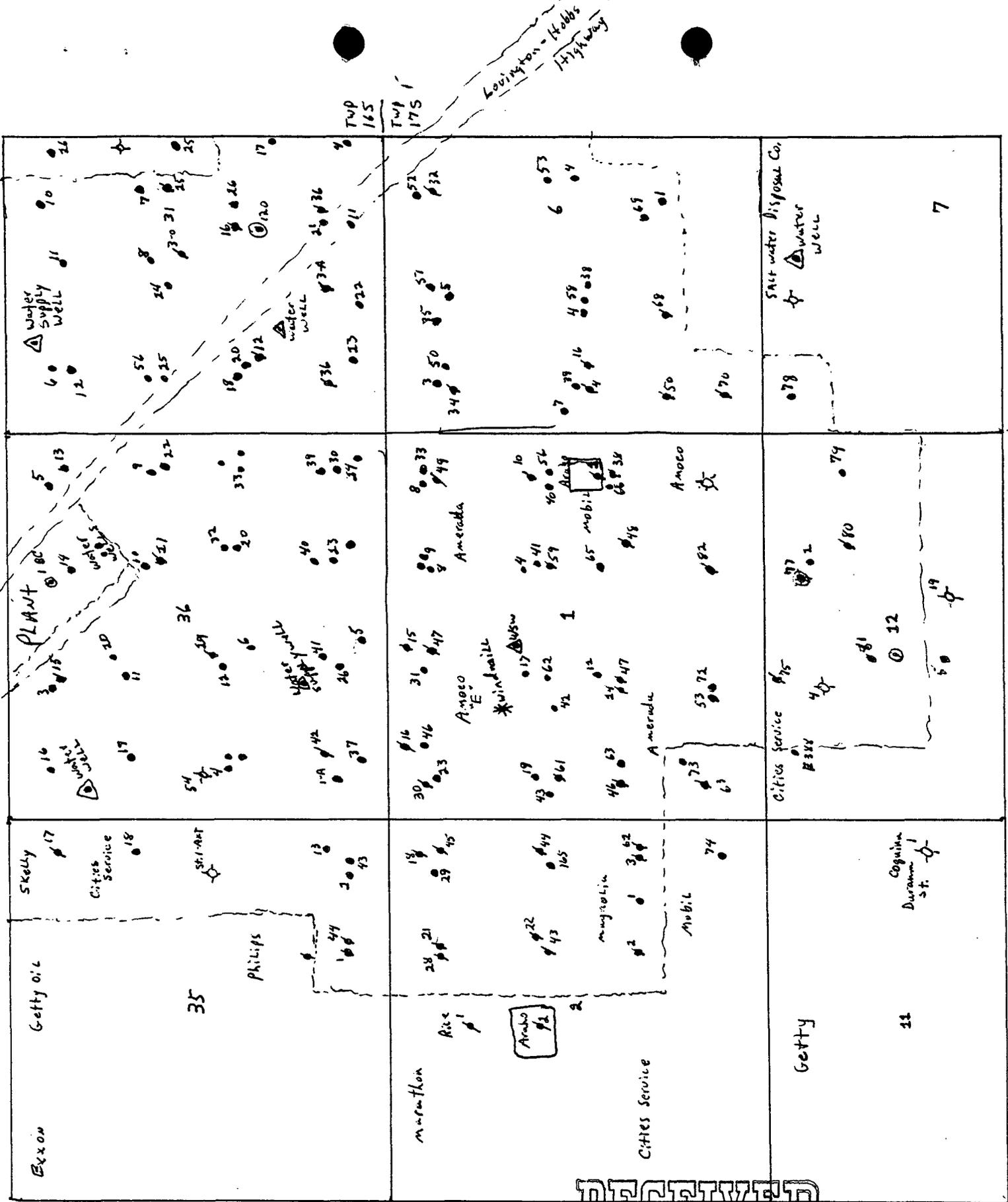
All surface equipment will be sealed to preclude unauthorized operation. A float operated warning will be installed on overflow pits to warn the plant of failure of storage facilities to accept more fluids. Their 24 hour manning will then shut down flow of discharge to the wells. The overflow pits will conform to OCD regulations. Application to install these pits shown in enclosures 3 - 1 and 3 - 2 will be forthcoming.

This discharge plan is for "guidelines" only and may be added to or subtracted from as dictated by Water Quality Control Commission and/or the Oil Conservation Division of the State of New Mexico.

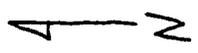


SUBMITTED BY:

Dorothy Runnels
Dorothy Runnels
President: Araho, Inc.



Rgc-36E Rgc-37E



RECEIVED
 OCT 16 1986
 OIL CONSERVATION DIVISION
 SANTA FE

Araho, Inc.

P. O. Box 937 / Lovington, New Mexico 88260 / Phone (505) 396-3663

WATER ANALYSIS

Samples taken: Date 9/17/81
Time 10:30 a.m.

WELL WATER WASTE WATER

Part A

Arsenic	mg/l	0.01	0.1
Barium	mg/l	0.3	0.5
Cadmium	mg/l	< 0.001	< 0.001
Chromium	mg/l	0.001	0.053
Cyanide	mg/l	< 0.1	260
Flouride	mg/l	1.0	1.7
Lead	mg/l	< 0.001	0.005
Total Mercury	mg/l	< 0.0004	0.0009
Nitrate (NO ₃ as N)		3.5	0.8
Selenium	mg/l	< 0.01	< 0.01
Silver	mg/l	< 0.01	< 0.01
Uranium	mg/l	< 5	14
Radioactivity p ^{Ci} /l			
Radium-226		< 0.6	< 0.6
Radium-228		4.2 + 3.0	3.1 + 2.3

Part B

Chloride	mg/l	79	505
Copper	mg/l	0.002	0.005
Iron	mg/l	0.02	4.6
Manganese	mg/l	0.002	0.11
Phenols	mg/l	< 0.001	0.327
Sulfate	mg/l	74.5	292
TDS	mg/l	453	1300
Zinc	mg/l	< 0.1	0.1
pH*	--	7.1	9.8

Part C

Aluminum	mg/l	< 0.1	< 0.1
Boron	mg/l	0.2	2.0
Cobalt	mg/l	< 0.01	< 0.01
Molybdenum	mg/l	0.001	0.001
Nickel	mg/l	< 0.01	< 0.01

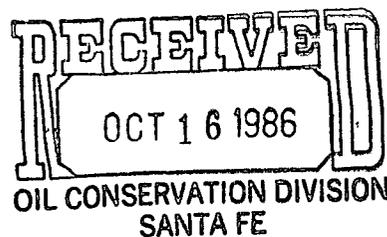
Toxic Pollutants

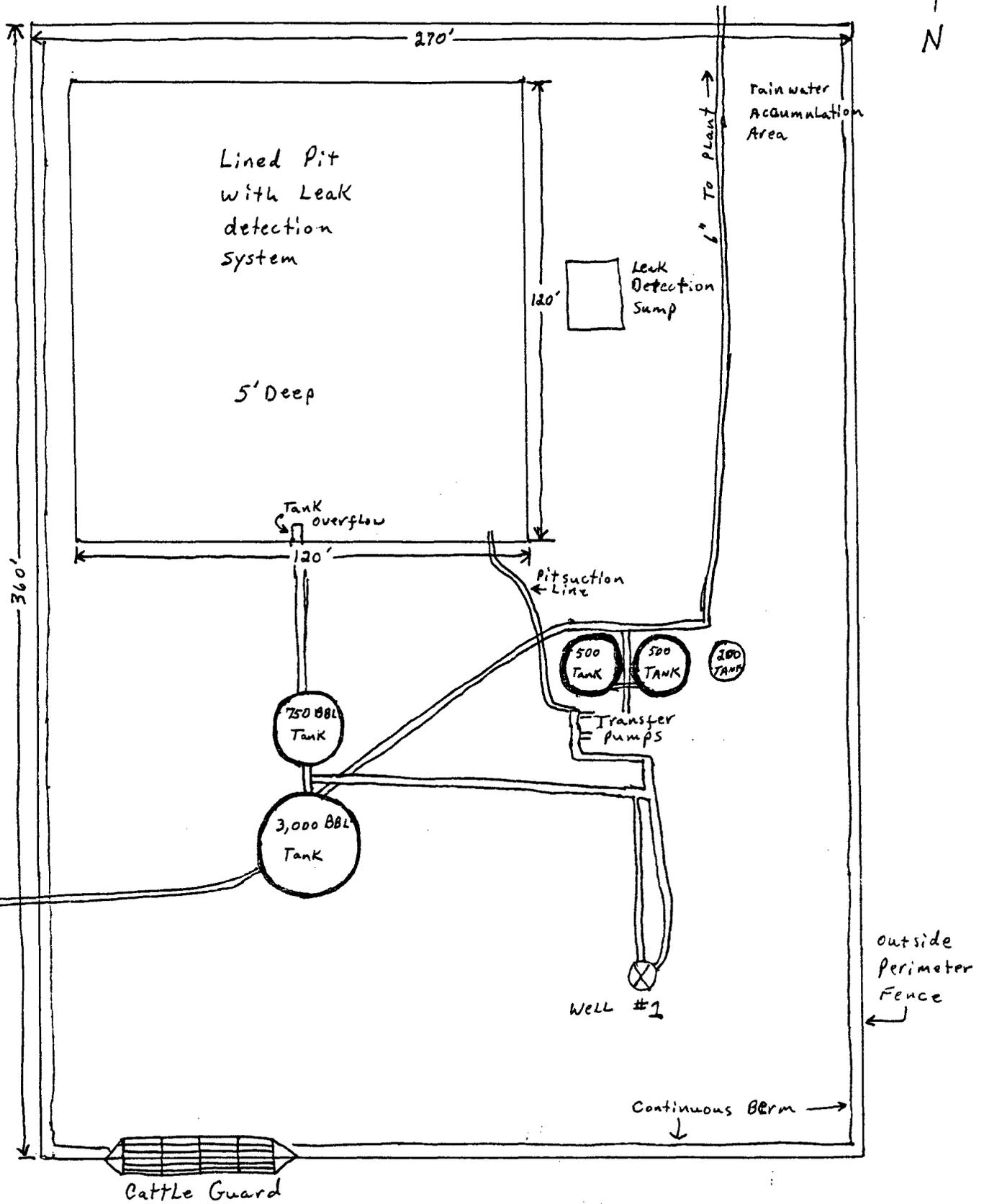
Benzene		< 1.0
Ethybenzene		< 1.0

Notes:

* pH determined at the site

< less than symbol: presence of the chemical not detected at the lowest sensitivity of the test.

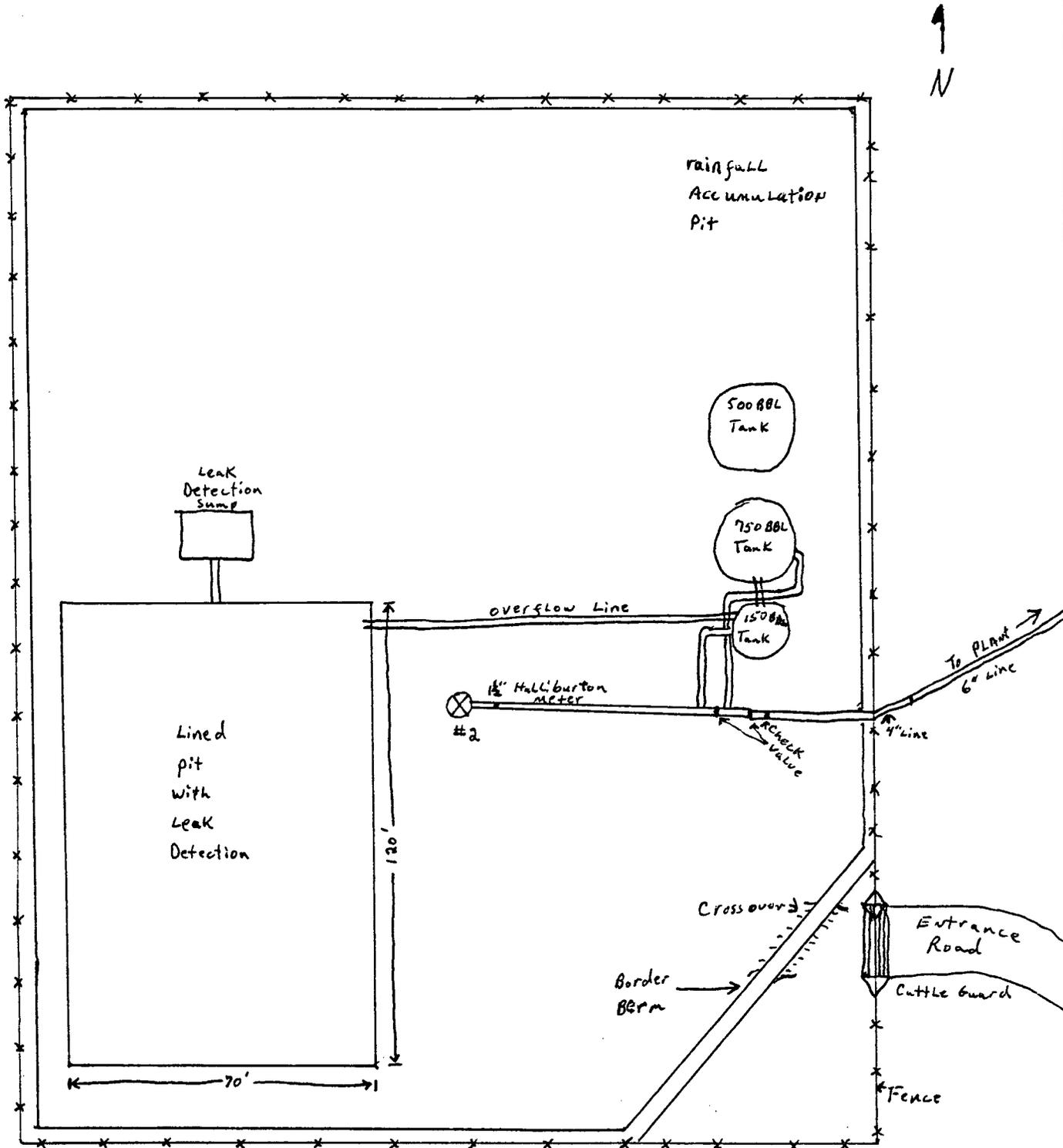




Tanks and lines are in place. Pits are in place, but do not have leak detection system installed. Application for pit reconstruction will be forthcoming.

ARRAHO INC.

L.C. STATE #2



Tanks and lines are in place. Pits are in place, but do not have leak detection system installed. Application for pit reconstruction will be forthcoming.

FORMATION RECORD

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation
0	6	6	Cellar				
6	300	294	Caliche, Red Shale & Sand				
300	700	400	Red Sand				
700	1930	1230	Red Shale & Sand				
1930	1990	60	Anhydrite				
1990	2900	910	Salt				
2900	4600	1700	Anhydrite & Shale				
4600	6000	1400	Dolomite				
6000	6850	850	Dolomite & Sand				
6850	7750	900	Dolomite				
7750	7875	125	Dolomite & Sand				
7875	10130	2255	Dolomite				
10130	10300	170	Lime, Chert, & Dolomite				
10300	10510	210	Dolomite				
10510	10710	200	Shale				
10710	10755	45	Lime				
10755	10860	105	Sand & Shale				
10860	10925	65	Lime & Chert				
10925	11555	630	Lime				
11555	11710	155	Shale				
11710	11850	140	Lime & Dolomite				
11850	12704	854	Dolomite				



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

TONY ANAYA
GOVERNOR

October 9, 1986

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-5800

Mrs. Dorothy Runnels
President
Araho, Inc.
P. O. Box 937
Lovington, New Mexico 88260

Re: Araho Disposal Wells

Dear Mrs. Runnels:

Enclosed for your review is the draft Enforcement Agreement to allow for continued use of Araho SWD wells for disposal of Southern Union refinery effluent while a discharge plan application is being processed. Upon receipt of your comments, we will finalize the document unless further negotiation is necessary.

Please note that the agreement includes provision for a penalty of up to \$100 per day for each day of actual disposal. This addition was felt to be necessary as further examination of the Federal Regulations indicated a temporary permit could not be granted. The Enforcement Agreement then becomes our only vehicle in this matter. Since Araho was notified in September, 1984, and again in May, 1986, that a discharge plan would be necessary, some penalty provision seems appropriate.

It is regrettable that this could not be discussed in person, however, the time available this week to the effort to resolve this matter did not allow for complete consideration of the options prior to our meeting on Tuesday.

Please feel free to call me relative to any questions about,
or concerns with, the Enforcement Agreement.

Sincerely,

A handwritten signature in cursive script, appearing to read "R. L. Stamets".

R. L. STAMETS,
Director

cc: David Boyer
Jeff Taylor
Jerry Sexton

ENFORCEMENT AGREEMENT

This Agreement is made and entered into this _____ day of October, 1986 by and among the New Mexico Oil Conservation Division of the Energy and Minerals Department (hereinafter "OCD"); Araho, Inc.; and Southern Union Refining Company (hereinafter Southern Union):

WHEREAS Southern Union is the owner of a refinery located approximately five miles southeast of Lovington, New Mexico in Section 36, Township 16 South, Range 36 East, and Section 31, Township 16 South, Range 37 East, NMPM; and

WHEREAS Araho, Inc. is the owner and operator of two Class II disposal wells, being the State LC Well No. 1, located in Section 1, Township 17 South, Range 36 East and the State LC Well No. 2, located in Section 2, Township 17 South, Range 36 East, NMPM; and

WHEREAS the above-referenced wells have historically been utilized for disposal of wastewater effluent from the Southern Union Refinery which disposal is exclusively authorized in the discharge plan for the refinery approved by the OCD in 1984; and

WHEREAS the OCD has notified Araho, Inc. of the need to file a discharge plan for the subject wells to bring such wells into compliance with Part 3 (Discharges to Ground Water) and Part 5 (Underground Injection Control) of the New Mexico Water Quality Control Commission (WQCC) Regulations, if they are to continue to be used for refinery effluent disposal in the future; and

WHEREAS Araho, Inc. has filed a request with the OCD to obtain approval of a discharge plan for the subject wells; and

WHEREAS the OCD has determined that limited continued use of the subject wells presents no hazard to fresh water; and

WHEREAS, the parties to this Agreement desire to set forth the conditions upon which the wells may be utilized for future refinery effluent disposal.

NOW THEREFORE, the parties mutually agree as follows:

1. Upon receipt by OCD of a discharge plan application for effluent disposal (Class I) well approval, Araho Inc. will be granted a 90 (ninety) day period to allow disposal of effluent from the Southern Union Refinery, such period to be extended to six months duration upon request of Araho, Inc. and a satisfactory showing of progress towards discharge plan approval. During the period that this agreement is in force, Araho Inc. shall accept industrial effluent only from the Southern Union Refinery.

