

1R - 184

**GENERAL
CORRESPONDENCE**

YEAR(S):

[Click here and type address]

facsimile transmittal

To: Lori Wrotenbery

Fax: 505-827-8177

From: Chris Williams

Date: 11/19/99

Re: Monument water

Pages: 15

CC: [Click here and type name]

☒ Urgent

☐ For Review

☐ Please Comment

☐ Please Reply

☐ Please Recycle

Notes: Select this text and delete it or replace it with your own. To save changes to this template for future use, choose Save As from the File menu. In the Save As Type box, choose Document Template. Next time you want to use it, choose New from the File menu, and then double-click your template.

Jerry Sexton
OCD + Hobbs



STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

October 21, 1987

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-8800

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. B. L. Lednicky
District Manager
Texas - New Mexico Pipeline Co.
P.O. Box 2528
Hobbs, NM 88241

Re: "Contamination of Monument Water Well No. 1"
Draft Settlement Agreement

Dear Mr. Lednicky:

Enclosed is a draft settlement agreement for the above contamination case. Although it has received preliminary review by both OCD and EID legal staff, they will be awaiting your comments prior to final review. As stated in my September 8, 1987 letter, the OCD is satisfied with the oil cleanup and reclamation performed by the company given the widespread preexisting contamination in the vicinity. Please note that the proposed settlement does not release the company from actions which could be taken pursuant to state or federal laws administered by other agencies.

After you have reviewed the document, please return the draft to me with any comments or suggestions. As they are interested parties, I am sending copies of the draft agreement to those persons listed below to keep them informed of action in this matter.

If you have any questions, please contact me at the above address or by telephone at 827-5812.

Sincerely,

David G. Boyer
Hydrogeologist/Environmental Bureau Chief

DGB:smd

October 21, 1987
Page 2

Enclosure

cc: The Honorable Joe Harvey, State Senator
W. E. Copeland, Monument, WUC
Sam Small, Monument, WUC
Jeff Taylor, OCD Legal
Jerry Sexton, OCD Hobbs✓
Jon F. Thompson, EID Community Services Bureau
Dennis McQuillan, EID Ground Water
Jennifer Pruett, EID Office of General Counsel
Garrison McCaslin, EID District IV Manager
Jack Block, LGD
Steve Massey, SENMDD
Rusty Rodke, ISC

DRAFT
10/21/87

MONUMENT WATER WELL SETTLEMENT AGREEMENT

This agreement is made by and among Texas - New Mexico Pipeline Company ("Company") and the New Mexico Oil Conservation Division of the Energy, Minerals and Natural Resources Department ("OCD") for the purpose of delineating those actions the parties will take to resolve problems stemming from water contamination in Lea County, New Mexico.

WHEREAS, on or about September 18, 1984, Water Well #1 belonging to the Monument Water Users' ("Association") located in Section 29, Township 19 South, Range 37 East, NMPM, ("existing well") was discovered contaminated with crude oil; and

WHEREAS, a crude oil pipeline owned and operated by the Company was discovered leaking approximately 100 feet from the existing well; and

WHEREAS, under the supervision of OCD the Company installed monitor wells and undertook oil recovery operations in the existing well and an additional recovery well; and

WHEREAS, the monitoring wells discovered that other source(s) of ground water contamination existed in the vicinity of the Association's water wells prior to September 1984; and

WHEREAS, the contamination caused by sources other than the Company appears extensive and widespread in the area of the Company's investigation; and

WHEREAS, the source(s) and extent of this preexisting contamination are not known; and

WHEREAS, In order to assure the community of Monument a safe and adequate water supply, the existing well must be replaced due to the oil contamination; and

WHEREAS, the Company offered to replace the existing well with a comparable new well that would provide equal service and be located near Association's existing water lines; and

WHEREAS, Association, OCD and certain other State agencies, including the Environmental Improvement Division, the Department of Finance and Administration, the Community Development Council, and the Southeastern New Mexico Economic Development District, recommended that in lieu of the comparable new well proposed by the company, a new well should be provided for the Association of better quantity and quality than the existing well and be located approximately three (3) miles north of the existing facility so as to avoid the likelihood of contamination from past and existing oil field operations; and

WHEREAS, said well was drilled in March 1986, in the NE/4, NE/4, NW/4 Section 20, Township 19 South, Range 37 East, at a distance of approximately one and one-half (1 1/2) miles north of the existing well; and

WHEREAS, said new well was discovered contaminated with natural gas, dissolved hydrocarbons, and excess dissolved salts when tested in June 1986; and

WHEREAS, the OCD has determined that the Company is not the source of this newly-discovered contamination; and

WHEREAS, additional actions to locate a potable water supply are being pursued by the Association, including the possible drilling of a second replacement well; and

WHEREAS, OCD is a duly created agency of the State of New Mexico charged by law to regulate the production of oil and gas and to protect fresh water which may be affected by such operations; and

WHEREAS, OCD is authorized to seek injunctive relief and civil penalties for violations of the Oil and Gas Act (70-2-1 et seq. NMSA 1978); is also authorized to administer and enforce the Water Quality Control Commission ("WQCC") regulations adopted under the New Mexico Water Quality Act, Sections 74-6-1 et seq. NMSA (1978 Repl.); and is also authorized to enforce the public nuisance statutes and to seek injunctive relief to abate a public nuisance and the public nuisance of polluting water, including ground water, as those two nuisances are defined in Sections 30-8-1 and 30-8-2 NMSA 1978 (1984 Repl.), pursuant to Section 30-8-8 NMSA 1978 (1984 Repl.); and

WHEREAS, prior to the signing of this agreement, the Company has provided to OCD an updated report dated April 27, 1987, summarizing recovery efforts and results obtained subsequent through October 1986; and

WHEREAS, the OCD has reviewed the report and other available information and agrees that the Company has substantially completed recovery of free oil in the area of the pipeline leak; and

WHEREAS, the OCD has determined in a summary letter dated September 8, 1987, that the actions previously taken and those proposed by the Company below are reasonable and in the best interest of the Association and Citizens of the State of New Mexico.

NOW, THEREFORE, In consideration of the foregoing and the mutual covenants and promises herein, Company, Association, and OCD agree as follows:

1. The Company shall be obligated, at its sole expense, to excavate a trench up to a total of three (3) miles in length suitable for installation of a water line to connect the Association's contemplated second new well or other replacement water source with the Association's existing water facilities. The trenching distance already completed to the replacement well drilled in Section 20 shall be credited as part of the three (3) mile total. Said trench shall be a minimum of 48 inches deep and 14 inches wide. Due to obstacles such as crossings of existing pipelines, the trench will be deepened where necessary and/or widened to the extent necessary for the water line installation. The excavation will be made along a route designated by the Association and staked at intervals not to exceed 400 feet. Because of safety considerations, trenching shall be concurrent with pipeline installation to the extent possible.

2. The Company shall remove any remaining equipment from the contamination site and recovery well area.
3. The Company shall remain responsible for final plugging of the monitor and recovery wells drilled by the Company; however, the date by which such wells must be plugged is at the discretion of the Company. Prior to plugging, the method of plugging shall be approved by the OCD Hobbs District Supervisor and that office notified upon completion.
4. This Agreement is executed by the parties for the sole purpose of compromising and settling all disputes concerning cleanup of all contamination caused by the Company specified in the above Statement of Dispute. The terms, execution, and/or performance of this Settlement Agreement shall not constitute an admission of any fact or liability by the Company.
5. The parties agree that they will act reasonably and in good faith at all times to accomplish the purpose of this Agreement, and will perform all evaluations required by this Agreement using scientific judgment.
6. The OCD hereby releases Company from any claim, demand, or cause of action that it may possess arising out of, or in connection with, or in any way incidental to, the contamination of Association's existing well, including, without limitation, claims for any other expenses not accepted by Company herein relating to construction of the new well, water line and associated

facilities, including, but not limited to, expenses of hauling, stringing and installing pipe, surveying, construction of fence gaps, boring of roads, padded backfilling, testing, reseeding, and acquiring necessary rights-of-way for the trench. OCD agrees not to pursue any other relief, civil, criminal, or administrative, including OCD's right to seek and recover penalties on behalf of other parties against the Company, its successors, assigns, and employees, that OCD or such parties might have against the Company under the factual allegations set forth above in this document; however, OCD retains the right to seek enforcement of this Agreement pursuant to paragraph 9, and to seek and collect appropriate penalties if the Company fails to comply with the terms of this Agreement, as described in paragraph 9.

7. The provisions of this Agreement shall apply to and be binding upon OCD, the New Mexico Water Quality Control Commission, their respective successor agencies of government, their employees, administrators, contractors, consultants, and agents, employees, receivers, successors, trustees, assigns, heirs, executors, and contractors.
8. This agreement does not release the Company from actions which could be taken pursuant to federal laws, or state laws or regulations adopted to comply with present or future federal statutes, or state laws or programs administered by other state agencies adopted or initiated to provide regional cleanup of contamination.

9. Notwithstanding anything contained herein, failure of the Company to comply substantially with any of the terms and conditions herein obligates the Company to pay a penalty of One Thousand Dollars (\$1,000.00) per day for each day of violation. Notice of such noncompliance and penalty shall be given in writing by OCD to the Company. Payment for such violation shall be by certified check payable to State of New Mexico c/o Oil Conservation Division.

10. This Agreement is effective when signed by all parties to the Agreement. This Agreement shall terminate when the Company has fulfilled all requirements of this Agreement, notified OCD in writing, and upon OCD's written approval thereof.

FOR:

TEXAS-NEW MEXICO PIPELINE COMPANY

DATE: _____

FOR:

THE OIL CONSERVATION DIVISION

DATE: _____

STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION



GARREY CARRUTHERS

GOVERNOR

MEMORANDUM

April 15, 1987

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

TO: Pat Olachea, Program Manager, Construction Grants Section, N.M.
Environmental Improvement Division

FROM: David G. Boyer, Hydrogeologist/Environmental Bureau Chief
Oil Conservation Division

WCB

SUBJECT: Monument Water Well Replacement

On January 28, 1987, I provided the Environmental Improvement Division (EID) with my comments on an engineering and feasibility report for a new Monument community water well. My review of the report included comments on information collection prior to final well location, and for water testing after drilling. My review and comments were prepared at the request of the EID for transmittal to the community.

Apparently there is misunderstanding by some parties as to what the function or responsibility of the Oil Conservation Division is in this matter. The Division has the duty to regulate the oil and gas industry to protect fresh water supplies, and works with both companies and affected parties if such contamination occurs. Therefore, we became involved with the problem of contamination of the Monument water supply well in 1984, and worked with the company, community, EID and other governmental agencies in an attempt to find a solution.

It is not the responsibility of the Oil Conservation Division to provide a replacement source of water, locate or make recommendations as to replacement sources of water, or approve a replacement well location, although we assisted in some of these matters. Further, given the past history of oil and gas activities in the area, assurances can not be provided that any location selected that is free of contamination today will not become contaminated in the future. The review comments provided in the January 28 memorandum were only meant to assist in review of the report, and should not be construed as additional requirements mandated by the Oil Conservation Division and required to be performed by the engineer or contractor.

DB/cr

cc: William LeMay, OCD
Jerry Sexton, CCD-Hobbs
Jon Thompson, EID
Jacob Block, LGD
Rusty Rodke, ISSC

STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION



January 28, 1987

GARREY CARRUTHERS
GOVERNOR

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

MEMORANDUM

TO: PAT OLACHEA, PROGRAM MANAGER, CONSTRUCTION GRANTS,
N.M. ENVIRONMENTAL IMPROVEMENT DIVISION

FROM: DAVID G. BOYER, HYDROGEOLOGIST/ENVIRONMENTAL BUREAU CHIEF
OIL CONSERVATION DIVISION

SUBJECT: REVIEW OF "ENGINEERING & FEASIBILITY REPORT FOR MONUMENT
WATER USER'S COOPERATIVE, JANUARY 2, 1987" BY DENNIS
ENGINEERING COMPANY

At the request of the Environmental Improvement Division, I have reviewed the report and have the following general and specific comments:

General Comments

The report provides the most complete engineering information and associated cost data for replacement of Monument's water supply that I have seen to date. The "Key Map" shows that research went into locating various physical features (e.g., water and oil wells, pipelines, etc.) that need to be considered in the evaluation. The accuracy of the cost data will need to be evaluated by EID's water supply engineers who have expertise in the area.

There are several important omissions and errors in the report that need to be addressed before decisions are made on proceeding with further investigation. Other than oil well locations, the extent of the research on oil and gas activities in the area of the proposed well was not documented in the report (See Items 3 and 4, Dennis Engineering letter of 12/4/86). Because of oil and gas contamination of water in the Monument area, investigation is necessary of current and past oil and gas activities in the immediate area of the proposed well that may have had the potential to cause ground water contamination.

The following oil and gas information should have been collected for evaluation. For such purposes, an arbitrary radial distance of one-mile from the well upgradient and a radial distance of one-quarter mile downgradient might have been selected (See attached sketch). The information should have included:

1. Location of all oil wells, injection wells (if any), abandoned holes, and oil and produced water pipelines. (Only pipelines at major road crossings were shown.)
2. Records of well casing leaks, repairs, workovers, etc., for each well.

3. Records of volumes of water produced with the oil and disposition from the time each well was completed.
4. Available records of spills, leaks, pipeline breaks, etc., within the designated area.
5. On-site inspection and/or review of aerial photographs to detect any unusual surface disturbance (e.g., lack of vegetation, oil residue, caliche pits used for disposal, etc.).

All such information (including the lack thereof) should be documented in the report.

The ground water flow direction and the basic premise upon which it was based is incorrect. Ground water flow is perpendicular to the water surface elevation contours (potentiometric surface) and not perpendicular to the structural contour surface of the base of the Ogallala Formation (p. 19). The only exception to this is in areas where no significant saturated ground water thickness exists and percolating water moves along and on top of relatively impermeable formations. The attached map from Ground-Water Report 6 ("Geology and Ground-Water Conditions in Southern Lea County, New Mexico," N.M. Bureau of Mines, 1961) shows the direction of flow at that time. A current water-level elevation map (taking into account the EPNG well field effect on water levels) should be drawn to determine the hydraulic gradient.

Specific Comments

Water testing (p. 3 cover letter; p. 20, 22 & 26 report):

Water testing of existing wells should include chlorides, sulfates, total dissolved solids (TDS), purgeable aromatic and halogenated hydrocarbons, and natural gas (headspace) tests. During the 72-hour pumping of a test well, electrical conductivity should be continuously monitored (every 15 minutes at first; then at least hourly). Several samples should be taken and analyzed for at least the constituents listed above. At some point close to the end of the test, the water should be sampled and analyzed for the following parameters in addition to those listed above: Complete secondary analysis, primary drinking water constituents, nitrogen (NO_3 , NO_2 , NH_3 , TRN) and bacteria. The costs of these tests should be included in the cost estimates on page 26.

Water consumption (p. 8-9):

The values given (500 gpd) appear to be winter values. The summer values are about double. Not having metering required by the Association likely means that some folks are doing a lot of garden irrigation at little cost to themselves.

Page 3

Water treatment (p. 22):

The cost of treatment for the new well drilled in 1986 would also need to include desalination since chlorides and TDS also exceed standards (chlorides 510 mg/l vs. 250 standard, TDS 1750 mg/l vs. 500 standard).

If you need further information or clarification, you may contact me at 827-5812.

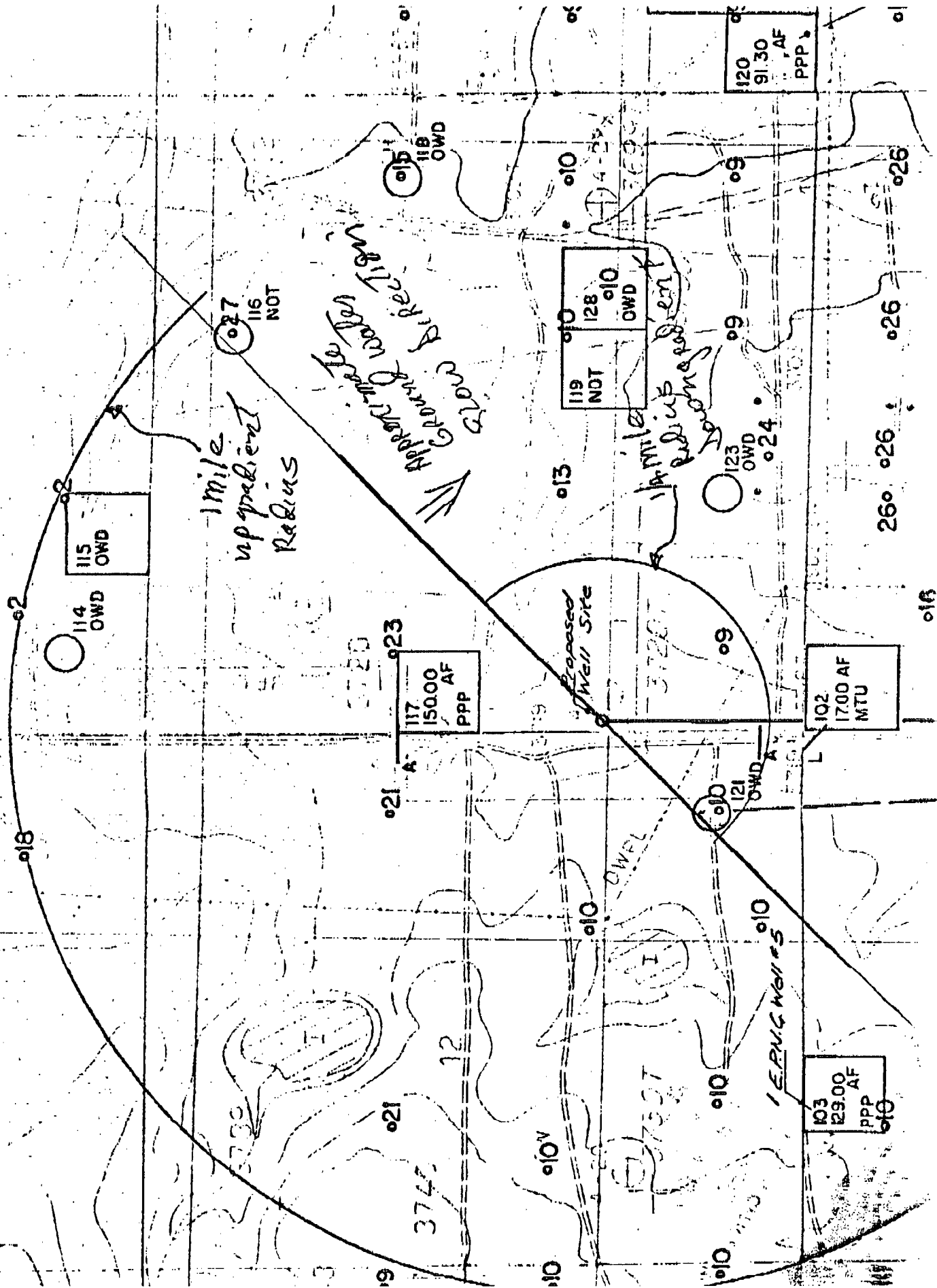
DGB:dp

Enc.

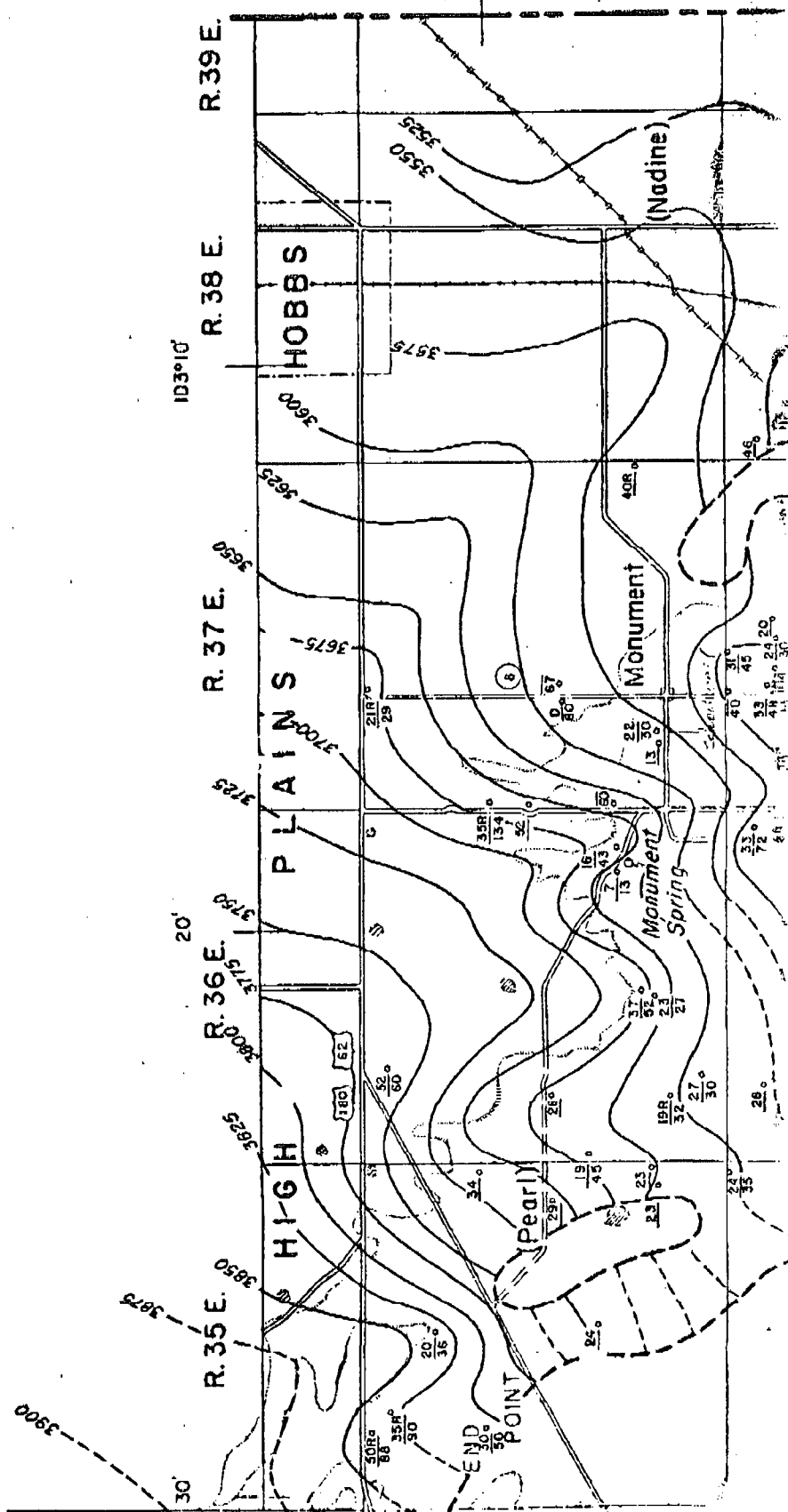
cc: William LeMay, OCD
Jerry Sexton, OCD-Artesia
Jon Thompson, EID
Jacob Block, LGD
Rusty Rodke, ISSC

08 09

020



ଅମର



May 2, 1988

The Honorable Joe Harvey, State Senator
P.O. Box 1501
Hobbs, NM 88240

Dear Senator Harvey:

I am pleased to report that on Friday April 29, 1988 the town of Monument began taking drinking water from it's own well. This event was the culmination of efforts by the community to develop a new source of drinking water after it's original source became contaminated. Many hours were devoted to this project and without the financial support of the State of New Mexico and the major oil and gas companies operating in the area, it's successful completion would not have been realized.

As you remember, contaminated drinking water first appeared in Monument's wells in September, 1984. After attempts to 'clean up' the problem in the existing wells proved unsuccessful, a CBDG grant was solicited from the State to drill a new well north of town and install approximately 1.5 miles of water line. The grant was in the amount of \$125,000, with \$85,915 provided by Texas New Mexico Pipeline Company for the trench and an additional \$15,000 provided by Amerada Hess Corp., ARCO, Chevron, Conoco and El Paso Natural Gas Co.. The well was drilled and the line was installed in 1986. Subsequent testing of the water in the new well revealed that it was also contaminated. An attempt to gain additional funding from the State to drill another well two miles to the northwest of this location and lay additional line was unsuccessful due to a lack of support from the NMEID for the recommendations made in the Engineering feasibility study. The Engineering feasibility study estimated the cost of the project at \$163,000.

After modifying the original recommendation made in the feasibility study and estimating costs utilizing local labor it was determined that the project could be done for a total cost of \$65,000. Amerada Hess Corp., Chevron, and Conoco were again asked to aid in funding the project. Texas New Mexico Pipeline Company agreed to pay for 8000 feet of trench. While the funds were being raised and all the necessary approvals were being garnered from the various State agencies, El Paso Natural Gas Company agreed to supply the town with drinking water on an emergency basis. As stated the project was completed last Friday and while all the bills are not in yet, the cost will be very close to the \$65,000 estimated. We feel that the difference in cost between what we were able to complete the project for with

Boyer Ex 11

private funds and the cost estimate of the Engineering feasibility study is worthy of note.

We would like to thank you for your efforts on behalf of the Monument Water User's Cooperative in dealing with the State Land Department and for your efforts to obtain additional funding through the State Legislature for the project.

Sincerely,



Sam Small

V.P. Monument Water User's Coop.

xc: Stuart P. Castle, Drinking Water Section, NMEID
Pat Olacchea, Construction Grants Section, NMEID
Bill Weber, Roswell, NMEID
DAVE Boyer, NMOCD

Monument Time & Travel Calculations (9/85)

$K = 3.3 \times 10^{-4} \text{ ft/sec}$ - Mid range clean sand
(Freeze & Cherry, p. 29)

Average gradient ~ 0.005

Worst case: 0.008

θ Porosity - Lowest 0.2

$$q_w = \frac{KI}{\theta} = \frac{3.3 \times 10^{-4} \text{ ft}}{0.2} \times \frac{0.008 \times 86400 \text{ sec}}{2} = 1.14 \sim 1.25 \text{ ft/d}$$

6/12/84
Report

Pumped WW #1, Oct 12, 1984, $Q = 25 \text{ gpm}$, $s = 17'$

$$\frac{Q}{s} = \frac{25}{17} = 2.26 \text{ gpd/ft} \sim 1.5 \text{ gpd/ft}$$

$s = 17 \times 65\%$
 $= 11$

For 1 day pumping, 100% efficient well

$\sim 6'$ diam: $T \approx 3000 \text{ cfd/ft}$ (Johnson, p. 780)

$s_e = 11$, however; assume efficiency of old well 60-70% (Johnson - p. 555)

DTW = 18' (12/15/84)

sat Thick = 55' (T.R. & b.c.s) - 18' = 37'

$$K = \frac{T}{b} = \frac{3000}{37} = 81 \text{ gpd/ft}^2$$

$$= 81 \frac{\text{g}}{\text{ft}^2} \times \frac{\text{day}}{86400} \times \frac{\text{ft}^3}{7.48 \text{ gal}} = 1.25 \times 10^{-4} \frac{\text{ft}}{\text{sec}}$$

$$q_i = 0.008 = 0.43 \text{ ft/d}$$

($\sim 40\%$ of clean sand value for worst case)

For worst case travel: $q_w = 1.2 \text{ ft/d}$

For best estimate of travel ($K = 81 \text{ gpd/ft}^2$, $I = 0.005$)

$$q_{\text{best}} = 0.27 \text{ ft/d}$$

Assume break just north of MW 9*.

Distance: d (ft)	I_w	I_{be}
Break to RW#2: 421'	351 days	4.2 yrs
MW 16: 321'	268	3.3 yrs
MW 14: 830	691 (1.9 yrs)	8.4 yrs
MW 28: 1496	1247 (3.4 yrs)	13.2 yrs

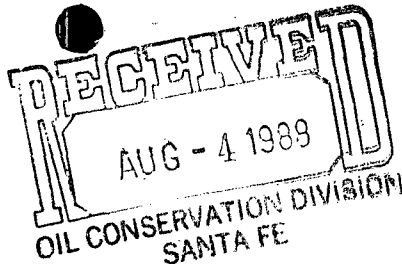
Distance from "break" to RW1 (supply well) = 160 ft. Assume
Avg gradient $3 \times$ worst case = 0.024

I_w
44 d

I_{be}
124 d (4 months)

[Conclusion - If break went undetected for several weeks at most (14-21 days), well contamination is from some other source unless avg. gradient from pumping well is greater. Likely that both break of greater duration and gradient steeper.]

* Break probably between MW 4 & MW 9; MW 9 assumed for calculations of "worst case",



HOBBS OFFICE FILE	
DEC 4 1987	
PLEASE NOTE	DATE NOTED
B. L. L.	
L. H. N.	
J. B. H.	
J. P. T.	
D. D. K.	
D. J. N.	
J. D. H.	

December 4, 1987

Mr. David G. Boyer
State of New Mexico
Energy, Minerals & Natural Resources Dept.
Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87504

Dear Mr. Boyer:

Re: "Contamination of Monument Water Well No. 1"
Draft Settlement Agreement

Thank you for your letter dated October 21, 1987. We have reviewed the draft settlement and have noted on the draft several changes that we wish included.

We believe the Environmental Improvement Division (EID) should also be a party to this agreement. Since it had a hand in drafting and/or reviewing the proposal it does not seem unreasonable that they should be a party to it.

We also believe that Paragraph 9, relating to stipulated penalties, should be deleted. Our attorney advises "that although contract law does allow for specified 'liquidated damages' to be paid in the event of a breach of contract, to be enforceable such damages must be reasonably related to an estimate of the actual loss to the other party in the event of a breach. The \$1000 per day stipulated penalty appears to be high enough that it would actually be a greater benefit to the OCD if the Pipe Line Company failed to comply. If so, this would be termed a 'gambling contract' and would not be enforceable." He also notes that since there are no apparent deadlines in the contract, Article 9 does not appear to be capable of application in any obvious cases.

Yours very truly,

BLL:DDM

DRAFT
10/21/87

MONUMENT WATER WELL SETTLEMENT AGREEMENT

This agreement is made by and among Texas - New Mexico Pipeline Company ~~the New Mexico Environmental Improvement Station (NEMIS)~~ ("Company"), and the New Mexico Oil Conservation Division of the Energy, Minerals and Natural Resources Department ("OCD") for the purpose of delineating those actions the parties will take to resolve problems stemming from water contamination in Lea County, New Mexico.

WHEREAS, on or about September 18, 1984, Water Well #1 belonging to the Monument Water Users' ("Association") located in Section 29, Township 19 South, Range 37 East, NMPM, ("existing well") was discovered contaminated with crude oil; and

WHEREAS, a crude oil pipeline owned and operated by the Company was discovered leaking approximately 100 feet from the existing well; and

WHEREAS, under the supervision of OCD the Company installed monitor wells and undertook oil recovery operations in the existing well and an additional recovery well; and

WHEREAS, the monitoring wells discovered that other source(s) of ground water contamination existed in the vicinity of the Association's water wells prior to September 1984; and

WHEREAS, the contamination caused by sources other than the Company appears extensive and widespread in the area of the Company's investigation; and

WHEREAS, the source(s) and extent of this preexisting contamination are not known; and

WHEREAS, In order to assure the community of Monument a safe and adequate water supply, the existing well must be replaced due to the oil contamination; and

WHEREAS, the Company offered to replace the existing well with a comparable new well that would provide equal service and be located near Association's existing water lines; and

WHEREAS, Association, OCD and certain other State agencies, including the Environmental Improvement Division, the Department of Finance and Administration, the Community Development Council, and the Southeastern New Mexico Economic Development District, recommended that in lieu of the comparable new well proposed by the company, a new well should be provided for the Association of better quantity and quality than the existing well and be located approximately three (3) miles north of the existing facility so as to avoid the likelihood of contamination from past and existing oil field operations; and

WHEREAS, said well was drilled in March 1986, in the NE/4, NE/4, NW/4 Section 20, Township 19 South, Range 37 East, at a distance of approximately one and one-half (1 1/2) miles north of the existing well; and

WHEREAS, said new well was discovered contaminated with natural gas, dissolved hydrocarbons, and excess dissolved salts when tested in June 1986; and

WHEREAS, the OCD has determined that the Company is not the source of this newly-discovered contamination; and

WHEREAS, additional actions to locate a potable water supply are being pursued by the Association, including the possible drilling of a second replacement well; and

WHEREAS, OCD is a duly created agency of the State of New Mexico charged by law to regulate the production of oil and gas and to protect fresh water which may be affected by such operations; and

WHEREAS, OCD is authorized to seek injunctive relief and civil penalties for violations of the Oil and Gas Act (70-2-1 et seq. NMSA 1978); is also authorized to administer and enforce the Water Quality Control Commission ("WQCC") regulations adopted under the New Mexico Water Quality Act, Sections 74-6-1 et seq. NMSA (1978 Repl.); and is also authorized to enforce the public nuisance statutes and to seek injunctive relief to abate a public nuisance and the public nuisance of polluting water, including ground water, as those two nuisances are defined in Sections 30-8-1 and 30-8-2 NMSA 1978 (1984 Repl.), pursuant to Section 30-8-8 NMSA 1978 (1984 Repl.); and

WHEREAS, prior to the signing of this agreement, the Company has provided to OCD an updated report dated April 27, 1987, summarizing recovery efforts and results obtained subsequent through October 1986; and

WHEREAS, the OCD has reviewed the report and other available information and agrees that the Company has substantially completed recovery of free oil in the area of the pipeline leak; and

WHEREAS, the OCD has determined in a summary letter dated September 8, 1987, that the actions previously taken and those proposed by the Company below are reasonable and in the best interest of the Association and Citizens of the State of New Mexico.

NOW, THEREFORE, In consideration of the foregoing and the mutual covenants and promises herein, Company, Association, and OCD agree as follows:

1. The Company shall be obligated, at its sole expense, to excavate a trench up to a total of three (3) miles in length suitable for installation of a water line to connect the Association's contemplated second new well or other replacement water source with the Association's existing water facilities. The trenching distance already completed to the replacement well drilled in Section 20 shall be credited as part of the three (3) mile total. Said trench shall be a minimum of 48 inches deep and 14 inches wide. Due to obstacles such as crossings of existing pipelines, the trench will be deepened where necessary and/or widened to the extent necessary for the water line installation. The excavation will be made along a route designated by the Association and staked at intervals not to exceed 400 feet. Because of safety considerations, trenching shall be concurrent with pipeline installation to the extent possible. *The Association will obtain an easement right-of-way for the line, the necessary*

2. The ^{Company} Company shall remove any remaining equipment from the contamination site and recovery well area.
3. The Company shall remain responsible for final plugging of the monitor and recovery wells drilled by the Company; however, the date by which such wells must be plugged is at the discretion of the Company. Prior to plugging, the method of plugging shall be approved by the OCD Hobbs District Supervisor and that office notified upon completion.
4. This Agreement is executed by the parties for the sole purpose of compromising and settling all disputes concerning cleanup of all contamination caused by the Company specified in the above ^{"wherein clause"} ~~Statement of Dispute~~. The terms, execution, and/or performance of this Settlement Agreement shall not constitute an admission of any fact or liability by the Company.
5. The parties agree that they will act reasonably and in good faith at all times to accomplish the purpose of this Agreement, and will perform all evaluations required by this Agreement using scientific judgment.
6. ^{and EID} The OCD hereby releases ^{they} Company from any claim, demand, or cause of action that ~~it~~ may possess arising out of, or in connection with, or in any way incidental to, the contamination of Association's existing well, including, without limitation, claims for any other expenses not accepted by Company herein relating to construction of the new well, water line and associated

facilities, including, but not limited to, expenses of hauling, stringing and installing pipe, surveying, construction of fence gaps, boring of roads, padded backfilling, testing, reseeding, and acquiring necessary rights-of-way for the trench. ^{and EID} OCD_A agrees ^{EID} not to pursue any other relief, civil, criminal, or administrative, including ^{any} ~~OCD's~~ right to seek and recover penalties on behalf of other parties against the Company, its successors, assigns, and employees, that ^{EID} OCD_A or such parties might have against the Company under the factual allegations set forth above in this document, however, ^{EID} ~~OCD~~ retains the right to seek enforcement of this Agreement pursuant to paragraph 9, and to seek and collect appropriate penalties if the Company fails to comply with the terms of this Agreement, as described in paragraph 9.

7. The provisions of this Agreement shall apply to and be binding upon ^{EID,} ~~OCD~~, the New Mexico Water Quality Control Commission, their respective successor agencies of government, their employees, administrators, contractors, consultants, and agents, employees, receivers, successors, trustees, assigns, heirs, executors, and contractors.
8. This agreement does not release the Company from actions which could be taken pursuant to federal laws, or state laws or regulations adopted to comply with present or future federal statutes, or state laws or programs administered by other state agencies adopted or initiated to provide regional cleanup of contamination.

9. Notwithstanding anything contained herein, failure of the Company to comply substantially with any of the terms and conditions herein obligates the Company to pay a penalty of One Thousand Dollars (\$1,000.00) per day for each day of violation. Notice of such noncompliance and penalty shall be given in writing by OCD to the Company. Payment for such violation shall be by certified check payable to State of New Mexico c/o Oil Conservation Division.

10. This Agreement is effective when signed by all parties to the Agreement. This Agreement shall terminate when the Company has fulfilled all requirements of this Agreement, notified OCD in writing, and upon OCD's written approval thereof.

FOR:

TEXAS-NEW MEXICO PIPELINE COMPANY

DATE: _____

FOR:

THE OIL CONSERVATION DIVISION

DATE: _____

For:

Environmental Improvement Division

Date: _____



STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

October 21, 1987

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

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. B. L. Lednicky
District Manager
Texas - New Mexico Pipeline Co.
P.O. Box 2528
Hobbs, NM 88241

Re: "Contamination of Monument Water Well No. 1"
Draft Settlement Agreement

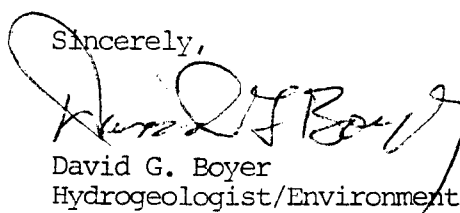
Dear Mr. Lednicky:

Enclosed is a draft settlement agreement for the above contamination case. Although it has received preliminary review by both OCD and EID legal staff, they will be awaiting your comments prior to final review. As stated in my September 8, 1987 letter, the OCD is satisfied with the oil cleanup and reclamation performed by the company given the widespread preexisting contamination in the vicinity. Please note that the proposed settlement does not release the company from actions which could be taken pursuant to state or federal laws administered by other agencies.

After you have reviewed the document, please return the draft to me with any comments or suggestions. As they are interested parties, I am sending copies of the draft agreement to those persons listed below to keep them informed of action in this matter.

If you have any questions, please contact me at the above address or by telephone at 827-5812.

Sincerely,


David G. Boyer
Hydrogeologist/Environmental Bureau Chief

DGB:smd

October 21, 1987

Page 2

Enclosure

cc: The Honorable Joe Harvey, State Senator
W. E. Copeland, Monument, WUC
Sam Small, Monument, WUC
Jeff Taylor, OCD Legal
Jerry Sexton, OCD Hobbs
Jon F. Thompson, EID Community Services Bureau
Dennis McQuillan, EID Ground Water
Jennifer Pruett, EID Office of General Counsel
Garrison McCaslin, EID District IV Manager
Jack Block, LGD
Steve Massey, SENMDD
Rusty Rodke, ISC

MONUMENT WATER WELL SETTLEMENT AGREEMENT

This agreement is made by and among Texas - New Mexico Pipeline Company ("Company") and the New Mexico Oil Conservation Division of the Energy, Minerals and Natural Resources Department ("OCD") for the purpose of delineating those actions the parties will take to resolve problems stemming from water contamination in Lea County, New Mexico.

WHEREAS, on or about September 18, 1984, Water Well #1 belonging to the Monument Water Users' ("Association") located in Section 29, Township 19 South, Range 37 East, NMPM, ("existing well") was discovered contaminated with crude oil; and

WHEREAS, a crude oil pipeline owned and operated by the Company was discovered leaking approximately 100 feet from the existing well; and

WHEREAS, under the supervision of OCD the Company installed monitor wells and undertook oil recovery operations in the existing well and an additional recovery well; and

WHEREAS, the monitoring wells discovered that other source(s) of ground water contamination existed in the vicinity of the Association's water wells prior to September 1984; and

WHEREAS, the contamination caused by sources other than the Company appears extensive and widespread in the area of the Company's investigation; and

WHEREAS, the source(s) and extent of this preexisting contamination are not known; and

WHEREAS, in order to assure the community of Monument a safe and adequate water supply, the existing well must be replaced due to the oil contamination; and

WHEREAS, the Company offered to replace the existing well with a comparable new well that would provide service equal and be located near Association's existing water lines; and

WHEREAS, association, OCD and certain other State agencies, including the Environmental Improvement Division, the Department of Finance and Administration, the Community Development Council, and the Southeastern New Mexico Economic Development District, recommended that in lieu of the comparable new well proposed by the company, a new well should be provided for the Association of better quantity and quality than the existing well and be located approximately three (3) miles north of the existing facility so as to avoid the likelihood of contamination from past and existing oil field operations; and

WHEREAS, said well was drilled in March 1986, in the NE/4, NE/4, NW/4 Section 20, Township 19 South, Range 37 East, at a distance of approximately one and one-half (1½) miles north of the existing well; and

WHEREAS, said new well was discovered contaminated with natural gas, dissolved hydrocarbons, and excess dissolved salts when tested in June 1986; and

WHEREAS, the OCD has determined that the Company is not the source of this newly-discovered contamination; and

WHEREAS, additional actions to located a potable water supply are being pursued by the Association, including the possible drilling of a second replacement well; and

WHEREAS, OCD is a duly created agency of the State of New Mexico charged by law to regulate the production of oil and gas and to protect fresh water which may be affected by such operations; and

WHEREAS, OCD is authorized to seek injunctive relief and civil penalties for violations of the the Oil and Gas Act (70-2-1 et seq, NMSA 1978); is also authorized to administer and enforce the Water Quality Control Commission ("WQCC") regulations adopted under the New Mexico Water Quality Act, Sections 74-6-1

et seq. NMSA (1978 Repl.); and is also authorized to enforce the public nuisance statutes and to seek injunctive relief to abate a public nuisance and the public nuisance of polluting water, including ground water, as those two nuisance are defined in Sections 30-8-1 and 30-8-2 NMSA 1978 (1984 Repl.), pursuant to Section 30-8-8 NMSA 1978 (1984 Repl.); and

WHEREAS, prior to the signing of this agreement, the Company has provided to OCD an updated report dated April 27, 1987, summarizing recovery efforts and results obtained subsequently through October 1986; and

WHEREAS, the OCD has reviewed the report and other available information and agrees that the Company has subsequeentially completed recovery of free oil in the area of the pipeline leak; and

WHEREAS, the OCD has determined in a summary letter dated September 8, 1987 that the actions previously taken and those proposed by the Company below are reasonable and in the best interest of the Association and Citizens of the State of New Mexico.

NOW, THEREFORE, in consideration of the foregoing and mutual covenants and promises herein, Company, and OCD agree as follows:

1. The Company shall be obligated, at its sole expense, to excavate a trench up to a total of three (3) miles in length suitable for installation of a water line to connect the Association's contemplated second new well or other replacement water source with the Association's existing water facilities. The trenching distance already completed to the replacement well drilled in Section 20 shall be credited as part of the three (3) mile total. Said trench shall be a minimum of 48 inches deep and 14 inches wide. Due to obstacles such as crossings of existing pipelines, the trench will be deepened where necessary and/or widened to the extent necessary for the water line installation. The excavation will be made along a route designated by the Association and staked at intervals not to exceed 400 feet. Because of safety considerations, trenching shall be concurrent with pipeline installation to the extent possible.
2. The Company shall remove any remaining equipment from the contamination site and recovery well area within 30 days of signing this Agreement.
3. The Company shall remain responsible for final plugging of the monitor and recovery wells drilled by the Company; however, the date by which such wells must be plugged is at the discretion of the Company. Prior to plugging, the

method of plugging shall be approved by the OCD Hobbs District Supervisor and that office notified upon completion.

4. This Agreement is executed by the parties for the sole purpose of compromising and settling all disputes concerning cleanup of all contamination caused by the Company specified in the above Statement of Dispute. The terms, execution, and/or performance of this Settlement Agreement shall not constitute an admission of any fact or liability by the Company.
5. The parties agree that they will act reasonably and in good faith at all times to accomplish the purpose of this Agreement, and will perform all evaluations required by this Agreement using sound scientific judgment.
6. The OCD hereby releases Company from any claim, demand, or cause of action that it may possess arising out of, or in connection with, or in any way incidental to, the contamination of Association's existing well, including, without limitation, claims for any other expenses not accepted by Company herein relating to construction of the new well, water line and associated facilities, including but not limited to, expenses of hauling, stringing and installing pipe, surveying, construction of fence gaps, boring of roads, padded backfilling, testing, reseeding,

acquiring necessary rights-of-way for the trench, and soil and aquifer restoration except as described in paragraph 7. OCD agrees not to pursue any other relief, civil criminal, or administrative, except that described in paragraph 7, including OCD's right to seek and recover penalties on behalf of other parties against the Company, its successors, assigns, and employees, that OCD or such parties might have against the Company under the factual allegations set forth above in this document. However, OCD retains the right to seek enforcement of this Agreement pursuant to paragraph 10, and to seek and collect appropriate penalties if the Company fails to comply with the terms of this Agreement, as described in paragraph 10.

7. Notwithstanding the limitations in paragraph 6, the OCD retains the right to pursue any and all relief from the Company in the future should OCD begin a statutory authorized comprehensive regional remedial action program affecting or including contamination from the Company described herein. For purposes of the paragraph, the term "regional" shall be defined to include an area of 4 square miles or more.
8. The provisions of this Agreement shall apply to and be binding upon OCD, the New Mexico Water Quality Control Commission, their respective successor agencies of

government, their employees, administrators, contractors, consultants, and agents, employees, receivers, successors, trustees, assigns, heirs, executors, and contractors.

9. This agreement does not release the Company from actions which could be taken pursuant to federal laws, or state laws or regulations adopted to comply with present or future federal statutes, or state laws, or programs administered by other state agencies and not described in paragraphs 6 and 7 and administered solely by OCD.
10. Notwithstanding anything contained herein, failure of the Company to comply substantially with any of the terms and conditions herein obligates the Company to pay a penalty of One Thousand Dollars (\$1,000.00) per day for each of violation. Notice of such noncompliance and penalty shall be given in writing by OCD to the Company. Payment for such violation shall be by certified check payable to State of New Mexico c/o Oil Conservation Division.
11. This Agreement is effective when signed by all parties to the Agreement. This Agreement shall terminate when the Company has fulfilled all requirements of this Agreement, notified OCD in writing, and upon OCD's written approval thereof.