2. During this limited period Araho, Inc. will perform such upgrading operations as are necessary to bring the subject wells into compliance with discharge plan requirements pursuant to Parts 3 and 5 of the WQCC Regulations, such upgrading to include at least those items listed in Exhibit A, attached hereto and made a part hereof.

3. Southern Union will apply to the OCD to amend its existing discharge plan in such a manner as to make explicit the requirement that all refinery effluent is to be disposed of into approved effluent disposal wells, or other approved disposal facility.

4. A penalty of up to 100 dollars per day shall be paid for any day during which injection of plant effluent takes place in said wells prior to final discharge plan approval. Such penalty shall be waived in event of delay by OCD beyond the times allowed in the WQCC Regulations for review of the application, or in the event of additional time required if a public hearing on the application is necessary. The actual penalty amount will be determined at the completion of discharge plan processing, and will be dependent on the completeness of the initial application, time taken to comply with the items specified in Exhibit A, prompt and complete response to OCD questions and comments on the application submitted, and on other items that show a willingness to promptly come into compliance.

5. During the period of this Agreement, OCD will take no further enforcement action against Araho, Inc., for utilizing subject wells for disposal of refinery effluent, provided Araho complies with those items in Exhibit B, attached hereto and made a part hereof.

6. This Agreement shall terminate on date of discharge plan approval, or no later than six months following receipt of discharge plan application, or by mutually agreeable consent of the parties.

ARAHO, INC. DATE

OIL CONSERVATION DIVISION DATE

SOUTHERN UNION REFINING COMPANY DATE

EXHIBIT A

Below are the minimum requirements for conversion of your Class II SWD wells to Class I effluent disposal (non-hazardous) wells and for associated surface facilities. Additional requirements may be identified and added based on a physical site inspection, test results, and/or public response following public notification. Final discharge plan approval will be based on the application meeting applicable sections of Part 3 and 5 of the WQCC Regulations.

State LC Well No. 1, Sec. 1, T-17-S, R-36-E

State LC Well No. 2, Sec. 2, T-17-S, R-36-E

- (1) Placement of cement in the annulus between the drilled hole and each string of casing extending from the bottom of the pipe to within the previous string of casing where such cement may not now be present.
- (2) A bond log or temperature survey verifying all casing is cemented so as to fulfill the requirements in (1) above.
- (3) Performance of a Mechanical Integrity test prior to injection after remedial work and yearly thereafter.
- (4) Provide analyses of the injected fluids quarterly for constituents determined by the Director.
- (5) Install continuous monitoring devices to provide a record of injection pressure (Vacuum), flow rate, flow volume, and pressure on the annulus.
- (6) Inject through plastic lined tubing with a packer set no more than 100 feet from the bottom of the long string casing.
- (7) Surface equipment will be secured to allow no unauthorized operation.
- (8) Surface equipment shall be maintained and have proper berms to contain any leaks or spills.
- (9) Automatic equipment shall be installed to interrupt the flow to the facility in the event of tank overflow.

(10) Any pits on the facility shall conform to the
OCD "Guidelines," attached.

EXHIBIT B

- A. Prior to injecting any industrial effluent pursuant to this Agreement the following will be required:
- (1) Static fluid level determination.
 - (2) Mechanical Integrity Test.
 - (3) Installation of surface monitoring equipment.
 - (4) An analyses of the fluid injected.
- B. During the period of this Agreement, the following will be required:
- (1) Injection of fluids on a vacuum.
 - (2) Continuous monitoring of injection pressure (vacuum), flow rate, flow volume, and pressure on the annulus with a monthly summary report to the Division.
 - (3) A quarterly chemical analysis of the injected fluids for those constituents representative of fluid characteristics and required by OCD.

Araho, Inc.

P. O. Box 937 / Lovington, New Mexico 88260 / Phone (505) 396-3663

October 6, 1986

Mr. R. L. Stamets
Director, Oil Conservation Division
Post Office Box 2088
Santa Fe, New Mexico 87504-2088

Dear Mr. Stamets:

With this letter, Araho, Inc. seeks to re-permit the State L.C. No. 1, located in Unit I, Section 1, Township 17S, Range 36E, and State No. 2, located in Unit F, Section 2, Township 17S, Range 36E, Lea County, New Mexico, to allow disposal of Class 1 Industrial effluent.

Araho, Inc. currently has approved OCD permits to operate Class II Salt Water Disposal wells for produced water and will retain its current Class II permits.

A permit application to comply with the discharge plan requirements of Part 3 (Discharges to Ground Water) and Part 5 (UIC) of the Water Quality Control Commission Regulations is being prepared and will be submitted within the next ten (10) days because injection is on a vacuum and well below the lowest zone of fresh water.

Araho, Inc. seeks emergency approval to operate and to receive Refinery effluence during the interim period before Discharge Plan approval.

Sincerely,


Dorothy Runnels
President

DR/jh



Memo

From

JERRY SEXTON
District Supervisor

February 18, 1986

To DICK,

Araho - was sent the attached letter from EID along with a booklet to be filled out by the Operator on the disposal well.

It will certainly be a hardship, expense-wise to fill out this form.

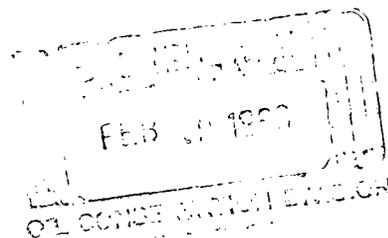
Since the refinery was shut down, it has been used as a Class IV well.

It was my understanding, even if it was a Class I well, we would do the permitting.

Would you look into this or clarify our position?

MRS. Rummels
393-2813

Judy Hinshaw
ARWHO, Inc
P.O. 937
Lorington
88260



Memo

From 2/19
DAVID G. BOYER
Hydrogeologist

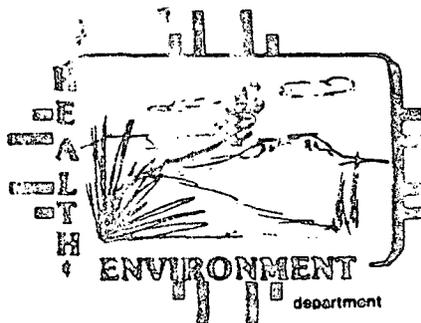
To Judy Hinshaw -

Here is the EIS package.
As I said on the phone,
Call Peter Pache, tell ~~him~~
him you are only a Class II
injection well operator,
accepting only salt water
and produced water, and
disposing of ~~no~~ other waste.
Ask to be taken off their
competitor listing for this
reporting.

David Boyer
827-5812
Environmental
Bureau Chief -

TONEY ANAYA
GOVERNOR

DENISE D. FORT
DIRECTOR



STATE OF NEW MEXICO

ENVIRONMENTAL IMPROVEMENT DIVISION

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

February 6, 1986

Earl R. Bruno, Manager
ARAHO, Inc.
P.O. Box 5456
Midland, Texas 79704

Dear Mr. Bruno:

Please find enclosed the Biennial Hazardous Waste Report Form(s) that need to be completed pursuant to Section 203.A.3. and/or Section 203.C.3. of the New Mexico Hazardous Waste Management Regulations-2.

In that there was a delay in obtaining these forms for distribution, an extension is granted until April 1, 1986 for their return. The forms when completed should be returned to:

Environmental Improvement Division
Ground Water/Hazardous Waste Bureau
Hazardous Waste Section
P.O. Box 968
Santa Fe, New Mexico 87504
ATTN: Peter H. Pache, Program Manager

Sincerely,

A handwritten signature in cursive script, appearing to read 'Peter H. Pache', written in dark ink.

Peter H. Pache
Program Manager
Hazardous Waste Section

PHP:mt

Encl.

**U.S. Environmental Protection Agency
Hazardous Waste
Treatment, Storage, and
Disposal Facility
Report for
1985**

THIS BOOKLET CONTAINS FORMS AND INSTRUCTIONS FOR COMPLETING
THE 1985 RCRA FACILITY BIENNIAL HAZARDOUS WASTE REPORT.
APPENDIX CONTAINS EXCERPTS FROM 40 CFR PARTS 260-265.
A RESPONSE IS REQUIRED BY LAW.

50 YEARS



TONEY ANAYA
GOVERNOR

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION



1935 - 1985

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-5800

MEMORANDUM

TO: R. L. STAMETS, DIRECTOR

FROM: DAVID CATANACH, PETROLEUM ENGINEER

SUBJECT: SWD-154 Araho Disposal Wells
R-5251 for Southern Union

I went through the well files on these two disposal wells and came up with the attached schematics. The construction of both wells is adequate for use as disposal wells.

State LC No. 1 - SWD-154

There is a slight discrepancy in the packer setting depth in this well. The order SWD-154 says the packer shall be no higher than 12,100 feet. Records show it to be set at 12,050 feet. I ran the mechanical integrity test on this well while I was still in Hobbs. The first time we pressured up to 300 psi on the casing and it lost 100 psi, approximately 33% in 15 minutes. Thinking we might have had some trapped air, we repressured to 400 psi, and this time it lost approximately 125 psi in 15 minutes or 31%. After that, we did not retest, thinking that we had some kind of problem. I have now been informed that the test was rerun on 9-4-84, approximately one month later, and that the well passed. There is some question in my mind about the validity of the second test. Copies of both tests run are enclosed. I would recommend that another test be run on this well just to be sure that the casing and packer are in good shape before they commence injection operations again.

State SWD No. 2-F - R-5251

There is also a discrepancy in this well regarding the tubing size. R-5251 authorized injection through 2 7/8" tubing and they are using 3 1/2" tubing in the well. I ran the mechanical integrity test on this well also and when we ran it, we found a tubing leak. The tubing was repaired and the well was retested and passed the test.

September 26, 1985

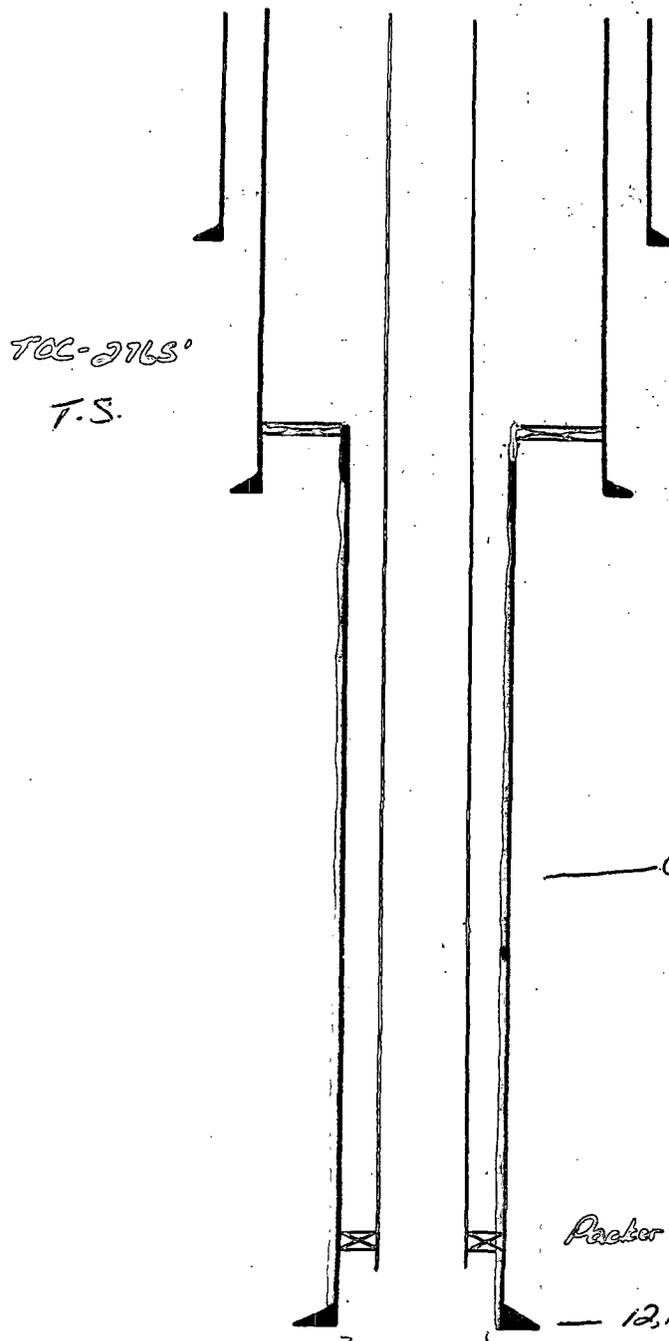
/bok

OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

1a. Type of Work		7. Unit Agreement Name	
b. Type of Well DRILL <input type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/> OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <i>SWD</i> SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>		8. Form or Lease Name	
2. Name of Operator		<i>Stub LC</i>	
3. Address of Operator		9. Well No.	
		<i>1</i>	
4. Location of Well		10. Field and Pool, or Willcox	
UNIT LETTER <i>I</i> LOCATED <i>2190</i> FEET FROM THE <i>South</i> LINE AND FEET FROM THE <i>560 E.</i> LINE OF SEC. <i>1</i> TWP. <i>17S</i> REG. <i>36E</i> NMPM			



SIZE OF HOLE 17.5 SIZE OF CASING 13 3/8

WEIGHT PER FOOT 48 SETTING DEPTH 451'

SACKS OF CEMENT 450 EST. TOP Surface

SIZE OF HOLE 11 SIZE OF CASING 8 5/8

WEIGHT PER FOOT 32 SETTING DEPTH 4999

SACKS OF CEMENT 1400 EST. TOP 2765'

+100 lbs. = 1500 lbs.
P. & A. December 1959 Dug hole.

Calc. top of cement @ 6513'

SIZE OF HOLE 7 7/8 SIZE OF CASING 5 1/2"

WEIGHT PER FOOT 17 SETTING DEPTH 4000 - 12,100

SACKS OF CEMENT 600 EST. TOP _____

Packer @ 12,050', 3 1/2" Tbg.

12,100

Open hole injection 12,100' - 12,700'

APPALO INC. STATE LC ST #1-1 Sec 1, 117, R36

8:48

8-9-84

5 PM

10:00

6 PM

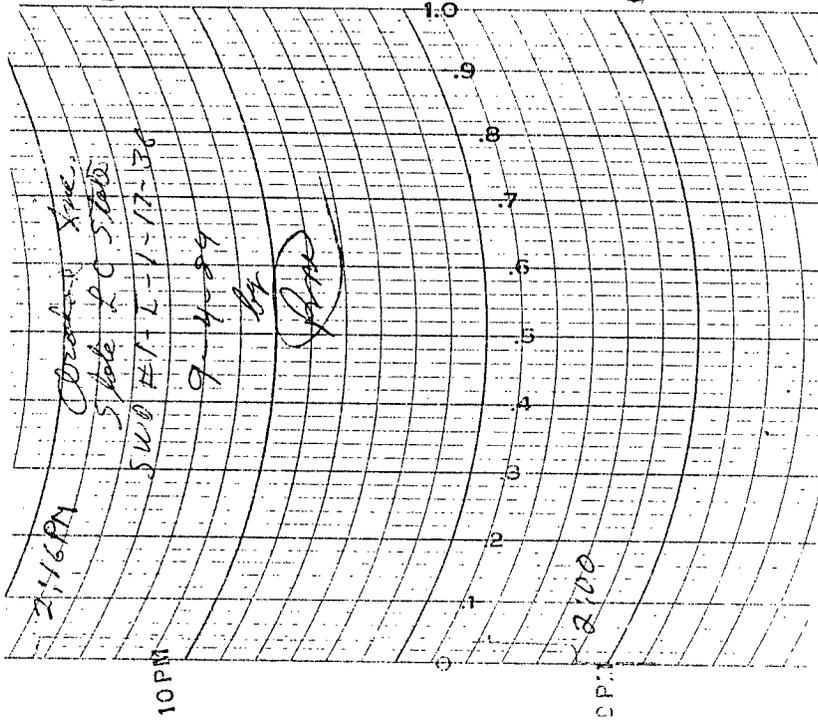
10:15

10:17

10:32

NO. 4305-C

BUFFALO, NEW YORK



PRINTED

REC

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

May 13, 1974

Famariss Oil and Refining Company
P. O. Box 980
Hobbs, New Mexico 88240

Attention: Mr. Earl M. Crain III

Re: Administrative Order SWD-154

Gentlemen:

Reference is made to your letter of May 3, 1974, concerning the Araho Inc. State "LC" Well No. 1, located 2190 feet from the South line and 560 feet from the East line of Section 1, Township 17 South, Range 36 East, Lea County, New Mexico, which well was authorized for salt water disposal by the Commission's Administrative Order No. SWD-154, dated April 1, 1974. The order provided that disposal is to be down 3 1/2-inch plastic-lined tubing set in a packer located no higher than 12,100 feet, although the application was for the packer to be set at 9,000 feet. Injection will be into the open-hole interval from 12,400 feet to 12,704 feet.

It is our understanding that although the well will continue to be operated by Araho, Inc., the waters disposed into the well will include refinery waste water produced at the Famariss refinery near Lovington.

The Foster Wheeler water analysis attached to your most recent letter indicates that the refinery waste water can be safely disposed of in the subject well, although it may be necessary to occasionally acidize or otherwise treat the well to prevent formation blockage.

Administrative Order SWD-154 is therefore hereby amended to include in the authority contained therein authority to dispose

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

Famariss Oil and Refining Company

May 13, 1974

-2-

of refinery waste waters of the general type described in the Foster Wheeler Corporation letter of October 18, 1973.

Araho, Inc., shall file monthly disposal reports on Commission Form C-120-A, as required by Commission Rules 704 and 1120.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/DSN/dr

cc: Oil Conservation Commission - Hobbs
New Mexico State Land Office - Santa Fe
Araho, Inc., Box 5446, Midland, Texas 79701
Attention: Mr. Earl R. Bruno

C

O

P

Y

OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

1a. Type of Work DRILL <input type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>		7. Unit Agreement Name
b. Type of Well OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>		8. Form or Lease Name State SWD
2. Name of Operator Arabee Inc.		9. Well No. 2-F
3. Address of Operator		10. Field and Pool, or Wildcat
4. Location of Well UNIT LETTER <u>F</u> LOCATED <u>2200</u> FEET FROM THE <u>West</u> LINE AND <u>1100</u> FEET FROM THE <u>North</u> LINE OF SEC. <u>2</u> TWP. <u>17S</u> REG. <u>36E</u> NMPM		

SIZE OF HOLE _____ SIZE OF CASING 13 7/8

WEIGHT PER FOOT 48 SETTING DEPTH 349

SACKS OF CEMENT 450 EST. TOP Surface

SIZE OF HOLE _____ SIZE OF CASING 9 5/8

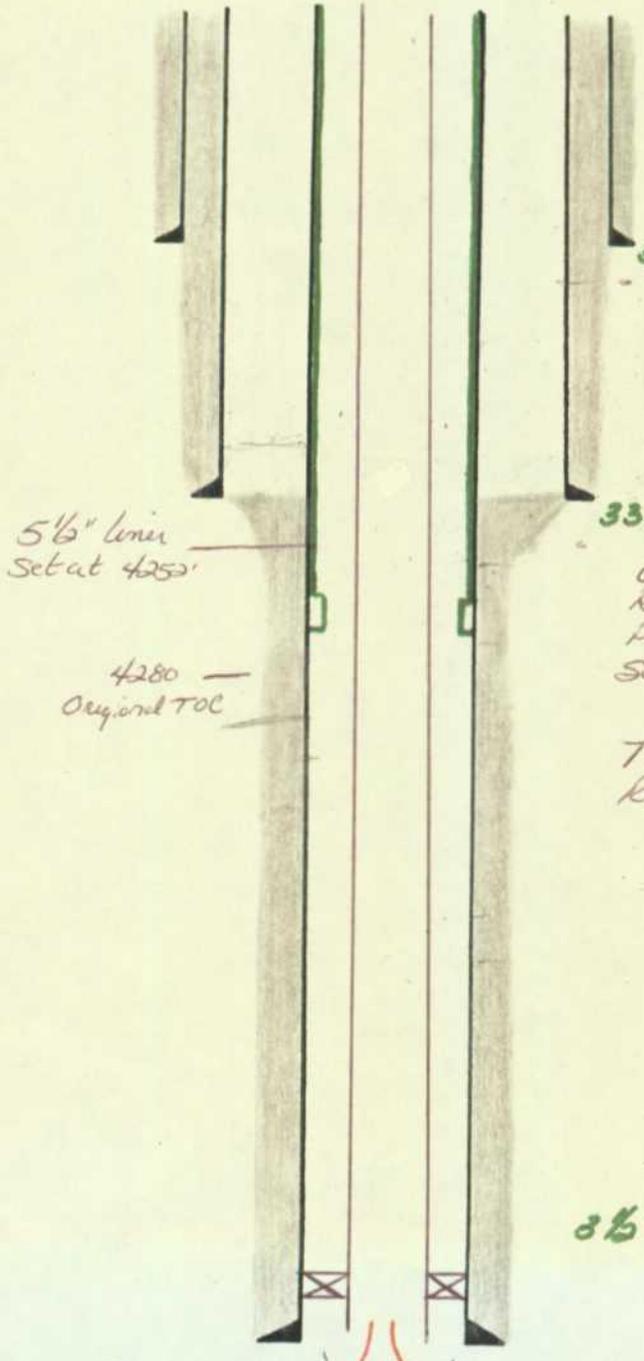
WEIGHT PER FOOT 36 SETTING DEPTH 3318

SACKS OF CEMENT 1750 EST. TOP Surface

SIZE OF HOLE _____ SIZE OF CASING 5 1/2

WEIGHT PER FOOT 17 SETTING DEPTH 8528

SACKS OF CEMENT 1400 EST. TOP T.S. - 4280

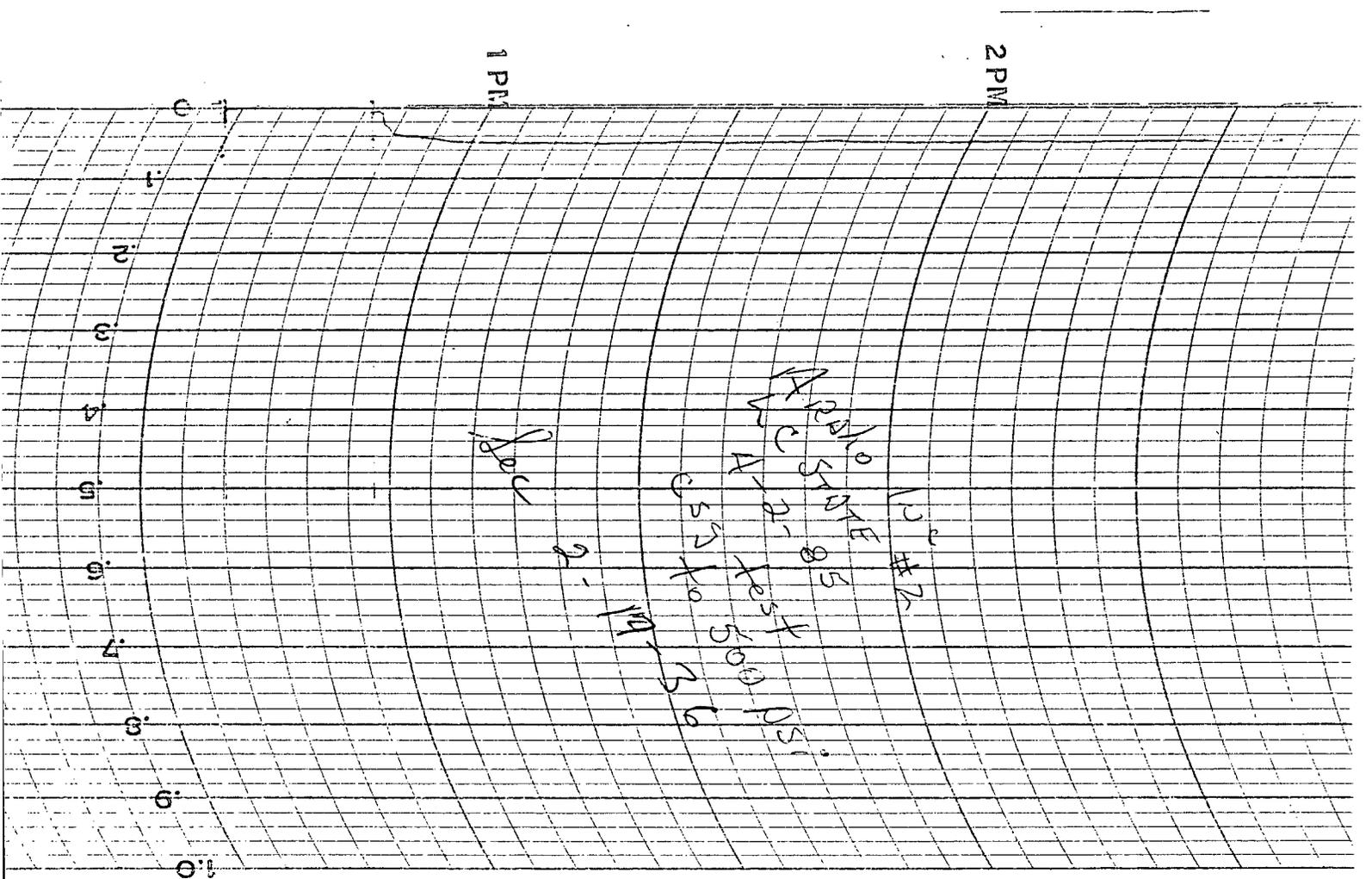


Cut & pulled 5 1/2" @ 4200' and plugged Reentard, set 5 1/2" liner from 3229- 4273' Pulled liner, P. A Set liner at 4250' to surface, cemented w/20084.

Toy leak found on Integrity tool Repaired and retolled.

3 1/2" Tbg set at 8492 (Packer)

8510' - 8889' Open hole Injection Interval



BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE NO. 5701
Order No. R-5251

APPLICATION OF ARAHO, INC. FOR
SALT WATER DISPOSAL, LEA COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on June 23, 1976, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 3rd day of August, 1976, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, Araho, Inc., is the owner and operator of the State SWD Well No. 2, located in Unit F of Section 2, Township 17 South, Range 36 East, NMPM, Lovington Field, Lea County, New Mexico.
- (3) That the applicant proposes to utilize said well to dispose of produced salt water into the Abo formation, with injection into the open-hole interval from approximately 8528 feet to 8900 feet.
- (4) That the injection should be accomplished through 2 7/8-inch plastic lined tubing installed in a packer set at approximately 8500 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure/vacuum gauge should be attached to the annulus in order to determine leakage in the casing, tubing, or packer.
- (5) That the injection well or system should be equipped with a pop-off valve or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 100 psi.
- (6) That the operator should notify the supervisor of the Hobbs district office of the Commission of the date and time of

the installation of disposal equipment so that the same may be inspected.

(7) That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

(8) That approval of the subject application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Araho, Inc., is hereby authorized to utilize its State SWD Well No. 2, located in Unit F of Section 2, Township 17 South, Range 36 East, NMPM, Lovington Field, Lea County, New Mexico, to dispose of produced salt water into the Abo formation, injection to be accomplished through 2 7/8-inch tubing installed in a packer set at approximately 8500 feet, with injection into the open-hole interval from approximately 8528 feet to 8900 feet.

PROVIDED HOWEVER, that the tubing shall be plastic-lined; that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure/vacuum gauge shall be attached to the annulus or the annulus shall be equipped with an approved leak detection device in order to determine leakage in the casing, tubing, or packer.

(2) That the injection well or system shall be equipped with a pop-off valve or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 100 psi.

(3) That the operator shall notify the supervisor of the Hobbs district office of the Commission of the date and time of the installation of disposal equipment so that the same may be inspected.

(4) That the operator shall immediately notify the supervisor of the Commission's Hobbs district office of the failure of the tubing, casing, or packer, in said well or the leakage of water from or around said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

(5) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

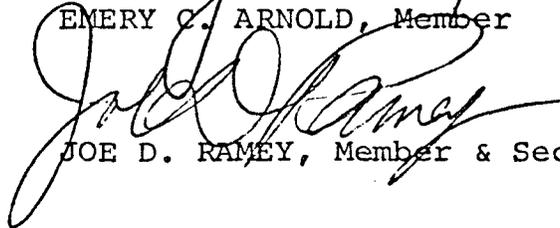
(6) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year herein-
above designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


PHIL R. LUCERO, Chairman


EMERY C. ARNOLD, Member


JOE D. RAMEY, Member & Secretary

S E A L

COPIES RECEIVED		
TRIBUTION		
FE		
U.S.G.S.		
LAND OFFICE		
OPERATOR		

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease
State Fee

5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER- Water Disposal	7. Unit Agreement Name None
2. Name of Operator Araho, Inc.	8. Farm or Lease Name State "LC"
3. Address of Operator P. O. Box 5456, Midland, Texas 79701	9. Well No. 1
4. Location of Well UNIT LETTER I 2190 FEET FROM THE South LINE AND 560 FEET FROM THE East LINE, SECTION 1 TOWNSHIP 17S RANGE 36E NMPM.	10. Field and Pool, or Wildcat Dry Hole
15. Elevation (Show whether DF, RT, GR, etc.) 3828 DF	12. County Lea

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK

TEMPORARILY ABANDON

PULL OR ALTER CASING

OTHER

PLUG AND ABANDON

CHANGE PLANS

SUBSEQUENT REPORT OF:

REMEDIAL WORK

COMMENCE DRILLING OPNS.

CASING TEST AND CEMENT JOB

OTHER complete water disposal well

ALTERING CASING

PLUG AND ABANDONMENT

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

5/9/74 thru 6/10/74 - Moved in rotary rig. Drilled cement plugs and washed and cleaned out to 12,000'.
Set 5½" 17# N-80 LT&C Liner from 4825.20 ft. to 11,940 ft. and cemented w/650 sx Lite Weight W/8/10% of 1% Halad 9 followed by 100 sx Class H w/1% Halad 9. Plug down at 1:00 a.m. 5/17/74.
Circulated to top of liner. WIH w/7 7/8" bit and washed to top of 5½" liner.
Drilled cement inside 5½" liner from 11,600-11,940'.
Drilled double valved guide shoe.
Ran 3½" 9.2# N-80 tubing to 11,894'. Set packer at 11,894'. Well taking water on vacuum.

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

SIGNED Earl R. Bruno TITLE Vice President DATE 9/13/74

APPROVED BY [Signature] TITLE SUPERVISOR DISTRICT I DATE SEP 16 1974

NO. OF COPIES RECEIVED	
DISTRIBUTION	
SANTA FE	
FILE	
U.S.G.S.	
LAND OFFICE	
OPERATOR	

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-101
Revised 1-1-65

5A. indicate Type of Lease
STATE FEE

5. State Oil & Gas Lease No.
Unknown

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

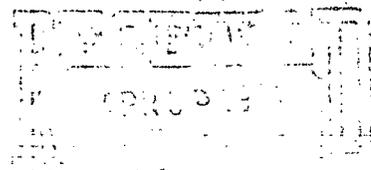
1a. Type of Work DRILL <input type="checkbox"/> DEEPEN <input type="checkbox"/> Clean Out <input checked="" type="checkbox"/> PLUG BACK <input type="checkbox"/>		7. Unit Agreement Name None
b. Type of Well OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/> Water Disposal SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input checked="" type="checkbox"/>		8. Farm or Lease Name State "LC"
2. Name of Operator Araho, Inc		9. Well No. 1
3. Address of Operator P. O. Box 5456, Midland, Texas 79701		10. Field and Pool, or Wildcat Not Applicable
4. Location of Well UNIT LETTER I LOCATED 2190 FEET FROM THE South LINE AND 560 FEET FROM THE East LINE OF SEC. 1 TWP. 17S RGE. 36E NMPM		12. County Lea
19. Proposed Depth 12,704'		19A. Formation Fusselman
20. Rotary or C.T. Rotary		
21. Elevations (Show whether DF, RT, etc.) DF 3828	21A. Kind & Status Plug. Bond Blanket	21B. Drilling Contractor Robinson Bros.
22. Approx. Date Work will start April 1, 1974		

23.

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
11"	8 5/8"	32#	4999'	1500	Circulated
7 7/8"	5 1/2"	17#	12,100-4800'	800	Circulate
	3 1/2"	9.2#	12,050'		

Will set packer at 12,050'. Dispose of water in open-hole interval from 12,100-12704'.



IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

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

Signed Care R. Bruno Title Vice-President Date March 20, 1974

(This space for State Use)

SUPERVISOR DISTRICT I

APPROVED BY _____ TITLE _____

NEW MEXICO OIL CONSERVATION COMMISSION

FORM C-103
(Rev 3-55)

MISCELLANEOUS REPORTS ON WELLS

(Submit to appropriate District Office as per Commission Rule 1106)

Name of Company Amerada Petroleum Corporation		Address Drawer "D" - Monument, N.M.				
Lease STATE L "C"	Well No. 1	Unit Letter I	Section 1	Township 17-S	Range 36-E	
Date Work Performed 12-28-60	Pool Wildcat	County Lea				

THIS IS A REPORT OF: (Check appropriate block)

- Beginning Drilling Operations
 Casing Test and Cement Job
 Other (Explain):
 Plugging
 Remedial Work

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

Spotted a 10 sack cement plug in top of 8-5/8" OD casing from 0' to 30' and installed a 4" OD abandon marker.

Witnessed by C. L. Thurman	Position Foreman	Company Amerada
-------------------------------	---------------------	--------------------

FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY

ORIGINAL WELL DATA

DF Elev.	TD	PBTD	Producing Interval	Completion Date
Tubing Diameter	Tubing Depth	Oil String Diameter	Oil String Depth	
Perforated Interval(s)		Open Hole Interval		
		Producing Formation(s)		

RESULTS OF WORKOVER

Test	Date of Test	Oil Production BPD	Gas Production MCFPD	Water Production BPD	GOR Cubic feet/Bbl	Gas Well Potential MCFPD
Before Workover						
After Workover						

OIL CONSERVATION COMMISSION

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

Approved by <i>Lester A. Clement</i>	Name <i>Lester A. Clement</i>
Title	Position Asst. District Superintendent
Date	Company

NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

NOTES OFFICE

MISCELLANEOUS NOTICES

Submit this notice in TRIPLICATE to the District Office, Oil Conservation Commission, before the work specified is to begin. A copy will be returned to the sender on which will be given the approval, with any modifications considered advisable, or the rejection by the Commission or agent, of the plan submitted. The plan as approved should be followed, and work should not begin until approval is obtained. See additional instructions in the Rules and Regulations of the Commission.

Indicate Nature of Notice by Checking Below

NOTICE OF INTENTION TO CHANGE PLANS		NOTICE OF INTENTION TO TEMPORARILY ABANDON WELL		NOTICE OF INTENTION TO DRILL DEEPER	
NOTICE OF INTENTION TO PLUG WELL	X	NOTICE OF INTENTION TO PLUG BACK		NOTICE OF INTENTION TO SET LINER	
NOTICE OF INTENTION TO SQUEEZE		NOTICE OF INTENTION TO ACIDIZE		NOTICE OF INTENTION TO SHOOT (Nitro)	
NOTICE OF INTENTION TO GUN PERFORATE		NOTICE OF INTENTION (OTHER)		NOTICE OF INTENTION (OTHER)	

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Monument, New Mexico
(Place)

December 27, 1960
(Date)

Gentlemen:

Following is a Notice of Intention to do certain work as described below at the State L "C"

Amerada Petroleum Corporation (Company or Operator) Well No. 1 in I (Unit)

NE 1/4 SE 1/4 of Sec. 1, T. 17S, R. 36E, NMPM., Wildcat Pool

Lea County.

FULL DETAILS OF PROPOSED PLAN OF WORK
(FOLLOW INSTRUCTIONS IN THE RULES AND REGULATIONS)

Plan to plug and abandon as follows:
Spot a 10 sack cement plug in top of 8-5/8" OD casing, cap casing and set a 4" OD abandon marker.

1961 JAN 3 AM 8:31

Approved....., 1960
Except as follows:

No 3/8 to be plugged

Approved
OIL CONSERVATION COMMISSION

By: [Signature]

Title.....

Amerada Petroleum Corporation
Company or Operator

By: [Signature]

Position: Asst. District Superintendent

Send Communications regarding well to:

Name: Amerada Petroleum Corporation

Address: District "C" - Monument, New Mexico

NEW MEXICO OIL CONSERVATION COMMISSION

FORM C-103
(Rev 3-55)

MISCELLANEOUS REPORTS ON WELLS

(Submit to appropriate District Office as per Commission Rule 1106)

1959 DEC 03 PM 2:35

Name of Company Amerada Petroleum Corporation		Address Drawer "D" - Monument, N.M.			
Lease State L "C"	Well No. 1	Unit Letter I	Section 1	Township 17S	Range 36E
Date Work Performed	Pool Wildcat	County Lea			

THIS IS A REPORT OF: (Check appropriate block)

- Beginning Drilling Operations
 Casing Test and Cement Job
 Other (Explain):
 Plugging
 Remedial Work

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

Well is still temporarily abandoned.
Plan to hold for possible future use as a salt water disposal well.

THE COMMISSION MUST BE NOTIFIED EVERY 6 MONTHS ON FORM C-103 AS TO THE WELL STATUS AND YOUR FUTURE PLANS FOR THIS WELL.