FOR:

TEXAS - NEW MEXICO PIPELINE COMPANY

DATE: _____

FOR:

THE OIL CONSERVATION DIVISION

DATE: _____

FOR:

THE WATER QUALITY CONTROL COMMISSION

DATE: _____

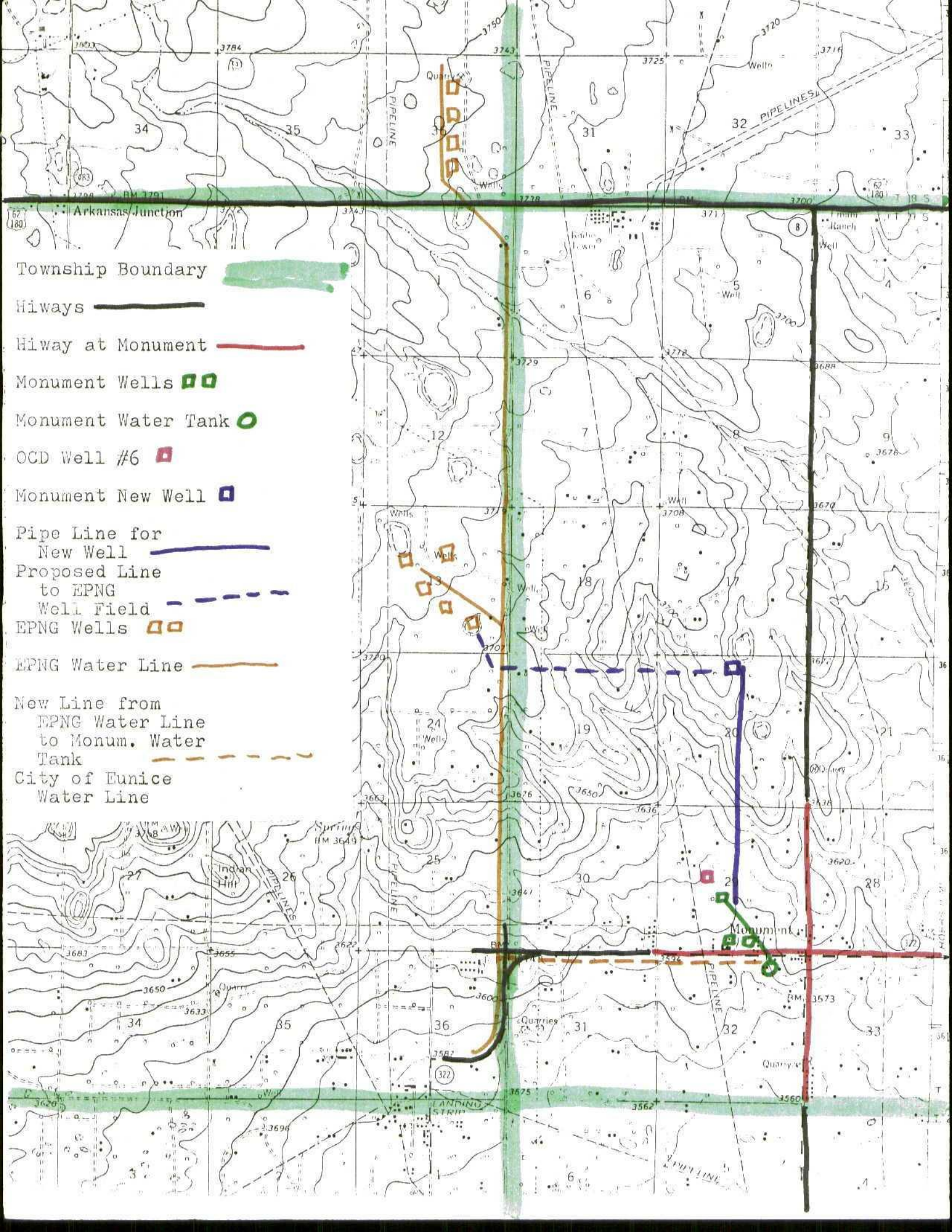
October 21, 1987

Page 2

Enclosure

cc: ~~The Honorable Joe Harvey, State Senator~~
~~W. E. Copeland, Monument, WUC~~
~~Sam Small, Monument, WUC~~
~~Jeff Taylor, OCD Legal~~
~~Terry Sexton, OCD Hobbs~~
~~Don F. Thompson, EID Community Services Bureau~~
~~Dennis McQuillan, EID Ground Water~~
~~Jennifer Pruett, EID Office of General Counsel~~
~~Garrison McCaslin, EID District IV Manager~~
~~Jack Block, LGD~~
~~Steve Massey, SENMDD~~
~~Rusty Rodke, ISC~~

*Interagency
Runnels Bldg
Santa Fe*



Township Boundary

Hiways

Hiway at Monument

Monument Wells

Monument Water Tank

OCD Well #6

Monument New Well

Pipe Line for
New Well

Proposed Line
to EPNG
Well Field

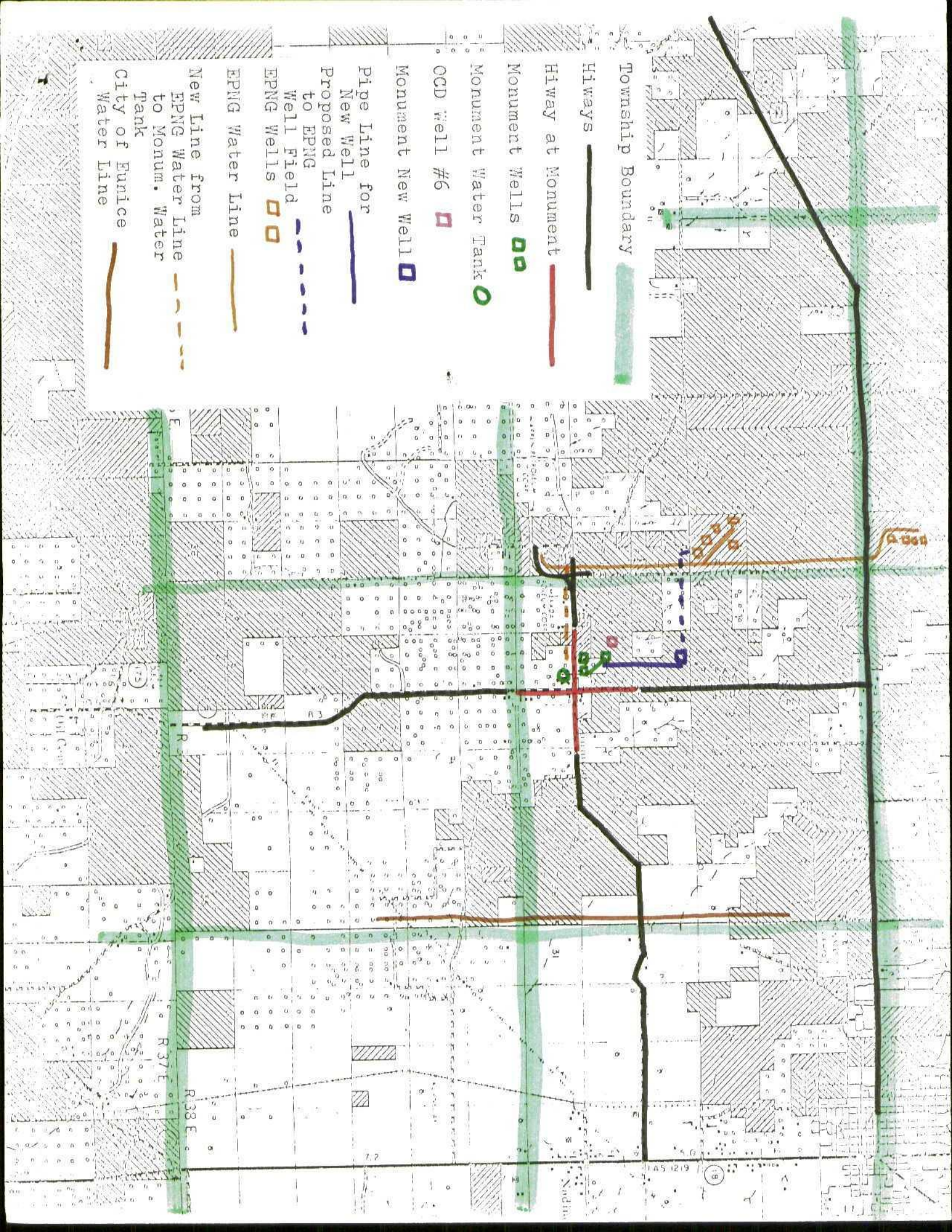
EPNG Wells

EPNG Water Line

New Line from
EPNG Water Line
to Monum. Water
Tank

City of Eunice
Water Line

- Township Boundary
- Hiways
- Hiway at Monument
- Monument Wells
- Monument Water Tank
- OCD Well #6
- Monument New Well
- Pipe Line for New Well Proposed Line to EPNG Well Field
- EPNG Wells
- EPNG Water Line
- New Line from EPNG Water Line to Monum. Water Tank
- City of Eunice Water Line



R 37 E
R 38 E

145 1219

El Paso Natural Gas Water Wells



3" Transite
1,318'

Well #10

Well #13

Well #12 (6" steel-21')

Well #11 (6" steel-21')

T16S R36E S36

Well #8

Well #9

Well #7

Well #6

Well #5

T19S R36E S13

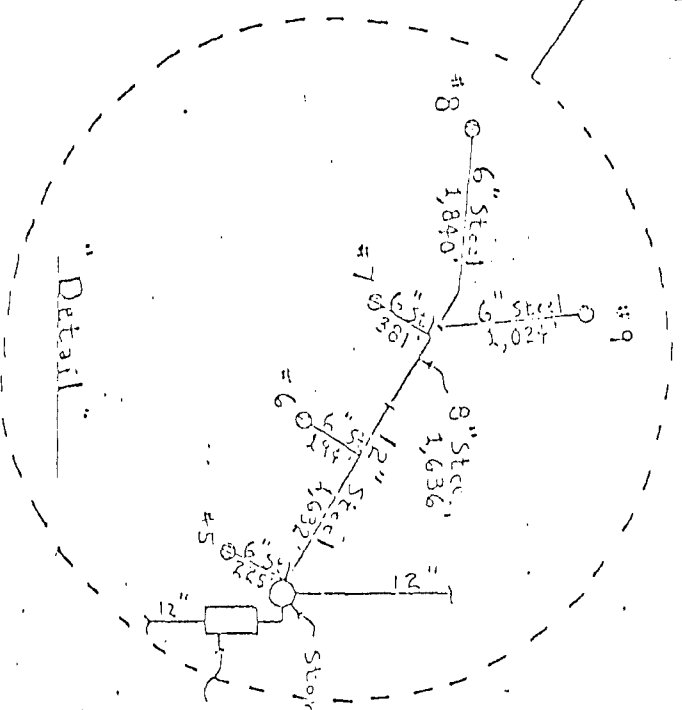
Monument
Plate

6" Steel
1,623'

12" Steel
15,402'

17" Steel
51,308'

Eunice
Plate



Storage Tank
Booster Pumps
(4 Ingersoll-Rand Pumps)

Water Consumption (Average Rate) from 1967	
Eunice	43,953 gpm
Monument	15,323 "
El Paso Production	23,455 "
City of El Paso	4,442 "
Total	83,666 gpm
Output less consumption = 1,615 gpm	

* Figures are based on the assumption that wells are being pumped.

Total No. of Operating Wells in System	
Well #	Output in gpm (1,318' Transite)
#2	1,318
#6	210
#7	152
#9	190
#10	134
#11	222
#12	410
#13	487
#14	490
Total Output	2,452 gpm (if all wells are pumped)

EUNICE-MONUMENT WATER

EL PASO NATURAL GAS COMPANY

EL PASO, TEXAS

1967 11-25-67



ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

007001

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

September 8, 1987

CERTIFIED MAIL
RETURN RECEIPT REQUESTEDMr. B.L. Lednický
Texas-New Mexico Pipeline Company
P.O. Box 2528
Hobbs, New Mexico 88241RE: Contamination of Monument Water Well No. 1: Summary Letter
and Comments on Final Report

Dear Mr. Lednický

OCD has received and reviewed your report entitled "Investigation and Abatement Program Report, Texas-New Mexico Pipeline, Monument New Mexico, 27 April, 1987" prepared by Ground Water Technology, Inc. of Englewood, Colorado. Your report was submitted pursuant to my request of May 22, 1985. The report, plus information previously submitted by Texas-New Mexico Pipeline and supporting data gathered by this agency (OCD) and the Environmental Improvement Division (EID) have led to the drafting of a settlement agreement by OCD which is under legal review by this agency and the EID. The agreement, when properly signed and executed, will release Texas-New Mexico Pipeline Company from further enforcement action for ground water contamination from the pipeline break, including contamination of Monument's water well, under state laws and regulations which this agency administers. These include the New Mexico Oil and Gas Act, and the New Mexico Water Quality Act. It will not, however, release you from actions which could be taken pursuant to federal laws, or state laws or regulations adopted to comply with present or future federal statutes, or state laws or programs administered by other state agencies adopted or initiated to provide regional cleanup of contamination. Examples of such federal statutes include the Federal Resource, Conservation and Recovery Act (RCRA) and Superfund (CERCLA).

When a settlement agreement is negotiated between the State of New Mexico and a party responsible for a ground water contamination, the agreement generally specifies that the

Boyer Ex 10

reclamation proposal include technology capable of removing dissolved, emulsified and free-floating petroleum product from the aquifer so that no explosive concentrations are present, no undesirable odors are present, dissolved hydrocarbon concentrations meet Water Quality Control Commission Regulations, and soils contain no hydrocarbons capable of recontaminating ground water. As discussed below, Texas-New Mexico Pipeline Company has not totally satisfied these requirements but, because of extenuating circumstances, will be released from OCD administered State enforcement actions as described above.

History of the Incident

On September 18, 1984, Monument Water Well No. 1 was discovered contaminated by crude oil and explosive vapors. A six-inch gravity-flow crude-oil line was found to be leaking oil at a collar connecting two pipe lengths. The leak was estimated to be approximately 100 feet from the water well, and surface pooling and contaminated soil extended up to several hundred feet northwest and southeast from the break along the pipeline trench.

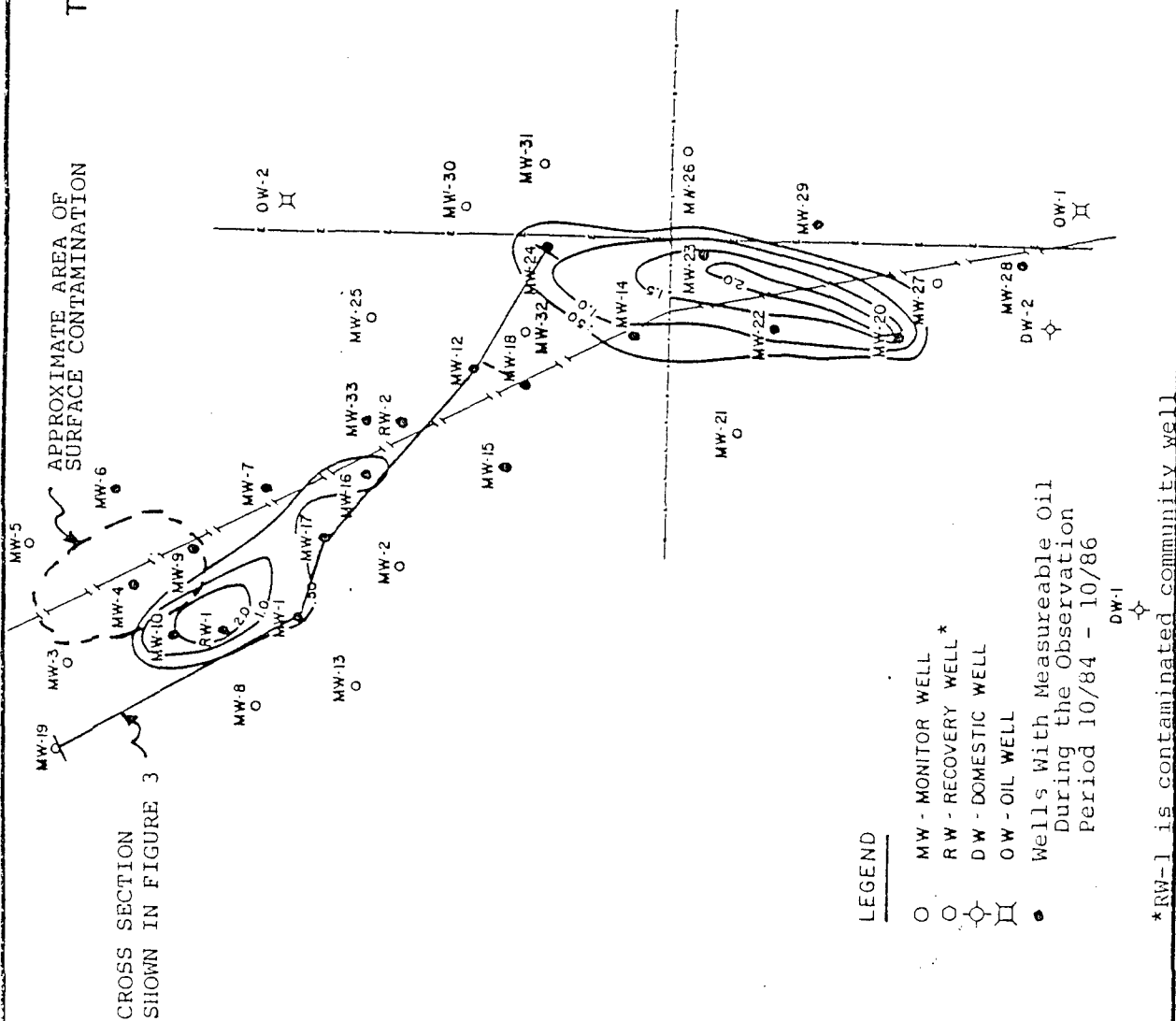
The pipeline was excavated for a distance of approximately 1500 south of the contaminated soil and no other breaks were located. Estimates of surface contamination were one acre by the company and 3 acres by EID. The pipeline company was unable to estimate the total crude oil lost but surface cleanup recovered approximately 1000 barrels (42,000 gallons). Subsurface cleanup recovered an additional 450.5 barrels (18920 gallons).

Beginning on October 4, 1984, the first eight monitor wells were installed. An additional 21 wells were installed by mid-October and another four in December, 1984. A total of 33 monitor wells were drilled by the company, and two wells (one the domestic well) were used as recovery wells (Figure 1). All monitor wells were made of PVC and had at least 20 feet of screened interval. During the observation period that extended through October 8, 1986, 21 wells had measurable amounts of crude product, and another five had measurable dissolved hydrocarbons. Several of the remaining wells recorded trace levels of aliphatic hydrocarbons too low to quantify.

OCD Hydrologic Analysis

A hydrologic analysis was performed by OCD shortly after contamination discovery to estimate worst-case rate-of-travel times for ground water in the area. Maximum estimated particle velocity was calculated to be 1.2 feet per day at locations outside the radius of influence of the pumping domestic/recovery wells. The aquifer material listed in the drillers logs was a mixture of sand, clay and gravel, but a hydraulic conductivity for moderately clean sand was chosen to represent worst-case

TEXAS-NEW MEXICO PIPELINE CO.
 MONUMENT TEST WELLS
 SEC. 29 T19 S, R 37 E, M.M.P.M.
 PRODUCT THICKNESS MAP
 15 NOVEMBER 1984



NO SCALE

DW-3

DW-1

DW-2

OW-1

OW-2

MW-1

MW-2

MW-3

MW-4

MW-5

MW-6

MW-7

MW-8

MW-9

MW-10

MW-11

MW-12

MW-13

MW-14

MW-15

MW-16

MW-17

MW-18

MW-19

MW-20

MW-21

MW-22

MW-23

MW-24

MW-25

MW-26

MW-27

MW-28

MW-29

MW-30

MW-31

MW-32

MW-33

RW-1

RW-2

DW-1

DW-2

DW-3

OW-1

OW-2

MW-1

MW-2

MW-3

MW-4

MW-5

MW-6

MW-7

MW-8

MW-9

MW-10

MW-11

MW-12

MW-13

MW-14

MW-15

MW-16

MW-17

MW-18

MW-19

MW-20

MW-21

MW-22

MW-23

MW-24

MW-25

MW-26

MW-27

MW-28

MW-29

MW-30

MW-31

MW-32

MW-33

RW-1

RW-2

DW-1

DW-2

DW-3

OW-1

OW-2

MW-1

MW-2

MW-3

MW-4

MW-5

MW-6

MW-7

MW-8

MW-9

MW-10

MW-11

MW-12

MW-13

MW-14

MW-15

MW-16

MW-17

MW-18

MW-19

MW-20

MW-21

MW-22

MW-23

MW-24

MW-25

MW-26

MW-27

MW-28

MW-29

MW-30

MW-31

MW-32

MW-33

RW-1

RW-2

DW-1

DW-2

DW-3

OW-1

OW-2

MW-1

MW-2

MW-3

MW-4

MW-5

MW-6

MW-7

MW-8

MW-9

MW-10

MW-11

MW-12

MW-13

MW-14

MW-15

MW-16

MW-17

MW-18

MW-19

MW-20

MW-21

MW-22

MW-23

MW-24

MW-25

MW-26

MW-27

MW-28

MW-29

MW-30

MW-31

MW-32

MW-33

RW-1

RW-2

DW-1

DW-2

DW-3

OW-1

OW-2

MW-1

MW-2

MW-3

MW-4

MW-5

MW-6

MW-7

MW-8

MW-9

MW-10

MW-11

MW-12

MW-13

MW-14

MW-15

MW-16

MW-17

MW-18

MW-19

MW-20

MW-21

MW-22

MW-23

MW-24

MW-25

MW-26

MW-27

MW-28

MW-29

MW-30

MW-31

MW-32

MW-33

RW-1

RW-2

DW-1

DW-2

DW-3

OW-1

OW-2

MW-1

MW-2

MW-3

MW-4

MW-5

MW-6

MW-7

MW-8

MW-9

MW-10

MW-11

MW-12

MW-13

MW-14

MW-15

MW-16

MW-17

MW-18

MW-19

MW-20

MW-21

MW-22

MW-23

MW-24

MW-25

MW-26

MW-27

MW-28

MW-29

MW-30

MW-31

MW-32

MW-33

RW-1

RW-2

DW-1

DW-2

DW-3

OW-1

OW-2

MW-1

MW-2

MW-3

MW-4

MW-5

MW-6

MW-7

MW-8

MW-9

MW-10

MW-11

MW-12

MW-13

MW-14

MW-15

MW-16

MW-17

MW-18

MW-19

MW-20

MW-21

MW-22

MW-23

MW-24

MW-25

MW-26

MW-27

MW-28

MW-29

MW-30

travel times. Specific capacity data obtained later from the contaminated well yielded a hydraulic conductivity less than, but in the range of, the moderately clean sand value. Using the previously chosen sand value (3.3×10^{-4} ft/sec) in the analyses, it would take a minimum of 351 days for dissolved hydrocarbon to reach MW-11(RW-2), 691 days to reach MW-14, and about 3.4 years to reach MW-28. Because oil has a higher viscosity than water, free product will take longer to travel the same distance. Since the spill was confined to the area between MW-4 and MW-7, and went undetected for an estimated period of up to several weeks, product in wells south of RW-2, and likely south of MW-16, is unrelated to the spill incident. Other factors demonstrating that oil south of the spill is unrelated to the spill include:

1. MW-26 has dissolved hydrocarbons, and is not located in the direction of the hydraulic gradient from the spill area;
2. October-November, 1984, product thickness maps show several feet of oil in the vicinity of wells MW-20, 22 and 23 and very little or no oil between the spill location and these wells; and,
3. The Monument area has a long history of contamination from earlier production leaks and spills and disposal practices no longer authorized today. The extensive nature of this contamination is far beyond that which could have been caused by this incident.

The final report states that only two wells, both recovery wells, contained measurable product on October 8, 1986, the last measurement date, and the "only minor amounts of phase-separated hydrocarbons remain in the subsurface" as of October 3, 1986. However, I believe that considerable oil remains in the subsurface at other locations. This oil is not necessarily the responsibility of the pipeline company.

My examination of the data collected by the pipeline company during the two-year recovery period indicates that oil presence in a number of the monitor wells located beyond the influence of the recovery wells is directly, but inversely, related to water level elevations. Figure 2 shows ground water levels and product thicknesses for monitor Well No. 18 for two years. Above a critical water level (approximately 78.5 feet for this well) no product is observed while below that level increasing amounts of oil enter the wellbore. The well was screened over the entire distance of water level fluctuation allowing entry of the product to the well at any location. The well logs show hard white caliche at the watertable (Figure 3). I believe that oil is present in fractures and permeable zones in the caliche and connects directly with a monitor well only when the well actually

7005

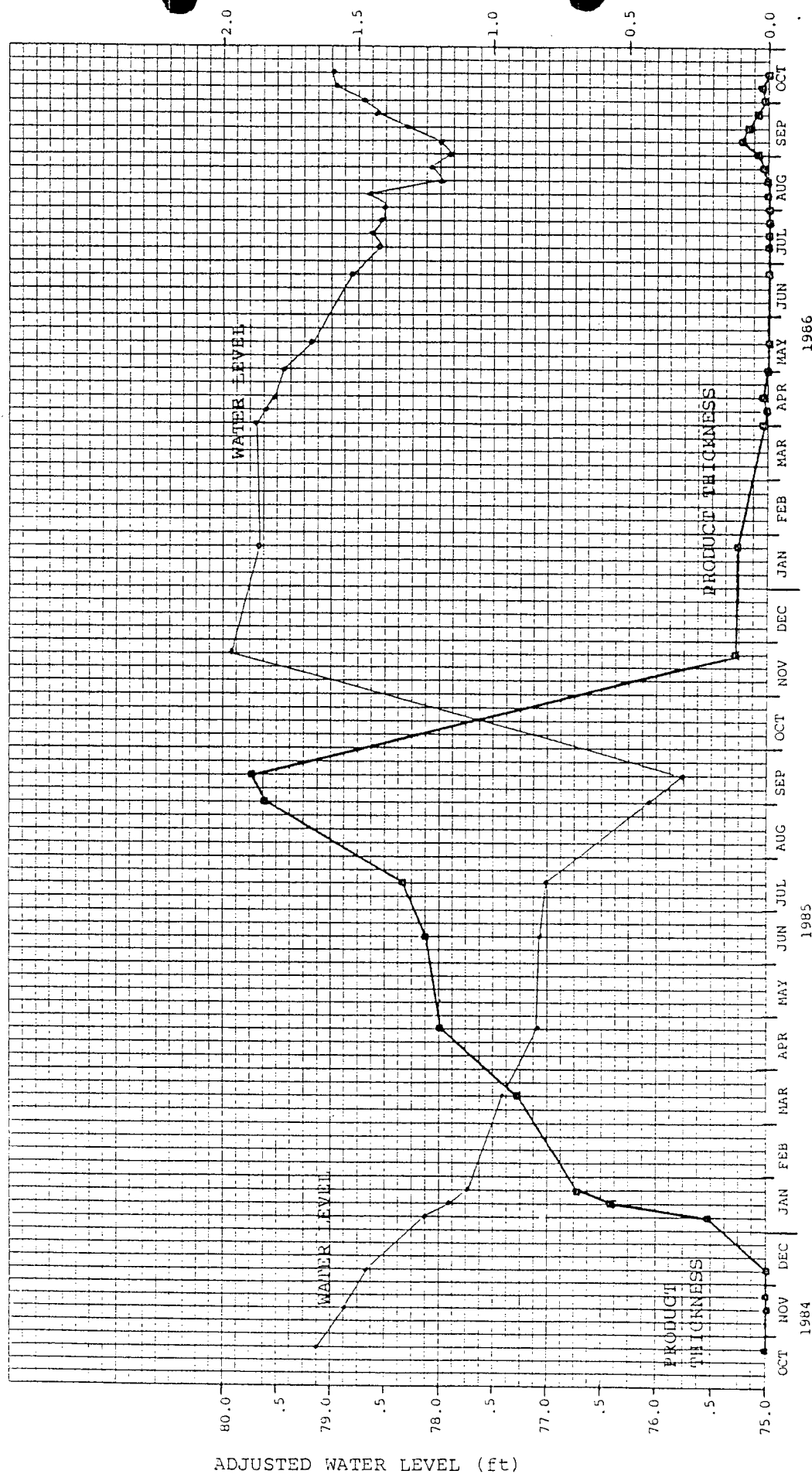
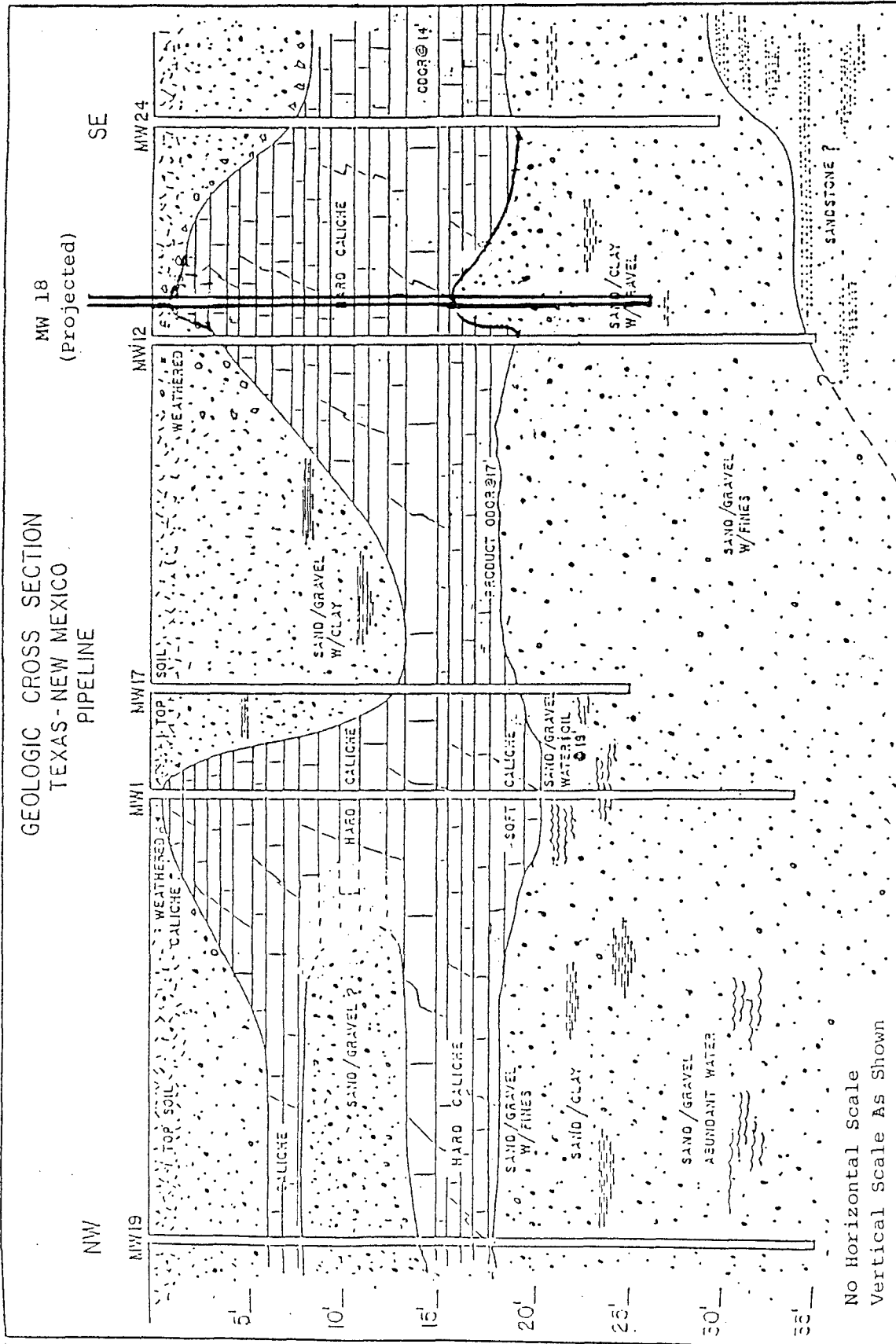


Figure 2. Water Level and Product Thickness for Monitor Well 18

ADJUSTED WATER LEVEL (ft)



*Water Level to Arbitrary Datum of 100 ft at RW-1

Figure 3. Modified Cross-Section Showing Location (Projected) of MW 18.

penetrates the oil zone during drilling. Otherwise the well will remain "clean" (although it may have an odor or contain dissolved hydrocarbons). Since most fractures or zones will likely be connected with the saturated zone, when water levels drop the oil drains out of these areas and into the well if it intersects one of these pathways. When water levels rise the reverse occurs, and no free product will remain in the well if water levels rise above the critical elevation, and if remaining floating product has been skimmed from the surface. This could be an explanation for floating product to appear weeks after the well was drilled, which otherwise could lead to an erroneous conclusion that oil is rapidly traveling towards a water supply.

Current and Future Status

The final report shows that very little oil was being recovered at the time pumping and recovery efforts ceased in 1986 (Figure 4). Continued clean-up efforts by the company, especially treatment for dissolved hydrocarbons, would have little impact on overall water quality given the pre-existing widespread brine and hydrocarbon contamination. Consequently on October 3, 1986, the OCD authorized cessation of recovery efforts and removal of equipment from the site.

OCD will not require any continued or future monitoring by the pipeline company at this location. OCD does not plan to use the company-drilled wells, and the responsibility for the monitor wells will remain with the company. Unless otherwise authorized by State Engineer Permit, the company-drilled wells should be plugged, and OCD so-notified, when they are no longer needed by the company. This provision will be placed in the settlement agreement. Also in this agreement will be a provision requiring the company to complete the remaining waterline trenching proposed in the company's original settlement agreement of April, 1985.

As stated earlier, the extensive nature of the Monument contamination, far beyond what possibly could have been caused by this incident, requires that a regional approach to investigation and cleanup be used to address the problem. OCD knows of no such effort now being considered. If such an effort were to be undertaken, the response and activity of the pipeline company in the current incident would certainly be credited towards any eventual cleanup goal and costs.

CUMULATIVE PRODUCT RECOVERY RW1 & RW 2

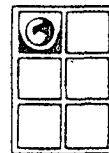
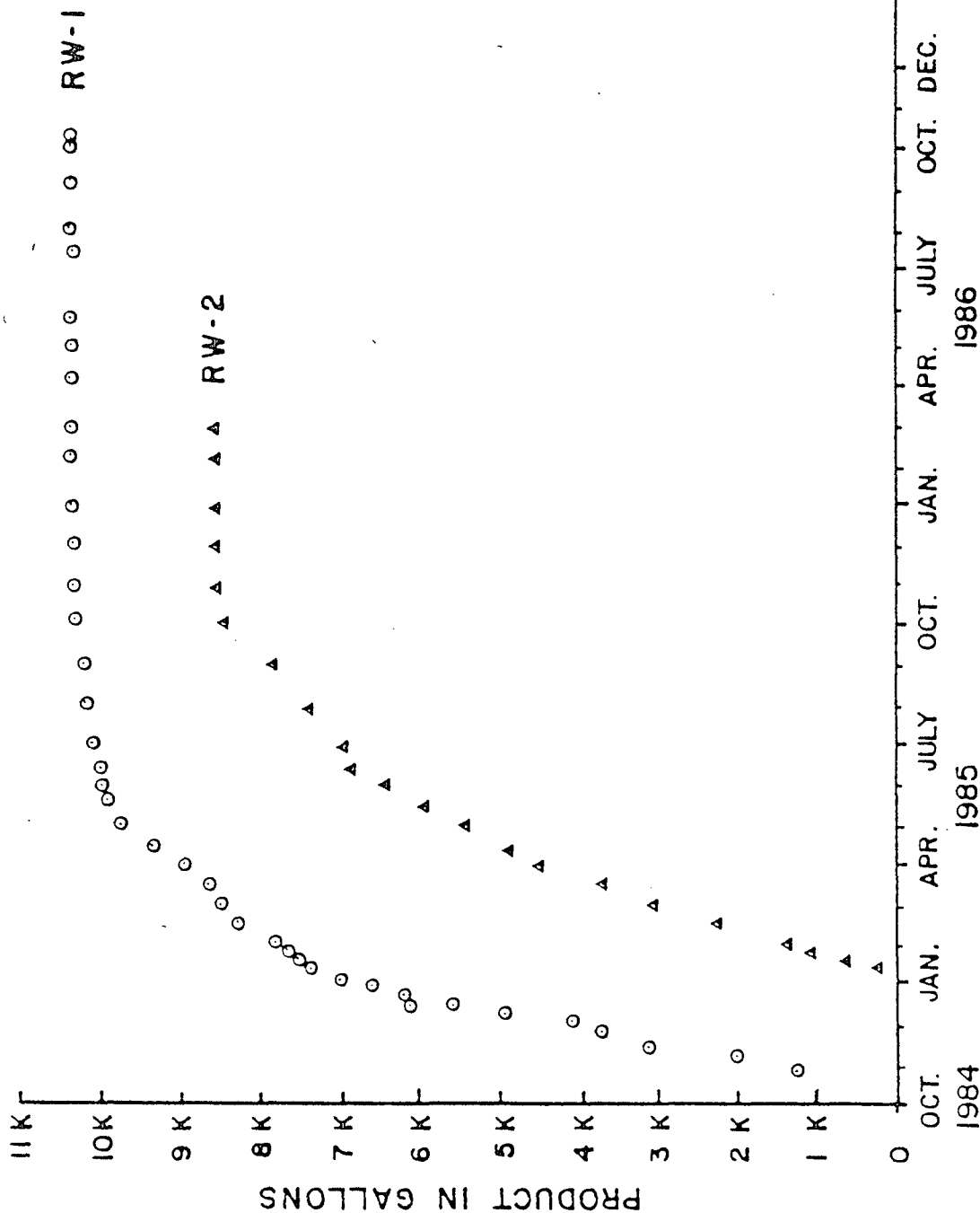
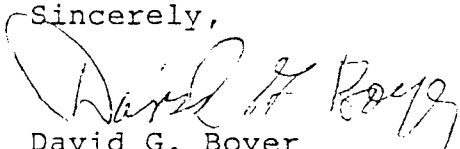


Figure 4. Cumulative Product Recovery

The OCD will be providing a draft copy of the settlement agreement when in-house review is complete. In the meantime, if you have any questions please contact me at the above address or by phone at 827-5812.

Sincerely,



David G. Boyer
Hydrogeologist/Environmental Bureau Chief

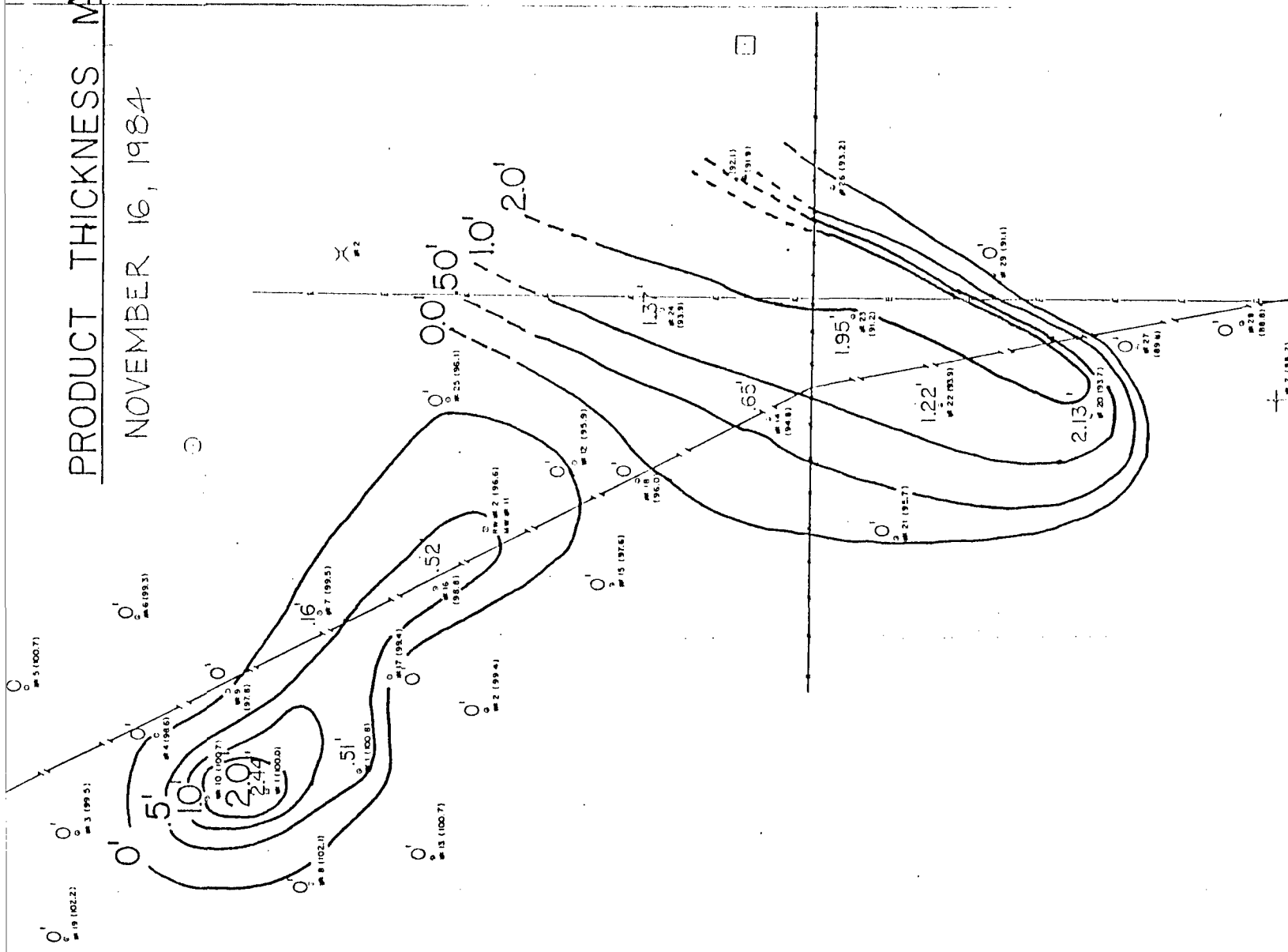
DGB:cr

Attachments

cc: The Honorable Joe Harvey, State Senator
W.E. Copeland, Monument, WUC
Sam Small, Monument WUC
W.J. LeMay, OCD Director
Jeff Taylor, OCD Legal
Jerry Sexton, OCD Hobbs
Jon F. Thompson, EID Community Services Bureau
Patrick Olachea, EID Construction Grants
Dennis McQuillan, EID Ground Water
Jennifer Pruett, EID Office of General Counsel
Garrison McCaslin, EID District IV Manager
Jack Block, LGD
Steve Massey, SENMDD
Bill Weber, EID
Rusty Rodke, ISC

NOVEMBER 16, 1984

SEC. 29. Title
Lea County



Boyer Ex 8

LEGEND

●	Motor Well
□	Recovery Well
()	Relative Elevations
—	Electric Line
Δ	Veget
—	Domestic Well
—	Oil Well
—	Storage Tank
—	Test Battery
—	Fence
—	Barred Pipeline

Monument Time & Travel Calculations (9/87)

$K = 3.3 \times 10^{-4}$ ft/sec - Midrange clean sand
(Freeze & Cherry, p. 29)

Average gradient ~ 0.005

Worst case: 0.008

θ Porosity - Lowest 0.2

$$q_w = \frac{KI}{\theta} = \frac{3.3 \times 10^{-4} \text{ ft} \times 0.008 \times \frac{86400 \text{ sec}}{2}}{0.2} = 1.14 \sim 1.25 \text{ ft/d.}$$

P. 6/12/84
Report

Pumped WW #1, Oct 12, 1984, $Q = 25 \text{ gpm}$, $s = 17'$

$$\frac{Q}{s} = \frac{25}{17} = 2.26 \text{ gpd/ft} \sim 1.5 \text{ gpd/ft}$$

$A_e = 17 \times 65\%$
= 11

For 1 day pumping, 100% efficient well
 $\sim 6"$ diam: $T = 3000 \text{ gpd/ft}$ (Johnson, p. 780)

[$A_e = 11$, however; assume efficiency of old well 60-70% (Johnson p. 555)]
DTW = 18' (12/15/84)

$$\text{Sat Thick} = 55' (\text{T.R. \& b.c.}) - 18' = 37'$$

$$K = \frac{T}{b} = \frac{3000}{37} = 81 \text{ gpd/ft}^2$$

$$= 81 \frac{\text{g}}{2 \text{ ft}^2} \times \frac{\text{day}}{86400} \times \frac{\text{ft}^3}{7.48 \text{ gal}} = 1.25 \times 10^{-4} \frac{\text{ft}}{\text{sec}}$$

$$q_i = 0.008 = 0.43 \text{ ft/d.}$$

($\sim 40\%$ of clean sand)
value for worst case

For worst case travel: $q_w = 1.25 \text{ ft/d}$

For best estimate of travel ($K = 81 \text{ gpd/ft}^2$, $I = 0.005$)

$$q_w = 0.22 \text{ ft/d.}$$

Assume break just north of MW 9*:

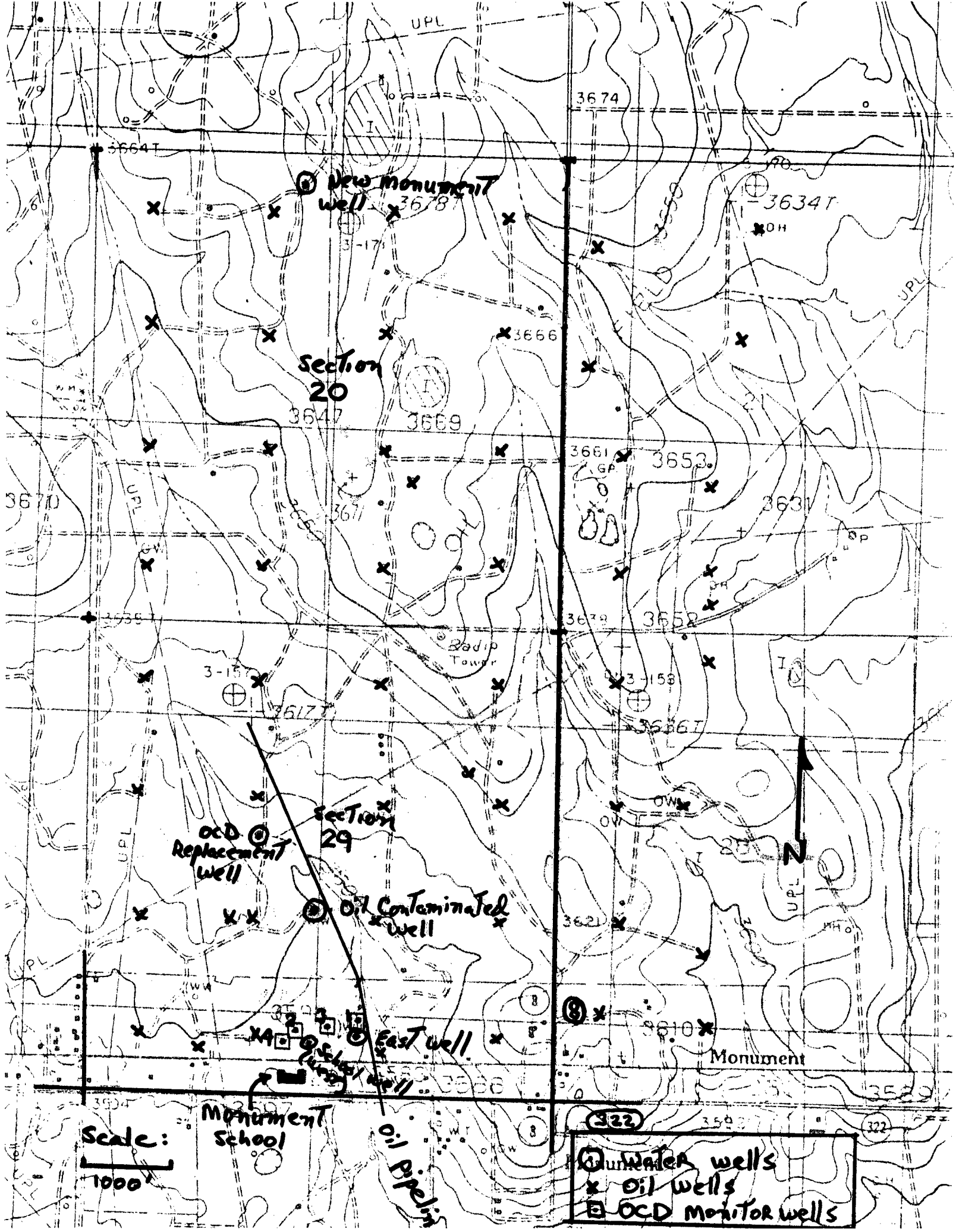
Distance: d (ft)	T_w	T_{be}
Break to RW#2: 421'	351 days	4.2 yrs
MW 16: 321'	268	3.3 yrs
MW 14: 830	691 (1.9 yrs)	8.4 yrs
MW 28: 1496	1247 (3.4 yrs)	15.2 yrs

Distance from "break" to RW 1 (supply well) = 160 ft. Assume
avg gradient $3 \times$ worst case = 0.024

T_w	T_{be}
44 d	124 d (4 months)

[Conclusion - If break went undetected for several weeks at most (14-21 days), well contamination is from some other source unless avg. gradient from pumping well is greater. Likely that both break of greater duration and gradient steeper].

* Break probably between MW 4 & MW 9; MW 9 assumed for calculations of "worst case",



New monument well

Section 20

Section 29

OCD Replacement well

Oil Contaminated well

East well

Monument School

Oil Pipeline

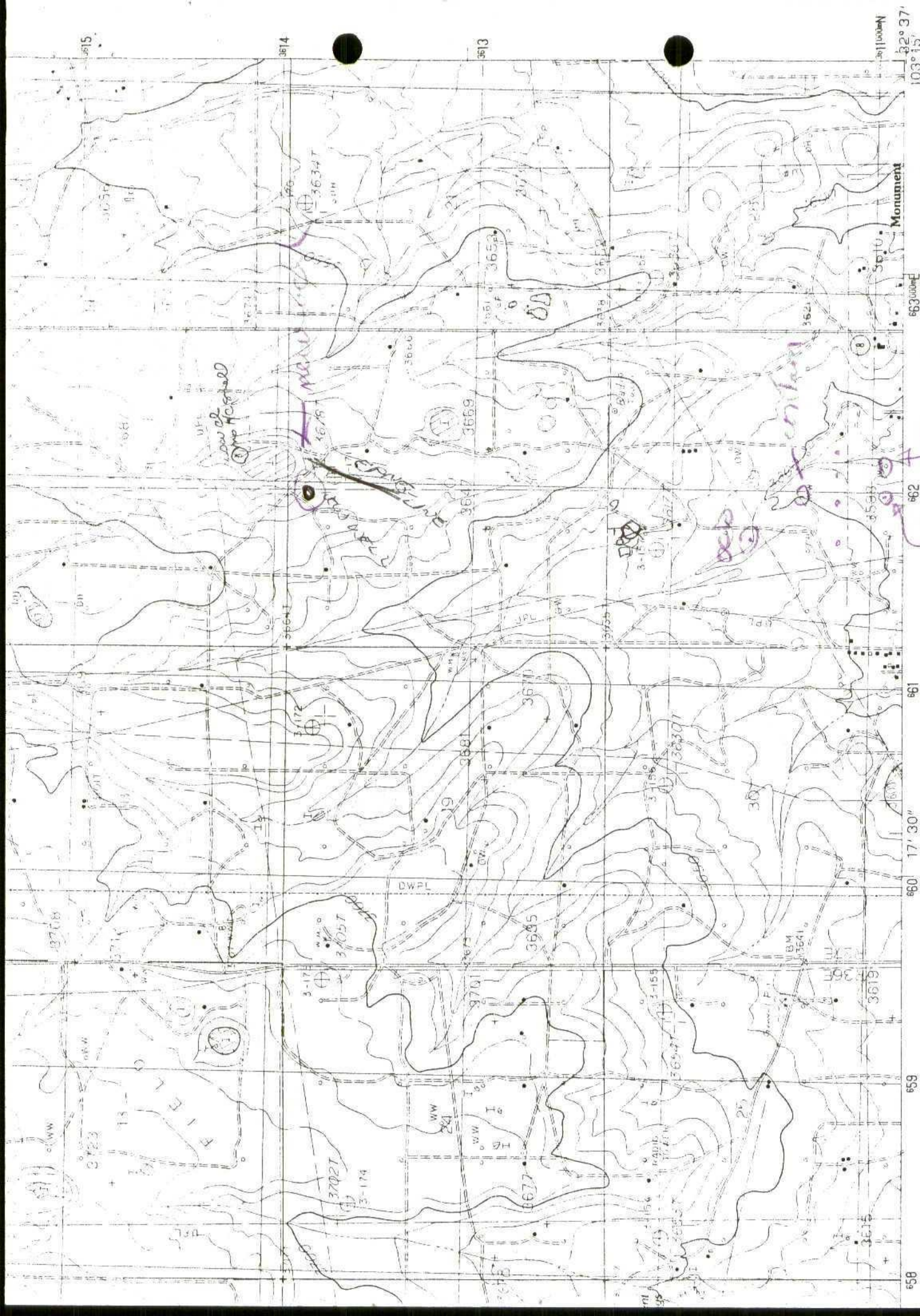
Monument

Radio Tower

N

Scale:
1000'

- Water wells
- Oil wells
- OCD Monitor wells



SCALE 1:24 000



NEW MEXICO

INTERIOR GEOLOGICAL SURVEY, RESTON VIRGINIA - 1985

ROAD LEGEND

8605211300 TANK DRAW PIT

MANAWA MARY WHEELER IE

BRIN DAKOTA

SC 50,000+ yards @ 27°C pH 9.2

8605211415 PUMP HOUSE FAUCET

FLORA VISTA

460

6/16/86 Conco's Transportation

Truck wash drain

8606161015 100

'8-1/16" crude flowing on sump
about 1/2 ft. tanks

John + David Coker - (Mechanic) contact man

6/16/86 New Monument well Pump @ 95'
Ref 60-105'

TD 105 Ref 60-105 8 5/8" aug.

STW 60.0 mld Shut in since lost

$\frac{5 \times 31}{54.69}$ cut THURS. 8/12

8606161110 1st Sample PUMP ON

No HC smell or taste

meter 2244 600

SC 1150 @ 23°C

2 p.m. 1400' C. H. P. 20' of surface

68 gpm lost week

Smell of gas in air fr. battery down
wind

8606161140 2nd sample GWC

meter 2246400

SC 1450 @ 23°C

Time	YOC	NEW MONUMENT	WELL
1110	✓	GWC NO.3	S.C. Temp
1140	✓		1150 23°
1210	✓		1450 23°
1310	✓	✓	1410 24°
1510	✓	1020	1510 25°
1910	✓		1700 24°
			1780 22°
860617			
0730	✓	70°	1600 20°
1100	✓	TEX-MEX	1610 22°
EPNG replacing pipe SE of well had bad section of pipe, flaring where removed clamps.			

CHANGE

EPNG PIPELINE

NEW WELL

00 TANK BATTERY

water (gals)	ELAPSED TIME	
2244600	START	16 SIBEL
2246400	30 min	1 R TANK
2248400	1 HR	
2252800	2 HR	ACCORD? SMOEL
2260600	4 HRS	NO SMOEL
2276600	8 HRS	NO SMOEL
2317300	20 HRS	NO SMOEL
2330600	PH 7.8	24 60gpm NO HC SMOEL

slightly higher elevation fr. well

8606161245 Monument Old
School Backup well
215 gpm TO 40-60'
SHUT DOWN
2300 at rising water, turned
on on downcast

8606161250 MAIN COMMUNITY WELL
DUPLICATE FROM TX MEX
S.C. 970 @ 24°C
sampled at well

8606161420 ¹¹th Replacement well
VOC, GWC, NO₃
DTW 1100 30 1 1/2' cut
new hand pump put out 1000 mg ~~1/2~~
S.C. 1230 @ 25°C
USED 35' well of pipe
pumped 6 min 6" PVC casing
gd taste no HC smell

8606161500 ¹¹th monitor well 4
Hold 22 cut 1'38
TO 335 SC 950 @ 26°C
GWC, VOC
4" PVC casing PUMPED 6 min

8606161600 OGD MW2
Hold 22 cut 1'57 TO 33.7
SC 920 @ 24°C 4" PVC
4" PVC casing GWC, VOC
PUMPED 8 min, getting low in water

8606161625 OGD MW3
Hold 220 cut 4'15 TO 29.3
SC 1550 @ 24°C 4" PVC
Bailed 7 min GWC, VOC
OGD MW1

8606161645 OGD MW1
Hold 220 cut 1'77 TO 32.8
SC 970 @ 24°C 4" PVC
Bailed 8 min GWC, VOC

6/17 Conoco Transportation

Sham field drug

8606170900 grease trap

GWC, HM, VOC

SC 1090 @ 24°C PH 7

oil + grease on barrels

LAGUNA PLATA SEEP

8606171230

~~Down~~ array jr. previously

sampled spring on SW slope of

SC 50,000 ft @ 29°C

102° air temp

Followed array down to shore

of Laguna; stopped by

quicksand outside of fence

posts on shore. Observed

ripple marks 1/2" deep +

Copper? mineral staining

in array. Unable to

obtain sample fr Laguna.



660 17' 30" 661 662 663 103

INTERIOR- GEOLOGICAL SURVEY, RESTON, VIRGINIA- 1984

1 MILE

6000 7000 FEET
1 KILOMETER

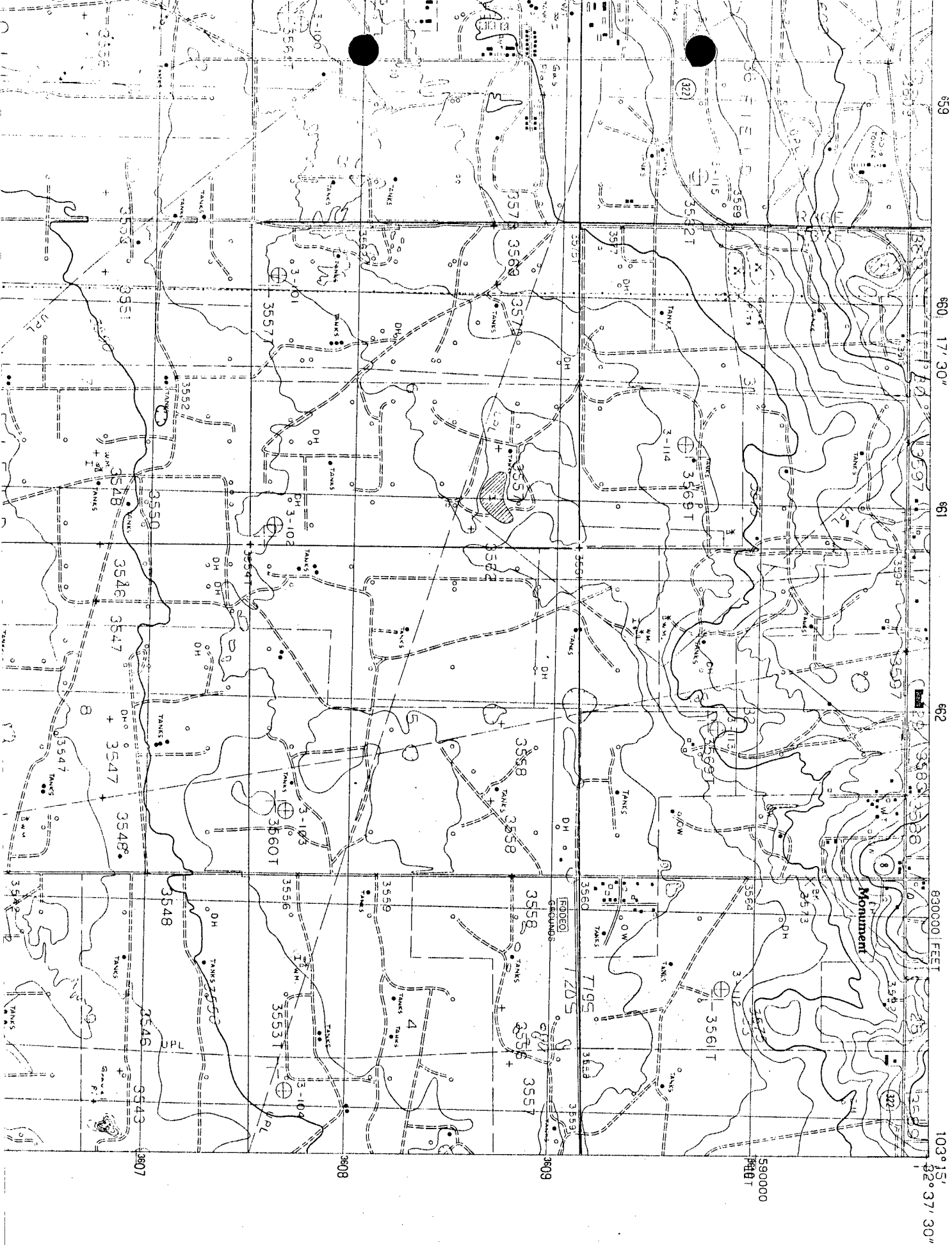


ROAD LEGEND

Improved Road
Unimproved Road
Road

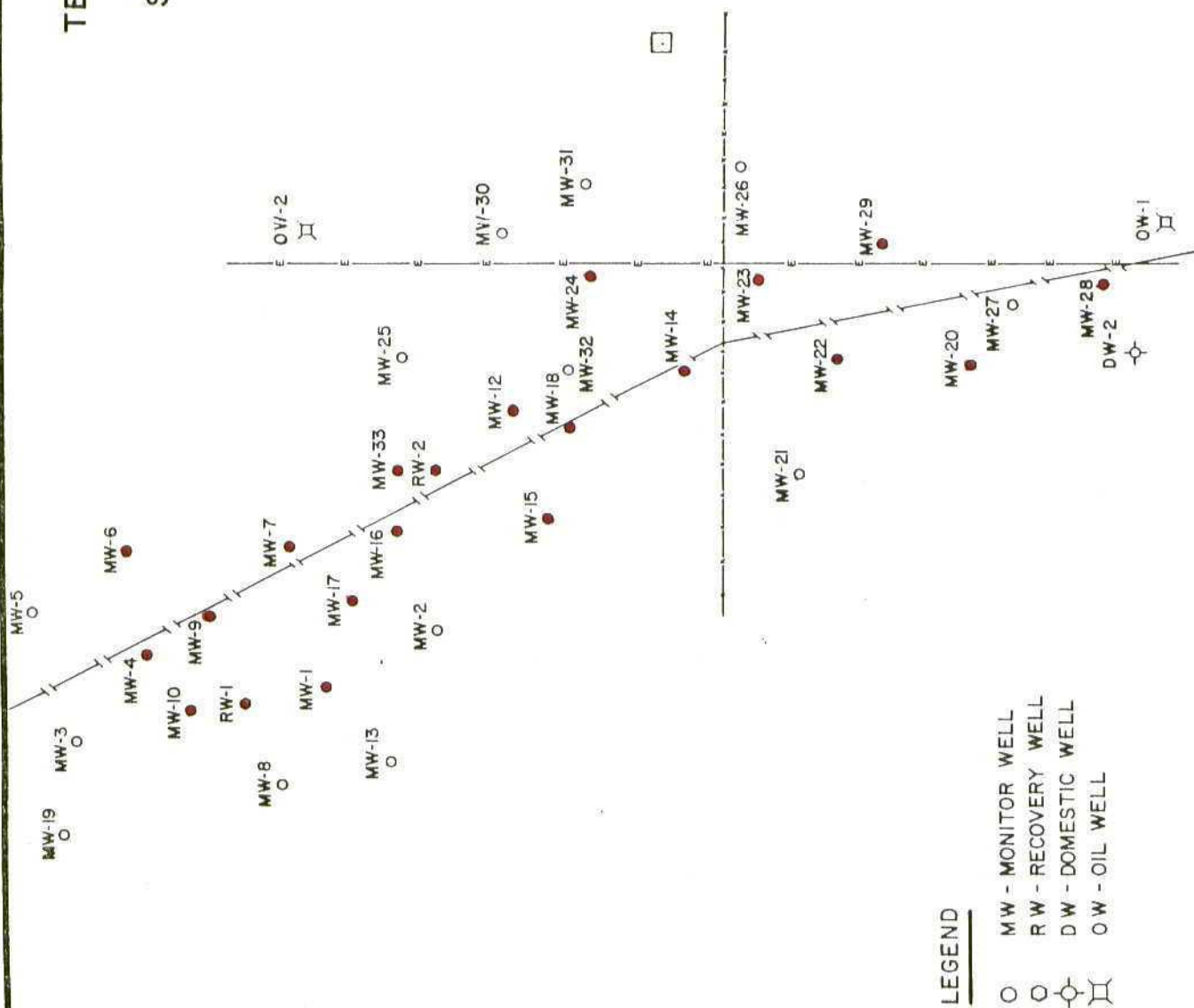
COMPANION LOCATION

MONUMENT SOUTH QUADRANGLE
NEW MEXICO-LEA CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)



TEXAS-NEW MEXICO PIPELINE CO.
MONUMENT TEST WELLS
SEC. 29 T19S, R37E, M.M.P.M.

SITE MAP



NO SCALE

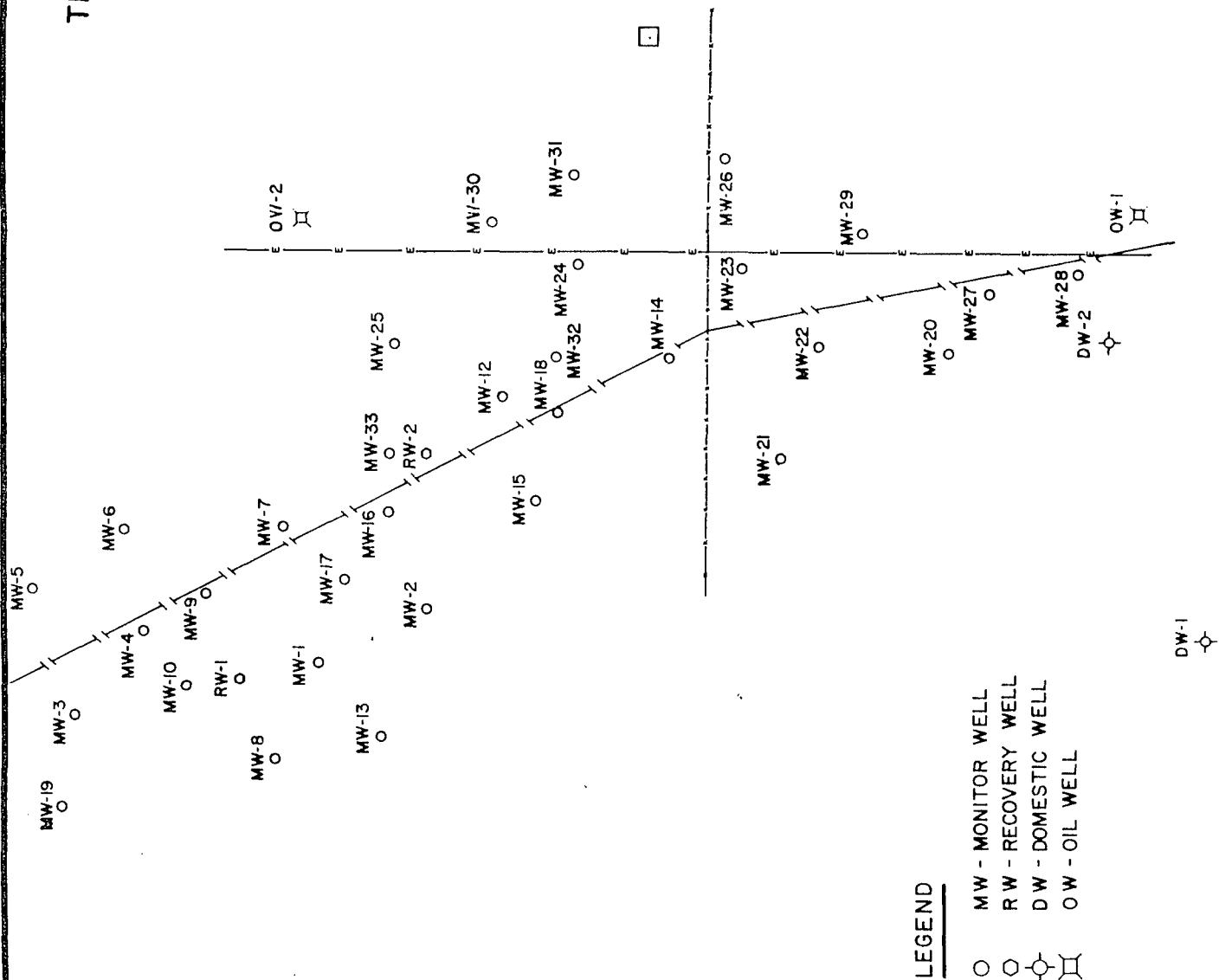
FIGURE 2.



GROUNDWATER
TECHNOLOGY
CONSULTING GROUNDWATER GEOLOGISTS

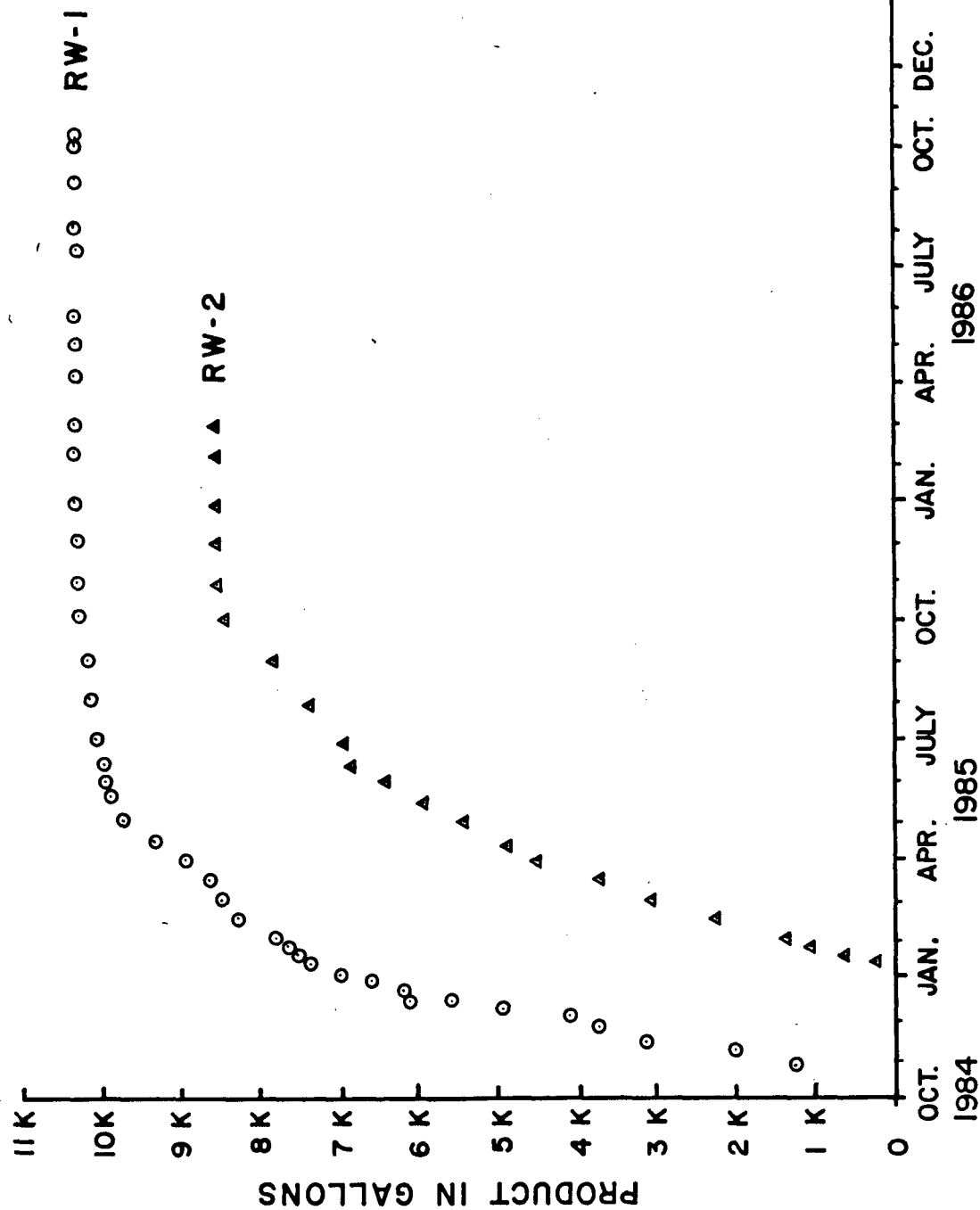
TEXAS-NEW MEXICO PIPELINE CO.
MONUMENT TEST WELLS
SEC. 29 T19S, R37E, M.M.P.M.

SITE MAP



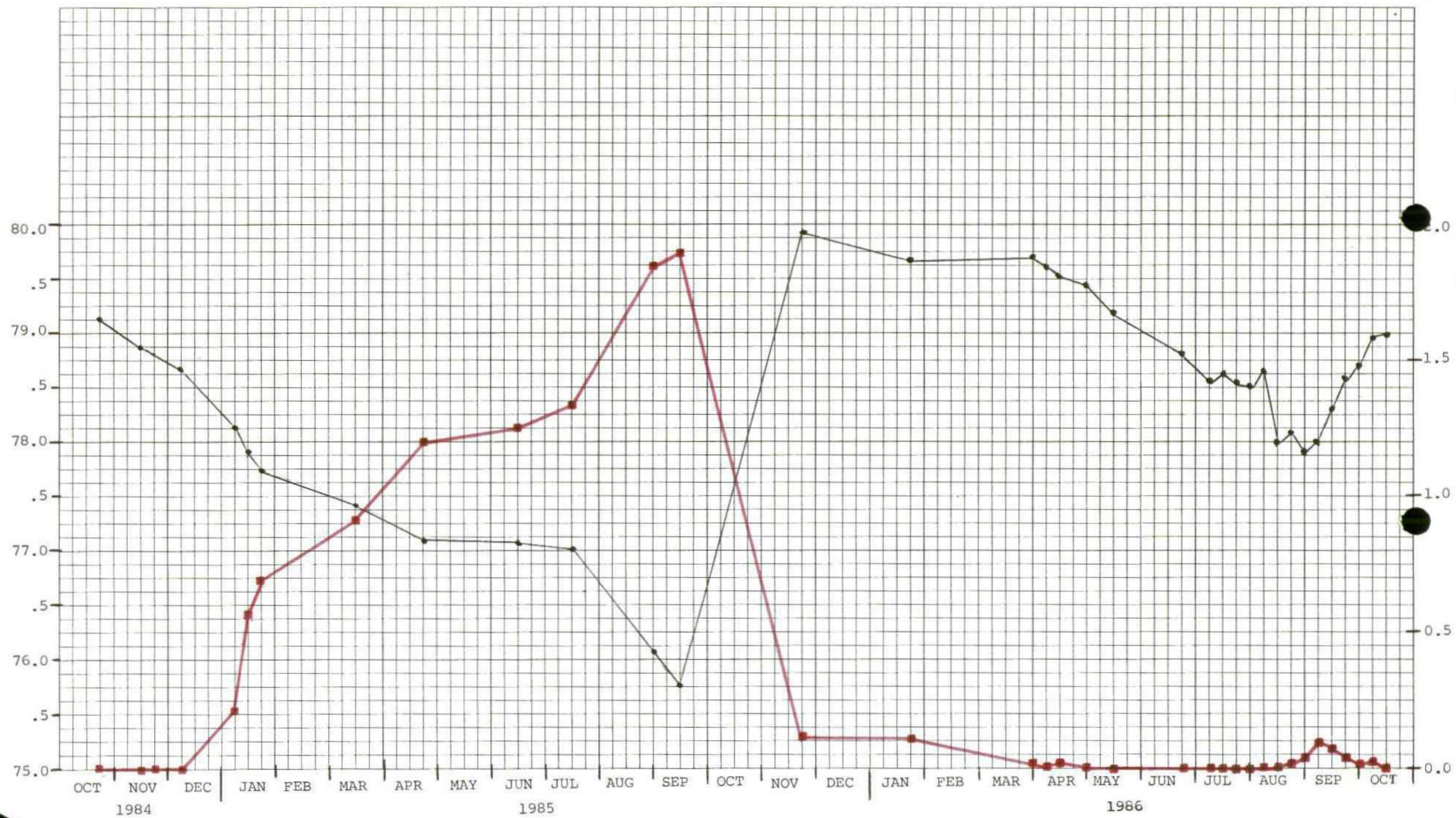
NO SCALE
FIGURE 2.

CUMULATIVE PRODUCT RECOVERY RW1 & RW 2



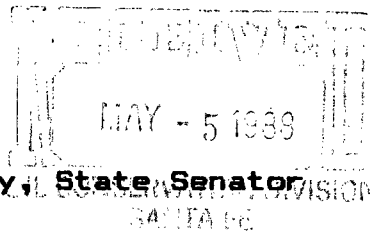
GROUNDWATER
TECHNOLOGY
CONSULTING GROUNDWATER GEOLOGISTS

Figure 8



May 2, 1988

The Honorable Joe Harvey, State Senator
P.O. Box 1501
Hobbs, NM 88240



Dear Senator Harvey:

I am pleased to report that on Friday April 29, 1988 the town of Monument began taking drinking water from it's own well. This event was the culmination of efforts by the community to develop a new source of drinking water after it's original source became contaminated. Many hours were devoted to this project and without the financial support of the State of New Mexico and the major oil and gas companies operating in the area, it's successful completion would not have been realized.

As you remember, contaminated drinking water first appeared in Monument's wells in September, 1984. After attempts to 'clean up' the problem in the existing wells proved unsuccessful, a CBDG grant was solicited from the State to drill a new well north of town and install approximately 1.5 miles of water line. The grant was in the amount of \$125,000, with \$85,915 provided by Texas New Mexico Pipeline Company for the trench and an additional \$15,000 provided by Amerada Hess Corp., ARCO, Chevron, Conoco and El Paso Natural Gas Co.. The well was drilled and the line was installed in 1986. Subsequent testing of the water in the new well revealed that it was also contaminated. An attempt to gain additional funding from the State to drill another well two miles to the northwest of this location and lay additional line was unsuccessful due to a lack of support from the NMEID for the recommendations made in the Engineering feasibility study. The Engineering feasibility study estimated the cost of the project at \$163,000.

After modifying the original recommendation made in the feasibility study and estimating costs utilizing local labor it was determined that the project could be done for a total cost of \$65,000. Amerada Hess Corp., Chevron, and Conoco were again asked to aid in funding the project. Texas New Mexico Pipeline Company agreed to pay for 8000 feet of trench. While the funds were being raised and all the necessary approvals were being garnered from the various State agencies, El Paso Natural Gas Company agreed to supply the town with drinking water on an emergency basis. As stated the project was completed last Friday and while all the bills are not in yet, the cost will be very close to the \$65,000 estimated. We feel that the difference in cost between what we were able to complete the project for with

private funds and the cost estimate of the Engineering feasibility study is worthy of note.

We would like to thank you for your efforts on behalf of the Monument Water User's Cooperative in dealing with the State Land Department and for your efforts to obtain additional funding through the State Legislature for the project.

Sincerely,



Sam Small

V.P. Monument Water User's Coop.

xc: Stuart P. Castle, Drinking Water Section, NMEID
Pat Olacchia, Construction Grants Section, NMEID
Bill Weber, Roswell, NMEID
DAVE Boyer, NMOCD

Mon. File



STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

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

September 8, 1987

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. B.L. Lednicky
Texas-New Mexico Pipeline Company
P.O. Box 2528
Hobbs, New Mexico 88241

RE: Contamination of Monument Water Well No. 1: Summary Letter
and Comments on Final Report

Dear Mr. Lednicky

OCD has received and reviewed your report entitled "Investigation and Abatement Program Report, Texas-New Mexico Pipeline, Monument New Mexico, 27 April, 1987" prepared by Ground Water Technology, Inc. of Englewood, Colorado. Your report was submitted pursuant to my request of May 22, 1985. The report, plus information previously submitted by Texas-New Mexico Pipeline and supporting data gathered by this agency (OCD) and the Environmental Improvement Division (EID) have led to the drafting of a settlement agreement by OCD which is under legal review by this agency and the EID. The agreement, when properly signed and executed, will release Texas-New Mexico Pipeline Company from further enforcement action for ground water contamination from the pipeline break, including contamination of Monument's water well, under state laws and regulations which this agency administers. These include the New Mexico Oil and Gas Act, and the New Mexico Water Quality Act. It will not, however, release you from actions which could be taken pursuant to federal laws, or state laws or regulations adopted to comply with present or future federal statutes, or state laws or programs administered by other state agencies adopted or initiated to provide regional cleanup of contamination. Examples of such Federal statutes include the Federal Resource, Conservation and Recovery Act (RCRA) and Superfund (CERCLA).

When a settlement agreement is negotiated between the State of New Mexico and a party responsible for a ground water contamination, the agreement generally specifies that the

reclamation proposal include technology capable of removing dissolved, emulsified and free-floating petroleum product from the aquifer so that no explosive concentrations are present, no undesirable odors are present, dissolved hydrocarbon concentrations meet Water Quality Control Commission Regulations, and soils contain no hydrocarbons capable of recontaminating ground water. As discussed below, Texas-New Mexico Pipeline Company has not totally satisfied these requirements but, because of extenuating circumstances, will be released from OCD administered State enforcement actions as described above.

History of the Incident

On September 18, 1984, Monument Water Well No. 1 was discovered contaminated by crude oil and explosive vapors. A six-inch gravity-flow crude-oil line was found to be leaking oil at a collar connecting two pipe lengths. The leak was estimated to be approximately 100 feet from the water well, and surface pooling and contaminated soil extended up to several hundred feet northwest and southeast from the break along the pipeline trench.

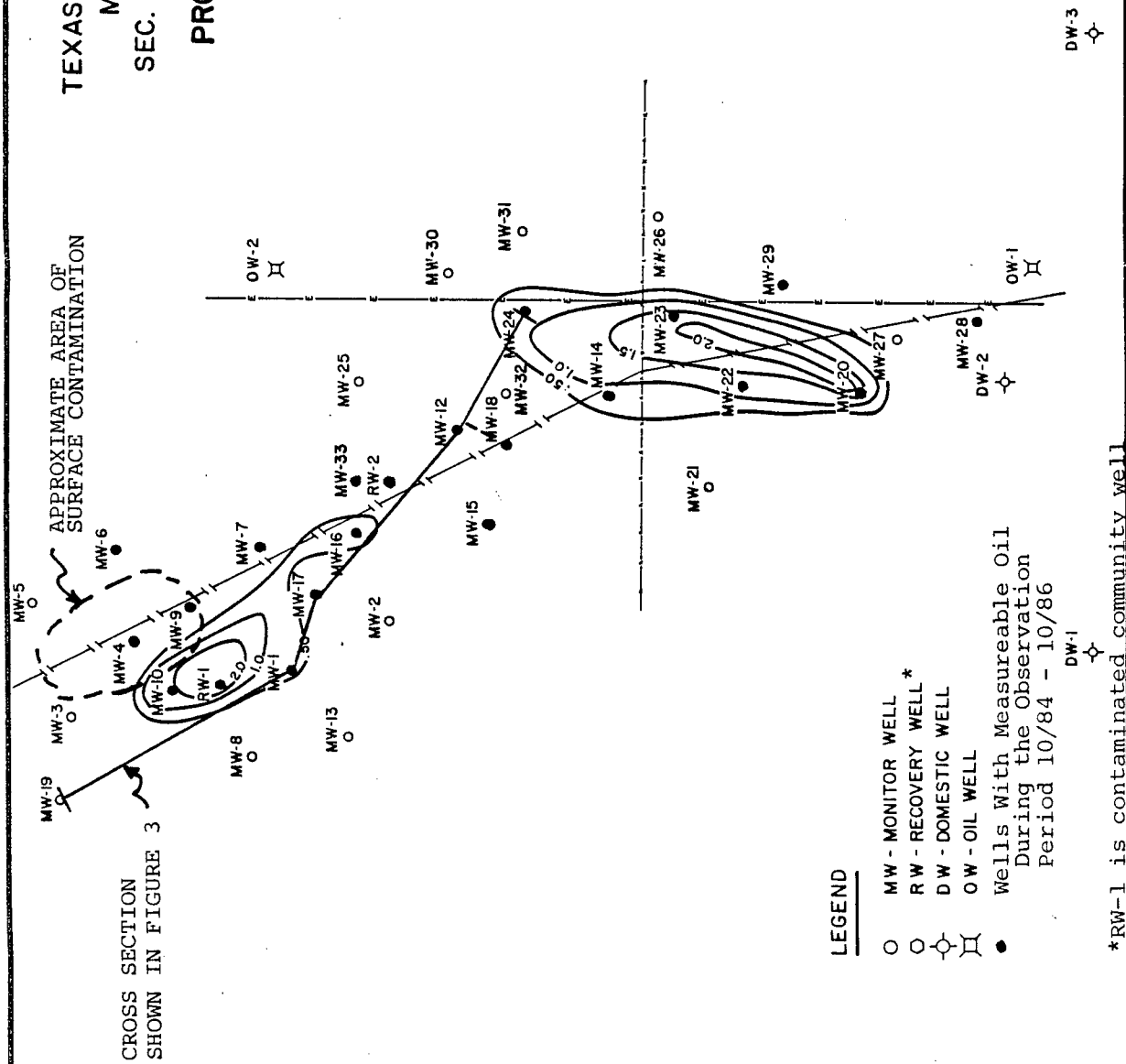
The pipeline was excavated for a distance of approximately 1500 south of the contaminated soil and no other breaks were located. Estimates of surface contamination were one acre by the company and 3 acres by EID. The pipeline company was unable to estimate the total crude oil lost but surface cleanup recovered approximately 1000 barrels (42,000 gallons). Subsurface cleanup recovered an additional 450.5 barrels (18920 gallons).

Beginning on October 4, 1984, the first eight monitor wells were installed. An additional 21 wells were installed by mid-October and another four in December, 1984. A total of 33 monitor wells were drilled by the company, and two wells (one the domestic well) were used as recovery wells (Figure 1). All monitor wells were made of PVC and had at least 20 feet of screened interval. During the observation period that extended through October 8, 1986, 21 wells had measurable amounts of crude product, and another five had measurable dissolved hydrocarbons. Several of the remaining wells recorded trace levels of aliphatic hydrocarbons too low to quantify.

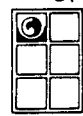
OCD Hydrologic Analysis

A hydrologic analysis was performed by OCD shortly after contamination discovery to estimate worst-case rate-of-travel times for ground water in the area. Maximum estimated particle velocity was calculated to be 1.2 feet per day at locations outside the radius of influence of the pumping domestic/recovery wells. The aquifer material listed in the drillers logs was a mixture of sand, clay and gravel, but a hydraulic conductivity for moderately clean sand was chosen to represent worst-case

TEXAS-NEW MEXICO PIPELINE CO.
 MONUMENT TEST WELLS
 SEC. 29 T19S, R37E, M.M.P.M.
 PRODUCT THICKNESS MAP
 15 NOVEMBER 1984



NO SCALE



GROUNDWATER
 TECHNOLOGY
 CONSULTING GROUNDWATER GEOLOGISTS

Figure 1. Site and Product Thickness Map

travel times. Specific capacity data obtained later from the contaminated well yielded a hydraulic conductivity less than, but in the range of, the moderately clean sand value. Using the previously chosen sand value (3.3×10^{-4} ft/sec) in the analyses, it would take a minimum of 351 days for dissolved hydrocarbon to reach MW-11(RW-2), 691 days to reach MW-14, and about 3.4 years to reach MW-28. Because oil has a higher viscosity than water, free product will take longer to travel the same distance. Since the spill was confined to the area between MW-4 and MW-7, and went undetected for an estimated period of up to several weeks, product in wells south of RW-2, and likely south of MW-16, is unrelated to the spill incident. Other factors demonstrating that oil south of the spill is unrelated to the spill include:

1. MW-26 has dissolved hydrocarbons, and is not located in the direction of the hydraulic gradient from the spill area;
2. October-November, 1984, product thickness maps show several feet of oil in the vicinity of wells MW-20, 22 and 23 and very little or no oil between the spill location and these wells; and,
3. The Monument area has a long history of contamination from earlier production leaks and spills and disposal practices no longer authorized today. The extensive nature of this contamination is far beyond that which could have been caused by this incident.

The final report states that only two wells, both recovery wells, contained measurable product on October 8, 1986, the last measurement date, and the "only minor amounts of phase-separated hydrocarbons remain in the subsurface" as of October 3, 1986. However, I believe that considerable oil remains in the subsurface at other locations. This oil is not necessarily the responsibility of the pipeline company.

My examination of the data collected by the pipeline company during the two-year recovery period indicates that oil presence in a number of the monitor wells located beyond the influence of the recovery wells is directly, but inversely, related to water level elevations. Figure 2 shows ground water levels and product thicknesses for monitor Well No. 18 for two years. Above a critical water level (approximately 78.5 feet for this well) no product is observed while below that level increasing amounts of oil enter the wellbore. The well was screened over the entire distance of water level fluctuation allowing entry of the product to the well at any location. The well logs show hard white caliche at the watertable (Figure 3). I believe that oil is present in fractures and permeable zones in the caliche and connects directly with a monitor well only when the well actually

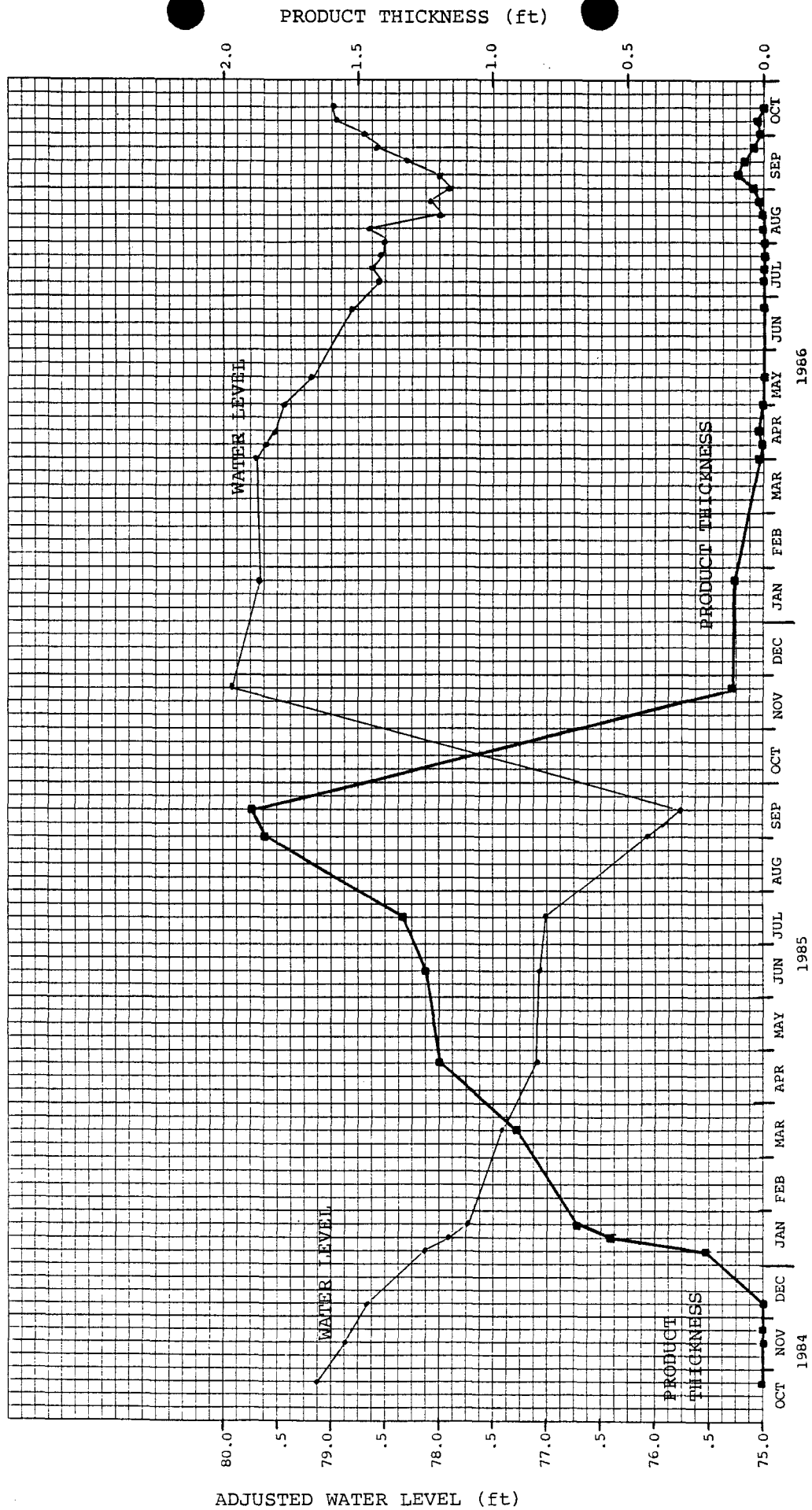


Figure 2. Water Level and Product Thickness for Monitor Well 18

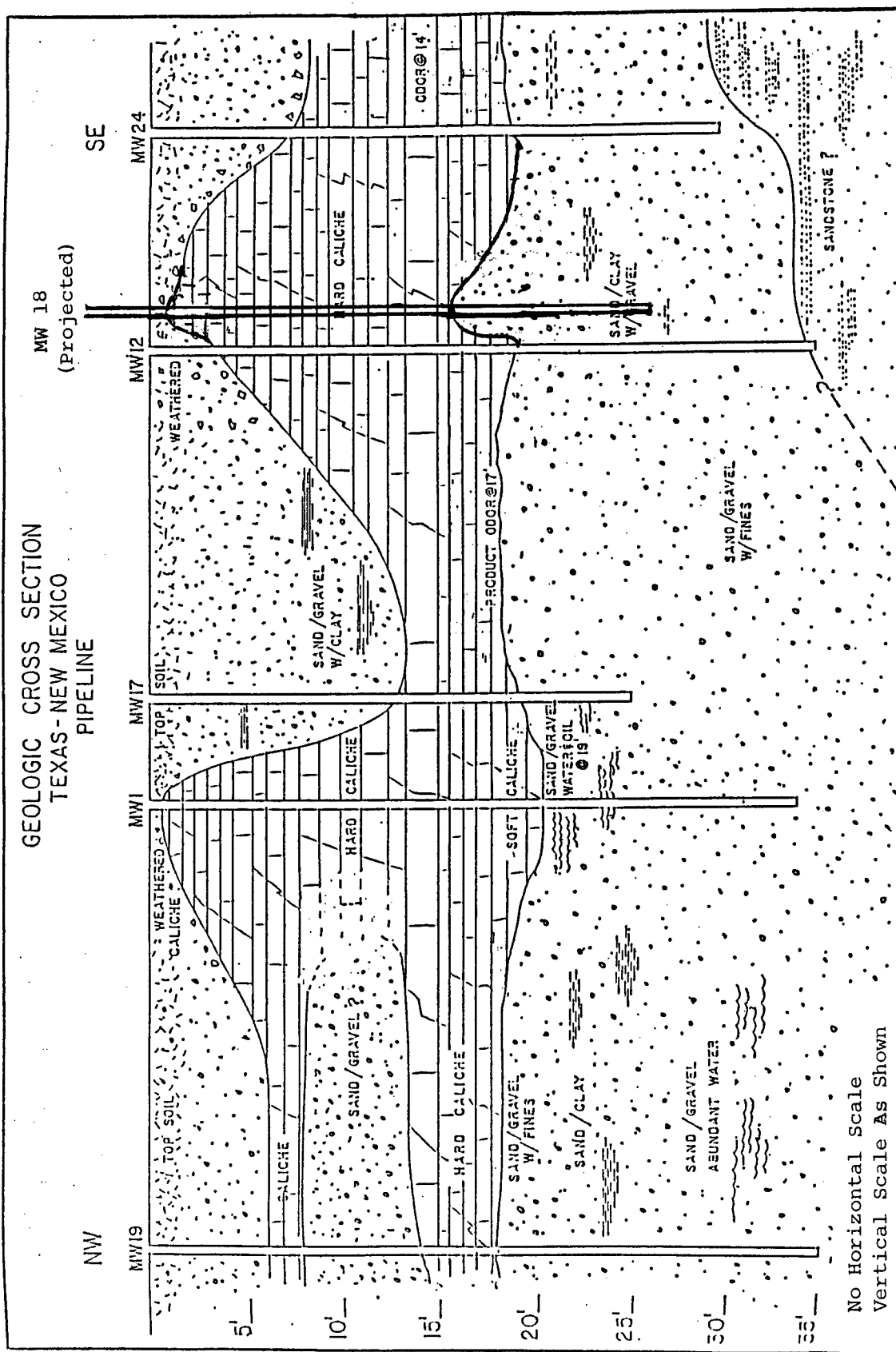


Figure 3. Modified Cross-Section Showing Location (Projected) of MW 18.

penetrates the oil zone during drilling. Otherwise the well will remain "clean" (although it may have an odor or contain dissolved hydrocarbons). Since most fractures or zones will likely be connected with the saturated zone, when water levels drop the oil drains out of these areas and into the well if it intersects one of these pathways. When water levels rise the reverse occurs, and no free product will remain in the well if water levels rise above the critical elevation, and if remaining floating product has been skimmed from the surface. This could be an explanation for floating product to appear weeks after the well was drilled, which otherwise could lead to an erroneous conclusion that oil is rapidly traveling towards a water supply.

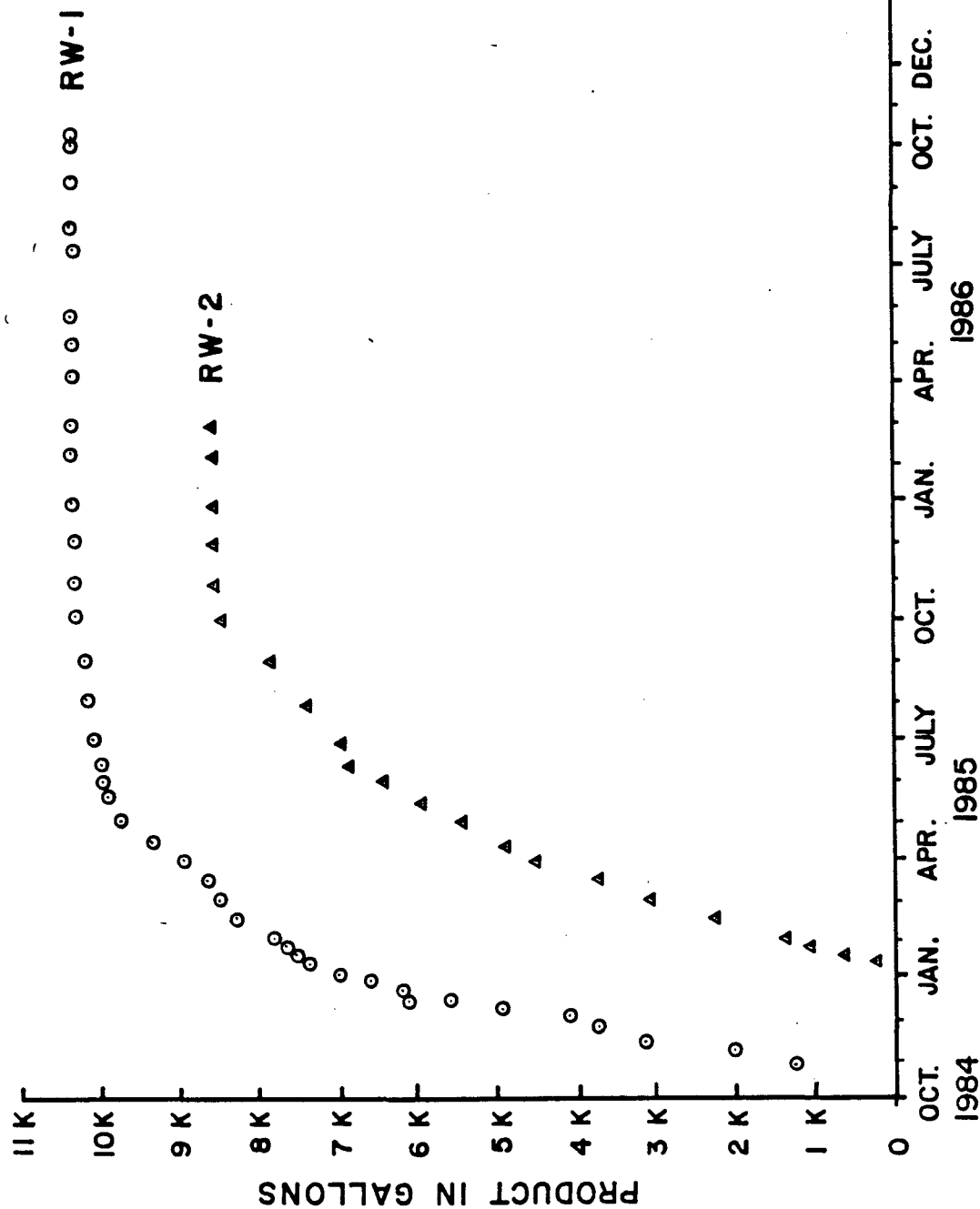
Current and Future Status

The final report shows that very little oil was being recovered at the time pumping and recovery efforts ceased in 1986 (Figure 4). Continued clean-up efforts by the company, especially treatment for dissolved hydrocarbons, would have little impact on overall water quality given the pre-existing widespread brine and hydrocarbon contamination. Consequently on October 3, 1986, the OCD authorized cessation of recovery efforts and removal of equipment from the site.