OIL CONSERVATION COMMISSION
 1959 DEC 03 PM 1:44

Witnessed by	Position	Company
--------------	----------	---------

FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY

ORIGINAL WELL DATA

D F Elev.	T D	P B T D	Producing Interval	Completion Date
Tubing Diameter	Tubing Depth	Oil String Diameter	Oil String Depth	
Perforated Interval(s)				
Open Hole Interval		Producing Formation(s)		

RESULTS OF WORKOVER

Test	Date of Test	Oil Production BPD	Gas Production MCFPD	Water Production BPD	GOR Cubic feet/Bbl	Gas Well Potential MCFPD
Before Workover						
After Workover						

OIL CONSERVATION COMMISSION		I hereby certify that the information given above is true and complete to the best of my knowledge.	
Approved by		Name	
Title	Asst. Dist. Superintendent	Position	Asst. Dist. Superintendent
Date		Company	Amerada Petroleum Corporation

NEW MEXICO OIL CONSERVATION COMMISSION

FORM C-103
(Rev 3-55)

MISCELLANEOUS REPORTS ON WELLS

(Submit to appropriate District Office as per Commission Rule 1106)

1000 JUN 6 107 3:41
1000 JUN 1 11 PM 2 43

Name of Company: Amerada Petroleum Corporation
Address: Drawer 4D - Monument, New Mexico

Lease: STATE L #CM
Well No.: 1
Unit Letter: I
Section: 1
Township: 17-S
Range: 36-E

Date Work Performed: _____
Pool: Wildcat
County: Lea

THIS IS A REPORT OF: (Check appropriate block)

- Beginning Drilling Operations
 Casing Test and Cement Job
 Other (Explain):
 Plugging
 Remedial Work

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

FOR RECORD ONLY

This is to advise that this well is still temporarily abandoned.
Plans remain to hold for possible future use as a salt water disposal well.

THE COMMISSION MUST BE NOTIFIED EVERY 6 MONTHS ON FORM C-103 AS TO THE WELL STATUS AND YOUR FUTURE PLANS FOR THIS WELL

Witnessed by: _____ Position: _____ Company: _____

FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY

ORIGINAL WELL DATA

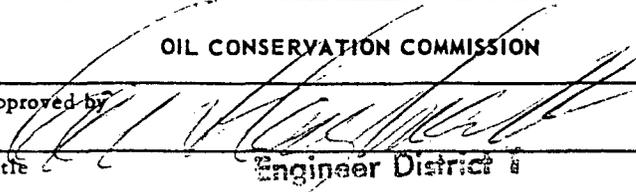
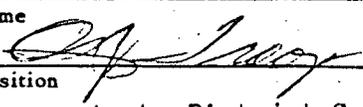
D F Elev.	T D	P BTD	Producing Interval	Completion Date
Tubing Diameter	Tubing Depth	Oil String Diameter	Oil String Depth	
Perforated Interval(s)				
Open Hole Interval		Producing Formation(s)		

RESULTS OF WORKOVER

Test	Date of Test	Oil Production BPD	Gas Production MCFPD	Water Production BPD	GOR Cubic feet/Bbl	Gas Well Potential MCFPD
Before Workover						
After Workover						

OIL CONSERVATION COMMISSION

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

Approved by:  Name: 
Title: Engineer District 4 Position: Asst. District Superintendent
Date: _____ Company: Amerada Petroleum Corporation

MISCELLANEOUS REPORTS ON WELLS

(Submit to appropriate District Office as per Commission Rule 1106)

1959 DISTRICT OFFICE 000

Name of Company Amerada Petroleum Corporation			Address Drawer "D" - Monument, N.M. 10 27			
Lease State L "C"	Well No. 1	Unit Letter I	Section 1	Township 17-S	Range 36-E	
Date Work Performed	Pool Wildcat	County Lea				

THIS IS A REPORT OF: (Check appropriate block)

- Beginning Drilling Operations
 Casing Test and Cement Job
 Other (Explain):
 Plugging
 Remedial Work

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

Permission to perform the following work was obtained from Mr. Ramey by telephone on 11-9-59.

12,704' total depth - dry hole. Cement plugs spotted as follows: 150 sx regular mixed 4% Gel with 1/4# flocele and 50# Gilsonite per sack at 12,005'; 35 sx slo-set at 11,625'; 105 sx slo-set and 125 sx regular mixed 4% Gel and 1/4# flocele per sack and 50# Gilsonite per sack at 9950'; 75 sx regular from 8220' to 8464'; 35 sx regular from 6300' to 6414'; 35 sx regular from 5936' to 6050' and 35 sx regular from 5000' to 5050', & in 8-5/8" csg from 4936' to 5000'.

Left all 8-5/8" and 13-3/8" casing in hole. Welded a metal cap over top of 8-5/8" OD casing.

Well temporarily abandoned as of 12-2-59. Plan to hold for possible future use as a salt water disposal well.

THE COMMISSION MUST BE NOTIFIED
 EVERY 6 MONTHS ON FORM C-103
 AS TO THE WELL STATUS AND YOUR
 FUTURE PLANS FOR THIS WELL.

Witnessed by C. L. Thruman	Position Foreman	Company Amerada Petr. Corp.
-------------------------------	---------------------	--------------------------------

FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY

ORIGINAL WELL DATA

D F Elev.	T D	P B T D	Producing Interval	Completion Date
Tubing Diameter	Tubing Depth	Oil String Diameter	Oil String Depth	
Perforated Interval(s)				
Open Hole Interval		Producing Formation(s)		

RESULTS OF WORKOVER

Test	Date of Test	Oil Production BPD	Gas Production MCFPD	Water Production BPD	GOR Cubic feet/Bbl	Gas Well Potential MCFPD
Before Workover						
After Workover						

OIL CONSERVATION COMMISSION		I hereby certify that the information given above is true and complete to the best of my knowledge.	
Approved by 	Name Asst. District Superintendent		
Title District	Position Asst. District Superintendent		
Date	Company Amerada Petroleum Corporation		

RECORD OF DRILL-STEM AND SPECIAL TESTS

If drill-stem or other special tests or deviation surveys were made, submit report on separate sheet and attach hereto

TOOLS USED

Rotary tools were used from 0 feet to 12,720 feet, and from ... feet to ... feet.
 Cable tools were used from ... feet to ... feet, and from ... feet to ... feet.

PRODUCTION

Put to Producing ... 19 ...
 OIL WELL: The production during the first 24 hours was ... barrels of liquid of which ... % was oil; ... % was emulsion; ... % water; and ... % was sediment. A.P.I. Gravity ...

GAS WELL: The production during the first 24 hours was ... M.C.F. plus ... barrels of liquid Hydrocarbon. Shut in Pressure ... lbs.

Length of Time Shut in ...

PLEASE INDICATE BELOW FORMATION TOPS (IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE):

Southeastern New Mexico		Northwestern New Mexico	
T. Anhy. 1970'	T. Devonian 11716'	T. Ojo Alamo	
T. Salt 1770'	T. Silurian 12400'	T. Kirtland-Fruitland	
T. Salt 2570'	T. Monks Formation 12277'	T. Farmington	
T. Yates 3210'	T. Simpson	T. Pictured Cliffs	
T. 7 Rivers	T. McKee	T. Menefee	
T. Queen	T. Ellenburger	T. Point Lookout	
T. Grayburg	T. Gr. Wash	T. Mancos	
T. San Andres 4607'	T. Granite	T. Dakota	
T. Glorieta 4817'		T. Morrison	
T. Drinkard		T. Penn	
T. Tubbs 7717'			
T. Abo 8217'			
T. Penn 10077'			
T. Mix 12003'			
T. Wolfcamp 12007'			

FORMATION RECORD

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation
0	6	6	Collar				
6	300	294	Caliche, Red Shale & Sand				
300	700	400	Red Sand				
700	1970	1270	Red Shale & Sand				
1970	2970	1000	Anhydrite				
2970	3970	1000	Salt				
3970	4600	1700	Anhydrite & Shale				
4600	6000	1400	Dolomite				
6000	6670	670	Dolomite & Sand				
6670	7770	1100	Dolomite				
7770	7875	105	Dolomite & Sand				
7875	10130	2255	Dolomite				
10130	10300	170	Lime, Shale & Dolomite				
10300	10510	210	Dolomite				
10510	10710	200	Shale				
10710	10735	25	Lime				
10735	10860	125	Sand & Shale				
10860	10975	115	Lime & Shale				
10975	11275	300	Lime				
11275	11710	435	Shale				
11710	11870	160	Lime & Dolomite				
11870	12704	834	Dolomite				

ATTACH SEPARATE SHEET IF ADDITIONAL SPACE IS NEEDED

I hereby swear or affirm that the information given herewith is a complete and correct record of the well and all work done on it so far as can be determined from available records.

December 9, 1959

Amecia Petr. Corporation

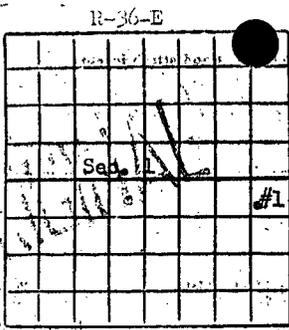
By *[Signature]* - *[Name]*, D.M. (Date)

Company or Operator

Address

Name *[Signature]*

Position or Title *[Signature]*



NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

ROBBS OFFICE 060

WELL RECORD
NOV 27 1959

Mail to District Office, Oil Conservation Commission, to which Form C-101 was sent not later than twenty days after completion of well. Follow instructions in Rules and Regulations of the Commission. Submit in QUINTUPLICATE. If State Land submit 6 Copies

AREA 640 ACRES
LOCATE WELL CORRECTLY

Amerasia Petroleum Corporation
(Company or Operator)

State L "C"

Well No. 01 in NE 1/4 of SE 1/4 of Sec. 1 T. 17-S. R. 36-E NMPM.

Wildcat Pool, Lea County.

Well is 2190 feet from South line and 560 feet from East line

of Section 1. If State Land the Oil and Gas Lease No. is B-3009

Drilling Commenced September 5, 1959. Drilling was Completed November 26, 1959.

Name of Drilling Contractor: Rowan Drilling Co., Inc.

Address: Midland, Texas

Elevation above sea level at Top of Casing Head: 3828' D.F. The information given is to be kept confidential until

Not Confidential, 19

OIL SANDS OR ZONES

No. 1, from None to No. 4, from to

No. 2, from to No. 5, from to

No. 3, from to No. 6, from to

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from None to feet.

No. 2, from to feet.

No. 3, from to feet.

No. 4, from to feet.

CASING RECORD

SIZE	WEIGHT PER FOOT	NEW OR USED	AMOUNT	KIND OF SHOE	CUT AND PULLED FROM	PERFORATIONS	PURPOSE
13-3/8"	48#	New	433'	Guide			
8-5/8"	32#	New	5006'	"			

MUDDING AND CEMENTING RECORD

SIZE OF HOLE	SIZE OF CASING	WHERE SET	NO. SACKS OF CEMENT	METHOD USED	MUD GRAVITY	AMOUNT OF MUD USED
17-1/2"	13-3/8	451'	450	Halliburton		
11"	8-5/8	4999'	1500	"		

RECORD OF PRODUCTION AND STIMULATION

(Record the Process used, No. of Qu. or Gals. used, interval treated or shot.)

Dry Hole - Temporarily abandoned.

Result of Production Stimulation

Depth Cleaned Out

STATE L'C" NO. 1 - DRILL STEM TESTS

- DST #1 from 9640' to 9687', Wolfcamp, Opened tool with weak blow of air. Packer failed.
- DST #1, 2nd run, from 9640' to 9687', Wolfcamp, opened tool with very weak blow air and died in 4 minutes. Recovered: 9561' dry pipe and 59' drilling fluid, no shows of oil, gas or water. HI & HO - 4176#, IFP - 54#, FFP - 54#, 10, 20, & 30 min. build up - 54#.
- DST #2 from 10,290' to 10,335', Pennsylvanian, 4 hour test. Used 1300' water blanket. Opened tool with fair blow of air then decreased to a very weak blow in 4 hours. Recovered: 1953' dry pipe, 1300' water blanket, 279' drilling fluid and 6713' salty sulphur water above TC valve and 90' salt water below TC valve, no shows of oil or gas. HI-4415#, HO-4380#, IFP-700#, FFP-3850#, 10, 20, & 30 min. build up-3960#.
- DST #3 from 10,730' to 10,780', Pennsylvanian, had packer failure.
- DST #3, 2nd run, from 10,715' to 10,780', Pennsylvanian, 15 min. test. Used 1800' water blanket. Opened tool with a very weak blow of air and died in 5 mins. Recovered: 1800' water blanket and 280' of drilling fluid with no shows of water, oil & gas. HI & HO-4681#, IFP & FFP-766#, no build up due to packer failure.
- DST #4 from 10,765' to 10,865', Lower Pennsylvanian, had packer failure.
- DST #4, 2nd run, from 10,755' to 10,865', Lower Pennsylvanian, 2 hour & 9 minute test. Used 1800' water blanket. Opened tool with weak blow of air for 15 minutes and died. Closed and re-opened with no blow. Recovered: 1800' water blanket, 465' drilling mud above TC valve and 171' drilling mud below TC valve, no shows of oil, water or gas. HI & HO-4930#, IFP-1275#, FFP-1275#, 10 min. BUP-1310#, 20 min. BUP-1434# and 30 min. 1500#.
- DST #5 from 11,718' to 11,760', Devonian, 1 hour test. Used 2711' nitrogen blanket. Opened tool with few air bubbles and died. Recovered nitrogen blanket and 30' of very slightly gas cut drilling mud, no shows of oil or water. HI & HO-5500#, IFP & FFP-880#, 10 min BUP-1300#, 20 min. BUP-1630# and 30 min. BUP-2240# and increasing.
- DST #6 from 11,760' to 11,789', Devonian zone, 2 hour test. Used 2711' nitrogen blanket. Opened tool with weak blow air and died after 19 minutes. Recovered: 2711' nitrogen blanket, 304' water and 30' drilling mud estimated 5% heavy black oil cut. HI & HO-5520#, IFP-880#, FFP-1040#, 10 min. BUP-3020#, 20 min. BUP-3420#, and 30 min. BUP-3700#.
- DST #7 from 11,789' to 11,840', Devonian, 1 hour and 21 min. test. Used 2813' nitrogen blanket. Opened tool with very weak blow of air for 21 mins. and died. Recovered: 2813' nitrogen blanket, 151' water and 98' drilling mud, no shows of oil or gas. HI & HO-5580#, IFP-900#, FFP-975#, 10 min. BUP-3620#, 20 min. BUP-3900# and 30 min. BUP-4100#.
- DST #8 from 11,840' to 11,876', Devonian zone, 4 hour test. Used 2813' nitrogen blanket. Opened tool with weak blow air for 10 mins. then increased to strong blow for 2 hours & decreased to weak blow at end of test. Recovered: 256' of mud cut salt water and 5146' of salt water. No shows of oil. HI & HO-5600#, IFP-940#, FFP-2080#, 10 min, BUP-2080#, 20 min. BUP-2120#, and 30 min. BUP-2300#.
- DST #9 from 12,540' to 12,704', Fusselman zone, 3 hour test. Opened tool with faint blow increasing to sudden-strong blow then weakened & died. Had another blow increasing to strong blow at end of test. Recovered: 10,677' of salt water, no shows of oil or gas. HI-5000#, HO-4800#, IFP-2620#, FFP-4320#, 10 min. BUP-4360#, 20 min. BUP-4520#, and 30 min. BUP-4740#.
- DST #10 from 9910' to 9990', Pennsylvanian, opened tool with good blow air continuing for 2 hrs and gradually decreasing to weak blow at end of test. Recovered above TC valve: 282' of drilling mud and 6470' salty sulphur water. Below TC valve: 150' salty sulphur water. HI-4220#, HO-4150#, IFP-45#, FFP-2990#, 10 min. BUP-3180#, 20 min. BUP-3205#, 30 min. BUP-3225#.

<u>TOTGOS</u>					
623'	1/2 deg.	7060'	1-3/4 deg.	11755'	3 degs.
1910'	2-	8005'	2	12168'	3-1/2
2840'	3/4	9060'	2-3/4		
3335'	1/2	10070'	3/4		
4260'	1-3/4	10864'	3/4		
5054'	1-1/2	10040'	1/2		
6310'	1-3/4	11465'	2		

NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico

MISCELLANEOUS NOTICES

Submit this notice in TRIPLICATE to the District Office, Oil Conservation Commission, before the work specified is to begin. A copy will be returned to the sender on which will be given the approval, with any modifications considered advisable, or the rejection by the Commission or agent, of the plan submitted. The plan as approved should be followed, and work should not begin until approval is obtained. See additional instructions in the Rules and Regulations of the Commission.

Indicate Nature of Notice by Checking Below

NOTICE OF INTENTION TO CHANGE PLANS		NOTICE OF INTENTION TO TEMPORARILY ABANDON WELL		NOTICE OF INTENTION TO DRILL DEEPER	
NOTICE OF INTENTION TO PLUG WELL		NOTICE OF INTENTION TO PLUG BACK		NOTICE OF INTENTION TO SET LINER	
NOTICE OF INTENTION TO SQUEEZE		NOTICE OF INTENTION TO ACIDIZE		NOTICE OF INTENTION TO SHOOT (Nitro)	
NOTICE OF INTENTION TO GUN PERFORATE		NOTICE OF INTENTION (OTHER)		NOTICE OF INTENTION (OTHER)	

MAINTENANCE OFFICE
NOV 23 PM 4 03
AM 8:36
DCC X

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Monument, New Mexico
(Place)

November 18, 1959
(Date)

Gentlemen:

Following is a Notice of Intention to do certain work as described below at the.....

Amerada Petroleum Corporation
(Company or Operator)

State L "C"

Well No. 1 in I
(Unit)

NE 1/4 SE 1/4 of Sec. 1, T 17-S, R 36-E, NMPM., Wildcat Pool

Lea County.

FULL DETAILS OF PROPOSED PLAN OF WORK
(FOLLOW INSTRUCTIONS IN THE RULES AND REGULATIONS)

On Notice of Intention to Drill dated 8-25-59, intentions were to drill to a depth of approximately 12,000' and test the Devonian. We have reached the proposed depth and now plan to drill deeper to approximately 12,875' and test the Silurian.

Approved....., 19.....
Except as follows:

Approved
OIL CONSERVATION COMMISSION

By.....

Title.....

Amerada Petroleum Corporation
Company or Operator

By.....

Position Asst. District Superintendent

Send Communications regarding well to:

Name Amerada Petr. Corp.

Address Santa Fe - Monument, N.M.