OCD will not require any continued or future monitoring by the pipeline company at this location. OCD does not plan to use the company-drilled wells, and the responsibility for the monitor wells will remain with the company. Unless otherwise authorized by State Engineer Permit, the company-drilled wells should be plugged, and OCD so-notified, when they are no longer needed by the company. This provision will be placed in the settlement agreement. Also in this agreement will be a provision requiring the company to complete the remaining waterline trenching proposed in the company's original settlement agreement of April, 1985.

As stated earlier, the extensive nature of the Monument contamination, far beyond what possibly could have been caused by this incident, requires that a regional approach to investigation and cleanup be used to address the problem. OCD knows of no such effort now being considered. If such an effort were to be undertaken, the response and activity of the pipeline company in the current incident would certainly be credited towards any eventual cleanup goal and costs.

CUMULATIVE PRODUCT RECOVERY RW1 & RW 2

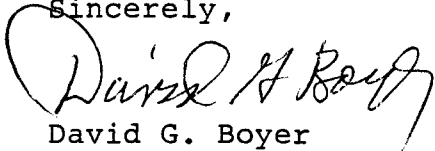


GROUNDWATER
TECHNOLOGY
CONSULTING GROUNDWATER GEOLOGISTS

Figure 4. Cumulative Product Recovery

The OCD will be providing a draft copy of the settlement agreement when in-house review is complete. In the meantime, if you have any questions please contact me at the above address or by phone at 827-5812.

Sincerely,



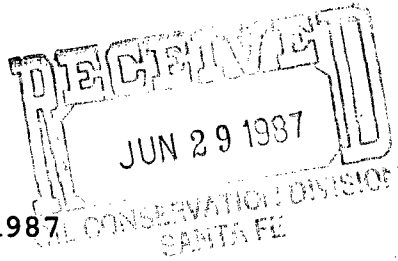
David G. Boyer
Hydrogeologist/Environmental Bureau Chief

DGB:cr

Attachments

cc: The Honorable Joe Harvey, State Senator
W.E. Copeland, Monument, WUC
Sam Small, Monument WUC
W.J. LeMay, OCD Director
Jeff Taylor, OCD Legal
Jerry Sexton, OCD Hobbs
Jon F. Thompson, EID Community Services Bureau
Patrick Olachea, EID Construction Grants
Dennis McQuillan, EID Ground Water
Jennifer Pruett, EID Office of General Counsel
Garrison McCaslin, EID District IV Manager
Jack Block, LGD
Steve Massey, SENMDD
Bill Weber, EID
Rusty Rodke, ISC

June 26, 1987



El Paso Natural Gas Company
One Petroleum Center, Bldg. Two
3300 North "A" Street
Midland, Texas 79705

ATTN: Mr. John Cunningham

On behalf of the Monument Water Users Cooperative, I would like to request an extension of the agreement we have with El Paso Natural Gas Company, granting us permission to draw water off your 12" water line.

On June 18, 1987, I visited with Mr. Patrick G. Olaechea of the NMEID in Santa Fe, New Mexico. He indicated that although the EID was not entirely satisfied with the Engineering & Feasibility Report prepared by Dennis Engineering Company, they would not actively oppose the decision to drill a new water well and install the necessary flowline as described in the report. Similar sentiments were expressed by Mr. David Boyer of the NMOCD, during a telephone conversation on June 25, 1987. Therefore, it is the intention of the Monument Water Users Cooperative to procede with obtaining funds for a new water well and associated flowline.

I am currently in the process of soliciting funding for the project from private sources and expect to have written commitments within the next three to four months. At that time I will meet with Senator Joe Harvey and Representative Robert Wallach to review the available sources for public funding of the remaining costs.

The Monument Water Users Cooperative is grateful for your suuport and patience in this matter. If you need additional information my phone number is (505) 393-2144.

Yours, truly,

S.W. Small
Vice President
Monument Water Users Cooperative

*C/O Amerado-Hess
P.O. Drawer 15
Monument NM*

88265

XC: The Honorable Joe Harvey; State Senator
Mr. Raymond Dennis, PE; Dennis Engineering Company
Mr. Patrick G. Olachea, PE; NMEID
Mr. Bill Weber; NMEID
~~Mr. David Boyer; NMOCD~~
Mr. Dale Fisher; Phillips Petroleum
Mr. Don Trice; El Paso Natural Gas Company
File

ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION



GARREY CARRUTHERS
GOVERNOR

June 16, 1987

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

Ms. Linda Findlay
Legislative Aide
c/o Senator Pete Domenici
434 Dirksen Office Building
Washington, DC 20510

RE: Monument Community Water Supply

Dear Ms. Findlay:

Thank you for your inquiry on information available in our office on the Monument contamination incident. I am enclosing copies of recent correspondence between this agency and EID on the matter. As the material shows, any site selected for a new water well may be at some risk due to past contamination. However, the risk can be reduced by conducting a preliminary investigation at the preferred site prior to drilling.

If you have questions on the engineering requirements for a water supply system, contact Mr. Pat Olachea of EID Construction Grants at (505) 827-2797, or Mr. Joe Guillen of the Local Government Division at (505) 827-4950 for questions on community development block grant fundings (CDBG). If OCD can provide you with further information or if you have any other questions, please contact me at the above address, or by phone at (505) 827-5812.

Sincerely,

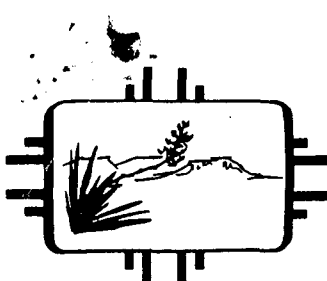
A handwritten signature in cursive script, reading "David G. Boyer".

David G. Boyer
Environmental Bureau Chief

DGB/ag

cc: William J. LeMay, OCD
Tom Bahr, Natural Resources Department
David Hanna, Environmental Improvement Division
Pat Olachea, Environmental Improvement Division
Joe Guillen, Local Government Division

Enc.



NEW MEXICO
HEALTH AND ENVIRONMENT
DEPARTMENT

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

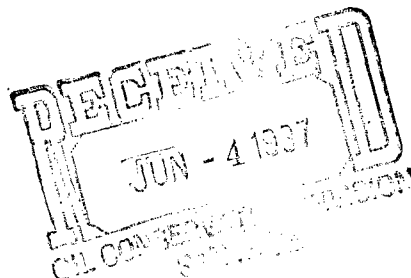
GARREY CARRUTHERS
Governor

LARRY GORDON
Secretary

CARLA L. MUTH
Deputy Secretary

May 29, 1987

Mr. Raymond Lee Dennis, PE
Chief Engineer
Dennis Engineering Co.
P.O. Box "Y"
Socorro, New Mexico 87801



RE: Monument Water System

Dear Mr. Dennis:

Your May 14, 1987 letter relative to our previous letter to you dated January 29, 1987 was received on May 18, 1987. As promised to you, we have tried to review your comments as promptly as we could. Your letter of May 14, has been reviewed by, in addition to ourselves, EID District Engineer Bill Weber and Construction Grants Section Engineer, Neil Williams. We offer the following comments:

1. The major difference between capital costs estimated in the May 19, 1987 letter versus the January report is that the well option estimate has been reduced considerably. This is due to using a more direct pipe route and eliminating the well house. The well controls will be placed in a buried vault instead of a well house. The \$4,000 estimated for pump, meters and controls may be a little low considering the need to build a vault. Overall the relative costs estimated for the well and the three municipal connection options seem reasonable with the exception of the cost of electric power to each site which was overlooked. It is our understanding this cost will be added.
2. On page 6 there is a summary of operation costs leading to estimates of monthly user fees for each option. You told Mr. Williams the estimates for pumping costs on page 6 are based on the existing well's power bills, not on the power cost estimate presented on page 5. Since the Eunice line options would require more head than the existing well you have estimated \$400 per month for those options rather than the lower estimate provided by the page 5 power cost.
3. The cost of water on page 6 is based, according to your conversation with Mr. Williams, on an assumed \$0.50 per 1000 gallon charge by Hobbs or Eunice. (Note: (6) has a typo, it shows 0.05 instead of \$0.50 per 1000 gallons). Even though a supply by Hobbs or Eunice has been an issue for several months, it is understood that neither yourself nor

Mr. Raymond Lee Dennis
May 29, 1987
Page 2

the Monument Water Association has made a formal request for consideration by Hobbs or Eunice. Thus, the prices quoted are merely estimates. The usage of 15000 gallons/connection/month might decrease if meters are installed in any future project.

4. The column of estimates for the Eunice Direct option has an arithmetic error. The correct estimated cost per user per month using your figures should be \$58.88 instead of \$62.22. Also the loan calculations were made using a thirty year loan. Please be advised that FmHA might go forty years and WSC by law, can only go twenty years.
5. If Texas - New Mexico Pipeline could contribute 10,700 LF of trenching required to reach the proposed well site, the cost for that option or any other option the company chooses to participate on would decrease by approximately \$71,000. The report assumes a 6,000 LF trenching contribution by Texas - New Mexico pipeline for each option.
6. We understand that you have received additional information on treatment of organic contaminants which might make that alternative possible.
7. The remainder of your letter-report deals with state requests for information on hydrogeology, oil spill leaks, well and pipeline locations, etc. which were requested in our letter of January 29, 1987 and Dave Boyer's memo of January 28, 1987 which was attached to our previous letter. A water table map was shown; however, virtually none of the requested information was provided because you have felt the data available was not accurate, or in your opinion not covered by your contract with Monument.

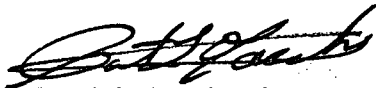
As explained in our letter of January 29, 1987, we felt that the original report had emphasized the replacement of the existing wells with another well drilled in a different location but that sufficient information regarding the other alternatives had NOT been developed or presented. Your letter of May 14, 1987 attempted to do that, however as it can be seen from the above comments, there are still some important variables which are not solidified such as the cost of water, the contribution of Texas - New Mexico Pipeline and the terms of any future loans. We realize that these variables will affect some options in the same way and that the new well option will still be the lowest monthly cost alternative according to your calculations. Again as stated in our January 29, 1987 letter, if the new well appeared to be the best alternative, we felt that additional information and analysis should have been developed to support the proposed location. As stated above, your letter of May 14, 1987 had not addressed those concerns which we believe are still valid.

Mr. Raymond Lee Dennis
May 29, 1987
Page 3

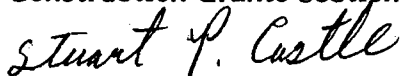
You state in your letter , page nine that "the Association has agreed to proceed with the drilling of test and the development of a production well at their expense, to the extent the current funds will allow, unless the regulatory agencies object" (emphasis added). We believe that a clarification of both, EID and OCD (David Boyer) involvement in the project is needed. We have provided comments and suggestions which based on our expertise and/or knowledge of the area would help you to prepare a document for your client, Monument, which in turn could assist them and any possible funding agency in making options and funding decisions. EID is responsible for protecting public health and will monitor the quality of existing and future public water supplies serving Monument. It is not OCD and EID's responsibility, statutory or regulatory, to object to what Monument might or might not decide. We feel however that our original comments and those in this letter are still valid. We hope that any decisions made by Monument be based not only on "cost" but also on long range probability of success and reliability of the option chosen.

If we can provide our expertise in the review of any future document, please do not hesitate to call upon us. Meanwhile we assure you that as soon as we receive the written laboratory results from the State Laboratory, they will be provided to you for your use.

Sincerely,



Patrick G. Olachea, P.E.
Program Manager
Construction Grants Section



Stuart P. Castle
Program Manager
Drinking Water Section

PGO/SPC/ra

cc: The Honorable Joe Harvey, State Senator
John Cunningham, El Paso Natural Gas
W.E. Copeland, Monument, WUC
Sam Small, Monument WUC
Jon F. Thompson, Bureau Chief, Community Services Bureau
Garrison McCaslin, EID District IV Manager
~~(Dave Boyer, OCD)~~
Jack Block, LGD
Steve Massey, SENMDD
Bill Weber, EID
Rusty Rodke, ISC
Neil Williams, EID

Dave Bayer

DENNIS ENGINEERING COMPANY

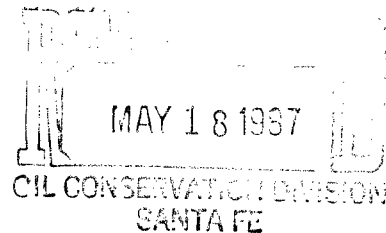
(505) 835-2195

ENGINEERING SURVEYING

HIGHWAY 60 WEST (P.O. BOX "Y") • SOCORRO, NEW MEXICO 87801
BRANCH OFFICE: 114 WEST FOURTH • P.O. BOX 206 • PORTALES, NEW MEXICO 88130 • (505) 356-5523

Mr. Pat Oleachea, PE
Construction Grants Section
Environmental Improvement Div.
Box 968
Santa Fe, N.M. 87504-0968

May 14, 1987



RE: Monument, NM Water System

Dear Pat:

Pursuant to our telephone conversations, I submit herewith my comments, relative to your letter dated January 29, 1987. I had hoped that we could discuss the various items at the public meeting on April 14, 1987, however key individuals were not able to attend.

As a matter of information, the Board of Directors decided at the meeting on April 14th, to obtain samples from existing wells located near the site proposed in our original report for a new production well. Samples were obtained from three wells by Don Edgington, of this firm, and Don Lutjens of the Hobbs EID Office. The samples have been submitted to the EID Lab in Albuquerque. A copy of Don Edgington's letter dated April 21, 1987 and a local map is attached hereto for your information. Upon receipt of the test results a decision will be made on the drilling of one or more test holes from which samples can be obtained. Mr. Stuart Castle recently advised me that he had some of the test results and that he expected to receive the remaining results in a few days. The preliminary results look good to me.

State Senator Joe Harvey and others feel that a definite plan and cost estimate needs to be formulated for presentation to the various funding agencies. We seek your assistance and cooperation in this matter.

The following comments are listed in the same sequence as your letter dated January 29, 1987:

A-1a: Correspondence with City of Hobbs: Don Edgington spoke with the City Engineer regarding the purchase of water from the City of Hobbs and was advised that the City would probably not be opposed, however, their nearest line is approximately five miles north and five miles east of Monument (slightly over seven miles by direct route). City representatives were asked to attend the meeting on April 14th, however, no one was present.

A-1b: Correspondence with Town of Eunice: Discussions with Town officials indicate that the Town of Eunice would agree to supply Monument with water if they received funding to replace their transmission line. The necessary funding was approved by the Legislature but was vetoed by the Governor, however, this alternative should be pursued by the Association to obtain more specific information regarding the Town's water rights, anticipated cost for supplying water, etc. I beleive the local people are in a better position than this firm, to prepare a water purchase agreement. We will be happy to assist in any manner as the Association requests.

A-2: I am attaching a copy of a map which reflects the anticipated points of connection to the Hobbs and Eunice water systems and the anticipated location of a new well.

The ground elevation of Monument's storage tank is approximately 3585'. The tank is approximately 25' tall, resulting in an overflow elevation of approximately 3610'. The ground elevation at the end of the Hobbs' line is approximately 3630'. The direct distance between the two points is approximately 39,000'. On the assumption that the Hobbs' line is operating at 30 psi, there will be no need for a booster pump to provide approximately 65 gpm to the Monument tank through a 4" Class 160 PVC line. A 6" line will provide approximately 180 gpm without pumping. It should be noted that approximately 39,000' of

new line will be required if Monument is supplied directly from the Hobbs system.

The elevation at the anticipated point of connection to the Eunice water line is approximately 3600' and the distance to Monument's tank is approximately 23,000'. Since the slope is generally to the southeast in this part of the world and the elevation at Eunice is approximately 3450' we have assumed that there is little, if any, available head at the connection. A booster pump operating at 100 psi at the point of connection will provide approximately 140 gpm through a 4" Class 160 PVC line and approximately 390 gpm through a 6" Class 160 PVC line. Mr. Charles Sissel, Mayor of Eunice, confirmed the assumption that a booster pump will be required to provide water into Monument's tank.

The ground elevation at the proposed well is approximately 3720'. If a storage tank is constructed near the new well, an operating elevation of approximately 3730 can be assumed resulting in an available head of approximately 110' to Monument's tank overflow. A flow of approximately 100 gpm can be maintained without the use of a booster pump. A storage tank is recommended at the new well to provide easy control of the supply and transmission system.

A-3 Cost Estimates

a. Connect to Eunice Transmission Line

1. 4" Transmission Line	23,000 FT	\$ 10.00	\$230,000
2. Connections w/Metering	1 LS	4,000	4,000
3. Booster Station	1 LS	15,000	<u>15,000</u>
Construction Subtotal			\$249,000
Design & Inspection @ 10% + GRT			26,000
Rights-of-Way Permits			<u>5,000</u>
TOTAL PROJECT COST			\$280,000

A small storage tank (approximately 10,000 gallons) may be necessary if a pumping rate of 100 - 140 gpm has an adverse effect

on the operation of the Eunice line. At this time I do not believe a tank will be required.

b. Connect to Hobbs Distribution System:

1. 4" Transmission Line	39,000 FT	10.00	\$390,000
2. Connections w/Metering	1 LS	4,000	4,000
Construction Subtotal			\$394,000
Design & Inspection @ 9% + GRT			37,000
Rights-of-Way Permits			5,000
TOTAL PROJECT COST			\$436,000

c. Connect to Hobbs VIA Eunice Transmission Line:

1. 4" Line (Eunice line to Monument with pump station, connections, etc.)			\$249,000
2. 4" (Hobbs to Eunice)	5,300 Ft	10.00	53,000
3. Metering Facility & Connection	1 LS	3,000	3,000
Construction Subtotal			\$305,000
Design & Inspection @ 10% + GRT			32,000
Rights-of-Way Permits			5,000
TOTAL PROJECT COST			\$342,000

d. New Well & Transmission Line By Direct Route:

1. Drill 14" hole	140 FT	25.00	\$ 3,500
2. 8" Blank Casing	80 FT	15.00	1,200
3. 8" Well Screw	60 FT	60.00	3,600
4. Gravel Pack	3 CY	100.00	300
5. Test Pumping	72 HR	100.00	7,200
6. Pump, Meter, Controls	1 LS	4,000.	4,000
7. Storage Tank	1 LS	15,000	15,000
8. 4" PVC	10,700 FT	10.00	107,000
Construction Subtotal			\$141,800
Design & Inspection @ 11% + GRT			16,200
Right-of-Way Permits			5,000
TOTAL PROJECT COST			\$163,000

e. Recap of Cost Estimates for Initial Construction:

	CURRENT	PREVIOUS
Eunice Transmission Line	\$280,000	(275,600)

Hobbs Distribution System	436,000	(NA)
Hobbs Water thru Eunice Line	342,000	(341,500)
*New Well	*163,000	*(245,680)

*The difference between the current and previous cost estimates is the length of the transmission line required to connect the new well to the existing 4" line. After reviewing the situation with the local residents, it appears that a right-of-way can be obtained by direct route instead of routing the line around the private property.

Discussions with Texas - New Mexico officials indicate that the firm may be willing to provide approximately 6,000' of trenching for a new Transmission Line. If this is the case, all of the costs shown above can be reduced by approximately \$40,000.

A-4 Pumping Costs

With the exception of a direct connection to the Hobbs distribution system, pumping will be required either from the new well into a storage tank or from the Eunice line to Monument. The cost will be essentially the same as that experience by the Association in the operation of their former supply system which included at least two wells.

The cost of electricity to pump 1,000 gallons of water is \$0.07 based on the following assumptions:

Power Cost	\$0.10 per KWH
Head @ Pump discharge	120 ft. (wells)
Pump @ Motor efficiency	55 percent

If the discharge pressure is increased to approximately 100 psi (booster at Eunice Transmission line) the cost of electricity will increase to approximately \$0.14 per 1,000 gallons pumped.

The cost of maintenance will vary, however, \$25.00 per month is felt to be adequate for pump repair and replacement. The cost of labor to check the pumps is included in the salary of the meter reader.

A-5 Summary of System Operation Costs

ITEM	NEW WELL	HOBBS DIRECT	HOBBS THRU EUNICE	EUNICE DIRECT
Current FmHA Loan	350	350	350	350
Salaries	550	550	550	350 (1)
Postage, Supplies, etc.	120	120	120	120 (2)
Pumping Costs	300	0	400	400 (3)
Maint., Repair, Replace	360	360	360	360 (4)
SUB-TOTAL	1680	1380	1780	1780
New Construction	875	2341	1836	1503 (5)
Cost of Water	0	450	630	450 (6)
TOTAL MONTHLY COST	2555	4171	4246	3733
COST PER USER/MONTH	42.58	69.52	70.77	62.22 (7)

(1) 1985 = \$458 , 1986 = \$514

(2) 1985 = \$83 , 1986 = \$141

(3) 1985 = \$294 , 1986 = \$295

(4) 1985 = \$335 , 1986 = \$382

(5) Based on cost estimates above, 30 year loan, 5.0% interest, no Grant Funds.

(6) Based on 15,000 gallon per user per month, \$0.05 FROM HOBBS & EUNICE DIRECT and \$0.20 per 1,000 gallons for use of Eunice line to transport Hobbs water ASSUMES 60 USERS.

(7) ASSUMES 60 USERS.

B-1 Spill and Leak Report

We researched the O.C.D. files in Hobbs for the area north and west of Monument and discussed the situation with local residents, gas system operating personnel, and O.C.D. personnel. O.C.D. records include only the information reported by the oil companies. The reporting was on a volunteer basis in previous years with no checking by O.C.D. personnel. Because of potential liabilities, the oil companies are not willing to provide detailed information on leaks and/or spills. Additional information may be available in Santa Fe, however, I question the accuracy and the dependability of the data obtained. A detailed on-site

investigation may identify some potential problem areas, however, any method used to determine the seriousness of any potential problem area is questionable. If additional information is to be obtained, I suggest we meet with the O.C.D. personnel before the investigation begins and define the parameters and scope of the additional work and the area to be investigated.

B-2 Pipeline Information

I believe an on-site investigation and a review of available aerial photos is the only way to obtain additional information on pipelines. The cost of detailed research for additional information for pipelines may be quite high unless the search area is kept to the smallest practical area. Pipeline data was obtained at roadway crossings because most crossings are identified by a sign. I question the value of detailed pipeline information except in the immediate area of a new well and feel we should agree on the scope and search the area prior to the start of any additional work.

B-3 Oil and Natural Gas Wells

Again it appears that the information in the O.C.D. files is not complete nor is it totally accurate. Apparently the reporting of such information was on a voluntary basis for many years. Because of the potential liability, the oil companies are not willing to provide much information on such matters. Additional information may be obtained by research of available records and an on-site investigation, however, the search area must be defined prior to the start of the work to keep the cost at a reasonable amount.

B-4 Oil and Natural Gas Tank Batteries

Same as B-1, B-2, and B-3. Additional information may be available, however, the search area must be defined before work

begins. I question the value of extensive research on this matter.

B-5 Water Table Map

A copy of the water table map with water level and well depth information, as obtained from the Interstate Stream Commission, is attached for your review. Previous research of existing wells indicates that the proposed well site has the potential to provide more than enough water to meet Monument's needs. We cannot move west because of problems associated with the transfer of water rights. If we move north into areas with a thicker water bearing strata, we increase the length of transmission line required. If we move south, the thickness of the water bearing strata becomes smaller. Certainly additional information can be obtained, however, the magnitude of the work as well as the search area should be defined before work is started. I believe a close look at the information provided in the original report and a review of the operating wells in the vicinity of the proposed well site justifies the site selection, however, we will be happy to review this matter in detail with you as you request.

B-6 Well Data

Certainly additional data may be available if the scope of work and the search area is clearly defined prior to the start of work. Again I question the accuracy of the available information because of the voluntary nature of early reporting and the potential liability for those involved.

B-7 Hydrogeological Information

This matter was discussed at our meeting on December 1, 1986 and it was agreed that this matter was outside the scope of our report. Certainly a report can be prepared to provide such information if the scope and area to be covered is identified and if the funds are available to employ an experienced hydrogeologist.

B-8 Testing of Existing Wells

As mentioned at the beginning of this letter, samples were obtained from three wells near the proposed new well site. The samples were sent to the E.I.D. lab in Albuquerque. Final results should be available in a few days. See the attached map and letter from Dave Edgington. Additional samples can be obtained as you feel necessary.

B-9 Ground Water Motion

In view of the extended pumping from existing wells near the proposed site, it appears that the limited pumping required by Monument will not adversely affect the availability of groundwater in the area. If we proceed as outlined in our earlier recommendations and drill one initial test hole followed by a production well with an extended (72 hours or more) pumping test at a high discharge (2 to 3 times the anticipated requirements for Monument). We will obtain this information at a nominal cost. The Association has agreed to proceed with the drilling of test and the development of a production well at their expense, to the extent that their current funds will allow, unless the regulatory agencies object. When the results of the test samples are available, a decision on the drilling of test holes at the proposed well site will have to be made. If a production well is drilled, the Association's current cost balance will be depleted..

Hopefully, I have provided some of the additional information you desired. In brief, we can spend as much time on the gathering of data and the evaluation of such data as anyone feels is necessary, however, we have already exceeded our original budget for this project. If additional research is required I would like to meet with those involved to define the scope of the additional work, the search area to be studied, and the basis of compensation for such work.

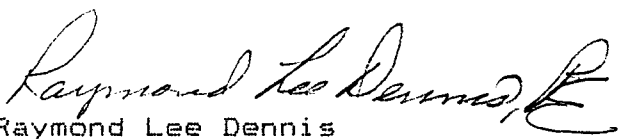
At this time I am of the opinion that the most reasonable solution for Monument's water supply is a new well in the vicinity

of the proposed site. I am fully aware that a well at this location may become contaminated in the years ahead, however, the added cost of buying water from Hobbs or Eunice and the higher initial construction costs makes those alternatives somewhat expensive for the small number of users in the Monument Association. It appears that the Association membership may decline in the near future resulting in even higher costs for those residing in the area.

As with any project, someone at sometime must determine what approach to take. If our decision is wrong, we will have to live with it and make changes necessary to correct our mistake. If our decision is correct, we become heroes or are forgotten. Either way a decision must be made on how to proceed from our current position. I welcome your comments and will be happy to meet with anyone at anytime in order to determine where we go from here.

Thank you for your assistance and cooperation on this project. Please call me after you have reviewed this letter so that we can decide on a future course of action.

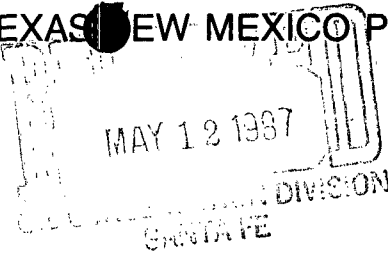
Very truly yours,


Raymond Lee Dennis

cc: Sam Small
Monument Association
Joe Harvey, State Senator- Hobbs
Dave Boyer- O.C.D.
Jack Block, Local Govt. Div.- DFA
Steve Massey- SENMDD
Bill Weber, EID- Roswell
Dave Edgington
RLD
File 189 B

TEXAS-NEW MEXICO PIPE LINE COMPANY

B L Lednicky
District Manager



PO Box 2528
Hobbs NM 88241
505 393 2135

May 11, 1987

State of New Mexico
Energy and Minerals Department
Oil Conservation Division
P. O. Box 2088
State Land Office Building
Santa Fe, New Mexico 87501

Attention: Mr. David G. Boyer

Gentlemen:

RE: MONUMENT WATER WELLS

Attached is the report prepared by Groundwater Technology, Inc. concerning Texas-New Mexico Pipe Line Company's groundwater and aquifer remedial activities following a pipe line spill near Monument, New Mexico. This report addresses the information requested in your letter dated May 22, 1985.

In view of our activities and the information presented in this report, we feel that we have completed our obligation in this area. We would plan to begin surface restoration of the location during July. Please advise if this is not satisfactory.

We have appreciated your help and suggestions during the course of this project. If we can provide additional information please let us know.

Yours very truly,

BLL:CSJ

DENNIS ENGINEERING COMPANY

(505) 835-2195

ENGINEERING



SURVEYING

HIGHWAY 60 WEST (P.O. BOX "Y") • SOCORRO, NEW MEXICO 87801
BRANCH OFFICE: 114 WEST FOURTH • P.O. BOX 206 • PORTALES, NEW MEXICO 88130 • (505) 356-5523

April 21, 1987

Mr. Raymond Dennis
P.O. Box Y
Socorro, New Mexico 87801

Re: Monument Water Samples

Dear Raymond:

At 9:00 A.M., April 16, 1987, I met Mr. Don Lutjens of EID and Mr. Dan Vollentine of Warren Petroleum near the Northern Natural Gas Plant near Monument. We proceeded to the wells of Warren Petroleum in the vicinity of our proposed well site. The north well being out of service, we sampled the south well. The locations of both of these wells are indicated on the attached map. As you can see, the south well is very close to our proposed well site. It lies about 475 feet north of an east-west fence which in turn appears to be almost exactly $\frac{1}{4}$ mile north of the section line. The fence line is evidently the boundary between Snyder Ranch property on the south and state land on the north.

After sampling the one Warren petroleum well, Don and I proceeded to search for the Snyder Ranch well in the NW $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 18. After a short time we found the well but could not find a suitable place to collect a sample. From the Tindle's house we called Mr. Larry Squires, owner of Snyder Ranches. He advised us to start the pump and look for a suitable sampling location. After starting the pump, we discovered a short section of polyethelene pipe above ground, connected to a 90° bend with a hose clamp. Deciding that that was the only feasible sampling location, we stopped the pump to disconnect the pipe. However, we could not get the pump to start again; even after waiting a couple of hours.

We searched for and found the windmill located in the NE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 19, but did not get a sample--thinking it best to wait until we got a sample at the Snyder Ranch well.

Don Lutjens advised me that he would contact Mr. Bruce Alwin, foreman of Snyder Ranches and try to meet him at the well.

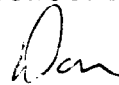
Mr. Raymond Dennis
4-21-87
Re: Monument Water Samples
Page 2

This he did on April 17, and was able to get a sample from the well after Mr. Alwin replaced a relay in the starter panel. Don then went back to the windmill to sample it.

It seems that many times these "simple" jobs turn out to be anything but simple. I appreciate all the time and energy Don Lutjens put in to collect these samples. He was very helpful. By copy of this letter, I am sending him a map showing the well and windmill locations.

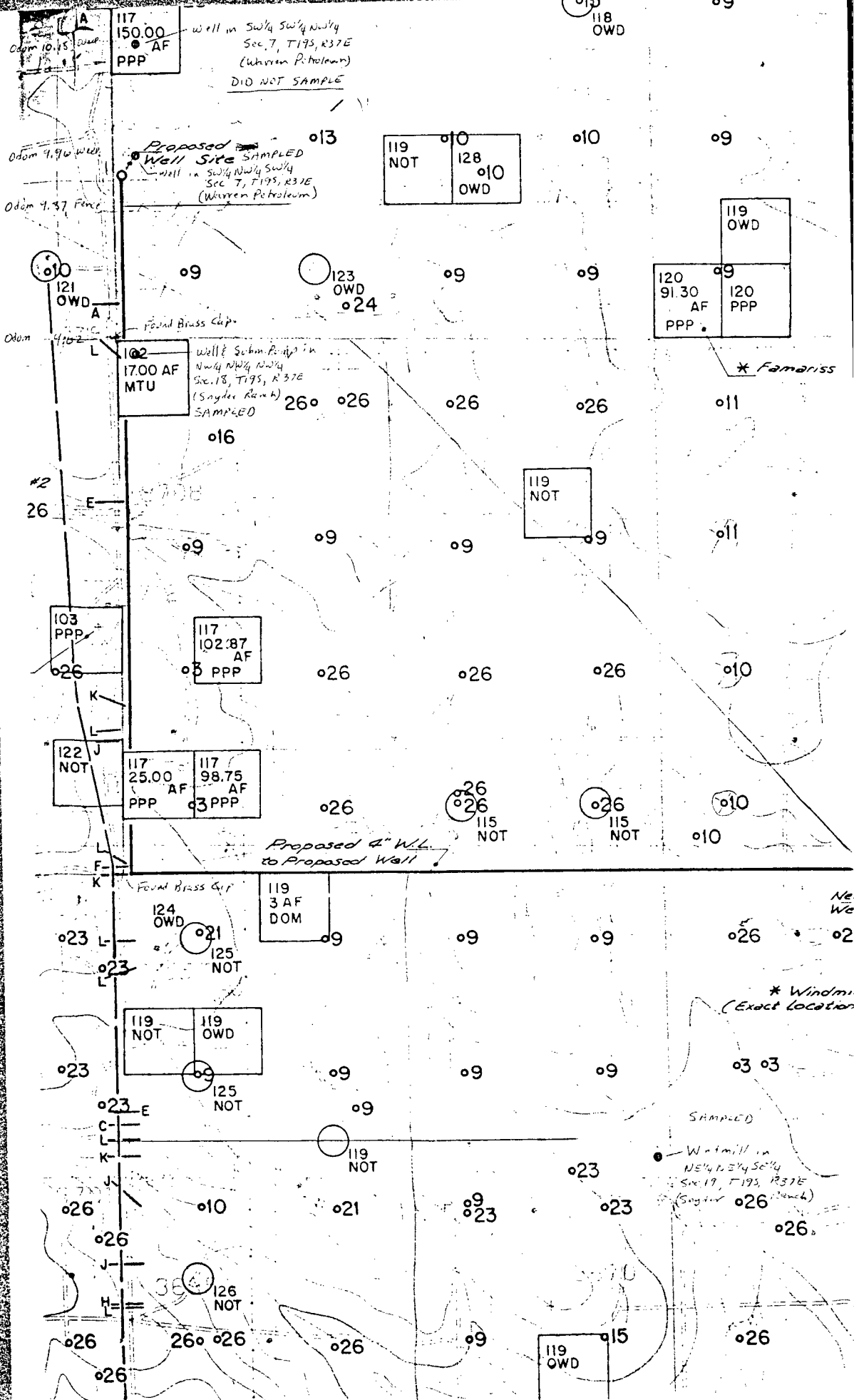
I am enclosing some literature I just received from Delta Cooling Towers, Inc. regarding water treatment to remove volatile organics.

Sincerely yours,



Donald E. Edgington, RLS
Portales Office

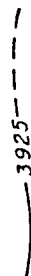
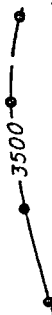
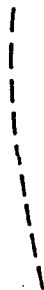
DEE:pe
Enclosures
xc: Mr. Don Lutjens
File



Water well

Upper figure is depth to water; lower figure is depth of well. Open circles are wells finished in Tertiary or Quaternary rocks; solid circles are wells finished in Triassic rocks

F = Flowing
R = Reported
P = Water level measured while pumping
D = Dry
? = Uncertainty as to aquifer
> = More than
< = Less than
(See tables 6 and 7 for detailed well data.)



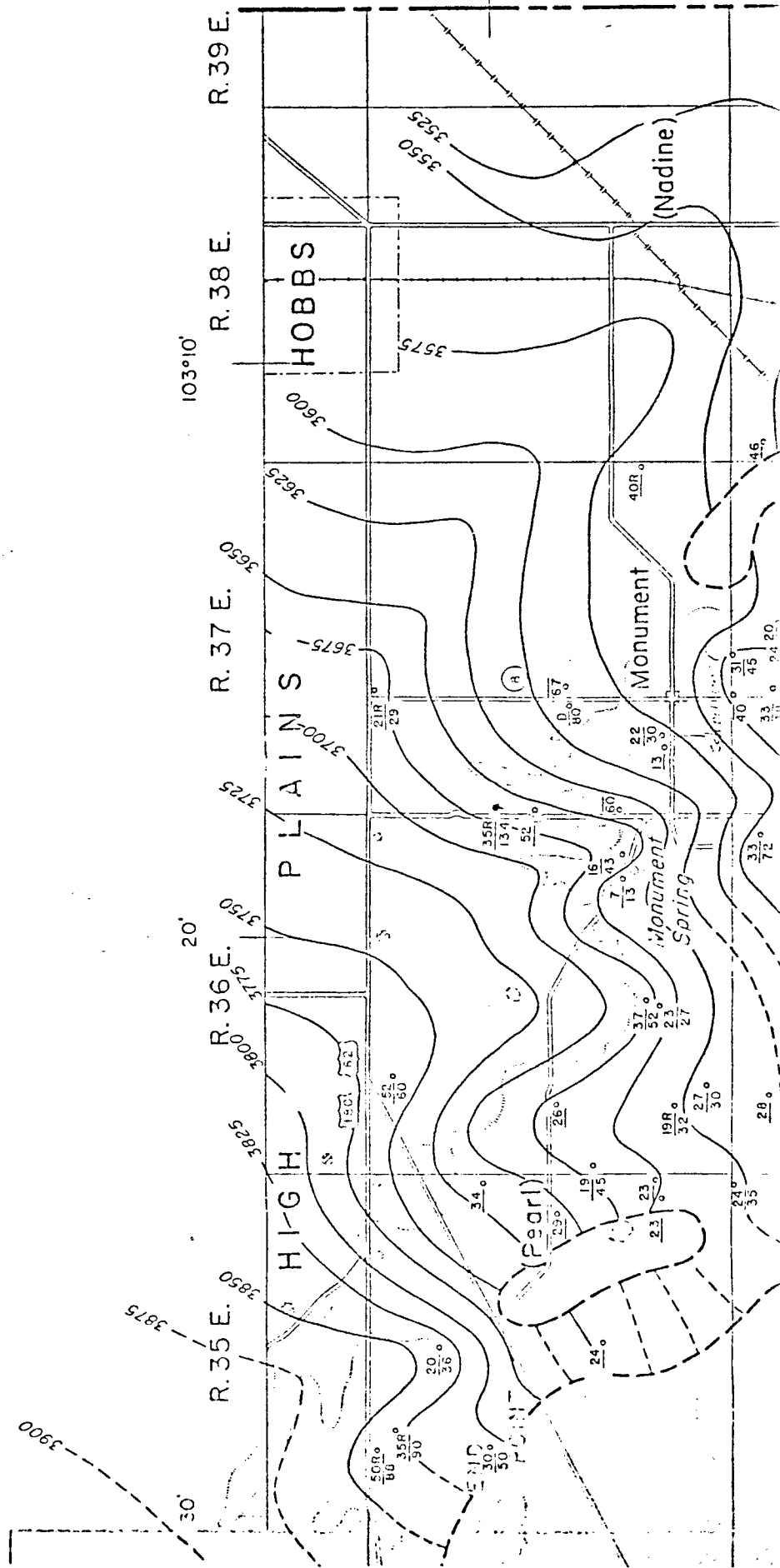
Water-table contour in Tertiary or Quaternary rocks

*Dashed where inferred or uncertain.
Contour interval 25 feet. Datum
mean sea level*

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

*Dashed where inferred or uncertain.
Contour interval 100 feet. Datum
mean sea level*

Approximate position of boundary between Triassic rocks and saturated Tertiary and Quaternary rocks



025

018

008

02

018

02

115
OWD

114
OWD

1 mile
up gradient
Radius

027

116
NOT

Approach water from
Ground & Rect. Tank

021

023

117
150.00
AF
PPP

021

009

12

3743

013

010

119
NOT

128
OWD

Proposed
Well Site

09

09

09

123
OWD

024

010

010

010

1 EPN.G Well #5

103
129.00
AF
PPP

102
17.00
AF
MTU

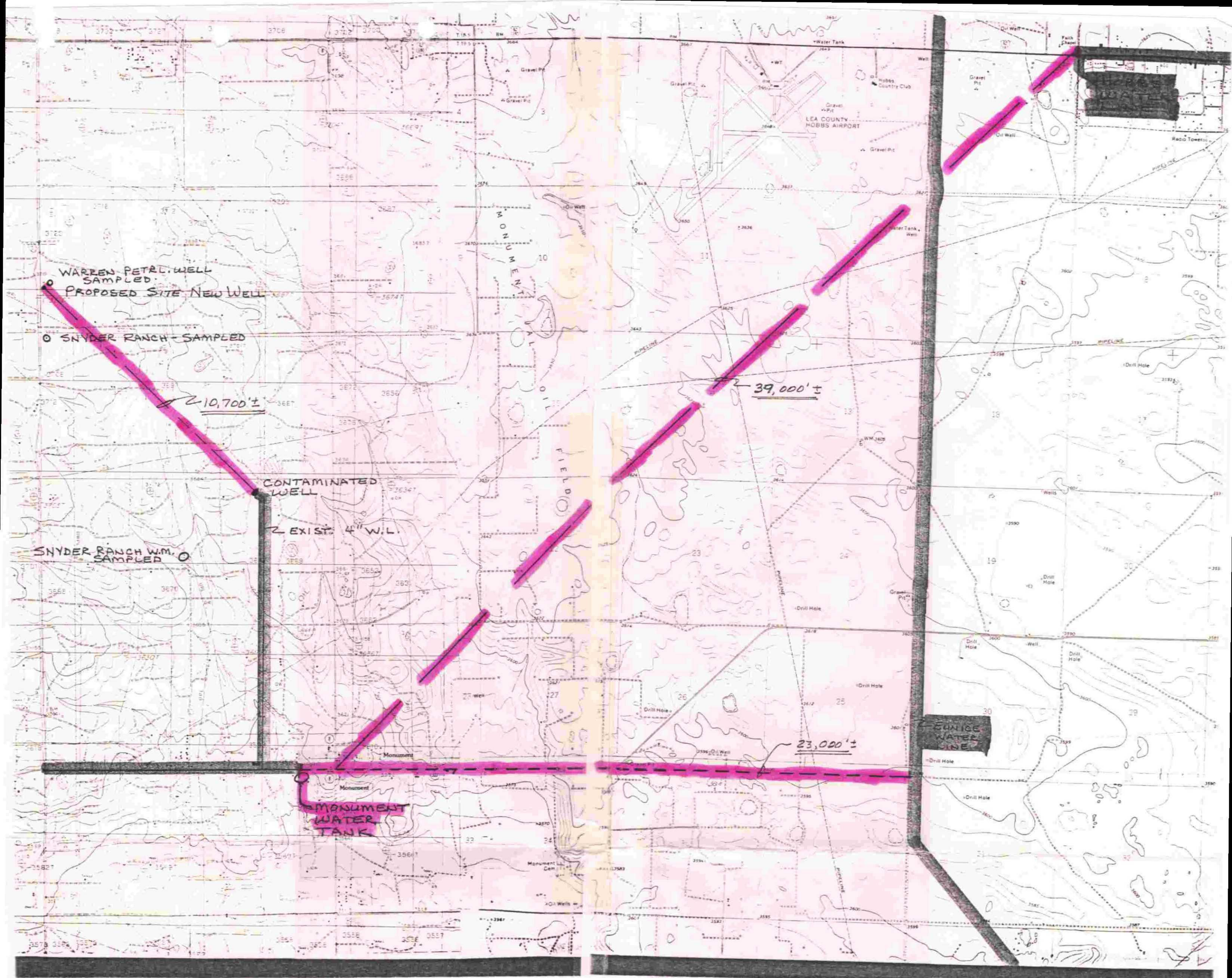
120
91.30
AF
PPP

026

026

026

010



MONUMENT, N.M. VICINITY
SCALE 1" = 2700'
MAY 1987
DENNIS ENGINEERING - SOCORRO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNORMEMORANDUM

April 15, 1987

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-5800TO: Pat Olachea, Program Manager, Construction Grants Section, N.M.
Environmental Improvement DivisionFROM: David G. Boyer, Hydrogeologist/Environmental Bureau Chief
Oil Conservation Division

WJS

SUBJECT: Monument Water Well Replacement

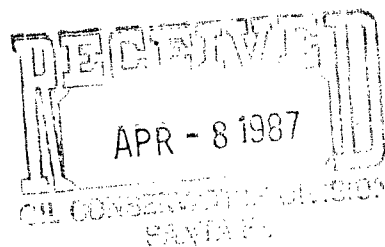
On January 28, 1987, I provided the Environmental Improvement Division (EID) with my comments on an engineering and feasibility report for a new Monument community water well. My review of the report included comments on information collection prior to final well location, and for water testing after drilling. My review and comments were prepared at the request of the EID for transmittal to the community.

Apparently there is misunderstanding by some parties as to what the function or responsibility of the Oil Conservation Division is in this matter. The Division has the duty to regulate the oil and gas industry to protect fresh water supplies, and works with both companies and affected parties if such contamination occurs. Therefore, we became involved with the problem of contamination of the Monument water supply well in 1984, and worked with the company, community, EID and other governmental agencies in an attempt to find a solution.

It is not the responsibility of the Oil Conservation Division to provide a replacement source of water, locate or make recommendations as to replacement sources of water, or approve a replacement well location, although we assisted in some of these matters. Further, given the past history of oil and gas activities in the area, assurances can not be provided that any location selected that is free of contamination today will not become contaminated in the future. The review comments provided in the January 28 memorandum were only meant to assist in review of the report, and should not be construed as additional requirements mandated by the Oil Conservation Division and required to be performed by the engineer or contractor.

DB/cr

cc: Willam LeMay, OCD
Jerry Sexton, CCD-Hobbs
Jon Thompson, EID
Jacob Block, LGD
Rusty Rodke, ISSC



Monument Water Users Coop.

Box 48

Monument N.M. 88265

Dear Board Members,

There will be a board member meeting for the Monument Water Users Coop. on April 14, 1987 at 7:00 p.m., at the Community Center. Present at this meeting will be Joe Harvey, some EID officials and others. Please plan to attend.

Thank You,

W. E. Copeland



MEMORANDUM OF MEETING OR CONVERSATION

☒ Telephone ☐ Personal

Time 3:35

Date 2/6/87

Originating Party

Other Parties

Jimi Goetz (GW Technology)
Denver (303) 799-8338

Dave Boyer

Subject Monument - Final Report on Tex-Mex Spill

Discussion

Goetz called to say they received new info on site and wished to evaluate it before sending in report (due Feb 9). They need 7-10 days.

Conclusions or Agreements

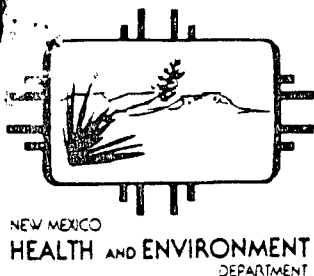
I said to make sure report was received by Friday Feb. 20. He said that was fine.

Distribution

Monument

Signed

D H Boyer



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

GARREY CARROLL THOMPSON
Governor

LARRY GORDON
Secretary

CARLA L. MUTH
Deputy Secretary

January 29, 1987

Mr. Raymond Lee Dennis, PE
Chief Engineer
Dennis Engineering Co.
P.O. Box "Y"
Socorro, New Mexico 87801

RE: Comments on Engineering and Feasibility Report for Monument, New Mexico

Dear Mr. Dennis:

EID staff have reviewed the above cited report which we received January 13, 1987 and which covers the well contamination problems of the Monument community water system and outlines recommendations for corrective action. EID comments and suggestions relate to two aspects of the report, i.e., the recommendation to drill a new supply well versus connection to the Eunice or the Hobbs system and the choice of the specific location proposed for a new well.

The larger issue here is the selection of an approach to providing a secure long term public water supply for Monument. To this end an analysis of all options should be provided covering all the items of the work order issued by the community. The submitted report emphasizes the replacement of existing wells with another well in a different location. However, we feel that not enough information is developed and presented in the report on the possibility of connection to other public water system in the area. In light of the wide spread contamination of groundwater in the Monument area and the continuing potential for contaminant migration, we believe a more detailed analysis of remote supplies is warranted. You might have already done this and just failed to incorporate it into the report. We would like to suggest that, in regard to alternate supplies, the analysis address the following:

1. Correspondence with Hobbs and Eunice regarding potential water deliveries. Terms needed in any possible contract. Discussion of political and other intangible issues.
2. Schematic drawings showing feasible points of connection.
3. More detailed capital cost estimates including booster stations, if required.

EQUAL OPPORTUNITY EMPLOYER

4. Documentation of estimates of operation and maintenance costs including pumping costs for all alternates including new well, connection to other public system or treatment of contaminated well water.
5. Comparison of user fees estimated to be required for all alternate sources. This comparison, we believe, should include capital improvements with an assumed percentage of grant and loan assignment such as that which might be available from FmHA or WSC as well as an O&M comparison for different options. We suggest a summary sheet which could assist a busy legislator or funding program officer in making any decision.

If, based on consideration of all factors, a new well does appear to be the best alternative then, because of the unfortunate experiences in the past, we suggest additional information and analysis be presented to support a proposed location. Specifically we recommend you include:

1. Oil and natural gas spill and leak reports (Sources: OCD and Industry). OCD's central office has reports dating back at least to 1979.
2. Information on pipelines, tabulation and maps of: the types, owners, sizes, uses, age, location, depth of burial and history of leaks for the proposed well site and alternative areas. (Sources: Industry, field reconnaissance and aerial photos).
3. Oil and natural gas wells - History and disposition of fluids (oil, gas, produced water, drilling, treatment.) In other words, where were the fluids stored, transported and disposed of? History and use of lined and unlined disposal pits at each well head. (Source: OCD and Industry)
4. History and location of oil and natural gas tanks batteries which are in the area of proposed well site and alternate areas. History of spill and leaks at these areas. (Source: OCD and Industry)
5. Water table map. A map showing the depth to groundwater would be very useful to evaluate whether oil and natural gas spills and leaks could have affected groundwater in the area of the proposed well site.
6. Tabulate data (well details, capacity, formation logs, pump test, etc) on existing water wells in the area of the proposed well site and alternate sites.
7. Hydrogeological information for the area.
8. Testing of existing wells in the vicinity of proposed sites for organic contaminants and other parameters including primary standards. EID could, as discussed on our previous meeting, assist in the processing of water quality analyses.

Raymond Dennis, P.E.
January 29, 1987
Page 3

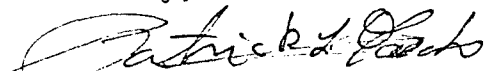
9. Analysis of probable groundwater motion under the influence of both formation gradients and local pumping effects of existing wells.

The Division realizes that some of this information might have already been considered and just failed to appear in the report which had to be prepared on such a short notice. We are also transmitting comments from the Oil Conservation Division in Santa Fe. We believe consideration of their comments and suggestions with EID's would make your report a better document and more useful for your client.

If you have any questions regarding these comments and suggestions we would be happy to discuss them with you. EID staff will work closely with you to help resolve Monument's need for a long term water supply as quickly as possible.

We intend to review the revised report faster than we did this review and we are ready to assist you in any way we can.

Sincerely,


Patrick Olachea, P.E.
Construction Grants Section


Stuart Castle, Program Manager
Water Supply Program

xc: The Honorable Joe Harvey, State Senator
W.E. Copeland, Monument W.U.C.
Jon F. Thompson - EID
Garrison McCaslin - EID
Dave Boyer - OCD ✓
Jack Block - LGD
Rusty Rodke - ISC
Steve Massey - SENMDD
Bill Weber - EID

ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION



GARREY CARRUTHERS
GOVERNOR

January 28, 1987

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

MEMORANDUM

TO: PAT OLACHEA, PROGRAM MANAGER, CONSTRUCTION GRANTS,
N.M. ENVIRONMENTAL IMPROVEMENT DIVISION

FROM: DAVID G. BOYER, HYDROGEOLOGIST/ENVIRONMENTAL BUREAU CHIEF
OIL CONSERVATION DIVISION *DTB*

SUBJECT: REVIEW OF "ENGINEERING & FEASIBILITY REPORT FOR MONUMENT
WATER USER'S COOPERATIVE, JANUARY 2, 1987" BY DENNIS
ENGINEERING COMPANY

At the request of the Environmental Improvement Division, I have reviewed the report and have the following general and specific comments:

General Comments

The report provides the most complete engineering information and associated cost data for replacement of Monument's water supply that I have seen to date. The "Key Map" shows that research went into locating various physical features (e.g., water and oil wells, pipelines, etc.) that need to be considered in the evaluation. The accuracy of the cost data will need to be evaluated by EID's water supply engineers who have expertise in the area.

There are several important omissions and errors in the report that need to be addressed before decisions are made on proceeding with further investigation. Other than oil well locations, the extent of the research on oil and gas activities in the area of the proposed well was not documented in the report (See Items 3 and 4, Dennis Engineering letter of 12/4/86). Because of oil and gas contamination of water in the Monument area, investigation is necessary of current and past oil and gas activities in the immediate area of the proposed well that may have had the potential to cause ground water contamination.

The following oil and gas information should have been collected for evaluation. For such purposes, an arbitrary radial distance of one-mile from the well upgradient and a radial distance of one-quarter mile downgradient might have been selected (See attached sketch). The information should have included:

1. Location of all oil wells, injection wells (if any), abandoned holes, and oil and produced water pipelines.
(Only pipelines at major road crossings were shown.)
2. Records of well casing leaks, repairs, workovers, etc., for each well.

3. Records of volumes of water produced with the oil and disposition from the time each well was completed.
4. Available records of spills, leaks, pipeline breaks, etc., within the designated area.
5. On-site inspection and/or review of aerial photographs to detect any unusual surface disturbance (e.g., lack of vegetation, oil residue, caliche pits used for disposal, etc.).

All such information (including the lack thereof) should be documented in the report.

The ground water flow direction and the basic premise upon which it was based is incorrect. Ground water flow is perpendicular to the water surface elevation contours (potentiometric surface) and not perpendicular to the structural contour surface of the base of the Ogallala Formation (p. 19). The only exception to this is in areas where no significant saturated ground water thickness exists and percolating water moves along and on top of relatively impermeable formations. The attached map from Ground-Water Report 6 ("Geology and Ground-Water Conditions in Southern Lea County, New Mexico," N.M. Bureau of Mines, 1961) shows the direction of flow at that time. A current water-level elevation map (taking into account the EPNG well field effect on water levels) should be drawn to determine the hydraulic gradient.

Specific Comments

Water testing (p. 3 cover letter; p. 20, 22 & 26 report):

Water testing of existing wells should include chlorides, sulfates, total dissolved solids (TDS), purgeable aromatic and halogenated hydrocarbons, and natural gas (headspace) tests. During the 72-hour pumping of a test well, electrical conductivity should be continuously monitored (every 15 minutes at first; then at least hourly). Several samples should be taken and analyzed for at least the constituents listed above. At some point close to the end of the test, the water should be sampled and analyzed for the following parameters in addition to those listed above: Complete secondary analysis, primary drinking water constituents, nitrogen (NO_3 , NO_2 , NH_3 , TKN) and bacteria. The costs of these tests should be included in the cost estimates on page 26.

Water consumption (p. 8-9):

The values given (500 gpd) appear to be winter values. The summer values are about double. Not having metering required by the Association likely means that some folks are doing a lot of garden irrigation at little cost to themselves.

Water treatment (p. 22):

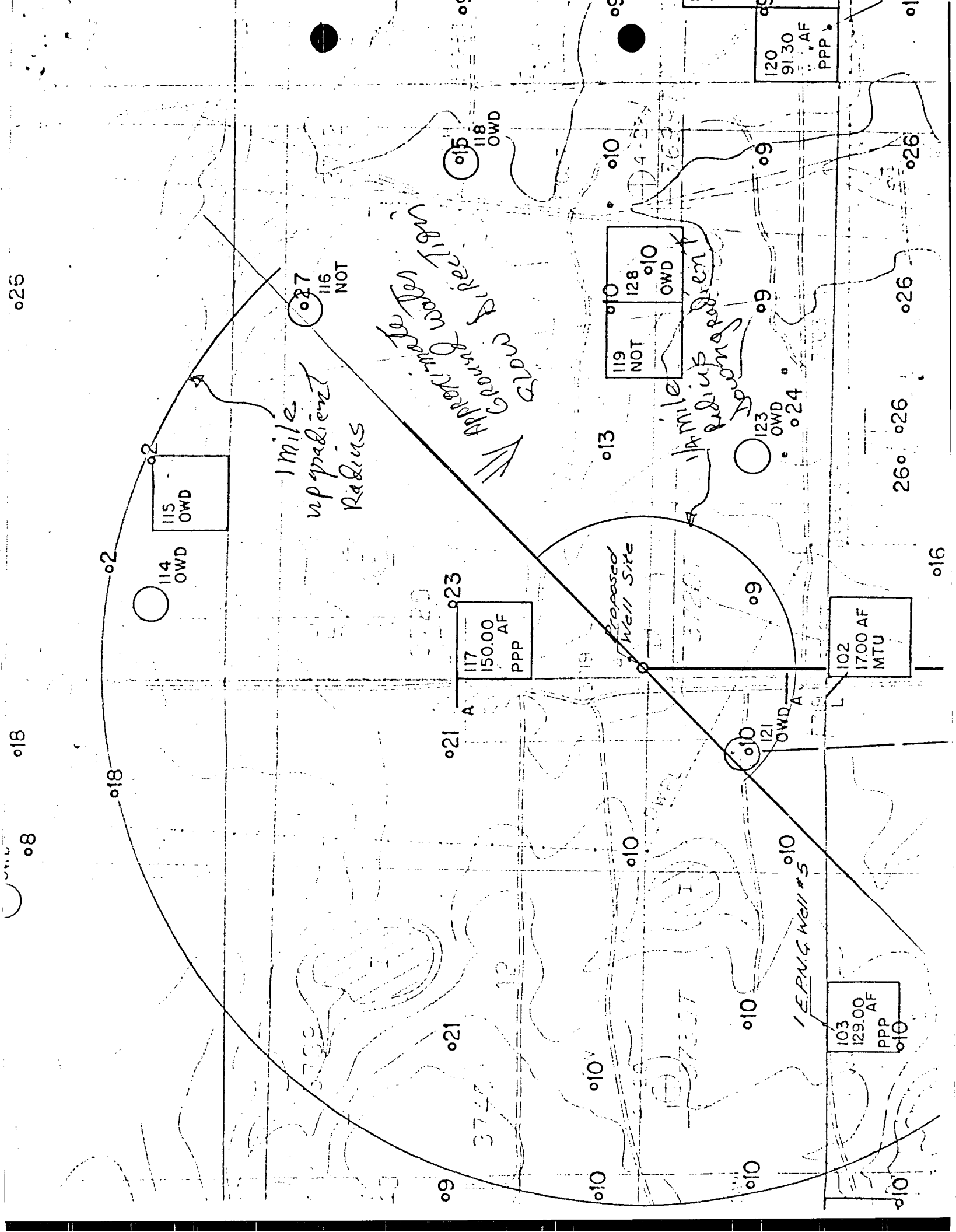
The cost of treatment for the new well drilled in 1986 would also need to include desalination since chlorides and TDS also exceed standards (chlorides 510 mg/l vs. 250 standard, TDS 1750 mg/l vs. 500 standard).

If you need further information or clarification, you may contact me at 827-5812.

DGB:dp

Enc.

cc: William LeMay, OCD
Jerry Sexton, OCD-Artesia
Jon Thompson, EID
Jacob Block, LGD
Rusty Rodke, ISSC



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

COMMUNITY SERVICES BUREAU

MEMORANDUM

TO: THE HONORABLE TONEY ANAYA
GOVERNOR, STATE OF NEW MEXICO

THRU: *Richard Holland*
RICHARD HOLLAND, ACTING DIRECTOR, EID

FROM: *Jon F. Thompson*
JON F. THOMPSON, BUREAU CHIEF
COMMUNITY SERVICES BUREAU
ENVIRONMENTAL IMPROVEMENT DIVISION

DATE: DECEMBER 29, 1986

SUBJECT: MONUMENT WATER SYSTEM

Relative to your assigning me the task of coordinating with the Community of Monument and state agencies to resolve and locate a safe drinking water source for Monument, I would like to provide you and others involved this second progress report on this important effort.

The Monument community is continuing to obtain drinking water from the El Paso Natural Gas Company (EPNG) main water line located approximately 2 miles northwest of Monument. EPNG officials have agreed to allow Monument use of this water at a nominal fee. The water line between the EPNG main and the Town of Monument is temporary in nature and the contractual agreement is being renewed on a monthly basis.

A permanent solution to the Monument water situation is progressing. Approximately \$8,000 was awarded by the Interstate Stream Commission (ISC) to Monument to conduct a feasibility study. This study will examine the community's long term water supply options and provide implementation costs. This contract has been awarded to Dennis Engineering Company of Socorro and a draft of the study findings is projected to be completed by early January, 1987.

MEMORANDUM

The Honorable Toney Anaya

December 29, 1986

Page 2

Thank you for your support on this important public health endeavor. As the project progresses, this report will be updated for those many individuals who have provided such excellent assistance and cooperation.

cc: The Honorable Joe Harvey, State Senator
The Honorable Dan Berry, State Representative
The Honorable Robert Wallach, State Representative
Richard Holland, Acting Director
Sally Rogers, Governor's Office
W.E. Copeland, Monument WUA, President
~~R.L. Stamets, Director, OGD~~
Dave Vargas, Director, LGD
B. Scott, Lea County
Neil S. Weber, Deputy Director
Steve Massey, SENMDD
Patrick Olacchia, EID
Garrison McCaslin, EID
Stuart Castle, Program Manager DWS
Raymond Dennis, P.E. Socorro



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

December 23, 1986

TONY ANAYA
GOVERNOR

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

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Jame E. Goetz
Rocky Mountain District Manager
Ground Water Technology, Inc.
6879 S. Emporia, Suite 4
Englewood, Colorado 80112

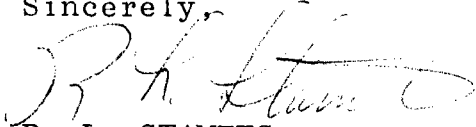
RE: TEXAS-NEW MEXICO PIPELINE SPILL AND CLEAN-UP AT MONUMENT,
NEW MEXICO

Dear Mr. Goetz:

Your letter and request of December 8, 1986, has been received by the OCD. In accordance with your request, and pursuant to Mr. Boyer's letter of October 3, 1986, Texas-New Mexico Pipeline Company is granted an additional sixty days until February 9, 1987, to submit the report on cleanup and remedial activities performed by Texas-New Mexico Pipeline at the site of the September, 1984, Monument, New Mexico, pipeline break.

If you have any questions, please contact me at the above address or by phone at 827-5812.

Sincerely,


R. L. STAMETS,
Director

DGB:dp:et

xc: D. G. Boyer, Environmental Bureau Chief
Jerry Sexton, OCD, Hobbs
B. L. Lednicky, Texas-New Mexico Pipeline Co.

STATE OF NEW MEXICO

TONEY ANAYA
GOVERNOR

DENISE D. FORT
DIRECTOR



ENVIRONMENTAL
IMPROVEMENT
DIVISION

December 16, 1986

Raymond Dennis, P.E.
Dennis Engineering Company
P.O. Box Y
Socorro, NM 87801

RE: Monument Water Users Cooperative

Dear Mr. Dennis:

The outline of the feasibility engineering report for the referenced community has been reviewed by EID staff and we find it acceptable. We look forward to receiving the first draft early in January, 1987.

If we can be of any assistance please call Stuart Castle at 827-2778 or myself at 827-2797.

Thank you for your cooperation.

Sincerely,

Patrick G. Oláechea, P.E.
Construction Grants Section

1c

xc: The Honorable Joe Harvey, State Senator
Jon F. Thompson - EID
Stuart Castle - EID
Garrison McCaslin - EID
Dave Boyer - OCD ✓
Dave Vargas - LGD
Rusty Rodke - ISC
Steve Massey - SENMDD

EQUAL OPPORTUNITY EMPLOYER

P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 827-0020



GROUNDWATER TECHNOLOGY

A DIVISION OF OIL RECOVERY SYSTEMS, INC.

6879 S. Emporia, Suite 4, Englewood, CO 80112, (303) 799-8338

8 December, 1986

Mr. David M. Boyer
Hydrogeologist/Environmental Bureau Chief
Energy and Minerals Department
Oil Conservation Division
P.O. Box 2088
State Land Office Building
Santa Fe, NM 87501-2088

Re: Texas-New Mexico Pipeline Company.

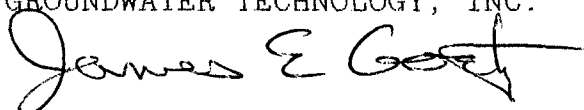
Dear Mr. Boyer:

Groundwater Technology, Inc. (GTI) has been retained by Texas-New Mexico Pipeline Company to write the updated report requested by you in your letter dated 3 October, 1986 to Mr. B. L. Lednicky. GTI is currently processing data forwarded to us by Mr. Lednicky.

Per our teleconference today, GTI requests a sixty day extension of the due date for the report. The additional time will allow us to properly assess the large amount of available current and historical information.

Should you require interim information please contact GTI in the Denver office at (303)799-8338.

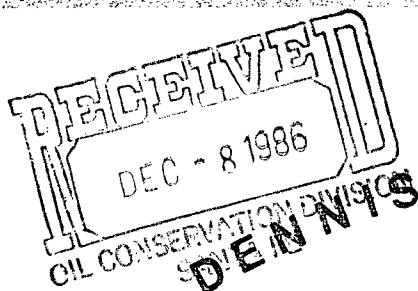
Sincerely,
GROUNDWATER TECHNOLOGY, INC.



James E. Goetz
Rocky Mountain District Manager

cc: B. L. Lednicky

Phone call to Dave Hanna, EIT, 12/8/86:
Proposal looks good from standpoint of
review of information, searching alternative
sources, etc.



ENGINEERING

(505) 835-2195

ENGINEERING



SURVEYING

COMPANY

HIGHWAY 60 WEST (P.O. BOX "Y") • SOCORRO, NEW MEXICO 87801
BRANCH OFFICE 114 WEST FOURTH • P.O. BOX 206 • PORTALES, NEW MEXICO 88130 • (505) 356-5523

TO: PAT OLEACHEA
ENVIRONMENTAL IMPROVEMENT DIV.
P.O. Box 968
SANTA FE, NM 87504-0968

DATE: 12-04-86
PROJECT: MONUMENT WATER ASSOC.
FILE:

Please review the attached proposal regarding
the engineering report for subject project as
we discussed in Santa Fe on 12-1-86.
If you feel anything is not adequately
covered or that changes are needed please
call me or contact Samuel Small, PE at
393-2144 in Hobbs (Board of Directors member).

By copy of this memo I am submitting
a copy of the proposal to the other agencies
involved in the project.

Thanks
R L Dennis, P.E.

CC: STUART CASTLE, NMEID, PO Box 968, SANTA FE, NM 87504-0968
RUSTY KODKE, INTERSTATE STREAM COMM, BATAAN MEMORIAL BLDG, SANTA FE 87501
JACOB BLOCK, LOCAL GOVT. DIV. - DFA, 206 LAMAR BLDG, SANTA FE, 87501
☒ DAVE BOYER, OIL CONSERVATION DIV, PO Box 2088, SANTA FE 87504-2088
FILE 189A

DON EDGINGTON, PROJ. SUPERVISOR, PORTALES
DIA

DENNIS ENGINEERING COMPANY

(505) 835-2195

ENGINEERING



SURVEYING

HIGHWAY 60 WEST (P.O. BOX "Y") • SOCORRO, NEW MEXICO 87801
BRANCH OFFICE, 114 WEST FOURTH • P.O. BOX 206 • PORTALES, NEW MEXICO 88130 • (505) 356-5523

December 4, 1986

Mr. W.E. Copeland, President
Monument Water Users Cooperative
P.O. Box 48
Monument, New Mexico 88265

Re: Engineering Report-Water Supply
RFP Published 9-26-86

Dear Mr. Copeland:

Reference my meeting in Monument with the Board of Directors and others on October 28, 1986 and my meeting in Santa Fe on December 1, 1986, with the following individuals:

- | | |
|------------------|-----------------------------|
| 1. Jon Thompson | NMIED |
| 2. Pat Oleachea | NMEID |
| 3. Stuart Castle | NMEID |
| 4. Oscar Simpson | NMEID |
| 5. Jacob Block | Local Government Div. - DFA |
| 6. Rusty Rodke | Interstate Stream Comm. |
| 7. Dave Boyer | Oil Conservation Division |

Based on discussions at these meetings this firm proposes to provide an Engineering Report which will include the following items of work and information:

1. Perform on-site inspection of the Association's existing facilities and prepare layout map of same.
2. Provide a description of existing facilities, identify problem areas and recommend needed improvements.
3. Review information available in the offices of the Oil Conservation Division and the Environmental Improvement Division, which relates to existing and abandoned oil and gas production, storage, transmission and distribution facilities within or adjacent to the present distribution system as well as those areas felt to be feasible as a potential site for a new water supply.
4. Review information available in the offices of the Oil Conservation Division, the Environmental Improvement Division and the State Engineer which relates to well locations, well details, well capacity, water quality, well contamination, line breaks,

etc., within or adjacent to the present distribution system and those areas felt to be feasible as a potential site for a new water supply.

5. Conduct an on-site inspection of those areas felt to be feasible as a potential site for a new water supply.

6. Review the feasibility of potential well sites with individuals familiar with the general area including personnel from EID, OCD, oil and gas companies as well as local residents.

7. Summarize and discuss the information obtained in items 3 through 6 above.

8. Review ownership of land in those areas recommended as a potential site for a new supply and along the route of any transmission lines necessary to connect to the existing distribution facilities.

9. Review, summarize and discuss with appropriate individuals, the feasibility of the following as a new source of supply:

- A. El Paso Natural Gas Co. well field northwest of Monument (Use of existing well or drilling of a new well)
- B. Use of existing well owned by Warren Gas Co.
- C. Purchase of existing irrigation or domestic well
- D. Connect to Town of Eunice system
- E. Connect to City of Hobbs system
- F. Treat water from existing well(s)
- G. Other sites that appear to be feasible as the report develops.

10. Obtain water samples and testing as necessary to evaluate the feasibility of potential new source of supply.

11. Review with the State Engineer the Association's established water rights and the ability to transfer these rights to a new source of supply.

12. Review, and utilize to the extent feasible, those improvements installed with previous NMCA funding.

13. Review and analyze anticipated construction problems, rights-of-way requirements and other administrative or physical problems which may be encountered by the implementation of the various options.

14. Provide cost estimates to implement those options considered feasible as a long-term solution to Monument's water supply.

15. Review and discuss the Associations current water rates, income, operating expenses, etc., and recommend appropriate changes (if any).

16. Meet with the Association's Board of Directors or their representative and representatives of the funding agencies at the time of the initial site inspection, when the report draft is approximately fifty percent complete and upon completion of the report draft.

17. Make necessary changes to the report draft and provide 15 copies of the completed report to the Association for distribution to the funding agencies and other interested parties.

Compensation for the work outlined above shall be the lump sum amount of \$7,500.00 plus gross receipts tax applicable within the City of Socorro (currently 5.25 percent). Said compensation does not include the cost of water quality testing discussed in Item 10 above; the preparation of any Plans, Specifications or Contract Documents for the construction of any new facilities including test holes, pump tests, etc.), or the inspection of any construction.

It is understood and agreed that this report is being financed by a grant from the Interstate Stream Commission and that payment will be made upon completion and acceptance of the report and upon receipt of said grant funds by the Association.

The preparation of this report shall begin upon receipt of acceptance of this proposal by the Association and the report draft shall be completed within 20 calendar days thereafter. The final report shall be submitted within seven working days following the final review meeting with the Association.

Respectfully submitted,

Raymond Lee Dennis, P.E.
Chief Engineer

Accepted:

MONUMENT WATER USERS COOPERATIVE

BY: _____

DATE: _____

Monument meeting - 12/2/86

EID - Stuart Castle OGD - Dave Boyer

PAT Chaechea LGD - Jack Black

Oscar Simson ISC - Rusty Radke

Jon Thompson

Dennis Engineering - Ray Dennis

Money available for study - \$19,000 - 23,000

{ State Engineer (ISC) \$8,000
Oil Co & Matching Funds (Monument) 15,000 ← \$ may be 11,000

Total \$23,000

Available Study Money \$19,000 - 23,000

since
extra 4,000
for temp line

Possible solutions -

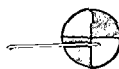
① EPN & Well acquisition

② New well in new location

Dennis Eng. To prepare legislative or CDC proposal
on alternatives. No study of contaminated
area.

Dennis Engineering
Civil Engineers - Surveyors
Soils & Concrete Laboratory

Hwy 60 West
Mail: P.O. Box Y
Socorro, N.M. 87801
505-835-2195



Hwy 70 & Kakawate Rd.
P.O. Box 206
Portales, N.M. 88130
505-356-5523

RAYMOND LEE DENNIS, P.E. — CHIEF ENGINEER

TONEY ANAYA
GOVERNOR

DENISE D. FORT
DIRECTOR

DB

STATE OF NEW MEXICO

ENVIRONMENTAL IMPROVEMENT DIVISION

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

(505) 984-0020

COMMUNITY SERVICES BUREAU



October 21, 1986

Mr. John Cunningham, Administrator
Special Projects
El Paso Natural Gas Company
1 Petroleum Center, Building 2
3300 North "A" Street
Midland, Texas 79705

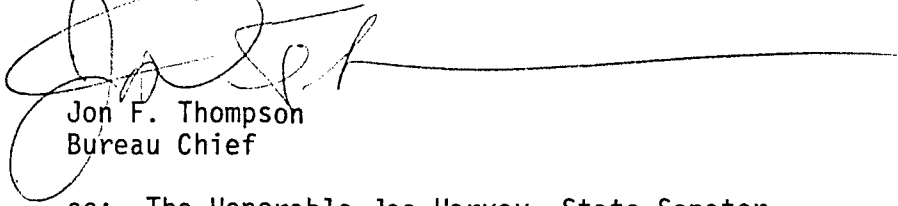
Dear Mr. Cunningham:

On behalf of the New Mexico Environmental Improvement Division (EID) and other state officials involved, I would like to thank you and other officials with the EL Paso Natural Gas Company (EPNG) for the excellent assistance provided the community of Monument in obtaining, at least temporarily, a safe drinking water supply source. The permission that EPNG provided to Monument to connect their storage and distribution system to an existing EPNG water supply main line allows the approximately 250 residents of Monument to utilize a drinking water source that is safe for drinking and culinary use. I have also been informed by EID personnel directly associated with the Monument project, Don Lutjens and Tom Burt, that EPNG furnished labor and equipment to connect the main water supply tee to the Monument water distribution system over one weekend free of charge to Monument. This is a commendable effort contributed by EPNG and is certainly an excellent example of public/private cooperation resulting in the protection of public health to the residents of Monument.

We look forward to working with you and other EPNG officials to provide the community of Monument a permanent safe drinking water supply source.

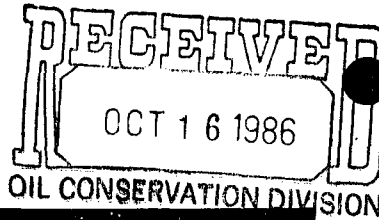
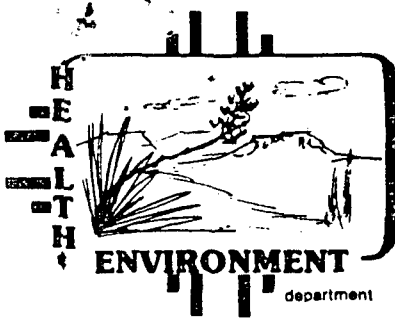
Thank you.

Sincerely,


Jon F. Thompson
Bureau Chief

cc: The Honorable Joe Harvey, State Senator
The Honorable Dan Berry, State Representative
The Honorable Robert Wallach State Representative
Ms. Sally Rogers, Governor's Office
Mr. W.E. Copeland, President, Monument Water Cooperative
Denise Fort, EID Director
Dave Vargas, Director, LGD
Bill Scott, Lea County
R.L. Stamets, Director, OCD ✓
Trace Hicks, Pettigrew and Associates
EID Water Supply Staff (Stuart Castle, Pat Olachea, Don Lutjens and Tom Burt)

EQUAL OPPORTUNITY EMPLOYER



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

COMMUNITY SERVICES BUREAU

October 14, 1986

Mr. W.E. Copeland, President
Monument Water Users Cooperative
P.O. Box 48
Monument, New Mexico 88265

RE: Feasibility Study Request For Proposals (RFP) - Monument Water Supply System

Dear Mr. Copeland:

On October 9, 1986, The Environmental Improvement Division (EID) received a copy of Monument's request for proposals (RFP) published on September 26, 1986 in the Hobbs News Sun and also the proposal information, including selection criteria available from you to any interested bidder. EID personnel have reviewed these documents and we offer the following suggestions:

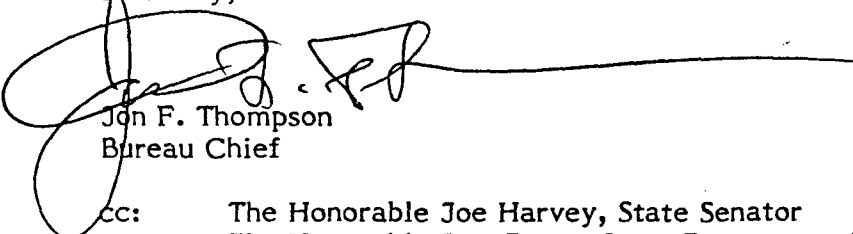
1. We strongly recommend that the RFP be published not only in a local paper but also on two other newspapers of general circulation in the state to offer the information to as many qualified personnel as possible. You may also desire to consider sending the RFP information to a list of firms which can be provided by Lea County and/or the Southeastern New Mexico Economic Development District.
2. We suggest that the problem statement and scope of work be more detailed. Information should be provided about the type of contamination, water quality data and current conditions. In the scope of work you should identify at least the minimum objectives of the scope. We understand the basic objectives are as follows:
 - Review of all existing data from EID and the Oil Conservation Division (OCD) regarding water quality, sources of contamination, casing leaks in the area, etc.
 - Incorporate to the extend technically and economically feasible the current improvements funded by NMCA emergency funds.
 - Perform necessary pump tests, water analyses, and if necessary, drilling of test holes to determine the extent of the contamination and possible areas for locating a new source of water.
 - Prepare a hydrogeologic study including the extent of the contamination and possible sources of the contamination.

Mr. W.E. Copeland
October 14, 1986
Page 2

- Analyze construction problems, right-of-ways, water rights and other administrative or physical problems which may be encountered by the different options including commenting on items such as possible needed negotiations with other providers of water both private or municipal.
- 3. For your information and use, we are attaching a copy of a Federal form used by the community of Des Moines in preparing their RFP (copy attached) for an engineering study funded by Community Development Block Grants (CDBG). We believe the 6 parts of the proposal: Problem Statement, Scope, Project Schedule, Contract Type, Proposal Contents and the Evaluation Criteria should also be in your request. The RFP and the report should comply with the requirements of the grant agreement between the Interstate Stream Commission (ISC) and Monument.
- 4. We suggest the Evaluation Criteria place emphasis on the methodology (technical approach) and experience of the personnel both, inhouse or sub-contracted. We believe the use of personnel with engineering and hydrology expertise is essential to the satisfactory completion of this proposal. The proposed evaluation criteria should also include cost. Please refer to attachment F in the Des Moines RFP. We Believe the consultants should be told how much is available in funds and you should allow them to tell you how much they can do, for how much, how and with what expertise.

We understand that the ISC has sent you an agreement for your signature and that until that agreement has been executed by the State Engineer you should not proceed with receiving bids or signing any contracts. This time can be used constructively by preparing a new RFP with the above recommendations. The EID can assist during the evaluation of consultants and with the review of the consultant's agreement for the purpose of accomplishing a report which will assist Monument in securing the future funding it needs to resolve the water problems in Monument. If you have any questions, please feel free to contact Pat Olachea at 827-2797 and/or Stuart Castle at 827-2778. Thank You.

Sincerely,



Jon F. Thompson
Bureau Chief

cc: The Honorable Joe Harvey, State Senator
The Honorable Dan Berry, State Representative
The Honorable Robert Walloch, State Representative
Rusty Rodke, ISC, Room 101, Bataam Building
Patrick G. Olachea, Program Manager
Stuart P. Castle, Program Manager, WSS
Garrison McCaslin, District Manager, EID
Dan Lujens, Environmentalist, Hobbs EID Office

MR. W.E. Copeland
October 14, 1986
Page 3

Bill Weber, Engineer, Roswell EID Office
Dennis McQuillan, Water Resource Specialist, EID
Steve Massey, SENMDD
William Hicks, Pettigrew & Associates
David Boyer, OCD
Bill Scott, Lea County
Dave Vargas, Director, LGD
JFT Monument File



STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

TONY ANAYA
GOVERNOR

October 3, 1986

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

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. B. L. Lednicky
District Manager
Texas - New Mexico Pipeline Co.
P. O. Box 2528
Hobbs, N.M. 88241

RE: MONUMENT WATER WELLS

Dear Mr. Lednicky:

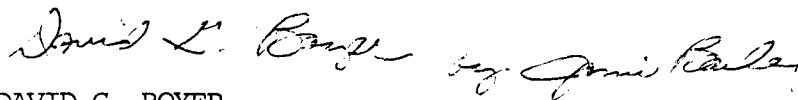
This letter is in response to your letter of June 4, 1986, and your phone call of last week. In your letter you requested approval to discontinue the oil recovery wells once the new water system was in operation. A response at that time was delayed due to events involving the testing of the new well. As you know, the new replacement well was contaminated, and an emergency hookup to El Paso Natural Gas Company's water pipeline was only completed several weeks ago. Until that time, your continued pumping and recovery was useful in decreasing movement of contaminants, from whatever source, to the remaining water supply wells. Now that the pipeline is providing water, you are free to discontinue operation of the recovery system and authorized to remove pumps, controls and other similar equipment that could be damaged or vandalized if left inoperable on site. At this time, you are not authorized to perform final equipment removal and surface restoration.

Final settlement of this matter will require you to address those issues in my May 22, 1985, letter to you. In that letter (copy attached), the OCD had requested a complete, detailed report on the activities your company has performed since the spill. Submittal, at this time, of an updated report is necessary for OCD to evaluate current conditions in the area. You are requested to submit such a report within sixty (60) days after receipt of this letter. An additional sixty days for submittal will be granted upon request if the pipeline company shows it cannot comply within the first sixty days. Within forty-five (45) days of receipt of the report requested in this letter, OCD will provide technical comments on the report, and propose a settlement agreement based on the information in your technical report.

It is important that your report scientifically document as much as possible what oil attributable to other causes exists in the area, what impact your continued oil recovery would have on cleanup of that contamination, and whether your continued efforts at aquifer restoration would improve water quality given the apparent existence of other contamination. The settlement agreement discussed in the spring of 1985 was submitted for comment to the

EID Ground Water/Hazardous Waste Bureau because the contamination affected a municipal water supply which is under EID's jurisdiction. Their comments on the proposed settlement are also enclosed. As you can see, they had strong objections. I hope that the information you provide in response to this letter will be technically sufficient to answer their concerns about restoration and the impact of contaminants left in the subsurface.

Sincerely,



DAVID G. BOYER
Hydrogeologist/Environmental Bureau Chief

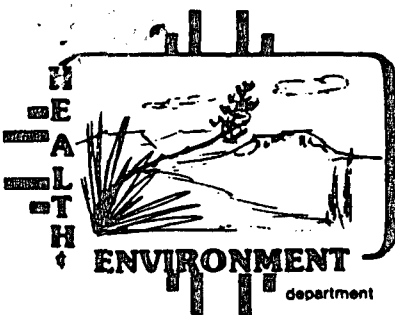
DGB:dp

Enc.

cc: R. L. Stamets
Jerry Sexton
Jeff Taylor

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

COMMUNITY SERVICES BUREAU

September 22, 1986

William Hicks, E.I.
Pettigrew and Associates
P.O. Box 5769
Hobbs, N.M. 88241

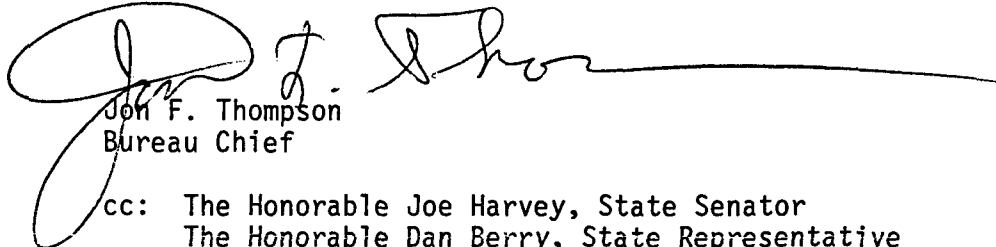
RE: MONUMENT WATER SYSTEM

Dear Mr. Hicks:

Thank you for your letter of September 16, 1986 relative to the referenced subject matter. I am taking the liberty to distribute copies of your letter to the primary participants involved with improving the Monument Water System.

Your cooperation and assistance in this important matter is appreciated.

Sincerely,



Jon F. Thompson
Bureau Chief

cc: The Honorable Joe Harvey, State Senator
The Honorable Dan Berry, State Representative
The Honorable Robert Wallach, State Representative
W.E. Copeland, Monument WUA, President
R.L. Stamets, Director, OCD
Dave Vargas, Director, LGD
B. Scott, Lea County
Steve Massey, SENMDD
Stuart Castle, HPM I, Water Supply Program, EID
Pat Olachea, Program Manager, Construction Grants, EID
Bill Webber, Env. Engineer, Roswell, EID
Garrison McCaslin, District Manager, EID

P.O. BOX 807
GLOVIS, NM 88101
(505) 762-3716

PETTIGREW & ASSOCIATES



P.O. BOX 5769
HOBBS, NM 88241
(505) 393-9827

RICHARD R. PETTIGREW, P.E.-L.S.

September 16, 1986

State of New Mexico
Environmental Improvement Division
Community Services Bureau
P.O. Box 968
Santa Fe, New Mexico 87504-0968

ATTN: MR. JON F. THOMPSON
BUREAU CHIEF

RE: MONUMENT WATER SYSTEM

Dear Mr. Thompson:

Bill Weber, P.E., of the Roswell E.I.D. office has requested we furnish you a certification that the pipeline serving the community of Monument has been properly installed. The water line connects the Monument system to a transmission line owned by El Paso Natural Gas Company.

We are unable to provide a certification as such for obvious reasons.

- 1) No plans or specifications on construction methods or materials were prepared for the work.
- 2) The pipeline is a 4" diameter, I.P.S., SDR-17, ASTM D-2513, polyethylene FAS-LINE as manufactured by Tex-Tube. The pipe is black polyethylene and is not susceptible to damage by the sun's ultraviolet rays, however it will not withstand vehicular traffic with no cover provided.
- 3) The joints are a standard heat fusion butt weld type.
- 4) The material was supplied by Walton Construction Company.
- 5) Representatives from Walton provided instruction to the volunteers from the Monument Water Users Association on the pipe connection procedures. Our observations of the jointing procedures indicate the practice of connecting the pipe, as was demonstrated, was adhered to.
- 6) Except for road crossings where the line is buried, the pipeline has been placed on the surface of the ground.

Monument Water System

Page 2

September 16, 1986

- 7) After installation, the line was disinfected by flushing with a chlorine solution, comprised of two (2) gallons powdered chlorine added to pipeline as it was filled, then let set overnight and flushed out the following morning.
- 8) The pipeline was walked and checked for leaks after it was filled, none were found, pressure held at 70 psi overnight.

If there are any questions regarding this submittal, please contact this office.

Respectfully Submitted,

PETTIGREW & ASSOCIATES

William Hicks

William Hicks, E.I.

WMH:bjc

JH → Monument Task Force
9/22/86

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

COMMUNITY SERVICES BUREAU

MEMORANDUM

TO: THE HONORABLE TONEY ANAYA
GOVERNOR, STATE OF NEW MEXICO

FROM: *[Signature]*
JON F. THOMPSON, BUREAU CHIEF
COMMUNITY SERVICES BUREAU
ENVIRONMENTAL IMPROVEMENT DIVISION

SUBJECT: MONUMENT WATER SYSTEM

DATE: SEPTEMBER 9, 1986

Relative to your assigning me the task of coordinating with the Community of Monument and state agencies to resolve and locate a safe water source for Monument, I would like to update you and others involved on the status of this effort.

As of this date (9/9/86), Monument has connected a new 4" water line to an existing El Paso Natural Gas Company (EPNG) main water line located approximately 2 miles northwest of Monument. Funds for the new water line were derived from the existing Monument Community Assistance Grant. Labor required for trenching water line ditches, placement of soft bedding material for the water line, and covering the water line was supplied by the residents of Monument as a cooperative volunteer effort. The Environmental Improvement Division sampled the new EPNG water source for bacteriological and chemical quality (including hydrocarbons) prior to commencement of construction. Laboratory analysis indicated that the water source was free of contaminants and safe for consumption.

EPNG officials have agreed to allow Monument use of EPNG water at a nominal water users fee for an eleven (11) month period, with a verbal agreement to extend the contract terms as necessary or until Monument locates a permanent and safe drinking water source. Through the efforts of Senator Joe Harvey in coordination with Representatives Dan Berry and Robert Wallach and the excellent cooperation of EPNG officials, Monument officials, the Local Government Division, the Oil Conservation Division, Lea County officials, the consulting engineer for Monument, the Southwestern New Mexico Economic Development District, and EID a temporary solution to Monument's water problems have been resolved.

In an attempt to find a permanent solution to the Monument water situation, the Local Government Division has released \$15,000 in local matching funds from the Monument NMCA Grant directly back to Monument to conduct

The Honorable Toney Anaya
September 9, 1986
Page 2

a comprehensive feasibility study. The feasibility study will determine the options that will allow for the best available source of water (quality and quantity) for Monument on a long term basis taking costs into consideration. Recent contact with the Interstate Stream Commission (ISC) indicates that water feasibility study funds may be available from ISC sources to supplement this feasibility study. Staff of the Southwestern New Mexico Development District in Roswell and EID staff will assist Monument officials with the paperwork necessary to adequately advertise and contract the feasibility study proposal.

Thank you for your support and as the project development progresses significantly, this report will be updated for your continuing information.

Distribution:

The Honorable Joe Harvey, State Senator
The Honorable Dan Berry, State Representative
The Honorable Robert Wallach, State Representative
Denise Fort, Director, EID
Sally Rogers, Governor's Office
W.E. Copeland, Monument WUA, President
~~R. L. Stamets, Director, OCD~~
Dave Vargas, Director, LGD
B. Scott, Lea County
Neil S. Weber, Deputy Director
Richard Pettigrew, P.E. Hobbs
Steve Massey, SENMDD
Patrick Oleachea, EID
Garrison McCaslin, EID
Stuart Castle, Program Manager, Water Supply Section

Memo

From

JERRY SEXTON
District Supervisor

September 12, 1986

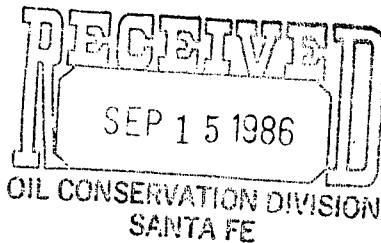
To Dave Boyer

Attached is the data you asked Eddie to get on the Joe R. Williams case.

We have looked into the case and do not feel the District staff can help in the case.

The water sand on his land is very thin and has very low capacity if it exists at all.

If you feel the OCD needs to do further work, please keep the work committed to the office staff.



ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS, NEW MEXICO

WATER ANALYSIS

Well Ownership: JOE WILLIAMS Well No. WATER WELL #2

Land Status: State _____ Federal _____ Fee _____

Well Location: Unit Letter _____, Section 33, T 19 S, R 37 E

Domestic

Type Well: _____ Depth _____ feet.

Well Use: _____

Sample Number: _____ Sample turned over to OCD 8/26/85

Taken By: Joe Williams

Specific Conductance: _____ m/

Total dissolved Solids: _____ PPM.

Chlorides: 383.4 PPM.

Sulfates: _____ PPM.

Ortho-phosphates: ☐ V.Low ☐ Low ☐ Medium ☐ High

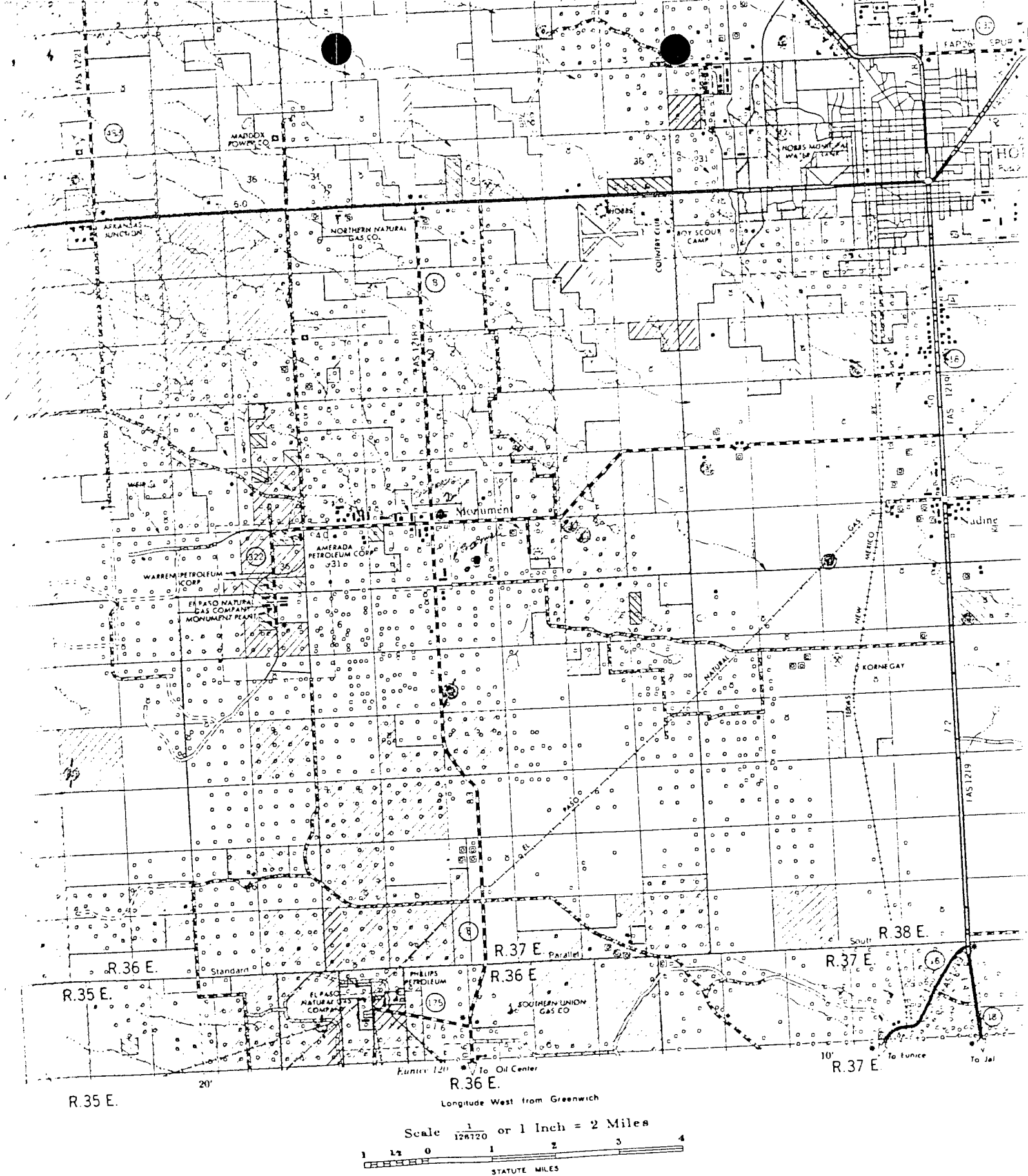
Sulfides: ☐ None ☐ Low ☐ Medium ☐ High

Date Analyzed: 8/27/85

By: Eddie Seay
Oil Conservation Division

REMARKS: _____

25 ml 142 x 2.7 = 383.4 ppm Cl.



Sample # 2 Came from shallow water well.



TONEY ANAYA
GOVERNOR

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

50 YEARS



1935 - 1985

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88240
(505) 393-6161

August 26, 1985

Mr. Joe Williams
PO Box 215
Monument, NM 88265

RE: Monument Water Situation

Dear Mr. Williams:

From the drilling reports of both the Oil Conservation Division and the Texas-New Mexico Pipeline Company, there appears to be two separate problems in the area.

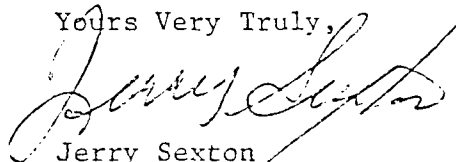
One problem appears to have occurred from a Texas-New Mexico Pipeline Company oil leak. The boundaries of this are right around the leak site and is well defined from the drilling of test wells.

The other problem is further South from the Tex-Mex spill and my best guess is that it occurred some time in the past from casing leaks or spills which probably occurred many years ago. This area appears to be "trapped" in its present location. There appears to be a clay streak on the West side, and as your wells indicated, a pinch out of the sand is to the Southeast.

Since we cannot pinpoint any movement of this oil and the time frame in which it got into the water, I'm not sure how further investigation into this would be accomplished.

Dave Boyer is the Oil Conservation Division's hydrologist and will be more than willing to discuss the hydrology of the area with you.

Yours Very Truly,


Jerry Sexton
Supervisor, District I

JE/ea
pc: file



TONEY ANAYA
GOVERNOR

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

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88240
(505) 393-6161

August 22, 1985

Dear Mr. Williams:

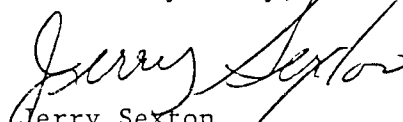
Attached is the water analysis for your domestic water well and the other information you asked for.