ORIGINAL

HOBBS OFFICE 65-060-103
(Revised 3-55)

NEW MEXICO OIL CONSERVATION COMMISSION
MISCELLANEOUS REPORTS ON WELLS

1959 SEP 23 AM 8:02

(Submit to appropriate District Office as per Commission Rule 1106)

COMPANY Amerada Petroleum Corporation - Drawer "D" - Monument, New Mexico
(Address)

LEASE State L "C" WELL NO. 1 UNIT I S 1 T 17S R 36-E
DATE WORK PERFORMED Sept., 1959 POOL wildcat

This is a Report of: (Check appropriate block) Results of Test of Casing Shut-off
 Beginning Drilling Operations Remedial Work
 Plugging Other _____

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

Drilled 11" hole to 5000'. Ran 117 jts of 8-5/8" OD casing and set at 4999'. Cemented with 1400 sx of 50-50 Bozmix and regular cement mixed with 2% Gel and 100 sx of Incor, total of 1500 sx. Maximum pressure - 1200#. Rotated casing until cement equalized. Ran temperature survey and found top of cement outside of 8-5/8" OD casing at 2765' or 31% fill. After WOG, tested 8-5/8" OD casing with 1000# press. for 30 mins, held OK. Drilled cement from 4907' to 5000' and tested 8-5/8" casing with 1000# press. for 30 mins, held OK.

Started drilling formation and 7-7/8" hole at 6PM, 9-23-59.

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 I hereby certify that the information given above is true and complete to the best of my knowledge.
Name [Signature] Name [Signature]
Title Engineer District I Position Asst. Dist. Superintendent
Date SEP 20 1959 Company Amerada Petroleum Corporation

SEP 20 1959

ORIGINAL

MAIN OFFICE OCC

HOBBS OFFICE 0003

NEW MEXICO OIL CONSERVATION COMMISSION
MISCELLANEOUS REPORTS ON WELLS

(Revised 3-55)

(Submit to appropriate District Office as per Commission Rule 1106)

COMPANY Amerada Petroleum Corporation - Drawer "D" - Monument, New Mexico
(Address)

LEASE State L "C" WELL NO. 1 UNIT I S 1 T 17S R 36-E

DATE WORK PERFORMED Sept., 1959 POOL Wildcat

This is a Report of: (Check appropriate block) Results of Test of Casing Shut-off
 Beginning Drilling Operations Remedial Work
 Plugging Other _____

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

Spudded 17-1/2" hole at 1:30PM, 9-5-59.

At a depth of 455', ran 13-3/8" OD 48# casing and set at 451' and cemented with total of 450 sacks, Maximum pump pressure 400#. Cement circulated. After WOC, tested 13-3/8" OD casing with 800# pressure & held OK. Drilled cement to 455' and tested 13-3/8" OD casing with 800# pressure, Held OK.

Started drilling formation and 11" hole at 455' at 2:30AM, 9-8-59.

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

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

Name [Signature]
Title [Signature]
Date [Signature]

Name [Signature]
Position Asst. Dist. Superintendent
Company Amerada Petroleum Corporation

NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico

HOBBS OFFICE OCC

NOTICE OF INTENTION TO DRILL OR RECOMPLETION

Notice must be given to the District Office of the Oil Conservation Commission and approval obtained before drilling or recompletion begins. If changes in the proposed plan are considered advisable a copy of this notice showing such changes will be returned to the sender. Submit this notice in **QUINTUPPLICATE** One copy will be returned following approval. See additional instructions in Rules and Regulations of the Commission.

Monument, New Mexico

August 25, 1959

(Place)

(Date)

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Gentlemen:

You are hereby notified that it is our intention to commence the (Drilling) (Recompletion) of a well to be known as

Amerada Petroleum Corporation

(Company or Operator)

State L "C"

(Lease)

Well No. 1

in I

(Unit)

The well is

located 2190 feet from the South line and 560 feet from the

East line of Section 1, T. 17-S, R. 36-E, NMPM.

(GIVE LOCATION FROM SECTION LINE)

Wildcat Pool, Lea County

R 36E

If State Land the Oil and Gas Lease is No. B-3009

If patented land the owner is

Address

We propose to drill well with drilling equipment as follows:

Rotary tools all the way

The status of plugging bond is Blanket

Drilling Contractor Rowan Drilling Co., Inc.

Midland, Texas

We intend to complete this well in the Devonian

formation at an approximate depth of 12,000 feet.

CASING PROGRAM

We propose to use the following strings of Casing and to cement them as indicated:

Size of Hole	Size of Casing	Weight per Foot	New or Second Hand	Depth	Sacks Cement
17-1/2"	13-3/8"	48#	New	400'	450 - Circ.
12 1/4" & 11"	8-5/8"	32#	New	5000'	2000
7-7/8"	5-1/2"	17 & 20#	New	12000'	600

If changes in the above plans become advisable we will notify you immediately.

ADDITIONAL INFORMATION (If recompletion give full details of proposed plan of work.)

Approved....., 19.....
Except as follows:

Sincerely yours,

Amerada Petroleum Corporation

(Company or Operator)

By [Signature]
Position Asst. District Superintendent

Send Communications regarding well to

Name Amerada Petr. Corp.

Address Drawer "D"

Monument, New Mexico

OIL CONSERVATION COMMISSION

By [Signature]

WELL LOCATION AND ACREAGE DEDICATION PLAT

SEE INSTRUCTIONS FOR COMPLETING THIS FORM ON THE REVERSE SIDE **HOBBS OFFICE OCC**

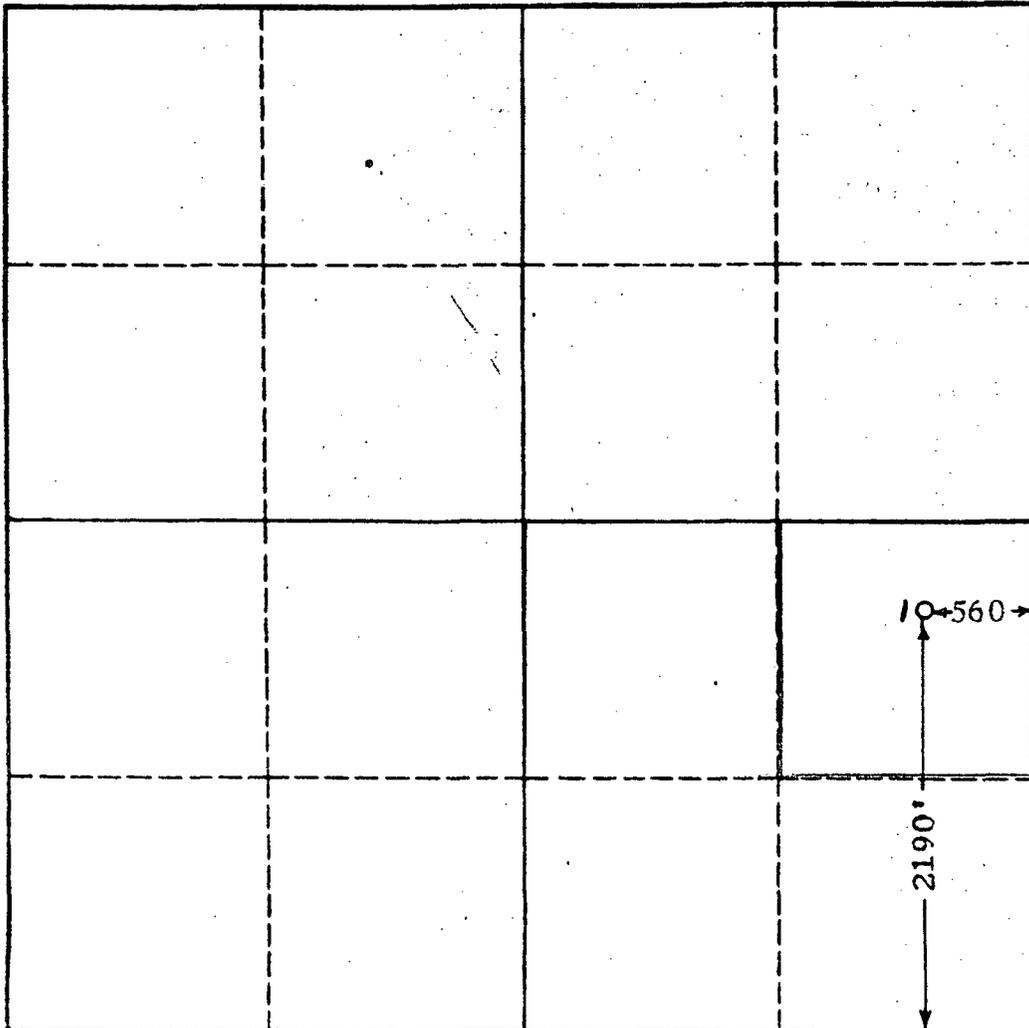
SECTION A

Operator Amerada Petr. Corp.		Lease State LC		1859 AUG 25		Well No. PM 2159	
Unit Letter K	Section 1	Township 17 S	Range 36 E	County Lea			
Actual Footage Location of Well: 2190 feet from the South line and 560 feet from the East line							
Ground Level Elev. -	Producing Formation Devonian		Pool Wildcat		Dedicated Acreage: 40 80 Acres		

1. Is the Operator the only owner in the dedicated acreage outlined on the plat below? YES _____ NO X ("Owner" means the person who has the right to drill into and to produce from any pool and to appropriate the production either for himself or for himself and another. (65-3-29 (e) NMSA 1935 Comp.)
2. If the answer to question one is "no," have the interests of all the owners been consolidated by communitization agreement or otherwise? YES X NO _____. If answer is "yes," Type of Consolidation Operating Agreement
3. If the answer to question two is "no," list all the owners and their respective interests below:

Owner	Land Description

SECTION B



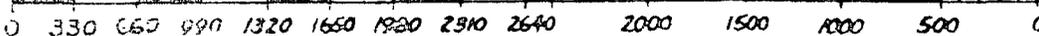
CERTIFICATION

I hereby certify that the information in SECTION A above is true and complete to the best of my knowledge and belief.

Name <i>[Signature]</i>
Position Asst. Dist. Superintendent
Company Amerada Petr. Corporation
Date August 25, 1959

I hereby certify that the well location shown on the plat in SECTION B was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed 8-19-59
Registered Professional Engineer and/or Land Surveyor JOHN W. WEST <i>[Signature]</i>
Certificate No. N.M. - P.E. & L.S. NO. 678



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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	GAS
OPERATOR	
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OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-104
Revised 10-01-78
Format 06-01-83
Page 1

REQUEST FOR ALLOWABLE
AND
AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

I.

Operator
Araho Inc.

Address
P.O.Box 936, Lovington, New Mexico 88260

Reason(s) for filing (Check proper box)

<input type="checkbox"/> New Well	Change in Transporter of:	Other (Please explain) <u>300 BBLs oil</u>	
<input type="checkbox"/> Recompletion	<input checked="" type="checkbox"/> Oil		<input type="checkbox"/> Dry Gas
<input type="checkbox"/> Change in Ownership	<input type="checkbox"/> Casinghead Gas		<input type="checkbox"/> Condensate

If change of ownership give name and address of previous owner _____

II. DESCRIPTION OF WELL AND LEASE

Lease Name <u>X L.C. State</u>	Well No. <u>2</u>	Pool Name, including Formation <u>Wolfcamp</u>	Kind of Lease <u>State, Federal or Fee State</u>	Lease No. <u>unknown</u>
Location Unit Letter <u>F</u> : <u>2310</u> Feet From The <u>West</u> Line and <u>1650</u> Feet From The <u>North</u> Line of Section <u>2</u> Township <u>17S</u> Range <u>36E</u> , NMPM, <u>Lea</u> County				

III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil <input checked="" type="checkbox"/> or Condensate <input type="checkbox"/> <u>Navajo Refining</u>	Address (Give address to which approved copy of this form is to be sent) <u>P.O. Drawer 159, Artesia, N.M. 88210</u>					
Name of Authorized Transporter of Casinghead Gas <input type="checkbox"/> or Dry Gas <input type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)					
If well produces oil or liquids, give location of tanks.	Unit	Sec.	Twp.	Rge.	Is gas actually connected?	When

If this production is commingled with that from any other lease or pool, give commingling order number: _____

NOTE: Complete Parts IV and V on reverse side if necessary.

VI. CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Division have been complied with and that the information given is true and complete to the best of my knowledge and belief.

Richard E. Cavill
(Signature)
Pumper
(Title)
12-15-84
(Date)

OIL CONSERVATION DIVISION

APPROVED JAN 14 1985, 19____
BY [Signature]
TITLE DISTRICT SUPERVISOR

This form is to be filed in compliance with RULE 1104.
If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviation tests taken on the well in accordance with RULE 111.
All sections of this form must be filled out completely for allowable on new and recompleted wells.
Fill out only Sections I, II, III, and VI for changes of owner, well name or number, or transporter, or other such change of condition.
Separate Forms C-104 must be filed for each pool in multiply completed wells.

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CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-103
Revised 10-1-78

5a. Indicate Type of Lease
State Fee

5. State Oil & Gas Lease No.
unknown

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input checked="" type="checkbox"/> SWD well	7. Unit Agreement Name none
2. Name of Operator Araho, Inc.	8. Farm or Lease Name LC State
3. Address of Operator P.O. Box 5456 Midland, Texas 79701	9. Well No. 2 SWD
4. Location of Well UNIT LETTER F 2310 FEET FROM THE west LINE AND 1650 FEET FROM THE north LINE, SECTION 2 TOWNSHIP 17 S RANGE 36 E NMPM.	10. Field and Pool, or Wildcat not applicable
15. Elevation (Show whether DF, RT, GR, etc.) 3858 DF	12. County Lea

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

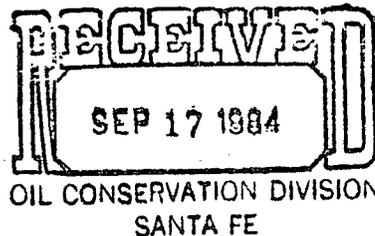
NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input checked="" type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOB <input type="checkbox"/>	OTHER <input type="checkbox"/>

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

We propose to temporarily shut in the well until such time as the Southern Union plant determines whether to reopen or to remain shut down. We will determine at that time the feasibility of repairing the tubing leak, to reopen the well or to plug and abandon it. We will reschedule your test of this well if and when repairs have been accomplished.



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

SIGNED Roland E. Caudill TITLE Pumper DATE Sept. 6, 1984

APPROVED BY [Signature] TITLE DISTRICT 1 SUPERVISOR DATE SEP 10 1984

CONDITIONS OF APPROVAL, IF ANY:

NEW MEXICO OIL CONSERVATION COMMISSION
WELL COMPLETION OR RECOMPLETION REPORT AND LOG

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LAND OFFICE	
OPERATOR	

5a. Indicate Type of Lease
State Fee

5. State Oil & Gas Lease No.
Unknown

1a. TYPE OF WELL
OIL WELL GAS WELL DRY OTHER **SWD 017**

b. TYPE OF COMPLETION
NEW WELL WORK OVER DEEPEN PLUG BACK DIFF. RESVR. OTHER

2. Name of Operator
Araho, Inc.

3. Address of Operator
P. O. Box 5456, Midland, Texas 79701

7. Unit Agreement Name
None

8. Farm or Lease Name
State

9. Well No.
2 SWD

10. Field and Pool, or Wildcat
Not applicable

4. Location of Well
UNIT LETTER **F** LOCATED **2310** FEET FROM THE **W** LINE AND **1650** FEET FROM THE **N** LINE OF SEC. **2** TWP. **17S** RGE. **36E** NMPM

12. County
Lea

15. Date Spudded **3/11/77** 16. Date T.D. Reached **3/29/77** 17. Date Compl. (Ready to Prod.) **4/23/77** 18. Elevations (DF, RKB, RT, GR, etc.) **3858 DF** 19. Elev. Casinghead **3848**

20. Total Depth **8889** 21. Plug Back T.D. 22. If Multiple Compl., How Many 23. Intervals Drilled By Rotary Tools Cable Tools

24. Producing Interval(s), of this completion - Top, Bottom, Name
8535-8889

25. Was Directional Survey Made
No

26. Type Electric and Other Logs Run 27. Was Well Cored
No

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13 3/8"	48.0	349	17 1/2"	450 sks circulated	None
9 5/8"	36.0	3318	12 1/2"	1750 sks circulated	None
5 1/2"	15.5-20#	8528	8 3/4"	1400 sks	None

29. LINER RECORD 30. TUBING RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
					3 1/2"	8527	8492'

31. Perforation Record (Interval, size and number)
Open Hole 8535-8889'

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
8535-8889	3000-15%

33. PRODUCTION

Date First Production Production Method (Flowing, gas lift, pumping - Size and type pump) Well Status (Prod. or Shut-in)
None - SWD well

Date of Test	Hours Tested	Choke Size	Prod'n. For Test Period	Oil - Bbl.	Gas - MCF	Water - Bbl.	Gas - Oil Ratio

Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API (Corr.)

34. Disposition of Gas (Sold, used for fuel, vented, etc.) Test Witnessed By

35. List of Attachments

I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

TITLE **President** DATE **4/26/77**

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NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease
State Fee

5. State Oil & Gas Lease No.
Unknown

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

1. OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER- SWD	7. Unit Agreement Name None
2. Name of Operator Araho, Inc.	8. Farm or Lease Name State
3. Address of Operator P. O. Box 5456, Midland, Texas 79701	9. Well No. 2 SWD
4. Location of Well UNIT LETTER F 2310 FEET FROM THE W LINE AND 1650 FEET FROM THE N LINE, SECTION 2 TOWNSHIP 17S RANGE 36E NMPM.	10. Field and Pool, or Wildcat Not applicable
15. Elevation (Show whether DF, RT, GR, etc.) 3858 DF	12. County Lea

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data
NOTICE OF INTENTION TO: SUBSEQUENT REPORT OF:

PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOBS <input type="checkbox"/>	OTHER Completion <input checked="" type="checkbox"/>

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

4/9/77 to 4/23/77

1. Ran 3½" OD 9.2# K-55 10 rd thd NU tubing Cond. A. When we lacked 4 jts from being to packer setting depth, 8500', tubing parted 3 jts from top. Found that this joint had bad threads and they had pulled out of the collar. Fished tubing and packer out of hole.

Ran the following tubing string in hole:

Bottom: 1 jt 3½" OD 9.2# 10rd thd K-55 NU Tubing tail joint	31.30
1-5½" x 2 3/8" EUE Halliburton Type G-4 Packer run with plastic coating in tension	5.20
305 jts 3½" 9.2# 10 rd thd K-55 NU Tubing Cond. A Plastic coated	8483.42
Packer set at	8492.02'

Tail pipe bottomed at 8527.92'.

- Acidized open hole section 8510-8889' w/3000 gals regular acid/
- Annulus between 5½ and 3½" tubing loaded w/fluid before acidizing.
- No communication.