Eddie Seay said you had had a big oil spill on your land when you cut the Tex-Mex pipeline.

As we discussed, an oil spill doesn't usually result in oil getting in the water, but the Monument well showed that it could happen. You would do well to keep an eye on your water wells.

At least you were lucky, Mr. Williams, and the spill was on your land.

Yours Very Truly,


Jerry Sexton
Supervisor, District I

JS/ea
Attachment as stated
pc: file

ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS, NEW MEXICO

WATER ANALYSIS

Well Ownership: JOE WILLIAMS (393-0764) Well No. _____

Land Status: State _____ Federal _____ Fee _____

Well Location: Unit Letter _____, Section 33, T 19 S, R 37 E

Type Well: Domestic - stock & irrigation Depth _____ feet.

Well Use: _____

Sample Number: _____

Date Taken: _____

Taken By: Joe Williams

Specific Conductance: _____ m/cm

Total dissolved Solids: _____ PPM.

Chlorides: 71.0 PPM.

Sulfates: _____ PPM.

Ortho-phosphates: ☐ V.Low ☐ Low - ☐ Medium ☐ High

Sulfides: ☐ None ☐ Low ☐ Medium ☐ High

Date Analyzed: 8/21/85

By: Eddie W. Seay
Oil Conservation Division

REMARKS: _____

25 ml 142 x .5 = 71 ppm Cl

Hobbs city water -- 25 ml 142 x .4 = 56.8 ppm Cl

NOTIFICATION OF FIRE, BREAKS, SPILLS, LEAKS, AND BLOWOUTS

NAME OF OPERATOR TEXAS-NEW MEXICO PIPE LINE CO					ADDRESS Box 2528, Hobbs, New Mexico 88240		
REPORT OF	FIRE	BREAK	SPILL	LEAK	BLOWOUT	OTHER*	
				X			
TYPE OF FACILITY	DRUG WELL	PROD WELL	TANK BTY	PIPE LINE X	GASO PLNT	OIL RPY	OTHER*
NAME OF FACILITY 4" Gathering Line							
LOCATION OF FACILITY (QUARTER/QUARTER SECTION OR FOOTAGE DESCRIPTION) SE/4 SW/4					SEC. 33	TWP. 19	RGE. 37
DISTANCE AND DIRECTION FROM NEAREST TOWN OR PROMINENT LANDMARK					3/4 Mi. S. of Monument, N.M. & 1/2 Mi. E of St. Rd		
DATE AND HOUR OF OCCURENCE Unknown				DATE AND HOUR OF DISCOVERY 2/12/85 12:30 P.M.			
WAS IMMEDIATE NOTICE GIVEN?		YES X	NO	NOT REQUIRED		IF YES, NMOC - E. W. Seay TO WHOM SCC - Ray Elliott	
BY WHOM		NMOC - R. C. Harrick		DATE		NMOC - 12-12-85 5:48 P.M.	
		SCC - C. Johnson		AND HOUR		SCC - 12-13-85 8:20 a.m.	
TYPE OF FLUID LOST Sour Crude				QUANTITY OF LOSS 300 BBLs		VOLUME RECOVERED 60 BBLs	
DID ANY FLUIDS REACH A WATERCOURSE?		YES	NO X	QUANTITY			
IF YES, DESCRIBE FULLY**							
DESCRIBE CAUSE OF PROBLEM AND REMEDIAL ACTION TAKEN**							
<p>Outside party with caterpillar/dozer was cleaning brush & mesquite along existing fence line and dug up our 4" pipe line.</p> <p>Cut damaged section out & replaced with dresser sleeve & 4" pipe. (temporary repairs)</p>							
DESCRIBE AREA AFFECTED AND CLEANUP ACTION TAKEN**							
<p>21,000 sq ft pasture land</p> <p>Oil soaked earth covered with fresh soil in prospects of full restoration</p>							
DESCRIPTION OF AREA		FARMING	GRAZING X	URBAN	OTHER*		
SURFACE CONDITIONS		SANDY	SANDY LOAM X	CLAY	ROCKY	WET	DRY X
DESCRIBE GENERAL CONDITIONS PREVAILING (TEMPERATURE, PRECIPITATION, ETC.)**							
62°							
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF							
SIGNED		B. L. Lednicky		TITLE		Dist. Manager	
						DATE 2-13-85	

*SPECIFY

**ATTACH ADDITIONAL SHEETS IF NECESSARY

NDO-18

cc: Hazardous Waste Section
N.M. Environmental Improvement Division

85-036940

...to be made by replacing 40 ft 4" gathering line

Wells in Sec 29, T19S, R37E that have had casing leaks.

Amerada Hess Corp.

State K #1-F Sec 29, T17S, R37E

State P #2-M Sec 29, T19S, R37E

State R #2-N Sec 29, T19S, R37E

Gulf Oil Corp.

Fred Luthy #1-E Sec 29 T19S, R37E

The OCD did not do a casing leak survey on any wells in Sec. 33 except the ones in the NW/4. You will be able to get this information from our well files.



STATE OF NEW MEXICO
GOVERNOR'S CABINET
DEPARTMENT OF
FINANCE AND ADMINISTRATION
LOCAL GOVERNMENT DIVISION

TONY ANAYA
GOVERNOR

DANIEL H. LOPEZ
SECRETARY

DAVID A. VARGAS
DIRECTOR

206 LAMY BUILDING
SANTA FE, NM 87501-2783
(505) 827-8050
TOLL FREE 1-800-432-7108

August 25, 1986

Mr. Bill Scott
Assistant County Manager
Lea County
P.O. Drawer 1539
Lovington, NM 88260

RE: NMCA Project No. 84-N-RS-I-05-GA791
Monument Water Supply

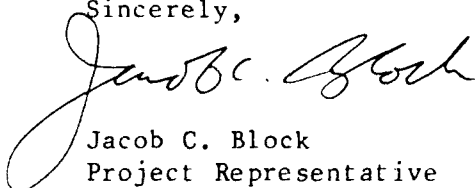
Dear Mr. Scott:

I am in receipt of a letter dated August 18, 1986, from William Hicks of Pettigrew and Associates. This letter provides me with a chronological account of events prior to the contamination in the recently completed water well. This account leaves out one important step. Was the quality of water of the new well tested before the transmission line was constructed? If so please provide me with the results. If the water was not tested for quality, please explain why.

In light of the water contamination problem of the area, it seems to me that it would have been very important to conduct water quality tests.

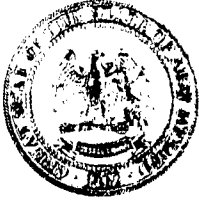
Feel free to contact me if you have any questions regarding this letter.

Sincerely,


Jacob C. Block
Project Representative

JCB/gj

cc: William Hicks
W. E. Copeland
David Boyer ✓
Denise Fort



STATE OF NEW MEXICO
GOVERNOR'S CABINET
DEPARTMENT OF
FINANCE AND ADMINISTRATION
LOCAL GOVERNMENT DIVISION

TONY ANAYA
GOVERNOR

DANIEL H. LOPEZ
SECRETARY

DAVID A. VARGAS
DIRECTOR

206 LAMY BUILDING
SANTA FE, NM 87501-2783
(505) 827-8050
TOLL FREE 1-800-432-7108

August 25, 1986

The Honorable Pat W. McCasland
Chairman, Lea County Commission
P.O. Drawer 1539
Lovington, NM 87260

RE: NMCA Project No. 84-N-RS-I-05-GA791
Monument Water Supply

Dear Commissioner McCasland:

I am in receipt of a letter from the County requesting the release of \$15,000 in local matching funds from the above referenced project in order to conduct a feasibility study to determine a permanent solution to the Monument water supply problem. The letter also requests authorization to use \$8,000 from the NMCA grant to construct a water transmission line to the existing El Paso Gas Company water line.

I have reviewed the request and other pertinent documentation and I approve your request. I am enclosing two copies of Grant Agreement Amendment Number 2. Please complete the Project Schedule and sign both copies of the Amendment and return both copies to this office.

Please feel free to contact me or Jacob C. Block, Project Representative, at 1-800-432-7108, if you have any questions regarding this letter.

Sincerely,

Joe Guillen
Deputy Director

JG/gj

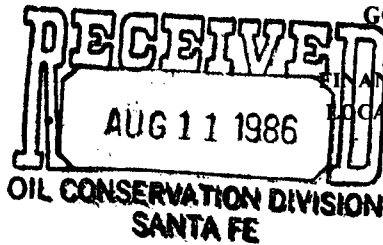
cc: Senator Joe Harvey
W. E. Copeland
Denise Fort
William M. Hicks
David Boyer ✓



TONY ANAYA
GOVERNOR

DANIEL H. LOPEZ
SECRETARY

STATE OF NEW MEXICO
GOVERNOR'S CABINET
DEPARTMENT OF
FINANCE AND ADMINISTRATION
LOCAL GOVERNMENT DIVISION



DAVID A. VARGAS
DIRECTOR

206 LAMY BUILDING
SANTA FE, NM 87501-2783
(505) 827-8050

TOLL FREE 1-800-432-7108

August 6, 1986

Mr. Bill Scott, Assistant Administrator
Lea County
P.O. Drawer 1539
Lovington, NM 88260

RE: NMCA Project No. 84-N-RS-I-05-GA791
Monument Water Supply

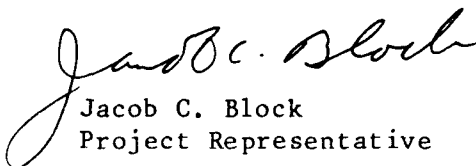
Dear Mr. Scott:

I am in receipt of your letter of July 31, 1986, wherein you request a time extension for the above referenced project. After reviewing your request and the water supply situation in Monument, instead of granting a time extension, the project will be suspended for the time being. Once the Monument Water Users Association comes up with a long term solution to its water problem and funding to implement it, we will look at extending and amending the Grant accordingly.

I would at this time like to request results of water quality tests conducted on the replacement water well when it was drilled. Before we honor any additional pay requests we have to insure that the replacement well contained no contaminants prior to the construction of the water transmission line.

Feel free to contact me if you have any questions regarding this letter or if I may be of any additional help.

Sincerely,


Jacob C. Block
Project Representative

JCB/gj

cc: W.E. Copeland
Trace Hicks
Jon Thompson
Dave Boyer

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

AUG - 3 1986

August 5, 1986

Mr. W.E. Copeland, President
Monument Water User's Association
P.O.Box 23
Monument, New Mexico 88265

Dear Mr. Copeland:

According to our Water Supply Policy #10, (copy included) we are advising you that the Monument Water Users's Association Water Supply System contains low levels of benzene in the distribution system according to recent tests performed at the New Mexico Scientific Laboratory Division. The test results are as follows:

<u>Location</u>	<u>Date Collected</u>	<u>Result ppb Benzene</u>
West Well	7/27/86	< 1
	8/03/86	< 1
East Well	7/27/86	23
	8/03/86	22
Bobby Bates Res.	7/27/86	1
	8/03/86	1
Oil Patch Cafe	7/27/86	1

As stated in our policy, public notice must be provided to the consumers of the Monument Water System. These notices may either be included in the first set of water bills or by direct mailing. A copy of a suggested notice is being provided to you with this letter. Your supply system may continue operating with benzene levels from 1.0 ppb to 69 ppb for up to 187 days (6 months). At the end of this period the concentration must be reduced below 1.0 ppb or an alternate water supply must be provided. This time limit is based on a concept of maximum public health protection which acknowledges that benzene is a recognized

cancer causing agent. Further, the effect that benzene may have when combined with other compounds is unknown and it is prudent to avoid long-term exposure. Benzene does not occur naturally and must be considered as being indicative of a man-made hydrocarbon contamination.

If you have any questions, please contact me at 827-2778 in Santa Fe.

Sincerely,

Stuart P. Castle

Stuart P. Castle, Program Manager, WSS/EID

SPC:er

cc: David Boyer, NM Oil Cons. Division, Santa Fe
William Hicks, Pettigrew & Assoc, Hobbs
Dan C. Berry, State Representative, Eunice
Robert P. Wallach, State Representative, Lea County
Tom Burt, EID, Carlsbad
Joe Harvey, State Senator, Hobbs
Garrison A. McCaslin, EID Dist. IV Manager
Don Lutjens, EID, Hobbs
Jon F. Thompson, Bureau Chief, CSB
Pat Olachea, EID, Santa Fe

**PUBLIC WATER CONTAMINATION NOTICE
COMMUNITY OF MONUMENT**

August 5, 1986

The Community of Monument and the New Mexico Health and Environment Department are notifying consumers on the Monument Water User's Association Water Supply System that low levels of hydrocarbons have been discovered in the public water system. The purpose of this notice is to advise the people served by the Monument Water User's Association Water Supply System that tests indicate the levels of contamination are low and will not cause any known immediate health problems. The long term effects of this contamination are not known. As a result, the New Mexico Health and Environment Department and the Community of Monument are working to correct the problem. You will receive another notice when we have determined that the water supply is free from any contaminants.

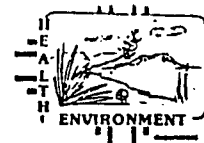
If you have any questions, Please call the Monument Water User's Association Office at 393-3830 or the New Mexico Health and Environment Department Environmental Improvement Division in Hobbs at 397-5250.

W. E. Copeland, President
Monument Water User's Association

Garrison A. McCaslin, District 4 Manager
New Mexico Environmental Improvement Division

86-0850-C

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

STATE OF NEW MEXICO

REPORT TO:

Oscar Simpson

S.L.D. No. OR-

09-850

EID, water supply

DATE REC.

7-28-86

P.O. Box 968

Santa Fe, N.M. 87504-0968

PRIORITY

1.5

PHONE(S):

827-2777

USER CODE:

52014

SUBMITTER:

Don Lutjens

CODE:

| | | |

SAMPLE COLLECTION CODE: (YYMMDDHHMMIII)

8607271640

SAMPLE TYPE: WATER ☒ SOIL ☐ FOOD ☐ OTHER: ☐

COUNTY:

Lee

CITY:

Monument

LOCATION CODE: (Township-Range-Section-Tracts)

195+37E+29+

(10N06E24342)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- ☐ (753) Aliphatic Purgeables (1-3 Carbons)
☒ (754) Aromatic & Halogenated Purgeables
☐ (755) Mass Spectrometer Purgeables
☐ (756) Trihalomethanes
 Other Specific Compounds or Classes

☐ _____
☐ _____
☐ _____
☐ _____
☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
☐ (760) Organochlorine Pesticides
☐ (755) Base/Neutral Extractables
☐ (758) Herbicides, Chlorophenoxy acid
☐ (759) Herbicides, Triazines
☐ (760) Organochlorine Pesticides
☐ (761) Organophosphate Pesticides
☐ (767) Polychlorinated Biphenyls (PCB's)
☐ (764) Polynuclear Aromatic Hydrocarbons
☐ (762) SDWA Pesticides & Herbicides

Remarks:

FIELD DATA:

pH= 7.35; Conductivity= _____ umho/cm at 23°C; Chlorine Residual= _____ mg/l

Dissolved Oxygen= _____ mg/l; Alkalinity= _____ mg/l; Flow Rate _____ / _____

Depth to water _____ ft.; Depth of well _____ ft.; Perforation Interval _____ - _____ ft.; Casing: _____

Sampling Location, Methods and Remarks (i.e. odors, etc.)

water slightly milky from bubbles. Impossible to get all bubbles out
 Oil Patch Cafe 1/4 mile ENE of Holding Tank

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities. (signature collector): Don Lutjens Method of Shipment to the Lab: Mesa Air

This form accompanies 2 Septum Vials, _____ Glass Jugs, and/or _____

Samples were preserved as follows:

- ☐ NP: No Preservation; Sample stored at room temperature.
☒ P-Ice Sample stored in an ice bath (Not Frozen).
☐ P-Na₂S₂O₃ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____

at (location) _____ on _____ / _____ - _____ : _____ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed ☐ Seals Intact: Yes ☐ No ☐

Signatures _____

LAB. No.: OR- 852

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- ☐ (753) Aliphatic Purgeables (1-3 Carbons)
☒ (754) Aromatic & Halogenated Purgeables
☐ (765) Mass Spectrometer Purgeables
☐ (766) Trihalomethanes
 Other Specific Compounds or Classes

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (760) Organochlorine Pesticides
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
halogenated purgeables	ND		
aromatic purgeables	ND		
* DETECTION LIMIT *	1000	+ DETECTION LIMIT +	

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT

T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)

[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS:

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes ☐ No ☒ Seal(s) broken by: _____ date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

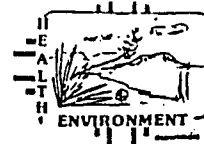
Date(s) of analysis: 28 July 06 . Analyst's signature: W. Finney

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: *L. M. ...*

86 0851-C

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

STATE OF NEW MEXICO

REPORT TO:

Oscar Simpson

S.L.D. No. OR-

Dr9 - 851

DATE REC.

7-28-86P.O. Box 968Santa Fe, N.M. 87504-0968

PRIORITY

1.5

PHONE(S):

827-2777

USER CODE:

52014

SUBMITTER:

Don L. Jans

CODE:

SAMPLE COLLECTION CODE: (YYMMDDHHMMII)

8607271710SAMPLE TYPE: WATER ☒ SOIL ☐ FOOD ☐ OTHER:

COUNTY:

Lee

CITY:

Monument

LOCATION CODE: (Township-Range-Section-Tracts)

195+37E+29+

(10N06E24S42)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- ☐ (753) Aliphatic Purgeables (1-3 Carbons)
☒ (754) Aromatic & Halogenated Purgeables
☐ (765) Mass Spectrometer Purgeables
☐ (766) Trihalomethanes
 Other Specific Compounds or Classes

☐ _____
☐ _____
☐ _____
☐ _____
☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
☐ (760) Organochlorine Pesticides
☐ (755) Base/Neutral Extractables
☐ (758) Herbicides, Chlorophenoxy acid
☐ (759) Herbicides, Triazines
☐ (760) Organochlorine Pesticides
☐ (761) Organophosphate Pesticides
☐ (767) Polychlorinated Biphenyls (PCB's)
☐ (764) Polynuclear Aromatic Hydrocarbons
☐ (762) SDWA Pesticides & Herbicides

Remarks:

FIELD DATA:

pH= ; Conductivity= umho/cm at °C; Chlorine Residual= mg/lDissolved Oxygen= mg/l; Alkalinity= mg/l; Flow Rate / Depth to water ft.; Depth of well ft.; Perforation Interval - ft.; Casing:

Sampling Location, Methods and Remarks (i.e. odors, etc.)

Bobby Bates Kitchen Sink. About 70 yards SW of Holding TanksI certify that the results in this block accurately reflect the results of my field analyses, observations and activities. (signature collector): Don L. Jans Method of Shipment to the Lab: This form accompanies 2 Septum Vials, Glass Jugs, and/or

Samples were preserved as follows:

- ☐ NP: No Preservation; Sample stored at room temperature.
☒ P-Ice Sample stored in an ice bath (Not Frozen).
☐ P-Na₂S₂O₃ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

CHAIN OF CUSTODY

I certify that this sample was transferred from to
 at (location) on / / - : and that
 the statements in this block are correct. Evidentiary Seals: Not Sealed ☐ Seals Intact: Yes ☐ No ☐

Signatures

LAB. No.: OR- 853

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- ☐ (753) Aliphatic Purgeables (1-3 Carbons)
☒ (754) Aromatic & Halogenated Purgeables
☐ (765) Mass Spectrometer Purgeables
☐ (766) Trihalomethanes
 Other Specific Compounds or Classes

5555

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (760) Organochlorine Pesticides
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
halogenated purgeables	ND		
aromatic purgeables:			
benzene	23 ppb		
* DETECTION LIMIT *	1 ppb	+ DETECTION LIMIT +	+

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT
T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)
[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: Good sample, no headspace.

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes ☐ No ☒ Seal(s) broken by: _____ date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

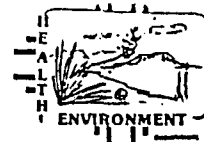
Date(s) of analysis: 28 July 86. Analyst's signature: J. Turner

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: L Meyerheim

86-0852-C

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

STATE OF NEW MEXICO

REPORT TO:

Oscar Simpson

S.L.D. No. OR-

089-852EID, water supply

DATE REC.

7-28-86P.O. Box 968Santa Fe, N.M. 87504-0968

PRIORITY

1.5

PHONE(S):

827-2777

USER CODE:

52014

SUBMITTER:

Don Lutjens

CODE:

SAMPLE COLLECTION CODE: (YYMMDDHHMMIII)

8607271740SAMPLE TYPE: WATER ☒ SOIL ☐ FOOD ☐ OTHER: ☐

COUNTY:

Lea

CITY:

Monument

LOCATION CODE: (Township-Range-Section-Tracts)

19S+37E+29+

((10N06E24342))

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

☐ (753) Aliphatic Purgeables (1-3 Carbons)☒ (754) Aromatic & Halogenated Purgeables☐ (755) Mass Spectrometer Purgeables☐ (756) Trihalomethanes

Other Specific Compounds or Classes

☐
☐
☐
☐
☐

EXTRACTABLE SCREENS

☐ (751) Aliphatic Hydrocarbons☐ (760) Organochlorine Pesticides☐ (755) Base/Neutral Extractables☐ (758) Herbicides, Chlorophenoxy acid☐ (759) Herbicides, Triazines☐ (760) Organochlorine Pesticides☐ (761) Organophosphate Pesticides☐ (767) Polychlorinated Biphenyls (PCB's)☐ (764) Polynuclear Aromatic Hydrocarbons☐ (762) SDWA Pesticides & Herbicides

Remarks:

FIELD DATA:

pH= 6.91; Conductivity= _____ umho/cm at 19° C; Chlorine Residual= _____ mg/l

Dissolved Oxygen= _____ mg/l; Alkalinity= _____ mg/l; Flow Rate _____ / _____

Depth to water _____ ft.; Depth of well _____ ft.; Perforation Interval _____ - _____ ft.; Casing: _____

Sampling Location, Methods and Remarks (i.e. odors, etc.)

Monument water co-op west well

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities. (signature collector): Don Lutjens Method of Shipment to the Lab: _____

This form accompanies 2 Septum Vials, _____ Glass Jugs, and/or _____

Samples were preserved as follows:

☐ NP: No Preservation; Sample stored at room temperature.☒ P-Ice Sample stored in an ice bath (Not Frozen).☐ P-Na₂S₂O₃ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____

at (location) _____ on _____ / _____ / _____ - _____ : _____ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed ☐ Seals Intact: Yes ☐ No ☐

Signatures _____

ANALYSES PERFORMED

LAB. No.: CR- 850

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- ☐ (753) Aliphatic Purgeables (1-3 Carbons)
☒ (754) Aromatic & Halogenated Purgeables
☐ (765) Mass Spectrometer Purgeables
☐ (766) Trihalomethanes
 Other Specific Compounds or Classes

☐
☐
☐
☐
☐

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
☐ (760) Organochlorine Pesticides
☐ (755) Base/Neutral Extractables
☐ (758) Herbicides, Chlorophenoxy acid
☐ (759) Herbicides, Triazines
☐ (760) Organochlorine Pesticides
☐ (761) Organophosphate Pesticides
☐ (767) Polychlorinated Biphenyls (PCB's)
☐ (764) Polynuclear Aromatic Hydrocarbons
☐ (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
halogenated purgeables	ND		
aromatic purgeables:			
benzene	1 ppb		
* DETECTION LIMIT *	1 ppb	+ DETECTION LIMIT +	+

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT

T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)

[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: Good sample, no headspace.

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes ☐ No ☒ Seal(s) broken by: _____ date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

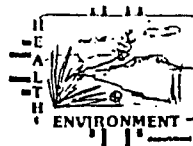
Date(s) of analysis: 28 July 86 Analyst's signature: *[Signature]*

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: *[Signature]*

86-0853-C

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

REPORT TO:

Oscar Simpson
EID, water supply
P.O. Box 968
Santa Fe, N.M.

S.L.D. No. OR-

Org-853

DATE REC.

7-28-86

PRIORITY

1.5

PHONE(S):

827-2777

USER CODE:

52014

SUBMITTER:

Don Lütjens

CODE:

SAMPLE COLLECTION CODE: (YYMMDDHHMMIII)

8607271725SAMPLE TYPE: WATER ☒, SOIL ☐, FOOD ☐, OTHER:

COUNTY:

Lea

CITY:

Monument

LOCATION CODE: (Township-Range-Section-Tracts)

19S+37E+29+

(10N06E24S42)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- ☐ (753) Aliphatic Purgeables (1-3 Carbons)
☒ (754) Aromatic & Halogenated Purgeables
☐ (765) Mass Spectrometer Purgeables
☐ (766) Trihalomethanes
 Other Specific Compounds or Classes

☐ _____
☐ _____
☐ _____
☐ _____
☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
☐ (760) Organochlorine Pesticides
☐ (755) Base/Neutral Extractables
☐ (758) Herbicides, Chlorophenoxy acid
☐ (759) Herbicides, Triazines
☐ (760) Organochlorine Pesticides
☐ (761) Organophosphate Pesticides
☐ (767) Polychlorinated Biphenyls (PCB's)
☐ (764) Polynuclear Aromatic Hydrocarbons
☐ (762) SDWA Pesticides & Herbicides

Remarks:

FIELD DATA:

pH= 7.05; Conductivity= _____ umho/cm at 21°C; Chlorine Residual= _____ mg/l

Dissolved Oxygen= _____ mg/l; Alkalinity= _____ mg/l; Flow Rate _____ / _____

Depth to water _____ ft.; Depth of well _____ ft.; Perforation Interval _____ - _____ ft.; Casing: _____

Sampling Location, Methods and Remarks (i.e. odors, etc.)

Monument water co-op, East well water milky
due to air. Impossible to get all of the bubbles out.

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities. (signature collector): Don Lütjens Method of Shipment to the Lab: _____

This form accompanies 2 Septum Vials, _____ Glass Jugs, and/or _____

Samples were preserved as follows:

- ☐ NP: No Preservation; Sample stored at room temperature.
☒ P-Ice Sample stored in an ice bath (Not Frozen).
☐ P-Na₂S₂O₃ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____

at (location) _____ on _____ / _____ / _____ - _____: _____ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed ☐ Seals Intact: Yes ☐ No ☐

Signatures _____

LAB. No.: OR- 851

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- ☐ (753) Aliphatic Purgeables (1-3 Carbons) ..
☒ (754) Aromatic & Halogenated Purgeables ..
☐ (765) Mass Spectrometer Purgeables ..
☐ (766) Trihalomethanes ..

Other Specific Compounds or Classes

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (760) Organochlorine Pesticides
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
halogenated purgeables	ND		
aromatic purgeables:			
benzene	1ppb		
* DETECTION LIMIT *	1ppb	+ DETECTION LIMIT +	

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT

T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)

[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS:

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes ☐ No ☒ Seal(s) broken by: _____ date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 28 July 86 . Analyst's signature: A. Finney

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: K Meyersheim

Memo

From

JERRY SEXTON
District Supervisor

7/3)

To Monument Well Sampling

OCT

Chloride and
conductivity:
Twice per day
including start
and finish

EIT

VOA & Headspace
Twice per day
including start
and finish.

Water chemistry
once per day.

ICAP (Heavy
metals) at
~~start and finish.~~
DJB

MONUMENT WATER SUPPLY

July 31, 1986

NAME	Address	Ph. No.
STUART CASTLE	EID - WATER SUPPLY P.O. Box 968, Santa Fe	827-2778
David Boyer	NM Oil Cons. Div. Santa Fe	827-5812
R.L. Stomets	"	827-5802
Jack Block	Local Govt. Div. / OFA Santa Fe	827-4950
ERR 4 SEXTON	Box 1980 Hobbs (OCD)	393-6161
William Hicks	Pettigrew & Assoc. Hobbs	393-9827
Debra Hicks	Pettigrew & Assoc Hobbs	"
Dan C. Boyer	St. Rep -	Eunice 394-3189
Robert P. Wallach	"	Hobbs 393-9989
Stephen Massey	SNMEDD 110 E. Fourth Suite 105 Roswell	624-6131
Tom Bunt	EID - 406 N. Guadalupe, Carlsbad	885-9023
B.E. Wardlaw	Box 8-C, Lea County Courthouse Lorington, NM	396-8521
Bill Scott	Box 11-C - Courthouse Lou. NM 88260	396-8521
M.E. Repeland	Box 23. - Monument NM	392-4557
Sam Small	Monument NM	393-2144
MARINELLE SZENASY	AIDE TO SENATOR HARVEY 2016 N. FOWLER, Hobbs	397-2051
Mike Tindis	Monument, N.M.	393-3830
Garrison A. McCaslin	Roswell, NM. EID DIST II Mgr.	624-6046
WILLIAM G. KIEBER	ROSWELL EID DIST. IV ENGR.	624-6046
Don Lutjens	Hobb EID	397-5250
JOHN F. THOMPSON	P.O. Box 968, EID, Santa Fe	827-2773
PAT Olachea	P.O. Box 968, EID, Santa Fe	827-2797

Eddy lives 6 blocks away
Amos has recording monitor

who approved moving
well from OGD-EID agreed upon
S, etc

Monument &
EID

Engv -
Other

7-31-86

Jon Thompson

Dan Berry - Bobby Wallace - Mary ^{Sr} Nell Harvey

Stewart Castle EID Health effects

Benzene - long term exposure - bone marrow problems - leukemia
(below taste smell levels)

230 ppb Toxic dose

76-230 long term effects (OK-10 days)

1-69 6 months OK

Monument Tap water

7-27-86 1 ppb benzene

East well

"

23

West

"

0

Water sampled weekly

New well

~~mt gas~~
6-10-86 1 ppb + Chlorides
384 ppm - 500 ppm

Dave Boyer

Old pool, different practices, individual contamination
problem.

Pl break - found other contamination

Pat Olocheu

Formerly St Govt Div in first round.

air
stripping
① Treatment short term east well - carbon filter - expensive
2000 per month?

long term chlorides \$10000 and up.

② Alternate Short Term use OCD replacement well
after pump test and sampling

③ SD east well - depend on West well only
only 15 gpm 21000 gpd barely adequate
for domestic needs

④ Blending various wells.

⑤ Private wells. Only one low producer.

⑥ National guard water tank thru Gov's office
7 days \$6000 cost to State after that
have to go private tanker. Domestic needs
only.

Trace Hicks Petigrew & Assoc
BCD well best short solution need
irrigation \$5000 hook up

EPNG 12" pipeline N&W of area
help Monument temporarily
more than hookup BCD well

EPNG long term \$150 000 pipeline plus
water cost
Drawbacks steel/concrete lined - current
condition? future cost or impact of
breaks. Crops shut down?

Pro-EPNG wells on West of major
oil pool - looks good for contamination

Treatment hydro & chlorides TDS - \$150-200 M
\$10000 yr upkeep

2 1/2 miles further to get out of leak area
\$200 - 225 M for line and another well

Jack Block
NMCA Grant w/ Lee County
would have to amend grant or contract
for new project

Federal Funding CIFC new applications Aug 15
Available \$ down from 7 to 4 million
last yr 66 applications only 12 funding
may become revolving loan program

Special legislative appropriation

Board of Finance emergency funds

Copeland
80000 gpd consumption

East well 56 gpm down 60
West " 15 " 17

730661 storage 26000 gallon w/ shut off

63960
26000

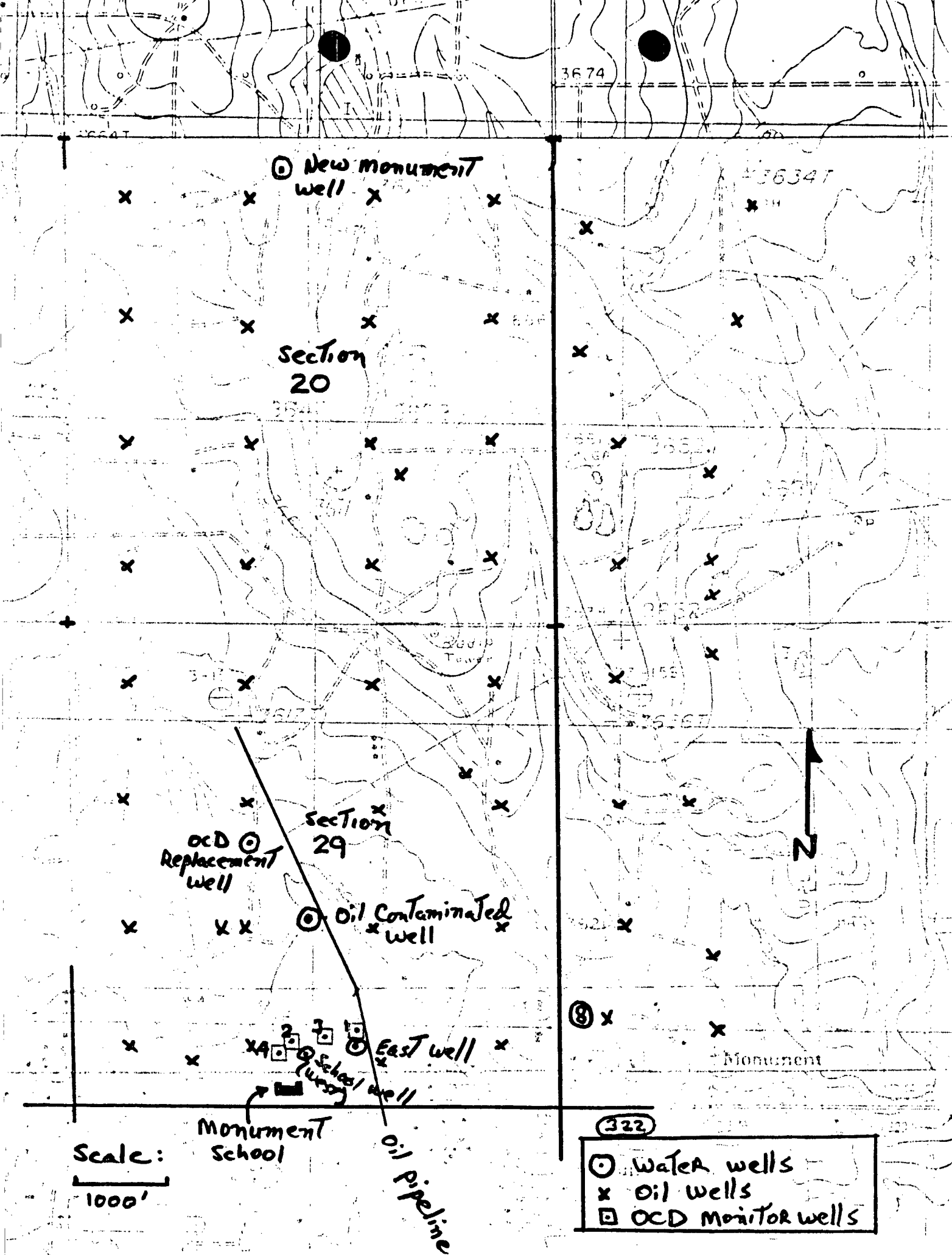
89960

8 million a year

Eunice - Billy Walker line

16" line

Conference Call Aug 11-12 to decide
which options to go for



NB-400' Natural Gas
 L10 Small Amis well
 (400+) High CL & TDS
 384, 510
 New monument
 benzene

Section 20

cell 21, 24
 High CL
 & TDS (1050)

OCD Replacement well

Section 29

Oil Contaminated well

980
 583 TDS

422 CL, 1683 TDS
 #3

32 ppb benzene
 (123 CL) (583 TDS)

#4 105 CL
 600 TDS

East well

#4
 School well

22 ppb benzene - E well
 CL 156, 705

Scale:
 1000'

Monument School

Oil pipeline
 CL 130 TDS 630

- ⊙ Water wells
- x Oil wells
- OCD monitor wells



**PUBLIC WATER CONTAMINATION NOTICE
COMMUNITY OF MONUMENT**

July 31, 1986

The Community of Monument and the New Mexico Health and Environment Department are notifying consumers on the Monument Water User's Association Water Supply System that low levels of hydrocarbons have been discovered in the public water system. The purpose of this notice is to advise the people served by the Monument Water User's Association Water Supply System that tests indicate the levels of contamination are low and will not cause any known immediate health problems. The long term effects of this contamination are not known. As a result, the New Mexico Health and Environment Department and the Community of Monument are working to correct the problem. You will receive another notice when we have determined that the water supply is free from any contaminants.

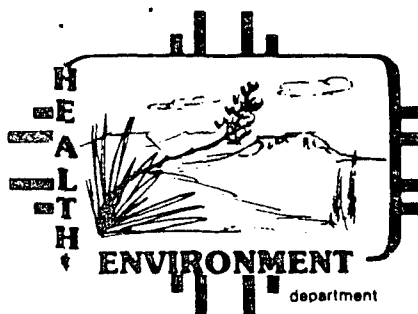
If you have any questions, Please call the Monument Water User's Association Office at 393-3830 or the New Mexico Health and Environment Department Environmental Improvement Division in Hobbs at 397-5250.

W. E. Copeland, President
Monument Water User's Association

Garrison A. McCaslin, District 4 Manager
New Mexico Environmental Improvement Division

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

July 30, 1986

Mr. W.E. Copeland, President
Monument Water User's Association
P.O.Box 23
Monument, New Mexico 88265

Dear Mr. Copeland:

According to our Water Supply Policy #10, (copy included) we are advising you that the Monument Water Users's Association Water Supply System contains low levels of benzene in the distribution system according to recent tests performed at the New Mexico Scientific Laboratory Division. The test results are as follows:

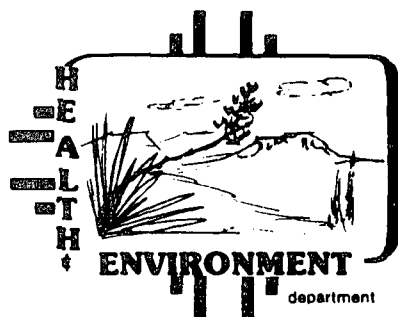
<u>Location</u>	<u>Date Collected</u>	<u>Result ppb Benzene</u>
West Well	7/27/86	< 1
East Well	7/27/86	23
Bobby Bates Res.	7/27/86	1
Oil Patch Cafe	7/27/86	1

As stated in our policy, public notice must be provided to the consumers of the Monument Water System. These notices may either be included in the first set of water bills or by direct mailing. A copy of a suggested notice is being provided to you with this letter. Your supply system may continue operating with benzene levels from 1.0 ppb to 69 ppb for up to 187 days (6 months). At the end of this period the concentration must be reduced below 1.0 ppb or an alternate water supply must be provided. This time limit is based on a concept of maximum public health protection which acknowledges that benzene is a recognized carcinogen. Further, the synergistic effect that benzene may have with other compounds is unknown and it is prudent to avoid long-term exposure. Benzene does not occur naturally and must be considered as being indicative of a man-made hydrocarbon contamination.

If you have any questions, please contact me at 827-2778 in Santa Fe.

Sincerely,

Stuart P. Castle, Program Manager, WSS/EID



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

July 25, 1986

Dave Boyer, Bureau Chief, OCD
Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87501

Dear Mr. Boyer:

Re: Monument Water Supply Source

I would like to invite you to attend a meeting to review Monument's water supply problems and discuss possible solutions. The meeting has been scheduled from 10:30 a.m. to 12 noon on Thursday, July 31, 1986 at the Hobbs City Hall in meeting room A.

A brief description of existing contamination data will be presented by the Environmental Improvement Division and the Oil Conservation Division. Mr. Trace Hicks, with Pettigrew and Associates Engineering, will then discuss possible alternative solutions. Finally, the Local Government Division will present information on funding sources. The meeting will have an open format to provide an opportunity for information exchange.

Please contact me at 827-2773 if you have any questions or concerns you would like me to add to our agenda. Your interest and concern in this important matter is appreciated.

Sincerely,



Don F. Thompson
Chief, Community Services Bureau
JT/SC/er

cc: Neil S. Weber, EID
Kathleen Sisneros, EID



STATE OF NEW MEXICO

OFFICE OF THE GOVERNOR

JUL 25 1986 SANTA FE

87503

TONEY ANAYA
GOVERNOR

July 22, 1986

W.E. Copeland, President
Monument Water Users Association
Box 48
Monument, New Mexico 88265

✓ R.L. Stamets, Director
New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87501

D. Vargas, Director
New Mexico Local Government Division
206 Lamy Building
Santa Fe, New Mexico 87501

B. Scott, Assistant Administrator
Lea County
Box 4C Courthouse
Lovington, New Mexico 88260

RE: Monument Water Supply Task Force

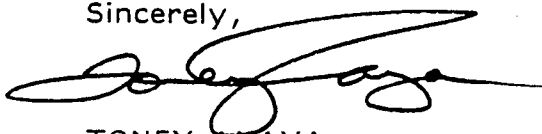
Dear Gentlemen:

You are aware that in the fall of 1984 the main Monument drinking water well (Well #1) became contaminated with crude oil. State emergency money was provided for the purpose of replacing the water source. The replacement well (Well #2) was scheduled for use this summer. However, laboratory samples taken in June, 1986, demonstrated that the new well also has low level hydrocarbon contamination. In addition, preliminary laboratory analyses indicates possible low level contamination of the existing water well (Well #3). There is no immediate public health threat to the Monument water users at the present time and EID will continue to monitor and sample the well source in use to determine water quality and safety.

Because the primary engineering reviews and approval, and the Safe Drinking Water Act and Regulations are administered by the Environmental Improvement Division (EID), I am appointing Jon F. Thompson of the EID as the coordinator for Monument and state agencies involved in this matter to resolve and assist the community in finding a safe water source.

I would appreciate your assistance and cooperation with Mr. Thompson and his staff in finding a solution to this public health threat. Jon can be reached at 827-2773 or 827-2778 if you have any questions or comments.

Sincerely,



TONEY ANAYA
Governor

TA/sr/jdv

cc: The Honorable Joe Harvey, Lea County
The Honorable Dan Berry, Lea County
The Honorable Robert Wallach, Lea County
Denise Fort, Director, EID
Neil S. Weber, Deputy Director, EID
Richard Holland, Deputy Director, EID
Jon F. Thompson, Chief, Community Services Bureau, EID
Kathleen Sisneros, Chief, Surface Water Quality Bureau, EID
Richard Pettigrew, P.E., Hobbs
Stuart Castle, Program Manager, Water Supply Section, EID

● Monument 7/15/86 Meeting -
Phone call from Jerry Sexton

Tom Burt
Don Lyons
Roeff Rubner
Steve Massey

Tres Hicks
Dan Berry
Mrs. Copeland
Citizens

Citizens upset - Hicks said well could be treated (but only mentioned organics) Want to sue Tex-Mex for contaminating the old well. Jerry told them Tex-Mex had ~~not~~ offered to replace well, but O&E is wanted new well out of oil patch. Ask for more money - Citizens want to go back to state to extend line 1 mile north. Jerry thinks unlikely to get money. I said any location chosen should be checked out for oil wells and brown contamination.

Jerry said O&E well available for hookup (but who knows how long it will last)

Other sources of water (Farmains) may already be taken, and not available.

Berry says state Turnaround on samples is Five days!



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

TONEY ANAYA
GOVERNOR

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88240
(505) 393-6161

TO: DICK STAMETS
FROM: JERRY SEXTON
DATE: AUGUST 5, 1986
RE: Monthly Activity Report
July, 1986

MONUMENT SITUATION: It looks like something may get done after 2 years of nothing being done. We pump tested the OCD well and the chloride checked out OK. The pump capacity was 65 GPM for 3 days and the chloride ran approximately 200 ppm.

The only problem we encountered was with the EID thinking the water percolated back into the water zone and we were circulating the same water. This is so unprofessional, I don't think we even need to comment on it.

BUILDING: The stucco job has been completed and looks good and also makes a big difference in the cooling of the building.

GAS PLANT SITUATION: I have had it reported that one of the gas plants gas analysis are out of line with independent tests. The liquids they obtain are some 10 times lower than independent tests. I need to know where we stand on this situation. This makes a large difference in the price of gas.



GULF WATER TECHNOLOGY LABORATORY

ANALYTICAL & CONSULTING SERVICES

Division of Oil Recovery Systems, Inc.

4 Mill St., Greenville, NH 03043

Tel: (603) 87-2500 OFFICE

Laboratory Test Results

6/25/86

Report No. 20-2050-9

Submitted to:

Eddie Seay

Texas-New Mexico Pipeline Co.

P.O. Box 2523

Hobbs, N.M. 38240

FILE
JUL 8 1986

REFUSE DATE	DATE NOTED
B. L. L.	
L. H. N.	
J. B. H.	
K. H. S.	
D. J. N.	
J. D. H.	

Sample Identification:

The attached report covers water samples #27053-27054 taken by Seay using 40 ml septum-capped glass vials at site #20-2050, Hobbs, New Mexico.

Method:

Analysis was performed for purgeable aromatic priority pollutants and xylenes by purge and trap gas chromatography with flame ionization detection as per EPA Method 602. Quantification was performed on a very polar open tubular fused silica capillary column which fractionates aliphatics (up to C12) away from volatile aromatics. Qualitative confirmation was performed for all samples on a dissimilar column. Chromatographic conditions are referenced in GTL Method Code 103. Hexane and ortho-xylene are used as calibration standards for the aliphatic hydrocarbons and miscellaneous aromatics, respectively, if reported.

Minimum Detection Limit (MDL) at 5 times background is 0.5 ppb for all parameters. The level for reliable quantitation for the summed groups such as aliphatics is 20 ppb. Samples diluted in order to maintain the calibrated range are so indicated by a footnote giving the factor by which the MDL is raised.

Sampling and sample handling and preservation are specified by this laboratory to be as per EPA Method 602. Any irregularities are referenced in the attached quality assurance report.

Results:

Results are reported in ppb (ug/l).

Prepared by:

Eileen Foley

Analytical Program Manager

J.P./S.E.B.

Analysts

cc. Jim Goetz



GROUNDWATER TECHNOLOGY LABORATORY

ANALYTICAL & CONSULTING SERVICES

Division of Oil Recovery Systems, Inc.

4 Mill St., Greenville, NH 03048

Tel: (603) 878-2500

HYDROCARBONS IN WATER ug/L (ppb)

REPORT NO. 20-2050-9

Sample I.D.		DATE SAMPLED	DATE RUN	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	TOTAL BTEX
27053	NW	6/17/86	6/21/86	2	ND	ND	ND	2
27054	MCW	6/16/86	6/20/86	5	ND	ND	ND	5

*NOTES:

ND = BELOW DETECTION LIMIT

TOTAL BTEX = THE SUM OF BENZENE, TOLUENE, ETHYL BENZENE,
AND XYLENES, ROUNDED TO THREE SIGNIFICANT FIGURES.



GROUNDWATER TECHNOLOGY LABORATORY

ANALYTICAL & CONSULTING SERVICES

Division of Oil Recovery Systems, Inc.

4 Mill St., Greenville, NH 03048

Tel: (603) 878-2500

HYDROCARBONS IN WATER ug/l

REPORT NO. 20-2050-9

SAMPLE NO.	I.D.	C4-C12	MISC	TOTAL
		ALIPHATIC HYDROCARBONS	AROMATICS C8-C10	
27053	NW	23	22	47
27054	MCW	2	ND	7

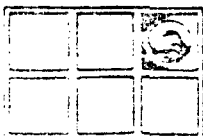
NOTES:

TOTAL = THE SUM OF THE TOTAL BTEX AND THE ABOVE PARAMETERS.

ND = BELOW DETECTION LIMIT

NW = NEW WELL

MCW = MAIN COMMUNITY WELL



GROUNDWATER TECHNOLOGY LABORATORY

ANALYTICAL & CONSULTING SERVICES

Division of Oil Recovery Systems, Inc.

4 Mill St., Greenville, NH 03048

Tel: (603) 878-2500

Quality Assurance Documentation

Statement of Sample Integrity:

The samples in this data set meet the Groundwater Technology Laboratory criteria for physical integrity as per GTL Method Code 103 throughout the sampling, handling and analytical process.

Exception: Sample 27054 contained bubbles.

Quality Assurance Specifications:

The data in this set conforms to the GTL Quality Assurance program and provisions specified in EPA Method 602 including daily calibration with freshly made standards, blanks before trace level samples, surrogate spikes, spikes in untested matrices, a minimum of 10% duplicates and a minimum of 6% reference samples traceable to the U.S. EPA.

Certification:

The data in this report have been checked for accuracy and completeness.

Respectfully Submitted,

Michael D. Webb
Technical Director

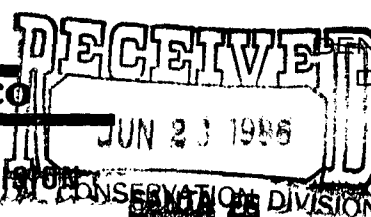
TONEY ANAYA
GOVERNOR

SENISE D. FORT
DIRECTOR

STATE OF NEW MEXICO

ENVIRONMENTAL IMPROVEMENT DIVISION

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



June 24, 1986

Mr. W.E. Copeland, President
Monument Water Users Association
Box 48
Monument, N.M. 88265

Subject: Contamination of Monument's new replacement water supply well.

Dear Sir:

Based on laboratory results of water samples taken from Monument's new well on June 5, 9 and 10, 1986, the Environmental Improvement Division (EID) recommends that this well not be used to supply public drinking water until further chemical analyses and studies are completed.

Laboratory results show that groundwater coming from the new water supply well contains hydrocarbons commonly associated with natural gas and low concentrations of other hydrocarbons such as benzene and toluene (see attached summary sheet). Other laboratory analyses for extractable hydrocarbons, aliphatic screens, general chemistry and heavy metals are in the process of being completed by the state Scientific Laboratory Division. The remaining laboratory analyses will provide more information to evaluate and/or provide further guidance. We expect these laboratory results within two weeks.

The EID will be available to provide technical advice on what further analyses would be appropriate. If you have any questions regarding this matter you may contact me at (505) 827-2778.

Sincerely,

Stuart Castle, Program Manager
Water Supply Section

SC/er

Enclosure

cc: Neil S. Weber, Deputy Director/EID
Dick Stamets, Director/OCD
Richard Holland, Deputy Director/EID
Trace Hicks, Pettigrew and Assoc.
Jack Block, LGD/DFA
Bill Scott, Assistant Administrator for Lea County

SUMMARY SHEET

LABORATORY RESULTS OF MONUMENT'S NEW WATER WELL

Thursday 6/5/86 - 9:20am. Collected by EID-Hobbs Office - R. Ruffner
Constituents

Methane	= 490 PPM
Ethane	13 PPM
Propane	13 PPM
Isobutane	13 PPM
Butane	4 PPM
Pentane	16 PPM

Monday 6/9/86 - 7:35am. Start of a 36 hour pump test to determine Quality variations in Monument's well
Sample collected by EID-Hobbs Office - R. Ruffner
Constituents:

Benzene	Trace < 1 ppb
Methane	930 PPM
Ethane	17 PPM
Propane	20 PPM
Isobutane	7 PPM
Butane	6 PPM

3:38pm. Sample collected by EID Hobbs Office - R. Ruffner
Constituents

Benzene	1 ppb
Methane	114 PPM
Ethane	5 PPM
Propane	4 PPM

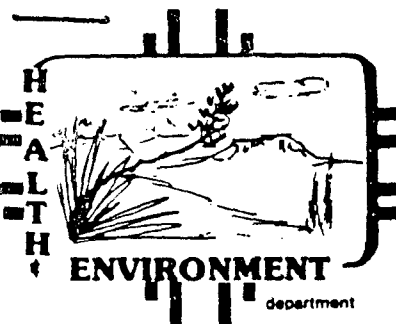
Tuesday 6/10/86-12:45pm. Sample collected by EID Hobbs Office D. Lutjens
Constituents.

Benzene	2 ppb
Methane	96 PPM
Ethane	3.5 PPM
Propane	2.1 PPM
Isobutane	2.3 PPM
Butane	2.2 PPM

7:35pm. Sample collected by EID Hobbs Office
D. Lutjens (End of pump test)
Constituents

Benzene	5 ppb
Toluene	3 PPb
M-Zylene	Trace < 1 PPb
Methane	75 PPM
Ethane	4 PPM
Propane	2 PPM

Note: PPb = Parts per billion
PPM = Parts per million



STATE OF NEW MEXICO

ENVIRONMENTAL IMPROVEMENT DIVISION

P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 827-2816

June 23, 1986

MEMORANDUM

TO: Pat Olachea, Program Manager

FROM: Robert W. Kane, Construction Grants Section *RWK*

SUBJECT: Monument Water System Improvements NMCA Emergency Project
No.84-N-RS-I-06-791

As per your request, the following items are provided for your information:

1. The project consisted of 8310 L.F. of 4" transmission line.
2. The plans do not indicate any oil/gas wells in the vicinity of the new water well.
3. The plans and specifications were approved contingent on five minor items as outlined in the letter attached dated January 22, 1986. We have no way of knowing if these five items were addressed, however these are minor items.
4. The well design appears to be standard.

1c

STATE OF NEW MEXICO

ENVIRONMENTAL IMPROVEMENT DIVISION

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

(505) 984-0020

ENVIRONMENT
department

January 22, 1986

Mr. Jacob Block
Local Government Division
527 Don Gaspar
Santa Fe, NM 87501

RE: NMCA Emergency Project No. 84-N-RS-I-06-791
Monument Water Users Cooperative Water System Improvements

Dear Jackie:

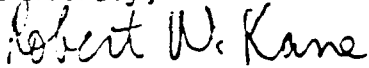
We have reviewed the Plans and Specifications for the above referenced project. The following comments are offered as a result of the review:

1. We did not receive a engineer's cost estimate of the construction proposed in this contract. It should be evaluated to determine if there are enough funds to complete entire project. The Specification states in Section 40, Scope of Work, that the quantities of the contract may be decreased, however such a decrease must be evaluated to determine if the project will "stand on it's own".
2. It appears that the trenching for the transmission line will be done by another contractor. If so, the Measurement and Payment Section (Item 13 Transmission Line) should clearly state that the trenching will be performed on another contract.
3. The coordination of both contractors is essential. Prior to approval of the Notice to Proceed the construction schedules of both contractors must be evaluated.
4. A note should be added to the Summary of Quantities Sheet 2 of the Plans indicating that another contract is to be let for the trenching of the transmission line.

5. The amounts of financing should not be included in the Plans on sheet 2, Project Sign. After the bids are opened is the best time to relay this information to the contractors.

The Plans and Specifications are approved subject to the minor comments mentioned above. If there are any further questions feel free to contact me at 827-2810.

Sincerely,



Robert W. Kane
Envir. Engr. Spec. I
Construction Grants Section

1c

xc: Pettigrew & Assoc.

SUMMARY SHEET

LABORATORY RESULTS OF MONUMENT'S NEW WATER WELL

Thursday 6/5/86 - 9:20am. Collected by EID-Hobbs Office - R. Ruffner
Constituents

Methane	= 490 PPM
Ethane	13 PPM
Propane	13 PPM
Isobutane	13 PPM
Butane	4 PPM
Pentane	16 PPM

Monday 6/9/86 - 7:35am. Start of a 36 hour pump test to determine Quality variations in Monument's well
Sample collected by EID-Hobbs Office - R. Ruffner
Constituents:

Benzene	Trace < 1 ppb
Methane	930 PPM
Ethane	17 PPM
Propane	20 PPM
Isobutane	7 PPM
Butane	6 PPM

3:38pm. Sample collected by EID Hobbs Office - R. Ruffner
Constituents

Benzene	1 ppb
Methane	114 PPM
Ethane	5 PPM
Propane	4 PPM

Tuesday 6/10/86-12:45pm. Sample collected by EID Hobbs Office D. Lutjens
Constituents.

Benzene	2 ppb
Methane	96 PPM
Ethane	3.5 PPM
Propane	2.1 PPM
Isobutane	2.3 PPM
Butane	2.2 PPM

7:35pm. Sample collected by EID Hobbs Office
D. Lutjens (End of pump test)
Constituents

Benzene	5 ppb
Toluene	3 PPb
M-Zylene	Trace < 1 PPb
Methane	75 PPM
Ethane	4 PPM
Propane	2 PPM

Note: PPb = Parts per billion
PPM = Parts per million



STATE OF NEW MEXICO

86-0675-C

Camino de Salud NE
Albuquerque, NM 87106 841-2570

765

Priority One OR 675

REPORT TO:

Roelf Ruffner

2120 N. ALto - EID

Hobbs 88240

397-5250

S.L.D. No.: OR-

52014

DATE REC.:

6/6/86

PHONE

397-5250

USER CODE: 1520114

CONTAINERS WHICH ACCOMPANY THIS FORM ARE COLLECTIVELY REFERED TO AS SAMPLE.

SUBMITTER:

Roelf Ruffner

CODE:

[][][][]

SAMPLE TYPE:

WATER ☒ , SOIL ☐ , OTHER ☐

CODE:

[][]

COLLECTED:

6/5/86 - 9:20AM BY R. Ruffner

CODE:

[][][][][][][][][][][][][][][][]

DATE AND TIME

Y Y M M D D H H M M I I I

SOURCE:

Monument Well (New)

CODE:

[][][][][][][][][][][][][][][][]

AQUIFER DEPTH

NEAREST CITY:

Monument

CODE:

[][][][][]

LOCATION:

North of Monument

CODE:

[][][][][][][][][][][][][][][][]

TOWNSHIP RANGE SECTION TRACTS

pH= ; Conductivity= umho/cm at °C; Chlorine Residual=

Dissolved Oxygen= mg/l; Alkalinity= ; Flow Rate=

Sampling Location, Methods and Remarks (i.e. odors, etc.)

As per conversation with Richard Asbury
Suspected petroleum in new Monument water well
My Home phone is 393-1867 or call Charles Ajzenmat 393-3349

I certify that the statements in this block accurately reflect the results of my field analyses, observations and activities.

Method of shipment to the Laboratory

Perulator

This form accompanies ☒ Septum Vials, ☐ Glass Jugs,
Containers are marked as follows to indicate preservation:

- ☐ NP: No preservation; sample stored at room temperature.
☒ P-Ice Sample stored in an ice bath (not frozen).
☐ P- $\text{Na}_2\text{S}_2\text{O}_3$; Sample preserved with $\text{Na}_2\text{S}_2\text{O}_3$ to remove chlorine residual.

I (we) certify that this sample was transferred from _____
to _____ at (location) _____ on

_____/_____/_____-_____:____ and that the statements in this block are correct.

DATE AND TIME

Evidentiary Seals: Not Sealed ☐ Seals Intact: Yes ☐ No ☐

Signatures _____

(we) certify that this sample was transferred from _____
to _____ at (location) _____ on

_____/_____/_____-_____:____ and that the statements in this block are correct.

DATE AND TIME

Evidentiary Seals: Not Sealed ☐ Seals Intact: Yes ☐ No ☐

Signatures _____

827-0020

ANALYSES REQUESTED

LAB. No.: ORG-675

PLEASE CHECK THE APPROPRIATE BOXES BELOW TO INDICATE THE TYPE OF ANALYTICAL SCREENS REQUIRED. WHENEVER POSSIBLE LIST SPECIFIC COMPOUNDS SUSPECTED OR REQUIRED.

QUALITATIVE	QUANTITATIVE	PURGEABLE SCREENS	QUALITATIVE	QUANTITATIVE	EXTRACTABLE SCREENS
	<input checked="" type="checkbox"/>	ALIPHATIC HYDROCARBON SCREEN			ALIPHATIC HYDROCARBONS
	<input checked="" type="checkbox"/>	AROMATIC HYDROCARBON SCREEN			CHLORINATED HYDROCARBON PESTICIDES
		HALOGENATED HYDROCARBON SCREEN			CHLOROPHENOXY ACID HERBICIDES
		GAS CHROMATOGRAPH/MASS SPECTROMETER			HYDROCARBON FUEL SCREEN
		<i>Suspected petroleum</i>			ORGANOPHOSPHATE PESTICIDES
					POLYCHLORINATED BIPHENYLS (PCB's)
					POLYNUCLEAR AROMATIC HYDROCARBONS
					TRIAZINE HERBICIDES
		SPECIFIC COMPOUNDS			SPECIFIC COMPOUNDS

REMARKS:

ANALYTICAL RESULTS

COMPOUND	[PPB]	COMPOUND	[PPM]
arom. purge screen	none detected	Methane in headspace	490 ppm
halo. purge screen	none detected	Ethane " "	13 "
		Propane " "	13 "
		Isobutane " "	3 "
		butane " "	4 "
		Isopentane " "	7 "
		Pentane " "	16 "
		* DETECTION LIMIT	1 mg/ml

REMARKS:

Chromatographic fingerprint of headspace is consistent with that of natural gas

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes ___ NO X. Seal(s) broken by: _____ date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements in this block and the analytical data on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 6 June 86 4/6/86 Analyst's signature: M. Triney ASB

I certify that I have reviewed and concur with the analytical results for this sample with the statements in this block. Reviewers signature: R. Meyerhem

Monument New Water Well

Well was drilled in later part of March 1986
less pump tested after drilling for approx 2 wks.

No analysis were obtained.

New line has been laid from well to old well
& ready for tie in.

Well Data

14 in hole - 8 $\frac{5}{8}$ welded casing

graveled from TD to 10 ft from surface

Cement from 10 ft to Surface

Perforation 105 - 60

3 hp pump set at 95 ft. w/ no draw down

No Scrubber or desander present or plans to install any.

Pump test 68 gal per min 6/10/86

Well had been shut in for some time while line
was being installed. Shut well in after pumping for
3 day notice smell & taste 6/4/86 we were notified

6/9/86, EID started sampling 6/5/86 No

results as of yet. Shut well in 6/10/86 to

see if gas will build up in casing 6/11/86

Eddie Sany, Terry Sexton & William Hicks observed

well. No smell or taste. Will von Bradenhead

test of surrounding area.

OCD COMPLAINT FORM

UIC _____
OTHER _____COMPLAINT TAKEN BY: Jerry SextonDATE: 6-9-86TIME: PM

PERSON COMPLAINING:

IN PERSON: _____ PHONE: _____

Name: William HicksComplaint: gas smell & taste in
newly drilled Monument water
wellAddress: Pettigrew & Assoc1110 N Grimes, HobbsPhone: 393-9827

. INVESTIGATION

INVESTIGATOR: Eddie W SeayDATE: 6-9-86TIME: 2 PM

DESCRIBE INVESTIGATION AND FINDINGS: went over well records with Mr. Hicks &
details of well. They have been pump testing the well for approx 1 month
and have not run any analysis until recently. EID obtained samples on
6-5-86. They were contacted on 6-4-86 about gas.

ACTION TAKEN:

DATE: 6-10-86TIME: 10:30 AMObtained water samples from well. Chloride analysis was 326.6 ppm.No smell or taste of gas in water. Mr. Hicks observed the same.Shut well in overnight - will check for gas on 6-11-86.6-11-86 7:30 AM - Mr. Sexton, Eddie Seay, & William Hicks checked well. No
smell or taste of gas was observed. Will run bradenhead test.

USE ADDITIONAL SHEET IF NECESSARY

ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS, NEW MEXICO

WATER ANALYSIS

Well Ownership: Monument water well Well No. _____

Land Status: State X Federal _____ Fee _____

Well Location: Unit Letter D, Section 20, T 19 S, R 37 E

Type Well: water well Depth 105 feet.

Well Use: to be used for City of Monument

Sample Number: _____

Date Taken: 6-10-86

Taken By: Eddie W Seay

Specific Conductance: _____ m/cm

Total dissolved Solids: _____ PPM.

Chlorides: 326.6 PPM.

Sulfates: _____ PPM.

Ortho-phosphates: ☐ V.Low ☐ Low ☐ Medium ☐ High

Sulfides: ☐ None ☐ Low ☐ Medium ☐ High

_____: _____

Date Analyzed: 6-10-86

By: Eddie W Seay
Oil Conservation Division
Eddie W Seay

REMARKS: 25 ml samples 142 x 2.3 titration = 326.6 ppm

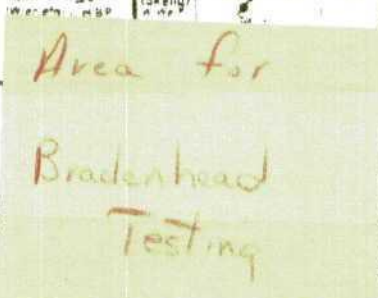
no smell or taste to water - test was witness by Mr. William Hicks of

Pettigrew & Associates

NW $\frac{1}{4}$ of Sect 28

All 16, 17, 18, 19, 20

• Mineral Bone Density



TEXAS-NEW MEXICO PIPE LINE COMPANY

B L Lednicky
District Manager

PO Box 2528
Hobbs NM 88241
505 393 2135

June 4, 1986

State of New Mexico
Energy & Minerals Department
Oil Conservation Division
P.O. Box 2088
State Land Office Building
Santa Fe, New Mexico 87501

Attention: Mr. David G. Boyer

Gentlemen:

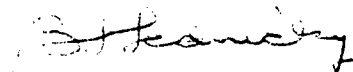
Re: Monument Water Wells

As your know since late 1984 Texas-New Mexico Pipe Line Company has been operating two wells to recover oil from the water table near Monument, New Mexico. This operation is no longer bringing significant quantities of oil in for recovery. Since October 1985 we have recovered less than 106 gallons of oil from the two wells.

Startup of the Monument Water Users Association's new water system is expected this month. We propose to discontinue operation of the recovery wells once the new water system is in service. We request your concurrence with this proposal.

We are also anxious to finalize this program, remove our equipment and restore the surface area. Your guidance in completing this project will be appreciated.

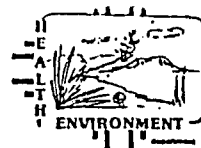
Yours very truly,



BLL:DDM

86-0852-C

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

STATE OF NEW MEXICO

REPORT TO:

Oscar Simpson

S.L.D. No. OR-

099-852

DATE REC.

7-28-86P.O. Box 968Santa Fe, N.M. 87504-0968

PRIORITY

1.5

PHONE(S):

827-2777

USER CODE:

52014

SUBMITTER:

Don Lutjens

CODE:

SAMPLE COLLECTION CODE: (YYMMDDHHMMIII)

8607271740SAMPLE TYPE: WATER ☒, SOIL ☐, FOOD ☐, OTHER: ☐

COUNTY:

Lea

CITY:

Monument

LOCATION CODE: (Township-Range-Section-Tracts)

19S+37E+29+

(10N06E24S42)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.**PURGEABLE SCREENS**

- ☐ (753) Aliphatic Purgeables (1-3 Carbons)
☒ (754) Aromatic & Halogenated Purgeables
☐ (765) Mass Spectrometer Purgeables
☐ (766) Trihalomethanes

Other Specific Compounds or Classes

☐ _____
☐ _____
☐ _____
☐ _____
☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
☐ (760) Organochlorine Pesticides
☐ (755) Base/Neutral Extractables
☐ (758) Herbicides, Chlorophenoxy acid
☐ (759) Herbicides, Triazines
☐ (760) Organochlorine Pesticides
☐ (761) Organophosphate Pesticides
☐ (767) Polychlorinated Biphenyls (PCB's)
☐ (764) Polynuclear Aromatic Hydrocarbons
☐ (762) SDWA Pesticides & Herbicides

Remarks:

FIELD DATA:pH= 6.91; Conductivity= _____ umho/cm at 19° C; Chlorine Residual= _____ mg/l

Dissolved Oxygen= _____ mg/l; Alkalinity= _____ mg/l; Flow Rate _____ / _____

Depth to water _____ ft.; Depth of well _____ ft.; Perforation Interval _____ - _____ ft.; Casing: _____

Sampling Location, Methods and Remarks (i.e. odors, etc.)

Monument water co-op west wellI certify that the results in this block accurately reflect the results of my field analyses, observations and activities. (signature collector): Don Lutjens Method of Shipment to the Lab: _____This form accompanies 2 Septum Vials, _____ Glass Jugs, and/or _____

Samples were preserved as follows:

- ☐ NP: No Preservation; Sample stored at room temperature.
☒ P-Ice Sample stored in an ice bath (Not Frozen).
☐ P-Na₂S₂O₃ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____

at (location) _____ on _____ / _____ / _____ - _____ : _____ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed ☐ Seals Intact: Yes ☐ No ☐

Signatures _____

ANALYSES PERFORMED

LAB. No.: OR- 852

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- ☐ (753) Aliphatic Purgeables (1-3 Carbons)
☒ (754) Aromatic & Halogenated Purgeables
☐ (765) Mass Spectrometer Purgeables
☐ (766) Trihalomethanes
Other Specific Compounds or Classes

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
☐ (760) Organochlorine Pesticides
☐ (755) Base/Neutral Extractables
☐ (758) Herbicides, Chlorophenoxy acid
☐ (759) Herbicides, Triazines
☐ (760) Organochlorine Pesticides
☐ (761) Organophosphate Pesticides
☐ (767) Polychlorinated Biphenyls (PCB's)
☐ (764) Polynuclear Aromatic Hydrocarbons
☐ (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
halogenated purgeables	ND		
aromatic purgeables	ND		
* DETECTION LIMIT *	1 ppb	+ DETECTION LIMIT +	

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT

T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)

[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS:

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes ☐ No ☒ Seal(s) broken by: _____ date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

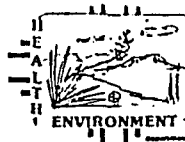
Date(s) of analysis: 28 July 86 Analyst's signature: J. Fairney

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: L. Meyerheim

86-0853-C

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

STATE OF NEW MEXICO

REPORT TO:

Oscar Simpson

S.L.D. No. OR-

*Org-853**EID, water Supply*

DATE REC.

*7-28-86**P.O. Box 968**Santa Fe, N.M.*

PRIORITY

1.5

PHONE(S):

827-2777

USER CODE:

52014

SUBMITTER:

Don Lutjens

CODE:

111

SAMPLE COLLECTION CODE: (YYMMDDHHMMIII)

*8607271725*SAMPLE TYPE: WATER ☒, SOIL ☐, FOOD ☐, OTHER: _____

COUNTY:

Lea

CITY:

Monument

LOCATION CODE: (Township-Range-Section-Tracts)

19S+37E+29+

(10N06E24S42)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- ☐ (753) Aliphatic Purgeables (1-3 Carbons)
☒ (754) Aromatic & Halogenated Purgeables
☐ (765) Mass Spectrometer Purgeables
☐ (766) Trihalomethanes
 Other Specific Compounds or Classes

☐ _____
☐ _____
☐ _____
☐ _____
☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
☐ (760) Organochlorine Pesticides
☐ (755) Base/Neutral Extractables
☐ (758) Herbicides, Chlorophenoxy acid
☐ (759) Herbicides, Triazines
☐ (760) Organochlorine Pesticides
☐ (761) Organophosphate Pesticides
☐ (767) Polychlorinated Biphenyls (PCB's)
☐ (764) Polynuclear Aromatic Hydrocarbons
☐ (762) SDWA Pesticides & Herbicides

Remarks:

FIELD DATA:

pH= *7.05*; Conductivity= _____ umho/cm at *21* °C; Chlorine Residual= _____ mg/l

Dissolved Oxygen= _____ mg/l; Alkalinity= _____ mg/l; Flow Rate _____ / _____

Depth to water _____ ft.; Depth of well _____ ft.; Perforation Interval _____ - _____ ft.; Casing: _____

Sampling Location, Methods and Remarks (i.e. odors, etc.)

Monument water co-op, East well water milky
due to air. Impossible to get all of the bubbles out.

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities. (signature collector): *Don Lutjens* Method of Shipment to the Lab: _____

This form accompanies *2* Septum Vials, _____ Glass Jugs, and/or _____

Samples were preserved as follows:

- ☐ NP: No Preservation; Sample stored at room temperature.
☒ P-Ice Sample stored in an ice bath (Not Frozen).
☐ P-Na₂S₂O₈ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____
 at (location) _____ on _____ / _____ / _____ - _____ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed ☐ Seals Intact: Yes ☐ No ☐

Signatures _____

ANALYSES PERFORMED

LAB. No.: OR- 853

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- ☐ (753) Aliphatic Purgeables (1-3 Carbons)
☒ (754) Aromatic & Halogenated Purgeables
☐ (765) Mass Spectrometer Purgeables
☐ (766) Trihalomethanes
Other Specific Compounds or Classes

☐
☐
☐
☐
☐

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
☐ (760) Organochlorine Pesticides
☐ (755) Base/Neutral Extractables
☐ (758) Herbicides, Chlorophenoxy acid
☐ (759) Herbicides, Triazines
☐ (760) Organochlorine Pesticides
☐ (761) Organophosphate Pesticides
☐ (767) Polychlorinated Biphenyls (PCB's)
☐ (764) Polynuclear Aromatic Hydrocarbons
☐ (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
halogenated purgeables	ND		
aromatic purgeables:			
benzene	23 ppb		
* DETECTION LIMIT *	1 ppb	+ DETECTION LIMIT +	+

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT

T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)

[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: Good sample, no headspace.

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes ☐ No ☒ Seal(s) broken by: _____ date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

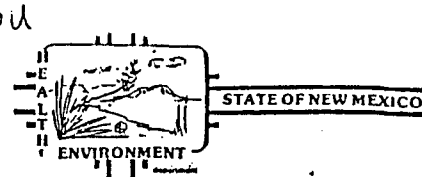
Date(s) of analysis: 28 July 86 Analyst's signature: [Signature]

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: [Signature]

86-0851-C

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

REPORT TO:

Oscar Simpson

S.L.D. No. OR-

019-851EID, water supply

DATE REC.

7-28-86P.O. Box 968Santa Fe, N.M. 87504-0968

PRIORITY

1.5

PHONE(S):

827-2777

USER CODE:

52014

SUBMITTER:

Don L. Jans

CODE:

SAMPLE COLLECTION CODE: (YYMMDDHHMMIII)

8607271710SAMPLE TYPE: WATER ☒, SOIL ☐, FOOD ☐, OTHER:

COUNTY:

Lea

CITY:

Monument

LOCATION CODE: (Township-Range-Section-Tracts)

195+37E+29(10N06E24342)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- ☐ (753) Aliphatic Purgeables (1-3 Carbons)
☒ (754) Aromatic & Halogenated Purgeables
☐ (765) Mass Spectrometer Purgeables
☐ (766) Trihalomethanes
 Other Specific Compounds or Classes

☐ _____
☐ _____
☐ _____
☐ _____
☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
☐ (760) Organochlorine Pesticides
☐ (755) Base/Neutral Extractables
☐ (758) Herbicides, Chlorophenoxy acid
☐ (759) Herbicides, Triazines
☐ (760) Organochlorine Pesticides
☐ (761) Organophosphate Pesticides
☐ (767) Polychlorinated Biphenyls (PCB's)
☐ (764) Polynuclear Aromatic Hydrocarbons
☐ (762) SDWA Pesticides & Herbicides

Remarks:

FIELD DATA:pH= ; Conductivity= umho/cm at °C; Chlorine Residual= mg/lDissolved Oxygen= mg/l; Alkalinity= mg/l; Flow Rate / Depth to water ft.; Depth of well ft.; Perforation Interval - ft.; Casing:

Sampling Location, Methods and Remarks (i.e. odors, etc.)

Bobby Bates Kitchen Sink. About 70 yards SW of Holding Tanks

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities. (signature collector): Don L. Jans Method of Shipment to the Lab:

This form accompanies 2 Septum Vials, Glass Jugs, and/or

Samples were preserved as follows:

- ☐ NP: No Preservation; Sample stored at room temperature.
☒ P-Ice Sample stored in an ice bath (Not Frozen).
☐ P-Na₂S₂O₃ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

CHAIN OF CUSTODYI certify that this sample was transferred from to at (location) on / / - : and thatthe statements in this block are correct. Evidentiary Seals: Not Sealed ☐ Seals Intact: Yes ☐ No ☐Signatures

LAB. No.: OR- 851

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) -checked below:

PURGEABLE SCREENS

- ☐ (753) Aliphatic Purgeables (1-3 Carbons)
- ☒ (754) Aromatic & Halogenated Purgeables
- ☐ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes
- Other Specific Compounds or Classes

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (760) Organochlorine Pesticides
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
halogenated purgeables	ND		
aromatic purgeables:			
benzene	1ppb		
* DETECTION LIMIT *	1ppb	+ DETECTION LIMIT +	

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT

T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)

[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS:

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes ☐ No ☒. Seal(s) broken by: _____ date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 28 July 86. Analyst's signature: A. Finney

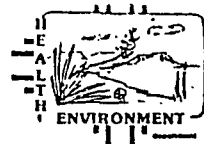
I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: K Meyersheim

66-0850-C

wpu
SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570



STATE OF NEW MEXICO

REPORT TO:

Oscar Simpson

S.L.D. No. OR-

09-850EID, water supply

DATE REC.

7-28-86P.O. Box 968Santa Fe, N.M. 87504-0968

PRIORITY

1.5

PHONE(S):

827-2777

USER CODE:

52614

SUBMITTER:

Don Lutjens

CODE:

SAMPLE COLLECTION CODE: (YYMMDDHHMMIII)

8607271640SAMPLE TYPE: WATER ☒, SOIL ☐, FOOD ☐, OTHER: ☐

COUNTY:

Lea

CITY:

Mosheim

LOCATION CODE: (Township-Range-Section-Tracts)

195+37E+29+

(10N06E24342)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- ☐ (753) Aliphatic Purgeables (1-3 Carbons)
☒ (754) Aromatic & Halogenated Purgeables
☐ (765) Mass Spectrometer Purgeables
☐ (766) Trihalomethanes
 Other Specific Compounds or Classes

☐ _____
☐ _____
☐ _____
☐ _____
☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
☐ (760) Organochlorine Pesticides
☐ (755) Base/Neutral Extractables
☐ (758) Herbicides, Chlorophenoxy acid
☐ (759) Herbicides, Triazines
☐ (760) Organochlorine Pesticides
☐ (761) Organophosphate Pesticides
☐ (767) Polychlorinated Biphenyls (PCB's)
☐ (764) Polynuclear Aromatic Hydrocarbons
☐ (762) SDWA Pesticides & Herbicides

Remarks:

FIELD DATA:pH= 7.35; Conductivity= _____ umho/cm at 23°C; Chlorine Residual= _____ mg/l

Dissolved Oxygen= _____ mg/l; Alkalinity= _____ mg/l; Flow Rate _____ / _____

Depth to water _____ ft.; Depth of well _____ ft.; Perforation Interval _____ - _____ ft.; Casing: _____

Sampling Location, Methods and Remarks (i.e. odors, etc.)

water slightly milky from bubbles. Impossible to get all bubbles out.
Oil Patch Cafe 1/4 mile ENE of Holding Tank

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities. (signature collector): Don Lutjens Method of Shipment to the Lab: Room Air

This form accompanies 2 Septum Vials, _____ Glass Jugs, and/or _____

Samples were preserved as follows:

- ☐ NP: No Preservation; Sample stored at room temperature.
☒ P-Ice Sample stored in an ice bath (Not Frozen).
☐ P-Na₂S₂O₃ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____

at (location) _____ on _____ / _____ / _____ - _____ : _____ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed ☐ Seals Intact: Yes ☐ No ☐

Signatures _____

ANALYSES PERFORMED

LAB. No.: OR- 850

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- ☐ (753) Aliphatic Purgeables (1-3 Carbons)
☒ (754) Aromatic & Halogenated Purgeables
☐ (765) Mass Spectrometer Purgeables
☐ (766) Trihalomethanes

Other Specific Compounds or Classes

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
☐ (760) Organochlorine Pesticides
☐ (755) Base/Neutral Extractables
☐ (758) Herbicides, Chlorophenoxy acid
☐ (759) Herbicides, Triazines
☐ (760) Organochlorine Pesticides
☐ (761) Organophosphate Pesticides
☐ (767) Polychlorinated Biphenyls (PCB's)
☐ (764) Polynuclear Aromatic Hydrocarbons
☐ (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
halogenated purgeables	ND		
aromatic purgeables!			
benzene	1 ppb		
* DETECTION LIMIT *	1 ppb	+ DETECTION LIMIT +	+

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT

T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)

[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: Good sample, no headspace.

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes ☐ No ☒ Seal(s) broken by: _____ date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 28 July 86. Analyst's signature: J. J. Truitt

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: A. Meyers



United States
Department of
Agriculture

Farmers
Home
Administration

Room 3414, Federal Building
517 Gold Avenue SW
Albuquerque, NM 87102

June 12, 1985

Mr. R. L. Stamets, Director
Oil Conservation Commission
P. O. Box 2088
Santa Fe, NM 87501

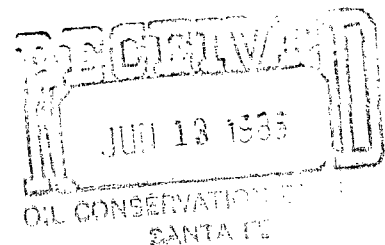
Dear Mr. Stamets:

We have become aware that the water well which served as the domestic water supply for Monument, NM has been contaminated.

Farmers Home Administration (FmHA) made two loans to the Monument Water Users Cooperative for the construction of its domestic water system. The water well which has been contaminated served as part of the security for the FmHA loans. For this reason, FmHA is interested in obtaining background information on the contamination of this well.

We would appreciate it if you would furnish us the following information:

1. Type of contaminants found in the well.
2. Extent of contamination.
3. Source of contamination.
4. Date the well was first identified as contaminated.
5. Any oil pipeline break(s) and/or leak(s) in the area and their proximity to the well.
6. The name and address of the owner(s) of the pipeline(s).
7. Date of the break(s) and/or leak(s).
8. Estimated duration of the break(s) and/or leak(s).
9. Estimated amount of oil spilled.
10. A copy of the Oil Conservation Commission policies, rules and regulations governing the operations of oil development and transportation facilities.




Farmers Home Administration is an Equal Opportunity Lender.
Complaints of discrimination should be sent to:
Secretary of Agriculture, Washington, D.C. 20250

Mr. R. L. Stamets
June 12, 1985

2

We appreciate your assistance in this request.

Sincerely,


GUSTAVO MORALES
Acting State Director

cc: District IV Director, Clovis
Monument Water Users Cooperative
EID, Attn: Gus Cordova

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

June 3, 1985

Jim Baca
Commissioner of Public Lands
P. O. Box 1148
Santa Fe, NM 87504-1148

Attention: Dwain Glidewell

RE: Monument Water User's Co-op,
Water Easement, No. W-644

Dear Jim,

This office is working with the Monument Water User's Co-op in efforts to obtain a replacement well for one that was contaminated by hydrocarbons. Construction of the new well and pipeline are to be financed by monies obtained from the New Mexico Community Development Council (CDC) and a loan from the Farmers Home Administration (FHA).

The Water Easement obtained from your office for the location of a new community well was granted for only a one-year period. This does not satisfy the FHA requirements to obtain a construction loan. On behalf of the Monument Water User's Co-op, I would like to request that the term of water easement W-644 be amended so that some kind of renewal option would permit a loan to be made by FHA. A five-year term with right to renew would suffice, I believe, if this would be acceptable to you.

Thank you for your previous prompt action in this matter.

Sincerely,

Jeff Taylor
General Counsel

cc: Monument Water User's Co-op
Pettigrew & Associates
Art Waskey

Meeting Regarding Monument Replacement well, 5-23-85

Meeting called by Farmers Home Administration regarding cost of project and loan amounts.

Association not ~~off~~ eligible for Farmers Home ~~loan~~ Grant

Incorporation under

51.15

53 comp

Went over again costs of system including:

- ① \$20,000 for land costs & easement (c. 160)
- ② Storage Tank relocation
- ③ Chlorination system
- ④ Well construction
- ⑤ Pipeline type C-900
- ⑥ Line on surface vs. buried

Bernie Hedrick stated they will sign off with ~~the~~ Monument for the pipeline and deal with the State separately. They will do this to get the community accurate supply.

County attorney arrived to clear up county's involvement. State has put up \$125,000, FHM to put up ~ 40,000 as a loan, and pipeline provides \$5,000 to 100,000 in trenching services.

Really want
Easement
Need base w/o
summary consultation
provision guaranteed
renewal
Both on
state and

Jeff needs to ~~the~~ send or have sent letter on lease/easements - Why does county get 20 or 25 years, and Monument 1 yr or 5 yrs
< Pipeline maybe easement, well will be lease

Bernie says he will do archaeological survey if it can not be waived,

(Farington)

Even with them, passing H-95, review, feasibility study needed afterward.

Then application must be approved.

→ Will be real tight on the time schedule for all this.

Pattigrew will "ramrod" gathering information etc. for application.
Steve Massey will see about H-95

AGENCY - COMPANY

ADDRESS

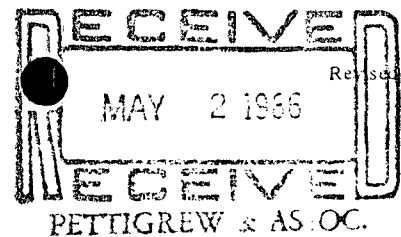
PHONE NO.

Jack Black	NFA Local Govt. Div.	Santa Fe	827-4950
VE COPELAND	MONUMENT WATER WRS	MONUMENT	393-4551
Steve Massey	SNMEDD	RT 3 Box 386 Roswell	623-5667
El Gallego	Fm HA	Albq NM	766-3938
Walter F. Glover	Fm HA	Clovis, NM	762-5832
Mike Tindie	Monument water users	Monument, N.M.	393-3830
DAN HERBONNE	T-NMPLCO	Hobbs NM	393-2135
B.L. LEDWICKY			
Dave Boyer	NM Oil Conservation Div.	Santa Fe NM	827-5812
Justino Morales	USDA - Fm HA	Albq. NM	766-2463
J. H. Nusz	T-NMPLCO	Hobbs	393-2135
BILL WEBER	EID	ROSWELL	
Sam Small	EPA - ROSWELL	Monument	393-2144
DEAN SEXTON	American Hess	Hobbs	3-6161
TOM BART	ORN	406 N. GUADALUPE	885-9023
	NMEID	CARLSBAD	

STATE ENGINEER OFFICE

WELL RECORD

Section 1. GENERAL INFORMATION



(A) Owner of well Monument Water Users Cooperative Owner's Well No. 2
 Street or Post Office Address P.O. Box 22
 City and State Holbrook, New Mexico 86025

Well was drilled under Permit No. L-5511 and is located in the:

a. 1/4 NE 1/4 1/4 of Section 20 Township 19S Range 37E N.M.P.M.

b. Tract No. _____ of Map No. _____ of the _____

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

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

(B) Drilling Contractor Abbott Bros. Drilling License No. 4D-16

Address P.O. Box 637, Hobbs, New Mexico 86024

Drilling Began 3/24/66 Completed 3/26/66 Type tools Cable Size of hole 12 in.

Elevation of land surface or _____ at well is _____ ft. Total depth of well 105 ft.

Completed well is ☒ shallow ☐ artesian. Depth to water upon completion of well 90 ft.

Section 2. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness in Feet	Description of Water-Bearing Formation	Estimated Yield (gallons per minute)
From	To			
<u>00</u>	<u>100</u>	<u>40</u>	<u>Sand, Small Gravel</u>	

Section 3. RECORD OF CASING

Diameter (inches)	Pounds per foot	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To
<u>6 5/8</u>	<u>22.55</u>	<u>Welded</u>	<u>0</u>	<u>105</u>	<u>105</u>		<u>00</u>	<u>100</u>

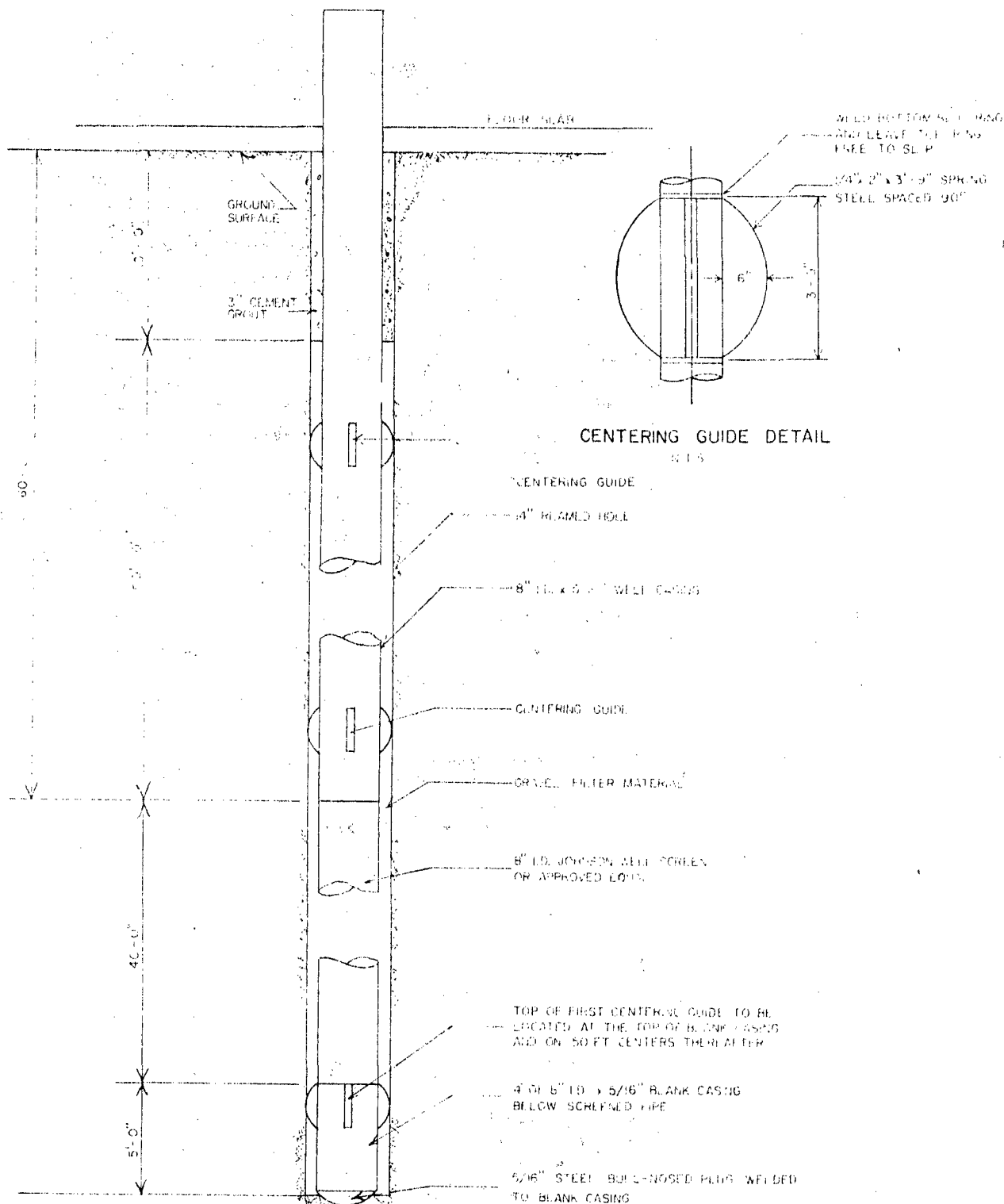
Section 4. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole Diameter	Sacks of Mud	Cubic Feet of Cement	Method of Placement
From	To				

Section 6. LOG OF HOLE

[illegible]

Section 7. REMARKS AND ADDITIONAL INFORMATION



WELL DETAIL

N.T.S.

CENTERING GUIDE DETAIL

N.T.S.

CENTERING GUIDE

4" REAMED HOLE

8" DIA. x 6' WELL CASING

CENTERING GUIDE

GRAVEL FILTER MATERIAL

8" DIA. JOHNSON WELL SCREEN OR APPROVED EQUIV.

TOP OF FIRST CENTERING GUIDE TO BE LOCATED AT THE TOP OF BLANK CASING AND ON 50 FT. CENTERS THEREAFTER

4' OR 6' DIA. x 5/16" BLANK CASING BELOW SCREENED PIPE

5/16" STEEL BULL-NOSED PLUG WELDED TO BLANK CASING

100% SBC
FATH

6.00%
SHIELD
CONCRETE
OR APP

50

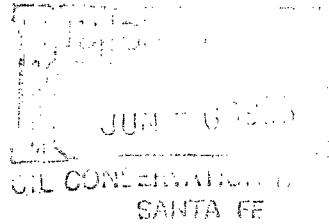
BEI

2.00% TRAIL
ABANDON

TEXAS-NEW MEXICO PIPE LINE COMPANY

B L Lednicky
District Manager

PO Box 2528
Hobbs NM 88241
505 393 2135



June 4, 1986

State of New Mexico
Energy & Minerals Department
Oil Conservation Division
P.O. Box 2088
State Land Office Building
Santa Fe, New Mexico 87501

Attention: Mr. David G. Boyer

Gentlemen:

Re: Monument Water Wells

As your know since late 1984 Texas-New Mexico Pipe Line Company has been operating two wells to recover oil from the water table near Monument, New Mexico. This operation is no longer bringing significant quantities of oil in for recovery. Since October 1985 we have recovered less than 106 gallons of oil from the two wells.

Startup of the Monument Water Users Association's new water system is expected this month. We propose to discontinue operation of the recovery wells once the new water system is in service. We request your concurrence with this proposal.

We are also anxious to finalize this program, remove our equipment and restore the surface area. Your guidance in completing this project will be appreciated.

Yours very truly,

BLL:DDM



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

TONEY ANAYA
GOVERNOR

June 3, 1986

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

MEMORANDUM

TO: PAUL BIDERMAN, SECRETARY, EMD
THROUGH: R. L. STAMETS, DIRECTOR, OCD
FROM: D. G. BOYER, ENVIRONMENTAL BUREAU CHIEF *AWB*
SUBJECT: UPDATE OF MONUMENT WATER CONTAMINATION

On May 28, I contacted Tres Hicks of Pettigrew & Associates in Hobbs for an update of the Monument situation. He reported that construction is nearly completed and tie-ins of the new well and pipeline with the existing system should be completed within the next two weeks.

Texas-New Mexico had originally offered to recover the oil in the ground water caused by their September, 1984 pipeline leak. They also requested permission to replace the well with a comparable shallow well close by the spill location, but out of the area of contamination. However, the choice was made to move further north from the area and try to put in one deep well to solve the community water problems. As explained below, this new well may not provide a complete solution.

The conversation with Hicks provided several interesting facts:

- *The pipeline company provided about \$40-60,000 worth of equipment and manpower for the trenching of the several miles of the replacement pipeline; \$125,000 came from CDC (State) money, and another \$15,000 came as cash donations from other area oil companies (without them assuming any liability).
- *The new well is located in the NE/4, NE/4, NW/4 of Section 20, Township 19 South, Range 36 East instead of the N/2 of Section 17, a mile to the north. The northernmost location was originally preferred by me because existing information indicated the likelihood of a greater thickness of water-bearing material. I estimated the depth to the redbeds at the northern location as 150 to 160 feet.
- *The southern site was chosen because not enough money was available to pay for the extra pipe and associated costs (not including trenching). When drilled, the well bottomed in redbeds at 105 feet and the static water level was 55'. This provides only 45 to 50 feet of water available for the well and limits the pumping rate to 70-75

gpm (vs. 100-125 gpm desired).

*The new well will provide enough water to more than replace the well lost to contamination and will likely satisfy Monument's current usage. However, it will not provide the total system capacity available previously. This is because the other two existing wells are threatened by contamination that is probably from casing leaks or spills that occurred 40 to 50 years ago before current practices were in effect. It is very unlikely that the current spill contributed to this contamination. The OCD had previously drilled a 6"-pvc monitor well north of the break area that can be used to provide an additional supply to the community if needed. I provided Hicks with a copy of the well information.

The OCD will be in contact with the pipeline company regarding the necessity for further reclamation actions once the new water well and line are in service. Before making decisions in this area, the Division will request a summary report detailing the company's efforts and providing up-to-date information.

DGB:dp

Memo

From
DAVID G. BOYER
Hydrogeologist

7/1/86

To Paul -

Attached is the Monument information you requested. The grant agreement copy I have calls for $2\frac{3}{4}$ miles of pipeline. It apparently was modified to 8300 feet (Lack of Funds?). I was under the impression until late December '85 that the new well was located out of the known problem area. My comments to the FHA clearly show my concerns about locating a new well in known problem areas.

Oil Conservation Division
P.O. Box 2088 Santa Fe, N.M. 87501

DGB



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

TONEY ANAYA
GOVERNOR

May 29, 1986

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

Mr. Tres Hicks
Pettigrew & Associates
P. O. Box 5769
Hobbs, New Mexico 88241

Dear Mr. Hicks:

Enclosed for your files is a copy of our records regarding the drilling and completion of a six-inch diameter monitor well north of the oil spill site at Monument. The well is 60 feet deep, with a static water level of about 17 feet. It is estimated that it will provide 45 gpm when equipped with a pump. The well is currently capped but available for use if an additional supply is needed.

Thank you for the information you provided me by phone yesterday. If you have any questions on this information, call me at 827-5812.

Sincerely,

A handwritten signature in dark ink, appearing to read "David G. Boyer".

DAVID G. BOYER
Hydrogeologist/Environmental
Bureau Chief

DGB:dp

Enc.



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

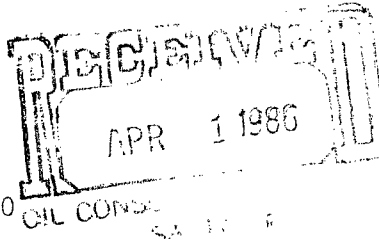
TONEY ANAYA
GOVERNOR

March 25, 1986

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88240
(505) 393-6161

EID

Attn: Roelf Ruffner
2120 North Alto
Hobbs, New Mexico 88240



Dear Mr. Ruffner:

Eddie Seay went to Monument in reference to a complaint from Mr. Bird on March 24, 1986, and found what smelled like gasoline to be present in his water well.

The chlorides were checked and found to be 86 PPM.

Mr. Bird said the gasoline tanks about 200 yards from his well has had several leaks in the past.

Attached is the complaint form which we filled out and the data on the situation.

We will turn this matter over to you since it is gasoline.

Very truly yours

OIL CONSERVATION DIVISION

Jerry Sexton
Jerry Sexton
Supervisor, District I

JS:bp

cc: Mr. Bird
R. L. Stamets
Dave Boyer
File

ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS, NEW MEXICO

WATER ANALYSIS

Well Ownership: Raymond Bird Well No. _____

Land Status: State _____ Federal _____ Fee X

Well Location: Unit Letter _____, Section 31, T 19 S, R 37 E

Type Well: water well Depth _____ feet.