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

SIGNED Larry R. Bruno TITLE President DATE 4/26/77

SUPERVISOR DISTRICT 1 DATE APR 28 1977

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NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease
State Fee

5. State Oil & Gas Lease No.
Unknown

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER- SWD	7. Unit Agreement Name None
2. Name of Operator Araho, Inc.	8. Farm or Lease Name State
3. Address of Operator P. O. Box 5456, Midland, Texas 79701	9. Well No. 2 SWD
4. Location of Well UNIT LETTER <u>F</u> <u>2310</u> FEET FROM THE <u>W</u> LINE AND <u>1650</u> FEET FROM THE <u>N</u> LINE, SECTION <u>2</u> TOWNSHIP <u>17S</u> RANGE <u>36E</u> NMPM.	10. Field and Pool, or Wildcat Not Applicable
15. Elevation (Show whether DF, RT, GR, etc.) 3858 DF	12. County Lea

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK PLUG AND ABANDON

TEMPORARILY ABANDON CHANGE PLANS

PULL OR ALTER CASING

OTHER

SUBSEQUENT REPORT OF:

REMEDIAL WORK ALTERING CASING

COMMENCE DRILLING OPNS. PLUG AND ABANDONMENT

CASING TEST AND CEMENT JOB

OTHER Drill out packer, bridge plugs, cement and drill new hole.

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

From 3/17/77 to 3/25/77:

1. Cleaned out 5½" casing from 4232'-8510'.
2. From 3/25/77 to 3/29/77 - Deepened hole from 8510' to 8889'.
3. Prep to run 3½" tubing and packer.

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

SIGNED Earl R. Brun TITLE President DATE 3/30/77

APPROVED BY [Signature] TITLE SUPERVISOR DISTRICT 1 DATE APR 4 1977

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NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease
State Fee

5. State Oil & Gas Lease No.
Unknown

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

1. OIL WELL GAS WELL OTHER- **SWD**

2. Name of Operator
Araho, Inc.

3. Address of Operator
P. O. Box 5456, Midland, Texas 79701

4. Location of Well
UNIT LETTER **F** **2310** FEET FROM THE **W** LINE AND **1650** FEET FROM

THE **N** LINE, SECTION **2** TOWNSHIP **17S** RANGE **36E** NMPM.

7. Unit Agreement Name
None

8. Farm or Lease Name
State

9. Well No.
2 SWD

10. Field and Pool, or Wildcat
Not Applicable

15. Elevation (Show whether DF, RT, GR, etc.)
3858 DF

12. County
Lea

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data
NOTICE OF INTENTION TO: SUBSEQUENT REPORT OF:

PERFORM REMEDIAL WORK
TEMPORARILY ABANDON
PULL OR ALTER CASING
OTHER

PLUG AND ABANDON
CHANGE PLANS

REMEDIAL WORK
COMMENCE DRILLING OPNS.
CASING TEST AND CEMENT JOBS
OTHER

ALTERING CASING
PLUG AND ABANDONMENT

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

- Waiting on rig 1/15-3/10/77
- 3/11/77 Nippled up BOP. Drilled cement plug out of 9 5/8" csg from surface to 15'. Ran 8 3/4" bit to 4231', top of 5 1/2" csg.
- 3/12-15/77 Ran 5 1/2" csg to 4213'. Casing parted while circulating and rotating our till 4213'. Fished out casing. Ran 8 3/4" bit to top of 5 1/2" csg at 4231'. Washed over 5 1/2" casing at 4231' w/7 5/8" wash pipe to 4260'.
- 3/16/77 Ran 5 1/2" csg w/1 jt 7 5/8" csg on bottom. Got over 5 1/2" csg @ 4231' and ran 7 5/8" jt of csg to 4252' and cemented w/200 sks Class "C" cement w/2% gel and 2% CaCl₂. Good returns through out. Now WOC.
- After WOC 18 hrs, will drill out w/4 5/8" bit and clean out to 8538' and deepen to 8850-8900 feet.

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

SIGNED Larry R. Dunning TITLE President DATE 3/17/77

APPROVED BY [Signature] TITLE SUPERVISOR DISTRICT DATE MAR 22 1977

OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

P. O. BOX 1980 - HOBBS

88240

LAND COMMISSIONER

PHIL R. LUCERO

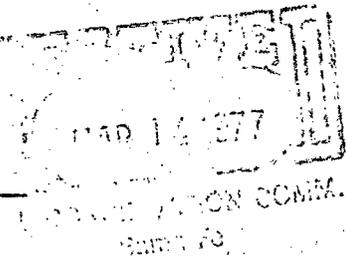
March 11, 1977



STATE GEOLOGIST

EMERY C. ARNOLD

DIRECTOR
JOE D. RAMEY



Araho, Inc.

P. O. Box 5456

Midland, Texas 79701

Re: State No. 2 SWD-F

1650/N & 2310/W

Sec. 2, T-17-S, R-36-E
Lea County, New Mexico

Gentlemen:

Ninety days have elapsed since approval of Commission Form C-101, Notice of Intention to Drill, for the subject well and to date no progress reports, Forms C-103, have been received. Therefore, Commission approval of Form C-101 has now expired and no drilling operations are to be initiated or continued without further notice to and approval by the Commission. Pending such approval this will be considered an abandoned location.

Yours very truly,

OIL CONSERVATION COMMISSION

Jerry Sexton
Supervisor, District 1

JS/mc
cc-OCC, Santa Fe

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-101
Revised 1-1-65

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LAND OFFICE		
OPERATOR		

5A. Indicate Type of Lease
STATE FEE

5. State Oil & Gas Lease No.
Unknown

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work
b. Type of Well DRILL DEEPEN PLUG BACK
OIL WELL GAS WELL OTHER Water disposal SINGLE ZONE MULTIPLE ZONE

2. Name of Operator
Araho, Inc.

3. Address of Operator
P. O. Box 5456, Midland, Texas 79701

4. Location of Well UNIT LETTER F LOCATED 2310 FEET FROM THE West LINE AND 1650 FEET FROM THE North LINE OF SEC. 2 TWP. 17S RGE. 36E NMPM

7. Unit Agreement Name
None

8. Farm or Lease Name
State

9. Well No.
2 SWD well

10. Field and Pool, or Wildcat
Not applicable

12. County
Lea

19. Proposed Depth 8900 19A. Formation ABO 20. Rotary or C.T. Rotary

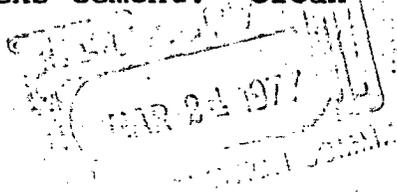
21. Elevations (Show whether DF, RT, etc.) 3858 DF 21A. Kind & Status Plug. Bond Blanket 21B. Drilling Contractor Cactus Drilling Co. 22. Approx. Date Work will start June 20, 1976

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
17 1/2	13 3/8	48.0	349	450	Circulated
12 1/4	9 5/8	36.0	3318	1750	Circulated
8 3/4	5 1/2	17.0	8528	1400	3000'
	2 7/8 tbg.	6.7	5800		

will set packer at 5800' and dispose of water through perforations at 5845-5968; 8378-8443; 8443-80; and open hole interval 8528-8900'.

Clean out well to 8528-4200' tie in existing 5 1/2" casing with 4241' of 5 1/2" casing and 1 jt. 7 5/8" casing and cement with 200 sacks cement. Clean out to 8528 and 4 3/4" hole to 8900'.



IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM; IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.
Signed Carl R. Bruno Title Vice-President Date June 7, 1976

(This space for State Use)

APPROVED BY [Signature] TITLE SUPERVISOR DISTRICT 1 DATE JUN 23 1976

CONDITIONS OF APPROVAL, IF ANY: This approval is for deepening, only. Water is not to be injected until approval is obtained after hearing.

CORRECTED FORM

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-101
Revised 1-1-65

NO. OF COPIES RECEIVED	
DISTRIBUTION	
SANTA FE	
FILE	
U.S.G.S.	
LAND OFFICE	
OPERATOR	

5A. Indicate Type of Lease
STATE FEE

5. State Oil & Gas Lease No.
Unknown

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

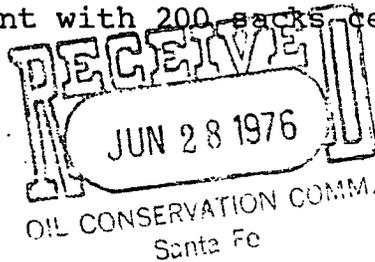
1a. Type of Work DRILL <input type="checkbox"/> DEEPEN <input checked="" type="checkbox"/> PLUG BACK <input type="checkbox"/>		7. Unit Agreement Name None
b. Type of Well OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER water disposal <input type="checkbox"/> SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>		8. Farm or Lease Name State
2. Name of Operator Araho, Inc.		9. Well No. 2 SWD well
3. Address of Operator P. O. Box 5456, Midland, Texas 79701		10. Field and Pool, or Wildcat Not applicable
4. Location of Well UNIT LETTER F LOCATED 2310 FEET FROM THE West LINE AND 1650 FEET FROM THE North LINE OF SEC. 2 TWP. 17S RGE. 36E NMPM		12. County Lea
19. Proposed Depth 8900		19A. Formation ABO
20. Rotary or C.T. Rotary		
21. Elevations (Show whether DF, RT, etc.) 3858 DF	21A. Kind & Status Plug. Bond Blanket	21B. Drilling Contractor Cactus Drilling Co.
22. Approx. Date Work will start June 20, 1976		

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
17½"	13 3/8"	48.0	349	450	Circulated
12 1/4"	9 5/8"	36.0	3318	1750	Circulated
8 3/4"	5 1/2"	17.0	8528	1400	3000'
	2 7/8" tbg.	6.7	5800		

will set packer at 5800' and dispose of water through perforations at 5845-5968; 8378-8443; 8443-80; and open hole interval 8528-8900'.

Clean out well to 8528-4200' tie in existing 5½" casing with 4241' of 5½" casing and 1 jt. 7 5/8" casing and cement with 200 sacks cement. Clean out to 8528 and 4 3/4" hole to 8900'.



IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM; IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

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

Signed Earl R. Bruno Title Vice-President Date June 7, 1976

(This space for State Use)

APPROVED BY [Signature] TITLE SUPERVISOR DISTRICT I DATE JUN 25 1976

CONDITIONS OF APPROVAL, IF ANY: This approval is for deepening, only. Water is not to be injected until approval is obtained after hearing.

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

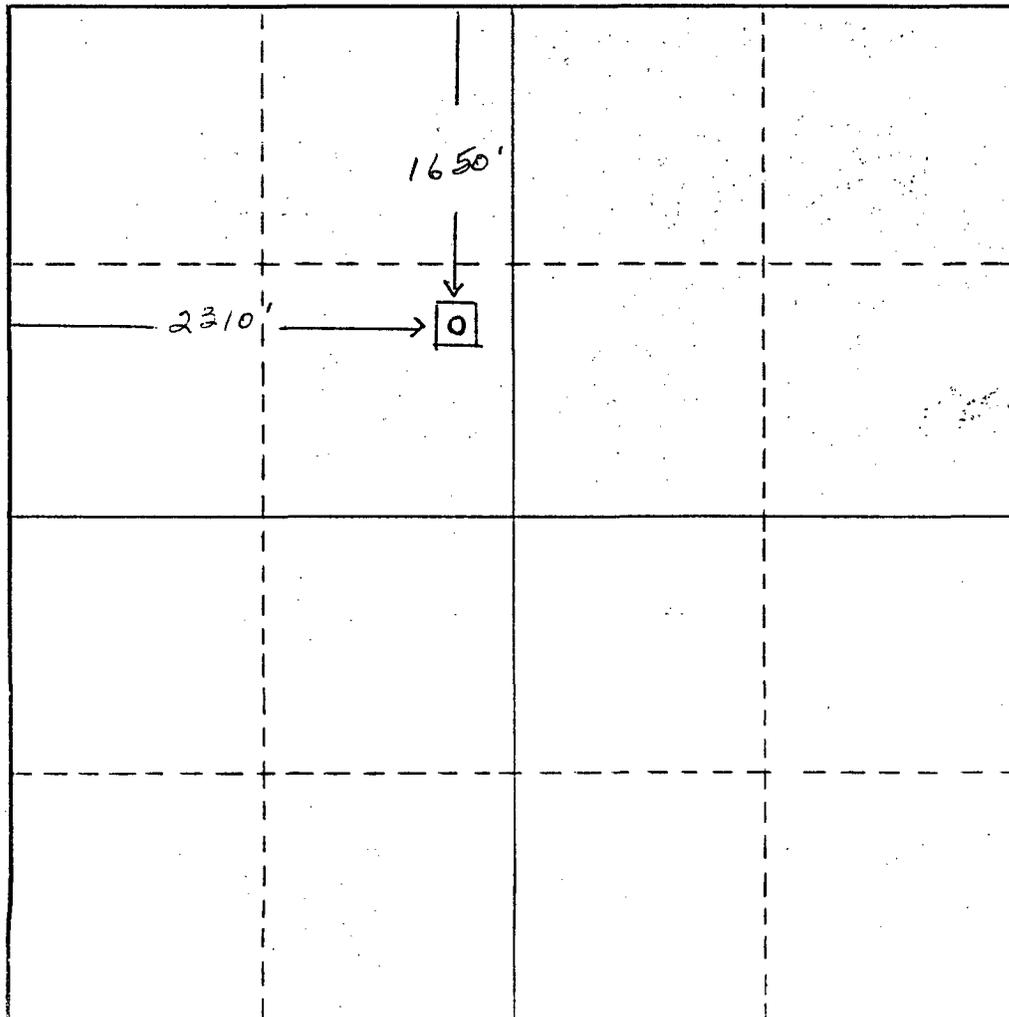
Operator Araho, Inc.		Lease State SWD			Well No. 2
Unit Letter F	Section 2	Township 17S	Range 36E	County Lea	
Actual Footage Location of Well: 2310 feet from the West line and 1650 feet from the North line					
Ground Level Elev. 3858 DF	Producing Formation Dry Hole	Pool None	Dedicated Acreage: 1 Acres		

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

Yes No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Earl A. Bruno

Name

Vice-President

Position

Araho, Inc.

Company

May 11, 1976

Date

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed

Registered Professional Engineer
and/or Land Surveyor

Date No.

NEW MEXICO OIL CONSERVATION COMMISSION

FORM C-103
(Rev 3-55)

MISCELLANEOUS REPORTS ON WELLS

(Submit to appropriate District Office as per Commission Rule 1106)

STATE	
FILE	
U.S.G.S.	
LAND OFFICE	
TRANSPORTER	OIL
	GAS
PRODUCTION OFFICE	
OPERATOR	

Name of Company MARATHON OIL COMPANY		Address 1962 NOV 13 AM 10 29 P. O. BOX 2107, HOBBS, NEW MEXICO				
Lease STATE B 1286 A	Well No. 2	Unit Letter F	Section 2	Township 17 S	Range 36 E	
Date Work Performed 11-7-- - 11-12-62	Pool Lovington Abo			County Lea		

THIS IS A REPORT OF: (Check appropriate block)

- Beginning Drilling Operations
 Casing Test and Cement Job
 Other (Explain):
 Plugging
 Remedial Work

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

TD 6085'

Removed well head connections and installed BOP. Pulled 2 7/8" tubing and locator seal assembly. Dropped Baker C.I. Trip Bob into Baker Model N production packer at 5522'. Spotted 100' cement plug from 5422' to 5522'. Latched onto 5 1/2" liner at 3229'. Pulled 9 5/8" x 5 1/2" liner hanger, 24 joints 5 1/2" casing, 5 1/2" x 7 5/8" change over nipple, and 1 joint of 7 5/8" casing. Spotted 150' cement plug from 4166' to 4316', 75' in cut off 5 1/2" casing to 75' above cut off 5 1/2" casing. Spotted 100' cement plug from 3270', 3370', 50' outside 9 5/8" casing and 50' up into 9 5/8" casing. Spotted 25' cement plug in top of 9 5/8" casing. Removed BOP, National Type E head and 10" 900 series x 9 5/8" 8-R casing flange. Welded 3/8" plate on top of 9 5/8" casing and installed permanent well marker. Well P & A

Dist: NMOC D. V. Kitley T. O. Webb
 Com. Pub. Lands T. A. Steele L. H. Davis
 J. A. Grimes C. M. Lynch File

Witnessed by L. H. Davis	Position Foreman	Company Marathon Oil Company
------------------------------------	----------------------------	--

FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY

ORIGINAL WELL DATA

D F Elev.	TD	PBTD	Producing Interval	Completion Date
Tubing Diameter	Tubing Depth	Oil String Diameter	Oil String Depth	
Perforated Interval(s)				
Open Hole Interval		Producing Formation(s)		

RESULTS OF WORKOVER

Test	Date of Test	Oil Production BPD	Gas Production MCFPD	Water Production BPD	GOR Cubic feet/Bbl	Gas Well Potential MCFPD
Before Workover						
After Workover						

OIL CONSERVATION COMMISSION

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

Approved by <i>[Signature]</i>	Name <i>[Signature]</i>
Title	Position Asst. Superintendent
Date	Company

NUMBER OF COPIES RECEIVED	
DISTRIBUTION	
STATE	
FILE	
U.S.G.S.	
LAND OFFICE	
TRANSPORTER	OIL
	GAS
PRODUCTION OFFICE	
OPERATOR	

NEW MEXICO OIL CONSERVATION COMMISSION

FORM C-103
(Rev 3-55)

MISCELLANEOUS REPORTS ON WELLS

(Submit to appropriate District Office as per Commission Rule 1106)

Name of Company Marathon Oil Company		Address Box 2107, Hobbs, New Mexico			
Lease State B 1286 A	Well No. 2	Unit Letter F	Section 2	Township 17 S	Range 36 E
Date Work Performed 11-2-59 thru 1-4-60	Pool Lovington Abo		County Lea		

THIS IS A REPORT OF: (Check appropriate block)

Beginning Drilling Operations
 Casing Test and Cement Job
 Other (Explain):
 Plugging
 Remedial Work
Convert to Salt Water Disposal Well

Detailed account of work done, nature and quantity of materials used, and results obtained.
Drilled cement from 0' to 25' & cement contaminated mud from 25' to 83'. Drilled bridge 1682-1701'. Tagged plug at 3205'. Drilled cement contaminated mud from 3205-3222' & cem. from 3222-3235'. Drilled cement 3235-3335'. Drilled cement 4146-4203'. Tagged top of 5 1/2" cut off at 4198'. Milled into 5 1/2" casing to 4212' & drilled out cement to 4619'. Drilled cement & metal 4619' to 4661'. Washed over top of 5 1/2"; went in hole with outside casing cutter & cut off 5 1/2" casing at 4241', recovering one piece 43.35' long. Ran 1 joint 7 5/8" casing, 24 joints 5 1/2" casing & 9 5/8" x 5 1/2" Brown Oil Tool Type C liner hanger; set liner from 3229' to 4273'. Cleaned out hole to 6085'. Set C.I. bridge plug at 6055'. Rigged up Halliburton & mixed 5 sacks reg. cement. Spotted 25' cement plug 6055-6030'. Perforated 5 1/2" casing 5845-5968' in lower San Andres. Treated thru perms. 5845-5968' with 500 gallons Spearhead acid followed by 5000 gallons non-emulsifying acid. Treated thru perms. 5845-5968' with 20,000 gallons regular acid. Formation would not take salt water by gravity. Tried pumping into formation for 31 days with maximum of 226 bbls. salt water pumped in 24 hours with maximum pump pressure of 1075#. Disconnected pump. Well temporarily shut-in.
NMOCC J. A. Grimes T. O. Webb
Com. of Pub. Lands D. V. Kitley L. H. Davis

Witnessed by L. H. Davis	Position Foreman	Company Marathon Oil Company
-----------------------------	---------------------	---------------------------------

FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY

D F Elev.	T D	P B T D A S FUTURE PLANS FOR THIS WELL	Producing Interval	Completion Date
Tubeing Diameter	Tubeing Depth	Oil String Diameter	Oil String Depth	
Perforated Interval(s)				
Open Hole Interval		Producing Formation(s)		

RESULTS OF WORKOVER

Test	Date of Test	Oil Production BPD	Gas Production MCFPD	Water Production BPD	GOR Cubic feet/Bbl	Gas Well Potential MCFPD
Before Workover						
After Workover						

OIL CONSERVATION COMMISSION		I hereby certify that the information given above is true and complete to the best of my knowledge.	
Approved by 	Name Asst. Superintendent	Date	
Title	Position	Company Marathon Oil Company	

NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

HOBBS OFFICE 000

MISCELLANEOUS NOTICES

Submit this notice in TRIPLICATE to the District Office, Oil Conservation Commission, before the work specified is to begin. A copy will be returned to the sender which will be given the approval, with any modifications considered advisable, or the rejection by the Commission or agent, of the plan submitted. The plan as approved should be followed, and work should not begin until approval is obtained. See additional instructions in the Rules and Regulations of the Commission.

Indicate Nature of Notice by Checking Below

NOTICE OF INTENTION TO CHANGE PLANS		NOTICE OF INTENTION TO TEMPORARILY ABANDON WELL		NOTICE OF INTENTION TO DRILL DEEPER	
NOTICE OF INTENTION TO PLUG WELL	X	NOTICE OF INTENTION TO PLUG BACK		NOTICE OF INTENTION TO SET LINER	
NOTICE OF INTENTION TO SQUEEZE		NOTICE OF INTENTION TO ACIDIZE		NOTICE OF INTENTION TO SHOOT (Nitro)	
NOTICE OF INTENTION TO GUN PERFORATE		NOTICE OF INTENTION (OTHER)		NOTICE OF INTENTION (OTHER)	

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Hobbs, New Mexico
(Place)

10-12-62
(Date)

Gentlemen:

Following is a Notice of Intention to do certain work as described below at the.....

MARATHON OIL COMPANY

STATE B 4286 "A"

Well No. 2

F

(Company or Operator)

Lease

(Unit)

SE 1/4 NW 1/4 of Sec. 2

17 S

R. 36 E

NMPM,

Lovington Abo

Pool

(40-acre Subdivision)

Lea

County.

TD 6085'

FULL DETAILS OF PROPOSED PLAN OF WORK
(FOLLOW INSTRUCTIONS IN THE RULES AND REGULATIONS)

Plan to plug and abandon well as follows: (1) Drop Baker trip plug and seat in Model "N" packer at 5522'. (2) Place 100' cement plug in 5 1/2" casing from 5522' to 5422'. (3) Pull 5 1/2" liner from 3229' to 4273'. (4) Place 150' cement plug from 4166' to 4316'. (5) Place 100' cement plug 3270' to 3370', place 25' cement plug from surface to 25'. (6) Cut off 9 5/8" casing below ground level and install permanent well marker.

Dist:

NMOCC

Com. of Pub. Lands

J. A. Grimes

D. V. Kitley

T. O. Webb

L. H. Davis

Approved....., 19.....
Except as follows:

MARATHON OIL COMPANY

Company or Operator

By.....

Position.....

Superintendent

Send Communications regarding well to:

Approved
OIL CONSERVATION COMMISSION

By.....

Name.....

Marathon Oil Company

Title.....

Address.....

Box 2107, Hobbs, New Mex.

NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico

HOBBS OFFICE OCC

MISCELLANEOUS NOTICES

Submit this notice in TRIPLICATE to the District Office, Oil Conservation Commission, before the work specified is to begin. A copy will be returned to the sender on which will be given the approval, with any modifications considered advisable, or the rejection by the Commission or agent, of the plan submitted. The plan as approved should be followed, and work should not begin until approval is obtained. See additional instructions in the Rules and Regulations of the Commission.

Indicate Nature of Notice by Checking Below

NOTICE OF INTENTION TO CHANGE PLANS		NOTICE OF INTENTION TO TEMPORARILY ABANDON WELL		NOTICE OF INTENTION TO DRILL DEEPER	
NOTICE OF INTENTION TO PLUG WELL		NOTICE OF INTENTION TO PLUG BACK		NOTICE OF INTENTION TO SET LINER	
NOTICE OF INTENTION TO SQUEEZE		NOTICE OF INTENTION TO ACIDIZE	X	NOTICE OF INTENTION TO SHOOT (Nitro)	
NOTICE OF INTENTION TO GUN PERFORATE	X	NOTICE OF INTENTION (OTHER)		Convert to NOTICE OF INTENTION (OTHER) SWD Well	X

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Hobbs, New Mexico
(Place)

October 28, 1959
(Date)

Gentlemen:

Following is a Notice of Intention to do certain work as described below at the The Ohio Oil Company's
 State "B" 4286 "A" Well No. 2 in F
 (Company or Operator) (Unit)
SE 1/4 NW 1/4 of Sec. 2, T. 17-S, R. 36-E, NMPM., Lovington - Abo Pool
 (40-acre Subdivision) Lea County.

FULL DETAILS OF PROPOSED PLAN OF WORK
(FOLLOW INSTRUCTIONS IN THE RULES AND REGULATIONS)

Total Depth 8530'; 5 1/2" csg. at 8528' with 1400 sacks; 9 5/8" csg. at 3318' with 1750 sacks and 13 3/8" csg. at 349' with 450 sacks. Plugged and abandoned as follows: Bridge plug set at 6320' with 10' cement on top of plug. Cement plug 6115' - 6205' in 5 1/2" csg.; cut off 5 1/2" csg. at 4200' and pulled 5 1/2" csg. Cement plug 4145' - 4245'; cement plug 3270' - 3370' and cement plug 0' - 25'. Proposed work is to drill out cement plugs 0' - 25', 3270' - 3370' and 4145' - 4245'. Clean out to approx. 6000'. Set Baker C.I. bridge plug at 6000' with 10' cement on top of plug. Set retainer type packer on 2 1/2" tbg. at approx. 5500' and perf. lower San Andres section. Treat perf. with 5,000 gal. acid and run injectivity tests. Connect up salt water gathering system to disposal well. Application to convert State B - 4286 "A" Well No. 2, to a salt water disposal well approved by New Mexico Oil Conservation Commission Order R-1500, Dated October 19, 1959.

OCT 29 1959

Approved....., 19.....
Except as follows:

Approved
OIL CONSERVATION COMMISSION
By: *[Signature]*
Title: Engineer District 7

NAME CHANGED
THE OHIO OIL COMPANY
THE OHIO OIL COMPANY
Company or Operator
AUGUST 1 1962

By: *[Signature]*
Position: Asst. Supt.
Send Communications regarding well to:
Name: The Ohio Oil Company
Address: Box 2107, Hobbs, New Mexico

NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

MAIN OFFICE OCC

HOBBS OFFICE OCC

MISCELLANEOUS REPORTS ON WELLS

1955 FEB 3 PM 1:35

Submit this report in TRIPLICATE to the District Office, Oil Conservation Commission, within 10 days after the work specified is completed. It should be signed and filed as a report on Beginning Drilling Operations, Results of test of casing shut-off, result of plugging of well, result of well repair, and other important operations, even though the work was witnessed by an agent of the Commission. See additional instructions in the Rules and Regulations of the Commission.

Indicate Nature of Report by Checking Below

REPORT ON BEGINNING DRILLING OPERATIONS		REPORT ON RESULT OF TEST OF CASING SHUT-OFF		REPORT ON REPAIRING WELL	
REPORT ON RESULT OF PLUGGING WELL	X	REPORT ON RECOMPLETION OPERATION		REPORT ON (Other)	

January 11, 1955 (Date)

Hobbs, New Mexico (Place)

Following is a report on the work done and the results obtained under the heading noted above at the

THE CHELO OIL COMPANY (Company or Operator)

State B-1186-1 (Lease)

Len Corroby Casing Pullers (Contractor)

Well No. 2 in the SE 1/4 of Sec 2

T. NMPM, Pool, County.

The Dates of this work were as follows: 1-10-55 to 1-20-55

Notice of intention to do the work (was/was not) submitted on Form C-102 on November 24, 54 (Cross out incorrect words)

and approval of the proposed plan (was/was not) obtained.

DETAILED ACCOUNT OF WORK DONE AND RESULTS OBTAINED

Plugged and abandoned as follows:

Bridge plug set at 6320' with 10' cement on top. Cement plug 6115-6205' in 5 1/2" casing; shot casing off at 4200' and removed same; cement plug 4245-4245' (45' in 5 1/2", 55' in 8 1/4" open hole); cement plug 3270-3370' (50' in 8 1/4" open hole, 50' in 9 5/8" casg.). Cemented 0-25' in 9 5/8" casing; placed 1" pipe well-marker in hole with marker extending 4' above ground level. All intervals between cement plugs filled with mud laden fluid.

Witnessed by B. C. Howard (Name)

THE CHELO OIL COMPANY (Company)

Foreman (Title)

Approved: OIL CONSERVATION COMMISSION

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

Name: M. L. Armstrong

Position: Supervisor

Representing:

Address:

M. L. Armstrong (Name)

(Title)

NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

MAIN OFFICE OCC

OFFICE OCC

MISCELLANEOUS NOTICES

1954 DEC 3

NOV 23 AM 6:53

Submit this notice in TRIPLICATE to the District Office, Oil Conservation Commission, before the work specified is to begin. A copy will be returned to the sender on which will be given the approval, with any modifications considered advisable, or the rejection by the Commission or agent, of the plan submitted. The plan as approved should be followed, and work should not begin until approval is obtained. See additional instructions in the Rules and Regulations of the Commission.

Indicate Nature of Notice by Checking Below

NOTICE OF INTENTION TO CHANGE PLANS		NOTICE OF INTENTION TO TEMPORARILY ABANDON WELL		NOTICE OF INTENTION TO DRILL DEEPER	
NOTICE OF INTENTION TO PLUG WELL	X	NOTICE OF INTENTION TO PLUG BACK		NOTICE OF INTENTION TO SET LINER	
NOTICE OF INTENTION TO SQUEEZE		NOTICE OF INTENTION TO ACIDIZE		NOTICE OF INTENTION TO SHOOT (Nitro)	
NOTICE OF INTENTION TO GUN PERFORATE		NOTICE OF INTENTION (OTHER)		NOTICE OF INTENTION (OTHER)	

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Hobbs, New Mexico

Nov. 24, 1954

(Place)

(Date)

Gentlemen:

Following is a Notice of Intention to do certain work as described below at the.....

The Ohio Oil Company's

State B-4286 "A"

Well No. 2

in F

(Company or Operator)

(Unit)

SE 1/4 NW 1/4 of Sec. 2

T 17-S

R 36-E

NMPM,

Lovington-Paddock

Pool

(40-acre Subdivision)

Lea

County.

FULL DETAILS OF PROPOSED PLAN OF WORK
(FOLLOW INSTRUCTIONS IN THE RULES AND REGULATIONS)

Plan to plug and abandon well according to the following procedure:

1. A 25' cement plug from 0' to 25'.
2. A 100' cement plug from 3270' to 3370' (50' in 9-5/8" pipe & 50' in 8-5/8" hole)
3. A 100' cement plug from 4230' to 4330' (50' in 8-5/8" open hole & 50' in 5 1/2" csg.)
4. A 50' cement plug from 6140' to 6190' (above perforations in Paddock)
5. Bridge plug @ 6320' with 10' cement to 6310' (P.B.T.D. of well)
6. All intervals between plugs filled w/mud laden fluid
7. Cut off and salvage 5 1/2" @ approximately 4280'
8. Set a 4" pipe marker in cement to extend 4' above G.L.

Approved....., 1954
Except as follows:

The Ohio Oil Company

Company or Operator

By D. L. Province

W. M. Kenley Jr.

Position Field Superintendent

Send Communications regarding well to:

Approved
OIL CONSERVATION COMMISSION

By W. M. Kenley Jr.

Name D. L. Province

Distribution:

O. V. Henry
H. J. Brunt

New Mexico O.C.C.(2) NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

(Form C-103)
(Revised 7/1/52)

MAIN OFFICE CCC
MISCELLANEOUS REPORTS ON WELLS
HOBBS OFFICE CCC

1954 SEP 13 AM 10:02
1954 SEP 9 AM 10:02

Submit this report in TRIPPLICATE to the District Office, Oil Conservation Commission, within 10 days after the work specified is completed. It should be signed and filed as a report on Beginning Drilling Operations, Results of test of casing shut-off, result of plugging of well, result of well repair, and other important operations, even though the work was witnessed by an agent of the Commission. See additional instructions in the Rules and Regulations of the Commission.

Indicate Nature of Report by Checking Below

REPORT ON BEGINNING DRILLING OPERATIONS		REPORT ON RESULT OF TEST OF CASING SHUT-OFF		REPORT ON REPAIRING WELL	
REPORT ON RESULT OF PLUGGING WELL		REPORT ON RECOMPLETION OPERATION		REPORT ON (Other) Shut off water	<input checked="" type="checkbox"/>

September 8, 1954
(Date)

Hobbs, New Mexico
(Place)

Following is a report on the work done and the results obtained under the heading noted above at the

THE OHIO OIL COMPANY

(Company or Operator)

State B 4286 A

(Lease)

Darrell W. Smith

(Contractor)

Well No. 2 in the SE 1/4 NW 1/4 of Sec. 2

T. 17 S., R. 36 E., NMPM, Lovington-Abo

Pool, Lea

County.

The Dates of this work were as follows: July 27, 1954 to August 14, 1954

Notice of intention to do the work (was) (~~was~~) submitted on Form C-102 on July 19, 1954

(Cross out incorrect words)

and approval of the proposed plan (was) (~~was~~) obtained.

DETAILED ACCOUNT OF WORK DONE AND RESULTS OBTAINED

Total depth 8164'; new PBTD 6310'. Attempted to squeeze Abo formation to shut off water; squeeze attempt unsuccessful because formation was too tight. Set bridge plug at 6320' and cemented with one sack. PBTD 6310'. Perf. in Paddock 6186-6194' and 6202-6265 with 6 shots; acidized thru perforations with 3000 gals. Ran 2 3/8 tbg to 6245'6". Swabbed at intervals, for 9 days, recovering small amount of fluid, approximately 65% water & 35% oil. Swabbed dry on 8-13-54 and well shut in. COMPLETED FINAL REPORT

Witnessed by

Clyde Kent
(Name)

THE OHIO OIL COMPANY

(Company)

Foreman

(Title)

Approved:

OIL CONSERVATION COMMISSION

S. G. Stanley
(Name)

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

Name: D. L. Praine

Position: Superintendent

Representing: The Ohio Oil Company

Address: Box 2107, Hobbs, New Mexico

NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

OFFICE OCC

HOBBS OFFICE OCC

1954 JUL 23 AM 11:00

MISCELLANEOUS NOTICES

Submit this notice in TRIPLICATE to the District Office, Oil Conservation Commission, before the work specified is to begin. A copy will be returned to the sender on which will be given the approval, with any modifications considered advisable, or the rejection by the Commission or agent, of the plan submitted. The plan as approved should be followed, and work should not begin until approval is obtained. See additional instructions in the Rules and Regulations of the Commission.

Indicate Nature of Notice by Checking Below

NOTICE OF INTENTION TO CHANGE PLANS		NOTICE OF INTENTION TO TEMPORARILY ABANDON WELL		NOTICE OF INTENTION TO DRILL DEEPER	
NOTICE OF INTENTION TO PLUG WELL		NOTICE OF INTENTION TO PLUG BACK		NOTICE OF INTENTION TO SET LINER	
NOTICE OF INTENTION TO SQUEEZE		NOTICE OF INTENTION TO ACIDIZE		NOTICE OF INTENTION TO SHOOT (Nitro)	
NOTICE OF INTENTION TO GUN PERFORATE		NOTICE OF INTENTION (OTHER)		NOTICE OF INTENTION (OTHER) SHUT OFF WATER	X

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Hobbs, New Mexico

July 19, 1954

(Place)

(Date)

Gentlemen:

Following is a Notice of Intention to do certain work as described below at the

State B 4286 "A"

The Ohio Oil Company

(Company or Operator)

Well No. 2

in F

(Unit)

SE 1/4 NW

(40-acre Subdivision)

1/4 of Sec. 2

T 17 S

R 36 E

NMPM,

Lovington-Abo

Pool

Lea

County.

FULL DETAILS OF PROPOSED PLAN OF WORK

(FOLLOW INSTRUCTIONS IN THE RULES AND REGULATIONS)

Total Depth 8530' P.B. 8464' Lime, Dolomite, Shale. Plan to move in work over rig and pull tubing, drill out cement to approximately 8487'. Set Baker retainer at approximately 8360' and squeeze off perforations from 8487' to 8378' with Diesel cement to shut off water.

JUL 20 1954

Approved....., 19.....
Except as follows:

The Ohio Oil Company

Company or Operator

By *A. H. Rowman*

Position Superintendent

Send Communications regarding well to:

Approved
OIL CONSERVATION COMMISSION

By *W. S. Stanley*

Name The Ohio Oil Company

Title

Address

RECORD OF DRILL-STEM AND SPECIAL TESTS

If drill-stem or other special tests or deviation surveys were made, submit report on separate sheet and attach hereto

TOOLS USED

Rotary tools were used from surface feet to T.D. 8530 feet and from P.B. 8464 feet to _____ feet.
 Cable tools were used from _____ feet to _____ feet and from _____ feet to _____ feet.

PRODUCTION

Put to Producing April 28, 1954
 OIL WELL: The production during the first 24 hours was 202 barrels of liquid of which 100 % was oil; _____ % was emulsion; _____ % water; and _____ % was sediment. A.P.I. Gravity 36.4

GAS WELL: The production during the first 24 hours was _____ M.C.F. plus _____ barrels of liquid hydrocarbon. Shut in Pressure _____ lbs.

Length of Time Shut in _____

PLEASE INDICATE BELOW FORMATION TOPS (IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE):

Southeastern New Mexico		Northwestern New Mexico	
T. Anhy. <u>6114</u>	T. Devonian <u>47</u>	T. Ojo Alamo	T. Kirtland-Fruitland
T. Salt	T. Silurian	T. Farmington	T. Pictured Cliffs
B. Salt	T. Montoya	T. Menefee	T. Point Lookout
T. Yates	T. Simpson	T. Mancos	T. Dakota
T. 7 Rivers	T. McKee	T. Morrison	T. Penn.
T. Queen	T. Ellenburger	T. Tubbs	T. Miss.
T. Grayburg	T. Gr. Wash		
T. San Andres	T. Granite		
T. Glorieta <u>6095</u>			
T. Drinkard			
T. Abou <u>8355-8360</u>			

FORMATION RECORD

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation
0	355	355	Sand, Red Rock				
355	3095	2739	Red Bed, Anhy. Gyp, Salt.				
3094	4359	1265	Shale, Anhy., Lime.				
4359	4619	260	Lime, Sand.				
4619	6195	1576	Lime.				
6195	6200	5	(Cored.)				
6200	6210	10	(Cored.)				
6210	6216	6	(Cored.)				
6216	6225	9	(Cored.)				
6225	6239	14	(Cored.)				
6239	6245	6	(Cored.)				
6245	6246	1	Lime.				
6246	6266	20	(Cored.)				
6266	6296	30	(Cored.)				
6296	8410	2114	Lime, Dolomite.				
8410	8530	120	Lime, Dolomite, Shale.				

OIL CONSERVATION COMMISSION
 HOBBS DISTRICT OFFICE
 Copies Received
 DISTRIBUTION
 Operator
 Santa Fe
 State Land Office
 Oil
 Inspector
 Oils

ATTACH SEPARATE SHEET IF ADDITIONAL SPACE IS NEEDED

I hereby swear or affirm that the information given herewith is a complete and correct record of the well and all work done on it so far as can be determined from available records.

Date May 11, 1954
 Company or Operator The Ohio Oil Company Address Box 2107, Hobbs, New Mexico
 Name [Signature] Position or Title Superintendent

NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico

HOBBS OFFICE OCC

It is necessary that Form C-104 be approved before this form can be approved an initial allowable be assigned to any completed Oil or Gas well. Submit this form in QUADRUPPLICATE.

1954 APR 29 AM 9:34

CERTIFICATE OF COMPLIANCE AND AUTHORIZATION
TO TRANSPORT OIL AND NATURAL GAS

Company or Operator The Ohio Oil Company Lease State B 4286 "A"

Address Box 2107, Hobbs, New Mexico Box 3128, Houston 1, Texas
(Local or Field Office) (Principal Place of Business)

Unit F, Well(s) No. 2, Sec. 2, T. 17 S, R. 36 E, Pool Lovington-Abo - 51

County Lea Kind of Lease: State

If Oil well Location of Tanks 2200' from West line, 1100' from North line of Sec. 2-17-36

Authorized Transporter Texas-New Mexico Pipe Line Company Address of Transporter
Box 1510, Midland, Texas
(Local or Field Office) (Principal Place of Business)

Per cent of Oil or Natural Gas to be Transported 100 Other Transporters authorized to transport Oil or Natural Gas from this unit are None

REASON FOR FILING: (Please check proper box)

NEW WELL CHANGE IN OWNERSHIP

CHANGE IN TRANSPORTER OTHER (Explain under Remarks)

REMARKS:

This well will produce in same tank battery with Well No. 1.
(Two (2) new 500 barrel tanks.)

The undersigned certifies that the Rules and Regulations of the Oil Conservation Commission have been complied with.

Executed this the 28th day of April 19 54

Approved APR 29 1954, 19.....

The Ohio Oil Company

OIL CONSERVATION COMMISSION
By A. J. Stanley
Title

By [Signature]
Title Superintendent

NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico

ORIGINAL

REQUEST FOR (OIL) - (GAS) ALLOWABLE

New Well
HOBBBS OFFICE 0007

This form shall be submitted by the operator before an initial allowable will be assigned to any completed Oil or Gas well. Form C-104 is to be submitted in QUADRUPLICATE to the same District Office to which Form C-101 was sent. The allowable will be assigned effective 7:00 A.M. on date of completion or recompletion, provided this form is filed during calendar month of completion or recompletion. The completion date shall be that date in the case of an oil well when oil is delivered into the stock tanks. Gas must be reported on 15.025 psia at 60° Fahrenheit.

Hobbs, New Mexico April 28, 1954
(Place) (Date)

WE ARE HEREBY REQUESTING AN ALLOWABLE FOR A WELL KNOWN AS:

The Ohio Oil Company State B 4286 "A", Well No. 2, in SE 1/4 NW 1/4,
(Company or Operator) (Lease)
F 2, Sec. 2, T. 17 S, R. 36 E, NMPM, Lovington-Abo Pool
(Unit)
Lea County. Date Spudded 2-23-1954, Date Completed 4-27-1954

Please indicate location:

	X		

Elevation 3858' D.F. Total Depth 8530' P.B. 8463'
 Top oil/gas pay 8378-8463 *more at* Top of Prod. Form *A60*
 Casing Perforations: 8378-8463 or
 Depth to Casing shoe of Prod. String
 Natural Prod. Test BOPD
 based on bbls. Oil in Hrs. Mins.
 Test after acid of *11/9* 202 BOPD
 Based on bbls. Oil in 24 Hrs. Mins.
 Gas Well Potential
 Size choke in inches 10/64"
 Date first oil run to tanks or gas to Transmission system: 4-27-1954
 Transporter taking Oil or Gas: Texas-New Mexico Pipe Line Company

Casing and Cementing Record

Size	Feet	Sax
13-3/8" @ 355'		450
9-5/8" @ 3318'		1750
5-1/2" @ 8528'		1400

Remarks:

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

Approved APR 29 1954, 19

The Ohio Oil Company
(Company or Operator)

OIL CONSERVATION COMMISSION
By: *J. G. Stanley*
Title: Engineer District

By: *[Signature]*
(Signature)
Title: Superintendent

Send Communications regarding well to:

Name: The Ohio Oil Company

ORIGINAL

NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
HOBBS OFFICE OCC

MISCELLANEOUS REPORTS ON WELLS 1954 APR 15 AM 9:05

Submit this report in TRIPLICATE to the District Office, Oil Conservation Commission, within 10 days after the work specified is completed. It should be signed and filed as a report on Beginning Drilling Operations, Results of test of casing shut-off, result of plugging of well, result of well repair, and other important operations, even though the work was witnessed by an agent of the Commission. See additional instructions in the Rules and Regulations of the Commission.

Indicate Nature of Report by Checking Below

REPORT ON BEGINNING DRILLING OPERATIONS		REPORT ON RESULT OF TEST OF CASING SHUT-OFF	X	REPORT ON REPAIRING WELL	
REPORT ON RESULT OF PLUGGING WELL		REPORT ON RECOMPLETION OPERATION		REPORT ON (Other)	

April 14, 1954
(Date)

Hobbs, New Mexico
(Place)

Following is a report on the work done and the results obtained under the heading noted above at the

The Ohio Oil Company

(Company or Operator)

State B 4286 "A"

(Lease)

Company Tools, Rig #2

(Contractor)

Well No. 2

in the SE 1/4 NW 1/4 of Sec. 2

T 17 S, R. 36 E, NMPM.

Lovington-Abo

Pool,

Lea

County.

The Dates of this work were as follows:

Notice of intention to do the work (was) (was not) submitted on Form C-102 on _____, 19____

(Cross out incorrect words)

and approval of the proposed plan (was) (was not) obtained.

DETAILED ACCOUNT OF WORK DONE AND RESULTS OBTAINED

Total Depth 8530' P. B. 8487 Lime Dolomite. Ran 202 joints of 5 1/2" OD 17# casing set @ 8528'. Cemented w/1400 sks sloe set cement w/2% gel preceded by 20 bbls smentox treated water. Used two plug. Pump pressure 500#, final pressure 2500#. Bled back to 1000#. Plug pumped down at 4:55 p. m. 4-11-1954. Ran temperature survey found top of cement @ 4280'. Cement set 48 hrs. Tested casing w/1000# pressure for 30 min. Test ok.

Witnessed by F. A. Nunley
(Name)

The Ohio Oil Company
(Company)

Drilling Foreman
(Title)

Approved: OIL CONSERVATION COMMISSION

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

Name: *D. C. ...*

Position: Superintendent

Representative: The Ohio Oil Company

Address: Hobbs, New Mexico

NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico

RECEIVED
MAR 9 1954
OIL CONSERVATION COMMISSION

MISCELLANEOUS REPORTS ON WELLS

Submit this report in TRIPPLICATE to the District Office, Oil Conservation Commission, within 10 days after the work specified is completed. It should be signed and filed as a report on Beginning Drilling Operations, Results of test of casing shut-off, result of plugging of well, result of well repair, and other important operations, even though the work was witnessed by an agent of the Commission. See additional instructions in the Rules and Regulations of the Commission.

Indicate Nature of Report by Checking Below

REPORT ON BEGINNING DRILLING OPERATIONS		REPORT ON RESULT OF TEST OF CASING SHUT-OFF	X	REPORT ON REPAIRING WELL	
REPORT ON RESULT OF PLUGGING WELL		REPORT ON RECOMPLETION OPERATION		REPORT ON (Other)	

March 8, 1954
(Date)

Hobbs, New Mexico
(Place)

Following is a report on the work done and the results obtained under the heading noted above at the

The Ohio Oil Company

State B 1286 "A"

(Company or Operator)

(Lease)

Company Tools, Rig #2

(Contractor)

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
MAR 15 1954

T. 17 S., R. 36 E., NMPM., Lovington-Abo

SE 1/4 NW 1/4 of Sec. 2
Lea County.

The Dates of this work were as follows:

Notice of intention to do the work (was) (was not) submitted on Form C-102 on _____, 19____.

(Cross out incorrect words)

and approval of the proposed plan (was) (was not) obtained.

DETAILED ACCOUNT OF WORK DONE AND RESULTS OBTAINED

Total Depth 3457' Lime and Anhydrite. Ran 79 joints of 9-5/8" OD 36# Grade J-55 casing set @ 3318'. Cemented w/1750 sacks of slo-set cement w/3% gel preceded w/20 barrels smentox treated using 2 plug system. Pump pressure 400#, final pump pressure 1200#. Plug pumped down @ 9:30 a. m. 3-2-54. Circulated estimated 50 sacks. Tested casing w/1000# pressure for 30 minutes. Test ok. Top of cement 3265'.

Witnessed by F. A. Nunley
(Name)

The Ohio Oil Company
(Company)

Drilling Foreman
(Title)

Approved: OIL CONSERVATION COMMISSION
[Signature]
(Name)

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

Name: *[Signature]*

Position: Superintendent

Representing: The Ohio Oil Company

Address: Hobbs, New Mexico

NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico

RECEIVED
(Form C-103)
(Revised 7/1/52)
MAR 1 1954
OIL CONSERVATION COMMISSION
HOBB'S OFFICE

MISCELLANEOUS REPORTS ON WELLS

Submit this report in TRIPLICATE to the District Office, Oil Conservation Commission, within 10 days after the work specified is completed. It should be signed and filed as a report on Beginning Drilling Operations, Results of test of casing shut-off, result of plugging of well, result of well repair, and other important operations, even though the work was witnessed by an agent of the Commission. See additional instructions in the Rules and Regulations of the Commission.

Indicate Nature of Report by Checking Below

REPORT ON BEGINNING DRILLING OPERATIONS		REPORT ON RESULT OF TEST OF CASING SHUT-OFF	X	REPORT ON REPAIRING WELL	
REPORT ON RESULT OF PLUGGING WELL		REPORT ON RECOMPLETION OPERATION		REPORT ON (Other)	

FEBRUARY 26, 1954
(Date)

HOBB'S, NEW MEXICO
(Place)

Following is a report on the work done and the results obtained under the heading noted above at the

THE OHIO OIL COMPANY
(Company or Operator)

STATE B 4286 "A"
(Lease)

COMPANY TOOLS, Rig #2
(Contractor)

Well No. 2 in the SE 1/4 NW 1/4 of Sec. 2

T. 17 S, R. 36E, NMPM, LOVINGTON-ABO Pool, LEA County.

The Dates of this work were as follows:

Notice of intention to do the work (was) (was not) submitted on Form C-102 on _____, 19____
(Cross out incorrect words)
and approval of the proposed plan (was) (was not) obtained.

DETAILED ACCOUNT OF WORK DONE AND RESULTS OBTAINED

SPUDED IN AT 12:00 N 2-23-54.
TOTAL DEPTH 355' RED BED. RAN 8 JOINTS OF 13-3/8" OD
48# GRADE H-40 CASING SET AT 349'. CEMENTED W/450
SACKS REGULAR CEMENT PRECEDED BY 20 BBLS SMENTOX TREAT-
ED WATER. CIRCULATED OUT ESTIMATED 75 SKS. PUMPING
PRESSURE 200#, FINAL PRESSURE 400#. PLUG PUMPED DOWN
AT 12:00 N, 2-24-54. TESTED CASING W/900# PRESSURE FOR
30 MIN. TEST OK. DRILLED PLUG AT 12:00 N, 2-25-54.
TOP OF CEMENT 322'.

OIL CONSERVATION COMMISSION
MAR 9 1954

Witnessed by F. A. NUNLEY THE OHIO OIL COMPANY DRLG. FOREMAN
(Name) (Company) (Title)

Approved: OIL CONSERVATION COMMISSION
F. A. Nunley
(Name)

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

Name: *J. C. ...*
Position: SUPERINTENDENT
Representing: THE OHIO OIL COMPANY
Address: Box 2100, NEW MEXICO

NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico

RECEIVED
FEB 22 1954
OIL CONSERVATION COMMISSION

NOTICE OF INTENTION TO DRILL OR RECOMPLETION

Notice must be given to the District Office of the Oil Conservation Commission and approval obtained before drilling or re-completion begins. If changes in the proposed plan are considered advisable, a copy of this notice showing such changes will be returned to the sender. Submit this notice in QUINTUPLICATE. One copy will be returned following approval. See additional instructions in Rules and Regulations of the Commission.

HOBBS, NEW MEXICO
(Place)

FEBRUARY 19, 1954
(Date)

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Gentlemen:

You are hereby notified that it is our intention to commence the (Drilling) (~~Recompletion~~) of a well to be known as

THE OHIO OIL COMPANY

(Company or Operator)

STATE B 4286 "A"
(Lease)

Well No. 2

in F

The well is

located 1650 feet from the NORTH line and 2310 feet from the WEST line of Section 2, T. 17 S, R. 36 E, NMPM.

(GIVE LOCATION FROM SECTION LINE)

LOVINGTON-ABO Pool,

LEA

County

If State Land the Oil and Gas Lease is No. B 4286

If patented land the owner is

Address

We propose to drill well with drilling equipment as follows:

The status of plugging bond is

Drilling Contractor

COMPANY TOOLS RIG #2

1000 NATIONAL ROTARY

SANTA FE, NEW MEXICO

MAR 1 1954

We intend to complete this well in the

ABO FORMATION

formation at an approximate depth of

8500

feet.

CASING PROGRAM

We propose to use the following strings of Casing and to cement them as indicated:

Size of Hole	Size of Casing	Weight per Foot	New or Second Hand	Depth	Sacks Cement
17 1/2"	13-3/8"	48	NEW	300	300
12"	9-5/8"	40	NEW	3300	2000
8-3/4"	5-1/2"	17	NEW	8500	2000

If changes in the above plans become advisable we will notify you immediately.

ADDITIONAL INFORMATION (If recompletion give full details of proposed plan of work.)

Approved: FEB 24 1954, 19
Except as follows:

Sincerely yours,

THE OHIO OIL COMPANY

(Company or Operator)

By

Position: SUPERINTENDENT

Send Communications regarding well to

Name: THE OHIO OIL COMPANY

Address: P. O. Box 107, Hobbs, New Mexico

OIL CONSERVATION COMMISSION

By

ED

State B 4286 "A" Well No. 2 - Lea County, New Mexico

DST #1, from 8310' to 8435'. 1" x 3/4" chokes, and 750' water blanket. Tool open 2 hrs., very weak blow of air immediately, decreasing and dying in 1 hr. and 45 min. Took 15 min. S.I. Recovered 750' water blanket and 60' of slightly gas cut mud. Pressures: Initial flowing - 450#, final flowing - 450#, water blanket - 450#, 15 min. S.I. 525#, hydrostatic - 4550#.

DST #2, from 8435' to 8480, 3/4" x 1" chokes, 750' water blanket. Tool open 4 hrs., fair blow immediately, increasing to fairly strong blow in 30 min. lasting thruout test. Gas to surface in 96 min., no fluid to surface. Pulled 6 stands and reversed out to test tank. Recovered water blanket 750' and 75' heavily oil and gas cut mud and 3000' oil. Recovered below reverse circulating sub, 120' gas cut drlg. mud and water. Pressures: Initial flowing - 450#, final flowing - 1550#, 15 min. S.I. - 3000#, hydrostatic (in) - 4500# (out) 4450#.

Coring Record - Paddock

Core No. 1 - from 6195' to 6245' recovered 50' (100%)

Coring time - 13 hr. 2 min.

Average per foot - 15 1/2 min/ft.

6195' - 6200', Gray, fine xln dolomite, dense, barren, very sli fractured w/thin white anhydrite inclusions, sli odor, sli staining on fractures.

6200' - 6210', Gray, fine xln dolomite, sli horizontal & vertical irregular fractures w/sli bleeding of dark brown oil & gas, very sli pp porosity, stylotic, thin white anhydrite inclusions scattered thruout, good odor, uneven staining thruout.

6210' - 6216', Gray, fine xln dolomite, sli horizontal & vertical fractures, sli bleeding of oil & gas in fractures, dense, no porosity, numerous thin white anhydrite inclusions, sli odor.

6216' - 6225', Gray, fin xln dolomite, dense & barren.

6225' - 6239' Gran, fine xln dolomite w/numerous vertical & horizontal shale partings bleeding oil & gas, very sli pp porosity, scattered thin white anhydrite inclusions thruout.

6239' - 6245', Gray, fine xln dolomite, dense, no porosity, very sli bleeding of oil & gas along vertical & horizontal shale partings.

Core No. 2 - from 6246' to 6296' recovered 50' (100%)

Coring time - 11 hr. 57 min.

Average per foot - 14.3 min/ft.

6246' - 6266' Gray to tan, fine xln dolomite, w/sli to fair pp porosity bleeding oil & gas. Scattered horizontal & vertical fracturing also bleeding oil & gas, stylitic w/numerous shale partings thruout, good odor, uneven staining thruout, scattered thin white anhydrite inclusions thruout.

6266' - 6296', Same as above except dense w/very sli bleeding of oil & gas along fractures.