Well Use: domestic water

Sample Number: 1

Date Taken: 3-24-86

Taken By: Eddie W Seay

Specific Conductance: _____ m/cm

Total dissolved Solids: _____ PPM.

Chlorides: 85.2 PPM.

Sulfates: _____ PPM.

Ortho-phosphates: ☐ V.Low ☐ Low ☐ Medium ☐ High

Sulfides: ☐ None ☐ Low ☐ Medium ☐ High

Date Analyzed: 3-24-86

By: Eddie W Seay
Oil Conservation Division
Eddie W Seay

REMARKS: 25 ml samples 142 x .6 titration = 85.2 ppm Cl

water appears to have a gasoline smell or may be bacteria - would recommend

EID to test and evaluate

OCD COMPLAINT FORM

VIC _____
OTHER _____COMPLAINT TAKEN BY: Ray SmithDATE: 3-21-86 TIME: _____

PERSON COMPLAINING:

IN PERSON: x PHONE: _____Name: Mr. BirdComplaint: domestic water wellAddress: Monument, NMhas funny taste & smell

Phone: _____

. INVESTIGATION

INVESTIGATOR: Eddie W SeayDATE: 3-24-86 TIME: 9 AM

DESCRIBE INVESTIGATION AND FINDINGS: visited w/Mr. Bird about problem - first
noticed smell & taste approx Aug, 85 - bad taste & odor - took water
sample - water had gasoline smell & taste - chloride test was 85.2 ppm -
would recommend Dist. Spr. that EID be notified to do further testings.
There is a gas station approx 200 yds N of water well. Mr. Bird said that
the gas station had leaks in gas tanks some time back.

ACTION TAKEN: DATE: _____ TIME: _____

USE ADDITIONAL SHEET IF NECESSARY



MEMORANDUM OF MEETING OR CONVERSATION

☒ Telephone ☐ Personal

Time
3:30PM

Date
12/26/85

Originating Party

Other Parties

Dave Boyer OCB

Debra Hicks-Pettigrew & Assoc.
393-9827 (Hobbs)

Subject
Monument Water Contamination - Status of New System

Discussion
Final Plans Received comment from E. J. Roswell
Engineers on 12/20. Plans & Specs to DFA (Jackie Block)
on 12/23. To be advertised early January. Bid likely
February - cons't estimated start March (maybe
late Feb). Total cost \$240,000, Tex-Mex to do only
8300 Ft of trenching (@ estimated worth of \$100,000).
Cash (\$15,000 additional) from Tex-Mex, Amstar-Hess,
Conoco, Warren. CAC funding remainder (\$125,000).
Well located at Test Hole 2 (NENE NW Sec 20, 19S, 37E)
4" pipeline ties into 2 1/2" line at contaminated well, some storage
Tank

Conclusions or Agreements

Pettigrew to send Final Plans & Specs for our file

Distribution

Signed

A. H. Boyer

Monument File
R. L. Stamets

COMPLAINT TAKEN BY: Ray SmithDATE: 3-21-86 TIME: _____

PERSON COMPLAINING:

IN PERSON: x PHONE: _____Name: Mr. BirdComplaint: domestic water wellAddress: Monument, NMhas funny taste & smell

Phone: _____

INVESTIGATION

INVESTIGATOR: Eddie W SeayDATE: 3-24-86 TIME: 9 AM

DESCRIBE INVESTIGATION AND FINDINGS: visited w/Mr. Bird about problem - first
noticed smell & taste approx Aug, 85 - bad taste & odor - took water
sample - water had gasoline smell & taste - chloride test was 85.2 ppm -
would recommend Dist. Spr. that EID be notified to do further testings.
There is a gas station approx 200 yds N of water well. Mr. Bird said that
the gas station had leaks in gas tanks some time back.

ACTION TAKEN: _____ DATE: _____ TIME: _____

Bayer Ex 19

AMERADA HESS CORPORATION

007250

June 19, 1985

P. O. DRAWER "D"
MONUMENT, NEW MEXICO 88265

Monument Water Users Cooperative
P. O. Box 48
Monument, New Mexico 88265

Attn: Mr. W. E. Copeland

Dear Sir:

Amerada Hess Corporation agrees to underwrite the \$15,000 shortfall in funding required for renovation of the Monument water system, as described in your letter of June 14, 1985. Donations have been solicited from other Companies in the area and it is anticipated that the full amount of \$15,000 is forthcoming. The willingness of Amerada Hess Corporation to underwrite the additional funding is in no way an admission of liability on the Company's part for any of the contamination found in Monument's water supply.

Yours Very truly,

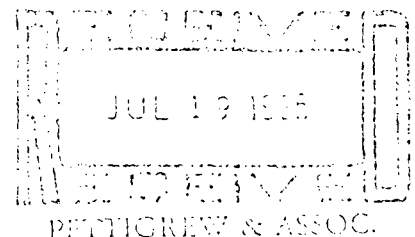


S. W. Small
District Superintendent

SWS/cb

cc: Johnny Cope - Community Development Council
Debra Hicks - Pettigrew and Associates
J. I. Johnson - Amerada Hess

Byer
EX18



Submit this report to TRIPPLICATE 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 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.

007389

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 Repair (Other) Casing Leak x

November 12, 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

Gulf Oil Corporation

(Company or Operator)

Graham State "G"

(Lease)

Clarka Oil Well Servicing

(Contractor)

Well No. 2 in the NW 1/4 SE 1/4 of Sec. 17

T. 19-S., R. 37-E., NMPM., Monument Pool, Lea County.

The Dates of this work were as follows: Oct. 29 thru Nov. 11, 1954

Notice of intention to do the work (was) (~~was~~) submitted on Form C-102 on October 19, 1954

(Cross out incorrect words)

and approval of the proposed plan (was) (~~was~~) obtained.

DETAILED ACCOUNT OF WORK DONE AND RESULTS OBTAINED

Repaired 5-1/2" casing leak as follows:

1. Pulled tubing.
2. Ran 5-1/2" magnesium wire line bridge plug set at 3700'. Dumped 2 sacks cement on top of plug.
3. Ran HRC tool. Found top hole between 197-224'. Bottom hole between 605-633'.
4. Perforated 5-1/2" casing with 2, 1/2" Jet Holes at 1395'.
5. Ran Howco DM cement retainer set at 1315'.
6. Pumped 136 sacks 4% Gal below retainer. Circulated estimated 25 sacks out 9-5/8" bradenhead.
7. Waited on cement.
8. Pressured 5-1/2" casing with 500# for 30 minutes. No drop in pressure. Pressured 7-5/8" casing with 500# for 30 minutes. No drop in pressure.
9. Drilled cement and retainer from 1305-1400'. Pressured 5-1/2" casing with 500# for 30 minutes. No drop. Drilled cement and bridge plug and returned well to production.

Witnessed by N. B. Jordan

(Name)

Gulf Oil Corporation

(Company)

Field Foreman

(Title)

Approved:

OIL CONSERVATION COMMISSION

S. G. Stanley

(Name)

(Title)

(Date)

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

Name

Position Asst. Area Supt. of Prod.

Representing Gulf Oil Corporation

Address Box 2167, Hobbs, N. M.

MUDDING AND CEMENTING RECORD

SIZE OF HOLE	SIZE OF CASING	WHERE SENT	NO. SACKS OF CEMENT	METHOD USED	MUD GRAVITY	AMOUNT OF MUD USED

Tidewater Oil Company Box 547 Hobbs, New Mexico
(Address) 007387
LEASE State "J" WELL NO. 2 UNIT D S 17 T 19S R 37E
DATE WORK PERFORMED 1-22-57 thru POOL Monument
1-31-57

This is a Report of: (Check appropriate block) ☐ Results of Test of Casing Shut-off
☐ Beginning Drilling Operations ☐ Remedial Work
☐ Plugging ☒ Other Repaired Casing Leak.

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

- 1-17-57 Discovered that gas was escaping between 13" surface casing and 9-5/8" salt string.
1-22-57 Pulled rods and tubing out of hole and set Baker Cast Iron Bridge plug @ 3600' w/
8' of cement on top inside 7" O.D. casing.
1-23-57 Ran H.R.C. test tool and found leak to be above 675' inside 7" O.D. casing.
Perforated 7" csg. w/ 1 bullet @ 1380'. Set D.M. retainer @ 1354' and mixed
246 sks. reg. cement. Cement circulated to surface between 7" O.D. and 9-5/8"
O.D. casing. W.O.C. 36 hrs.
1-25-57 Drilled out cement and tested 7" O.D. csg. w/ 1000 psi. Still had a slow drop
in pressure.
1-26-57 Ran H.R.C. test tool and found leaks to be 110' & 291'. Mixed 35 sks. of reg.
thru cement and spotted from 291' to 90'. Pumped 5 sacks away. W.O.C. 36 hrs.
1-31-57 Drilled out cement and tested 7" csg. with 1000 psi. Held okay. Drilled out
bridge plug @ 3600' and ran tubing and rods back in hole. Put well in operation.

FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY

Original Well Data:

DF Elev. TD PBD Prod. Int. Compl Date
Tbng. Dia Tbng Depth Oil String Dia Oil String Depth
Perf Interval (s)
Open Hole Interval Producing Formation (s)

RESULTS OF WORKOVER:

	BEFORE	AFTER
Date of Test		
Oil Production, bbls. per day		
Gas Production, Mcf per day		
Water Production, bbls. per day		
Gas-Oil Ratio, cu. ft. per bbl.		
Gas Well Potential, Mcf per day		
Witnessed by		

(Company)

OIL CONSERVATION COMMISSION

Name E. J. Fischer
Title Acting Area Superintendent
Date FEB 10 1957

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

Name E. W. Hogue
Position Acting Area Superintendent
Company Tidewater Oil Company

NEW MEXICO OIL CONSERVATION COMMISSION
MAIN OFFICE 000 Santa Fe, New Mexico

00729-1

MISCELLANEOUS NOTICES

Submit this notice in TRIPLICATE to the District Office, Oil Conservation Commission, before the work specified is to begin. 3 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 Repr. (OTHER) 7" Csg. Leak X		NOTICE OF INTENTION (OTHER)	

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICOHobbs, New Mexico
(Place)October 15, 1954
(Date)

Gentlemen:

Following is a Notice of Intention to do certain work as described below at the B. V. Culp

Gulf Oil Corporation
(Company or Operator)Well No. 2 in E
(Unit)

SW 1/4 NW 1/4 of Sec. 19, T. 19-S., R. 37-E, NMPM., Monument, Peol

Lea County.

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

Propose to repair 7" casing leak as follows:

1. Pull tubing.
2. Run wire line magnesium bridge plug and set in base of 7" casing.
3. Run HRC tool and locate leak interval.
4. Run magnesium cement retainer and set 50' above leak interval.
5. Attempt to circulate cement to the surface of 7" - 9-5/8" annulus.
6. If leak is found near the surface, perforate 2 holes at 1346' and attempt to circulate cement to the surface. (Base of intermediate casing at 1346')
7. Wait on cement.
8. Drill out cement retainer and cement in 7" casing.
9. Pressure test 7" casing with 500# for 30 minutes.
10. If pressure holds, drill out bridge plug and return well to production.

Approved....., 19.....
Except as follows:Approved
OIL CONSERVATION COMMISSIONBy: *Stanley*

Title.....

Gulf Oil Corporation
Company or OperatorBy: *E. J. Jay*

Position..... Area Supt. of Prod.

Send Communications regarding well to:

Name..... Gulf Oil Corporation

Address..... Box 2167, Hobbs, N. M.

Form G-103
(Revised 3-55)

NEW MEXICO OIL CONSERVATION COMMISSION

MISCELLANEOUS REPORTS ON WELLS

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

COMPANY Gulf Oil Corporation - Box 2167, Hobbs, N. M.

(Address)

EASE Elbert Shipp "B" WELL NO. 1 UNIT L S 8 T 19-S R 37-EDATE WORK PERFORMED 9-9 thru 10-10-55 POOL MonumentThis is a Report of: (Check appropriate block) ☐ Results of Test of Casing Shut-off☐ Beginning Drilling Operations☐ Remedial Work☐ Plugging☒ Other Repair of Casing Leak

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

SEE ATTACHED SHEET

*ccg leaks
815' - 2300'*FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY

Original Well Data:

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

Bng. Dia _____ Tng 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

*Boyer
815*

Attachment - C-103

Gulf Oil Corporation - Elbert Shipp "B" No. 1-L, 8-19-37

Repaired leaks in 5-1/2" casing as follows:

1. Attempted to pull tubing. Tubing stuck. Pumped fresh water down 5-1/2" casing in an attempt to dissolve salt ring. Ran McCullough magnatector. Showed tubing stuck at 2322'. Cut tubing at 2297' and pulled free tubing. Reran tubing with 2 drill collars and 3 Jts 4-1/2" wash pipe. Washed over tubing. Pulled tubing, drill collars and wash pipe. Reran tubing with overshot. Pulled and recovered fish.
2. Ran 5-1/2" gauge ring to 3815'. Ran 5-1/2" Baker magnesium bridge plug on wire line set at 3800'. Dumped 2 sacks cement on top of plug.
3. Ran HRC tool. Found top hole at 812', bottom hole at 2300'.
4. Set ~~Howco~~ DM retainer at 2232'. Failed to break circulation out 7-5/8" bradenhead. Pulled tubing. Drilled out retainer.
5. Perforated 5-1/2" casing at 2300' with 2, 1/2" Jet Holes. Ran HRC tool set at 2270'. Tested below tool. Injection rate 2 bbls per minute at 1500#. Pulled tubing and HRC tool. Reran tubing with Howco DM retainer set at 2198'. Cemented thru perforations at 2300' with 265 sacks cement in 8 stages. Maximum pressure 800#. Reversed out 30 sacks cement. WOC.
6. Ran HRC tool to 1907'. Tested below tool with 1000# for 30 minutes. No drop in pressure. Tested above tool. Injection rate 1 bbl per minute at 1200#. Reset HRC tool at 1877'. Injection rate below tool 1/2 bbl per minute, above tool 1-1/2 bbl per minute at 1000#. Pulled tubing and tool.
7. Perforated 5-1/2" casing with 2, 1/2" Jet Holes at 1905'. Ran tubing with DM retainer set at 1808'. Broke circulation on 7-5/8" annulus. Pumped 883 sacks cement thru casing perforations at 1905'. Cement circulated. Pulled tubing. Pumped 50 sacks cement down 10-3/4" - 7-5/8" bradenhead. WOC.
8. Ran tubing and bit to top cement at 1316'. Tested casing with 900# for 30 minutes. No drop in pressure. Drilled cement and retainer to 1916'. Tested with 800#, dropped 275# in 2 minutes. Drilled out to 2345'. Lowered bit to 2375'. Tested with 800#. Dropped 40# in 30 minutes then built up from 760# to 920# in 1-1/2 hours. Pulled tubing and bit.
9. Ran tubing and HRC tool. Found top hole between 1752-1754', bottom hole between 2319-2321'. Pulled tubing and tool.
10. Perforated 5-1/2" casing at 2320' and 1753' with 2, 1/2" Jet Holes. Set HRC tool at 2304'. Tested below tool with 1000# for 30 minutes. No drop in pressure. Pulled tubing and tool.
11. ~~Perforated 5-1/2" casing with~~ Ran tubing with 5-1/2" DM cement retainer set at 2257'. Pumped 109 sacks Neat cement thru perforations at 2320' in 8 stages. Maximum pressure 2000#. Pulled tubing. WOC.
12. Ran tubing with DM retainer set at 1684'. Pumped 128 sacks Neat cement thru perforations at 1753'. Maximum pressure 200#. Pulled tubing up 10' and backwashed approximately 20 sacks cement. Pulled tubing. WOC.
13. Ran tubing with bit to 1673'. Tested casing with 800# for 30 minutes. No drop in pressure. Drilled cement and retainers, drilled and pushed bridge plug to 4040' (TD). Tested at intervals 1700', 1767', 1815', 2341' with 800#, 800#, 500# and 500# respectively. No drop in pressure. Pulled tubing and bit.
14. Ran 131 Jts 2-3/8" tubing set at 4032'. Sweet hookwall packer at 3768'. Swabbed and well kicked off. Returned well to production.

Please cancel DJ-226 and MSP-131.

NO. OF COPIES RECEIVED	
DISTRIBUTION	
DATE	
FILE	
C.O.S.	
AND OFFICE	
PERATOR	

NEW MEXICO OIL CONSERVATION COMMISSION

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

007392

5. Indicate Type of Lease
State ☒ Fee ☐

6. State Oil & Gas Lease No.

B-2656

SUNDRY NOTICES AND REPORTS ON WELLS

DO NOT USE THIS FORM FOR NOTICES TO DRILL OR TO CEMENT OR PLUG BACK TO A DIFFERENT RESERVOIR.
EXEMPTED FROM PAYMENT OF FEE FOR SUCH PROPOSALS.

1. Indicate Type of Well
Oil ☐ Gas ☒ OTHER ☐

2. Name of Lessee

CONOCO INC.

3. Address

P. O. Box 460, Hobbs, N.M. 88240

4. Location

UNIT LETTER L 1980 FEET FROM THE South LINE AND 660 FEET FROM

THE West LINE, SECTION 19 TOWNSHIP 19-S RANGE 37-E MAP

7. Unit Agreement Name

8. Name of Lease Name

State AC Com

9. Well No.

1

10. Field and Pool, or Wildcat

Eumont Queen Gas

11. Elevation (Show whether DF, RT, GR, etc.)

12. County

Lea

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

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

REPAIR REMEDIAL WORK ☐

PLUG AND ABANDON ☐

REMEDIAL WORK ☐

ALTERING CASING ☐

TEMPORARILY ABANDON ☐

COMMENCE DRILLING OPNS. ☐

PLUG AND ABANDONMENT ☐

REPAIR OR ALTER CASING ☐

CHANGE PLANS ☐

CASING TEST AND CEMENT JOB ☐

OTHER ☒

OTHER repair csg

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

MIRU. Kill well w/ TFW. POOH w/ tbg, seat nipple, mud anchor. GIH w/ workstring, retrievable bridge plug, treating pkr. Test csg. Establish circulation. Set RBP 50' below hole. Spot 1sx sand on RBP. POOH w/ workstring and pkr. GIH w/ workstring and cmt. retainer. Set retainer 50' above hole. Contact Division Engineering Office for volume of cmt to be circ. Spot 5 sx on retainer. POOH. WOC 12hrs. GIH, drill cut cmt plug and retainer. Circ. sand off RBP. POOH. GIH w/ pkr. workstring and RBP retrieval tool. Test cmt job. POOH. GIH and run CNL-GR collar locator. Log 3967'-2700'. Run tbg, seat nipple, & mud anchor. Return well to production.

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

W. A. Butterfield

TITLE Administrative Supervisor

DATE October 22, 1980

SUPERVISOR DISTRICT 1

OCT 27 1980

NOTED BY [Signature]
DATE OF APPROVAL, IF ANY:

NO. OF COPIES RECEIVED	
DISTRIBUTION	
DATE	
LE	
S.G.S.	
AND OFFICE	
PERATOR	

NEW MEXICO OIL CONSERVATION COMMISSION

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

007393

5a. Indicate Type of Lease	State <input checked="" type="checkbox"/> Fee <input type="checkbox"/>
5. State Oil & Gas Lease No.	B-1533

SUNDY NOTICES AND REPORTS ON WELLS

DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO SPEER OR PLUG BACK TO A DIFFERENT RESERVOIR.
SEE INSTRUCTIONS FOR PERMIT ON FORM C-101 FOR SUCH PROPOSALS.

6. Indicate Type of Well	Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> OTHER <input type="checkbox"/>
7. Unit Agreement Name	
8. Name of Lease Name	State AC
9. Well No.	1
10. Field and Pool, or Wildcat	Eumont-Monument
11. Elevation (Show whether DF, RT, GR, etc.)	
12. County	Lea

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

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

REFORM 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"/>
ILL OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOB <input type="checkbox"/>	

Describe in detail all operations completed (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. SEE NOTE 1123.)

MIRU 12/6/80. Found holes from 1148'-1177'. Perf csg. 1152'-1155' w/2 JSPP. Set cmt. retainer at 1119'. Pmpd 200 sx Class C cmt into perfs. Spot 8' cmt on top of retainer. Drilled out cmt & retainer. Pressure test csg. Held ok. Ran CNL-GR collar log from 3967'-2700'. Ran equipment. Tested 34BO, 549BW, 28MCF on 12/24/80.

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

Wm. G. T. K. K. K. TITLE Administrative Supervisor DATE April 7, 1981

APPROVED BY *[Signature]* TITLE SUPERVISOR DATE APR 10 1981

NOTATIONS OF APPROVAL, IF ANY:

OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

007298

Form C-103
Revised 10-1-

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

5a. Indicate Type of Lease
State ☒ Foo ☐

5. State Oil & Gas Lease No.
B-246-1

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 checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>	7. Unit Agreement Name
2. Name of Operator Gulf Oil Corporation	8. Farm or Lease Name F. W. Kutter (NCT-A)
3. Address of Operator P. O. Box 670, Hobbs, NM 88240	9. Well No. 2
4. Location of Well UNIT LETTER <u>J</u> 1980 FEET FROM THE <u>South</u> LINE AND 1980 FEET FROM THE <u>East</u> LINE, SECTION <u>20</u> TOWNSHIP <u>19S</u> RANGE <u>37E</u> N.M.P.M.	10. Field and Pool, or Wildcat Eunice Monument
11. Elevation (Show whether DF, RT, GR, etc.) 3672' GL	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 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>Repaired Casing Leak</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.

POH with rods and pump. Found leak in tubing. Cut stuck tubing at 2990'. POH with tubing. Set RBP at 3620'. Replaced bad joint tubing. Spot 2 sacks frac sand on RBP. Found casing leaks 1044-67½, 753'-784', 689'-720', 628'-659'. Set cement retainer at 953'. Squeeze with 300 sacks Class "C" neat. Flushed with brine. Drill cement and cement retainer at 953'. Pressure test casing 300#. Circ hole clean. Circulate sand off RBP and POH. GIH with tubing, sub, PN & SN; tubing at 3949.53', PN at 3934.78', SN at 3933.68'. Pumped 1000 gals 20% NE double inhibited HCL. GIH with redressed pump and rods. Hung well on. Prior to work, pumped 5 BO, 6 BW with 82 MCF; after work, pumped 5 BO, 5 BW with 85 MCF. Complete after repairing casing leak 11-17-81.

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

SIGNED R.D. Pite TITLE Area Engineer DATE 12-2-81

APPROVED BY [Signature] TITLE OIL & GAS INSPECTOR DATE 12-2-81

CONDITIONS OF APPROVAL, IF ANY:

OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

Form C-103
Revised 10-77

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

5a. Indicate Type of Lease
State ☒ For ☐

5. State Oil & Gas Lease No.
B-246-1

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 checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>	7. Unit Agreement Name
2. Name of Operator Gulf Oil Corporation	8. Farm or Lease Name F. W. Kutter (NCT-A)
3. Address of Operator P. O. Box 670, Hobbs, NM 88240	9. Well No. 2
4. Location of Well UNIT LETTER <u>J</u> , <u>1980</u> FEET FROM THE <u>South</u> LINE AND <u>1980</u> FEET FROM THE <u>East</u> LINE, SECTION <u>20</u> TOWNSHIP <u>19S</u> RANGE <u>37E</u> N.M.P.M.	10. Field and Pool, or Wildcat Eunice Monument
11. Elevation (Show whether DF, RT, GR, etc.) 3672' GL	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 type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPS. <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 <u>Repaired Casing Leak</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.

POH with rods and pump. Found leak in tubing. Cut stuck tubing at 2990'. POH with tubing. Set RBP at 3620'. Replaced bad joint tubing. Spot 2 sacks frac sand on RBP. Found casing leaks 1044-67½, 753'-784', 689'-720', 628'-659'. Set cement retainer at 953'. Squeeze with 300 sacks Class "C" neat. Flushed with brine. Drill cement and cement retainer at 953'. Pressure test casing 300#. Circ hole clean. Circulate sand off RBP and POH. GIH with tubing, sub, PN & SN; tubing at 3949.53', PN at 3934.78', SN at 3933.68'. Pumped 1000 gals 20% NE double inhibited HCL. GIH with redressed pump and rods. Hung well on. Prior to work, pumped 5 BO, 6 BW with 82 MCF; after work, pumped 5 BO, 5 BW with 85 MCF. Complete after repairing casing leak 11-17-81.

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

SIGNED R.D. Pite TITLE Area Engineer DATE 12-2-81

APPROVED BY [Signature] TITLE OIL & GAS INSPECTOR DATE 12-2-81

CONDITIONS OF APPROVAL, IF ANY:

NO. OF WELLS RECEIVED		
DATE RECEIVED		
AREA		
FILE		
NO. OF		
AND OFFICE		
OPERATION		

NEW MEXICO OIL CONSERVATION COMMISSION

00746

Form C-193
Supersedes Old
C-102 and C-103
Effective 1-1-65

SUNDY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR OPERATIONS TO BE PERFORMED ON A WELL OR WELLS IN A DIFFERENT RESERVOIR.
SEE INSTRUCTIONS FOR REPORT ON OTHER C-193, FOR SUCH OPERATIONS.)

OIL WELL ☒ GAS WELL ☐ OTHER ☐

Name of Operator
Gulf Oil Corporation

Address of Operator
P. O. Box 670, Hobbs, NM 88240

Location of Well
UNIT LETTER **0** **660** FEET FROM THE **South** LINE AND **1980** FEET FROM
THE **East** LINE, SECTION **20** TOWNSHIP **19-S** RANGE **37-E** N.M.P.M.

13. Elevation (Show whether BP, RT, CR, etc.)
3675' DF

3a. Indicate Type of Lease
State ☒ Fee ☐

5. State Oil & Gas Lease No.
B-246-1

7. Unit Agreement Name

6. Name of Lease Name
F. W. Kutter (NCT-A)

9. Well No.
1

10. Field and Pool, or Wildcat
Eunice Monument

12. County
Lea

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

NOTICE OF INTENTION TO: SUBSEQUENT REPORT OF:

PERMANENT 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 OPS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
CE OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOBS <input type="checkbox"/>	

OTHER **Repaired 5 1/2" casing leak**

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

3931' PB.

Pulled producing equipment. Ran a RBP and RTTS packer, located leak in 5 1/2" casing at 1340'. Squeezed with 200 sacks Class C cement with 10# salt per sack. Squeeze pressures 950# - 1000#. WOC 18 hours. Tested casing to 400# for 30 min - OK. Re-ran producing equipment and returned well to production.

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

Signed *Guy Stone* TITLE Area Engineer DATE 11-4-77

SIGNED BY *[Signature]* TITLE SUPERVISOR DATE 11-4-77

REGIONAL DIRECTOR, IF ANY

OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

Form C-103
Revised 10-1-78

DATE RECEIVED		
DISTRIBUTION		
DATE		
LE		
D.O.P.		
IND OFFICE		
PERATOR		

007400

5a. Indicate Type of Lease	
State <input checked="" type="checkbox"/>	For <input type="checkbox"/>
5. State Oil & Gas Lease No.	
7. Unit Agreement Name	
8. Farm or Lease Name	
State "R"	
9. Well No.	
#2	
10. Field and Pool, or Wildcat	
Monument-G/SA	
12. County	
Lea	

SUNDARY 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.)

<input checked="" type="checkbox"/> L	<input type="checkbox"/> GAS WELL	<input type="checkbox"/> OTHER
Name of Operator		
Hess Corporation		
Address of Operator		
r D, Monument, New Mexico 88265		
Location of Well		
LETTER <u>N</u> <u>660</u> FEET FROM THE <u>South</u> LINE A <u>1980</u> FEET FROM		
West LINE, SECTION <u>29</u> TOWNSHIP <u>19-S</u> RANGE <u>37-E</u> N.M.P.M.		

15. Elevation (Show whether DF, RT, CR, etc.)

3609' DF

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

NOTICE OF INTENTION TO:

REMEDIAL WORK	<input type="checkbox"/>	PLUG AND ABANDON	<input type="checkbox"/>
EARLY ABANDON	<input type="checkbox"/>	CHANGE PLANS	<input type="checkbox"/>
ALTER CASING	<input type="checkbox"/>		<input type="checkbox"/>

SUBSEQUENT REPORT OF:

REMEDIAL WORK	<input checked="" type="checkbox"/>	ALTERING CASING	<input type="checkbox"/>
COMMENCE DRILLING O.N.S.	<input type="checkbox"/>	PLUG AND ABANDONMENT	<input type="checkbox"/>
CASING TEST AND CEMENT JOB	<input type="checkbox"/>		<input type="checkbox"/>
OTHER	<input type="checkbox"/>		<input type="checkbox"/>

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

prod. equip., ran 5-7/8" bit to 3808', ran a 5.719" gauge ring to 3808'. Set the plug @ 3756', & tested 2500#. Perf. 6 5/8" csg. w/2 shots @ 2558" & established inj. rate thru perfs. Set a retainer @ 2450' & pumped 800 sks. cement perfs. @ 2558' circ. cement out 8 5/8" int. csg. Ran a 5 3/4" bit and drilled cement tested squeeze job w/800#. Failed to hold, swab tested to pit. Spotted on perfs. @ 2558' & established inj. rate. Cement squeeze perfs @ 2558' w/ sks. cement. Drilled out & tested OK. Recovered bridge plug, perf. G/SA zone actively in O.H. fr. 3810' to 3856'. Acidized G/SA zone in fr. 3808' to 3900' 10 gal 20 N.E. acid & 4000 gal gelled water. Swab tested, ran prod. equip. resumed production.

and 5-4-79, 24 hrs. pumped 19 bbls. oil and 76 bbls. water on 13-56" SPM.

measures approved by Melvin Crossland with New Mexico Oil Conservation Commission

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

*E.B. Fisher*TITLE Supv. Adm. ServicesDATE May 9, 1979

Original by

Jerry Sexton

Dist 1, Supv.

MAY 13 1979

DATE

FICE
DH

007405

5a. Indicate Type of Lease

State ☒Fee ☐

5. State Oil & Gas Lease No.

B 1384

SUNDRY NOTICES AND REPORTS ON WELLS

DO NOT USE THIS FORM FOR NOTICES TO LESSEES TO ABANDON OR TO OPERATE IN A DIFFERENT RESERVOIR.
SEE APPLICATION FOR REPORT ON PRODUCTION FOR SUCH PURPOSES.☒GAS
WELL☐

OTHER

Operator

Merada Hess Corporation

of Operator

Drawer D, Monument, New Mexico

of Well

CITY M 660 FEET FROM THE South LINE AND 660 FEET FROM

West LINE, SECTION 29 TOWNSHIP 19S RANGE 37E NMPM.

7. Unit Agreement Lease

8. Form of Lease Name

State "P"

9. Well No.

#2

10. Field and Pool, or Unit

Monument-Grayburg

11. Elevation (Show whether DF, RT, CR, etc.)

3610' DF

12. County

Lea

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

NOTICE OF INTENTION TO:

REMEDIAL WORK ☐ELY ABANDON ☐LYER CASING ☐PLUG AND ABANDON ☐CHANGE PLANS ☐☐☐☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☒COMMENCE DRILLING OPERA ☐CASING TEST AND CEMENT JOBS ☐OTHER ☐ALTERING CASING ☐PLUG AND ABANDONMENT ☐☐☐☐be Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed operations.)
SEE RULE 1103.

March 1979 Pulled prod. equip., set bridge plug @ 3697' & tested plug. Test amount squeeze, tested 6-5/8" for leak @ approx. 775'. Established inj. rate into csg. leak. Perf. 6-5/8" csg. w/2 shots @ 2550'. Established inj. rate, circ. water out 8-5/8" csg. cement squeezed perf. @ 2550' w/800 sks. Class "C" cement. Ran temp. survey. Indicated top of cement @ 650'. Perf. 6-5/8" csg. shots @ 500'. Circ. water out 8-5/8" csg. Squeezed 6-5/8" csg. perf. @ 500' w/140 sks. Class "C" cement. Circ. out 8-5/8" Int. csg. Drld. out & tested. OK. Recovered bridge plug. Ran prod. equip. & resumed production. Work witnessed by NMOCC.

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

E. B. Finkler

TITLE

Supv. Admin. Serv.

DATE

3-15-79

Orig. Signed by
John Runyan

TITLE

DATE

MAR 16 1979

LINE OF APPROVAL, IF ANY

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

007407

3a. Indicate Type of Lease
State ☒ Non ☐
3. State Oil & Gas Lease No.
B-1962

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

1. Well ☒ GAS WELL ☐ OTHER ☐
2. Name of Operator

Arada Hess Corporation
Address of Operator

Over D. Monument, New Mexico 88265
Location of Well

NIT LETTER K 1980 FEET FROM THE South LINE A 1980 FEET FROM

West LINE, SECTION 29 TOWNSHIP 19-S RANGE 37-E

15. Elevation (Show whether DF, RT, GR, etc.)
3609' DF

7. Unit Agreement Name
8. Farm or Lease Name
State "R"
9. Well No.
1
10. Field and Pool, or Wildcat
Monument-G/SA
12. County
Lea

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
NEW REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input checked="" type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
ORABLY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPER. <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOB <input type="checkbox"/>	OTHER <input type="checkbox"/>

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

ed rods & pump, checked TD @ 3945', pulled tbq. Ran 5.719 gauge ring to 3780'.
& set cement retainer @ 3701'. Dowell cement squeezed OH from 3808' to 3945'.
'0 sks. Class "C" Neat cement. Go Wireline Services ran pipe recovery log
:L log in 6-5/8" csg. from 3665' to 2500'. Top of cement @ 3190'. Perforated
'8" csg. w/2 holes @ 2580'. Ran & set cement retainer @ 2467'. Attempted to
:. cement & squeeze 6-5/8" csg. perfs. w/400 sks. cement. Cement circ. out
'8" csg., drilled out retainer, perfs did not squeeze. Ran pkr. & set @ 2340'.
:ll squeezed 6-5/8" csg. perfs. @ 2580' & squeeze 6-5/8" csg. perfs. w/500 sks.
s "H" cement. Drilled out & tested squeeze job w/800# press. Tested OK.
led out retainer @ 3701' & drilled out from 3808' to 3880' w/5-7/8" drlg. bit.
ize OH fr. 3808' to 3880' w/5000 gal. 20% N.E. F.E. acid & 4000 gal gelled water.
Swab tested OH, reran prod. equipment & resumed pumping.

of May 10, 1979 - Pumped 19 b.w. & 2 b.o. in 24 hrs. SPM 13 - 52'.

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

T. J. [Signature]
TITLE Maintenance Supv. DATE May 21, 1979

[Signature]
TITLE SUPERVISOR DISTRICT 1 DATE MAY 23 1979

NO. OF COPIES APPROVED, IF ANY:

OIL CONSERVATION DIVISION
P. O. BOX 2000
SANTA FE, NEW MEXICO 87501

Form C-10
Revised 10

DISTRIBUTION		
MAINTENANCE		
FILE		
U.S.G.S.		
LAND OFFICE		
OPERATOR		

007409

3a. Indicate Type of Lease
State ☒ ☐ Fee
3. State Oil & Gas Lease No.
B 4096

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

Oil Well ☒ Gas Well ☐ OTHER ☐

7. Unit Agreement Name

8. Farm or Lease Name

State "K"

9. Well No.

#1

10. Field and Pool, or Wildcat
Monument - G/SA

UNIT LETTER F 1980 FEET FROM THE North LINE AND 1980 FEET FROM

THE West LINE, SECTION 29 TOWNSHIP 19S RANGE 37E N.M.P.M.

15. Elevation (Show whether DE, RT, GR, etc.)

3617' DE

12. County

Lea

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

INFORM REMEDIAL WORK ☐
TEMPORARILY ABANDON ☐
ILL OR ALTER CASING ☐

PLUG AND ABANDON ☐
CHANGE PLANS ☐

REMEDIAL WORK ☒
COMMENCE DRILLING OPERATIONS ☐
CASING TEST AND CEMENT JOBS ☐

ALTERING CASING
PLUG AND ABANDONMENT

OTHER ☐

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.

Pulled prod. equip. Set RBP @ 3735', tested plug & spotted sand. Ran cement bond log, found top of cement @ 3240'. Perf. 7" csg. @ 2720' w/2 holes. Cement squeezed 7" csg. perf. & circ. cement to surface out 9-5/8" csg. w/600 sks. cement. Pumped 450 sks. 65/35 Poz. w/5# Kolite & 8# salt per. sks. followed w/150 sks. Class "H" mixed w/2% CACL. Squeezed w/1400# press. 9-5/8" Hinder-Liter csg. head pkg. ring blew out & started loading while waiting on cement to set up. Repaired 9-5/8" csg. head. Drilled out & tested squeeze job w/1000# press., squeezed leaked. 7" csg. leaked @ the rate of 5# press. per. min., 9-5/8" csg. press. built up fr. 0# to 220# in 72 hrs. Swab tested 7" csg. perf. w/pkr. in hole, did not give up any fluids. Re-ran prod. equip. & returned to prod. Left 7" line off 9-5/8" csg. open to air.

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

Bob McHenry

TITLE Production Clerk

DATE May 29, 1980

Orig. Signed by

VED BY Jerry Sutton

TITLE

DATE

JUN 5 1980

CTIONS OF APPROVAL (If any)

<u>WELL NUMBER</u>	<u>FOOTAGE</u>	<u>DEPTH</u>	<u>SOIL SAMPLE</u>	<u>TOTAL DEPTH</u>	<u>OTHER</u>
3	approx. 200' NW of Monument water well	28'	water & sand	39'	hole was drilled approx. NW edge of spill - no smell or oil visible - approx. 90' SW from actual leak - slotted PVC to 26 perfs.
4	approx. 165' NW of water well - hole 21' S of ditch line & 140' SE of leak	0 - 6' 6 - 10' 10 - 17'	discolored soil & caliche - oil smell no oil odor - visible discoloration in caliche no oil odor - visible discoloration in sand & caliche	35'	spray of water at 18' - 20-25' sample clay & sand - water at 26' - pipe to 34' - one sample taken - bale sample slotted pipe - 26' of perfs.
5	NE of pipeline - app. 100' N of pipeline	9' 15' 2 - 9' 9 - 15' 15 - 21' 21'	sand & caliche mix sand & clay sand & caliche sand & caliche & clay clay spray sand & gravel	35'	water sample from baling - water at 26' - 26' perfs.
6	125' NE of pipeline	0 - 2' 2 - 10' 10 - 15' 15 - 20' 21 - 35'	clay & black soil hard caliche soft caliche wet clay & sand & caliche water, sand & gravel		drill to 39' - fill back to 35' - collect bale samples - 26' perfs.
7	240' E Monument water well & approx. 20' E of Texas-NM pipeline	0 - 5' 5 - 17' 17 - 20' 20' 32'	hard caliche soft caliche & sand clay & sand clay of sand & show of water water	35'	bale sample - show a sheen of oil & strong odor - perfs at 14' of surface

007049

Boyer Ex 7

WELL #	FOOTAGE	DEPTH	SOIL SAMPLE	T-D	OTHER
8	175' W of water well	0 - 2' 2 - 11' 11 - 22' 23 - 24' 24 - 26' 27'	hard caliche sand & gravel hard caliche clay - soil sample clay & sand wet sand, gravel, & water	36'	no smell or show of oil - bale sample: no show - good water - perfs at 15' of surf.
9	approx. 150' NE of WM & 15' from SW pipeline	0 - 2' 2 - 5' 5 - 7' 7 - 15' 15 - 20' 20 - 23' 23 - 28'	caliche - discolor sample caliche - discolor sample sand & gravel caliche sand, gravel, & clay - took sample clay & sand - sample clay, gravel, & sand	35'	water at 27' - perfs at 14' of surf - slight oil odor - caught bale sample - ran out of dis- color soil & caliche at approx. 20'.
10	100' N of WM	0 - 1' 1 - 5' 5 - 7' 7 - 10' 10 - 18' 18 - 22' 22 - 29'	top soil hard caliche soft caliche & sand hard rock & caliche sand, caliche, & gravel - sample sand & clay - sample clay & sand	35'	hit water at 29' - perfs at 14' of surface - bale sample - show of oil - no discoloration or smell
11	approx. 500' SE of WM	0 - 1' 1 - 5' 5 - 14' 14 - 16' 16 - 18' 18 - 23' 23 - 26' 26 - 30'	top soil hard rock caliche, sand, & gravel - sample hard caliche gravel & caliche - slight smell of oil clay & sand - sample clay & sand - hard rock clay, sand, & gravel - smell of oil	37½'	hit water at 30' - 20' perfs - smell of oil - bale sample - pulled PVC up 4' - show of oil.

007050

<u>WELL #</u>	<u>FOOTAGE</u>	<u>DEPTH</u>	<u>SOIL SAMPLE</u>	<u>T-D</u>	<u>OTHER</u>
12	150' SE of well #11	0 - 1' 1 - 19' 19 - 25' 25' 30'	top soil hard caliche clay, sand, & gravel clay & sand water	35'	water at 30' - cased to 34 1/2' - 25' perfs. - rig back of #11 - to bale & pull up csg at 4' - top perfs - 13'
13	200' SW of WM	0 - 1' 1 - 2' 2 - 14' 14 - 17' 17 - 20' 20 - 28'	top soil rock hard caliche soft caliche & sand hard caliche sand, clay, & gravel	35'	25' of perfs - hit water at 29'
14	approx. 1/10 mile SE from WM	0 - 19' 19' 19 - 28' 28 - 30' 30 - 35'	caliche small & soft water & oil - smell at 16' caliche, sand, & clay sand & clay gravel, sand, & clay		bale sample - strong oil odor - 25' of perfs
15	approx. 500' SE of WM	0 - 7' 7 - 11' 11 - 19' 19 - 21' 21 - 23' 23 - 25' 25 - 35'	caliche sand & gravel caliche - oil smell at 17' clay, gravel, & caliche water at 19' clay & gravel clay & sand clay, sand, gravel - water at 27'	35'	25' of perfs - bale sample - strong oil odor
16	300' SE of WM	0 - 1' 1 - 17' 17 - 19' 19 - 25'	top soil caliche - smell at 16' sand & gravel sand & clay - water at 19'	25'	20' of perfs - bale has oil show - smell at 16'
17	1/2 way between #16 & #1	0 - 1' 1 - 10' 10 - 13' 13 - 16' 16 - 19' 19 - 23' 23 - 30'	loose rock sand, gravel, & clay clay & gravel hard caliche sand & gravel - smell at 17' clay & sand clay, sand, & gravel	30'	water at 25' - 20' of perfs - smell at 17'

007051

<u>WELL #</u>	<u>FOOTAGE</u>	<u>DEPTH</u>	<u>SOIL SAMPLE</u>	<u>T-D</u>	<u>OTHER</u>
18	approx. 75' SW of #12 & approx. 100' NW of #14	0 - 1' 1 - 12' 12 - 16' 16 - 18' 18 - 19' 19 - 22' 22 - 28'	loose rock caliche, sand - soft hard caliche - smell at 16' sand, gravel & caliche sand & gravel clay & sand sand & gravel	28'	perfs at 20' - water at 20' - smell at 16'
9	approx. 100' W of #10 & approx. 250' NW of WW	0 - 6' 6 - 8' 8 - 14' 14 - 18' 18 - 20' 20 - 28' 28 - 35'	top soil caliche sand & gravel sand & hard caliche sand, clay, & gravel sand & clay sand & gravel - water at 31'	35'	water at 31' - 25' of perfs - no smell - so sign
20	approx. 150' SE of #21	0 - 6' 6 - 17' 17 - 27' 27 - 30'	top soil & loose rock caliche - soft to 12' sand & clay sand	30'	water at 18'
21	approx. 150' NE of #20 & near sec line corner	0 - 6' 6 - 12' 12 - 18' 18 - 19' 19 - 21' 21 - 22' 22 - 25' 25 - 27' 27 - 30'	caliche & chert - sample caliche & chert - sample caliche & sand - sample sand - damp - no odor clay, sand, & gravel - no odor top of water - clay - no water yet no water - damp clay - no odor top of water TD & cased w/2 fts of PVC	30'	cased w/2 fts of PVC pipe - water sample from baler - water standing 12' in hole at 30'
22		0 - 6' 6 - 12' 12 - 15' 16'	caliche - sample caliche - sample caliche soil - odor of oil or gas pure crude oil appeared in hole	30'	baler sample of water
		16'			
		19'	top of water		
		30'	clay & sand		

007052

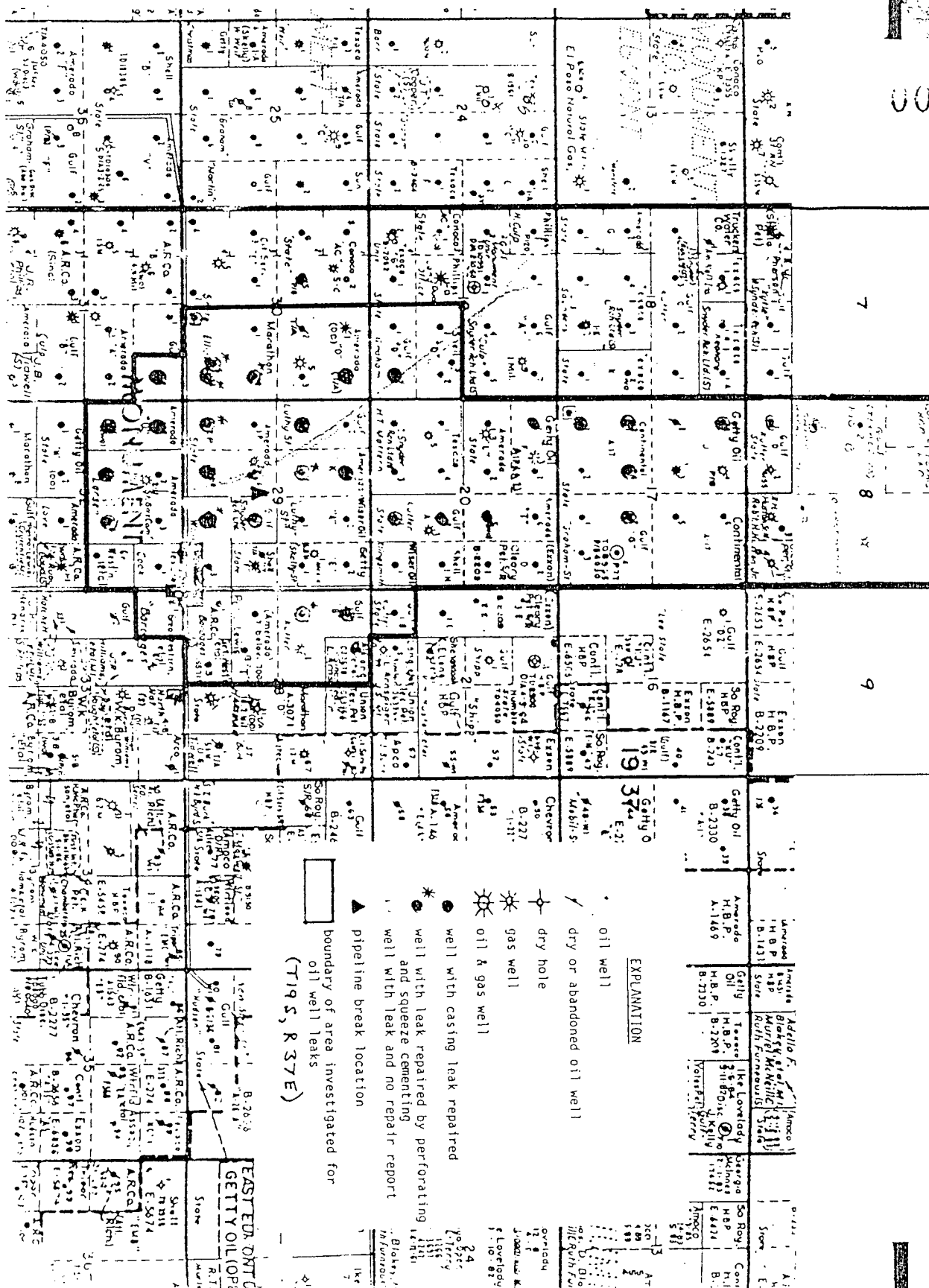
<u>WELL #</u>	<u>FOOTAGE</u>	<u>DEPTH</u>	<u>SOIL SAMPLE</u>	<u>T-D</u>	<u>OTHER</u>
23		0 - 10' 10 - 12' 12 - 16' 16 - 18' 18 - 30'	caliche - sample caliche - sample caliche & sand - oil odor oil coming in hole sand, gravel, clay & oil	30'	piped & cased PVC - probe showed 2' of oil on water
24	29-19-37	0 - 12' 12 - 16' 16 - 20' 20 - 22' 24'	caliche - sample caliche - oil odor caliche - faint odor clay, sand, gravel - no odor water	24'	baller sample showed oil on water - set 20' PVC pipe & cased hole to top - top of water at 24'
25	29-19-37	0 - 10' 10 - 15' 15 - 18' 18 - 24'	sand, caliche, & gravel sand - top of water - no odor sand, clay, & gravel - no odor sand & clay	24'	set 20' perf - PVC pipe & cased hole to top
26		0 - 6' 6 - 8' 8 - 12' 12 - 18' 18 - 32' 32 - 34'	sand, gravel, & caliche sand, gravel, & caliche caliche sand & gravel sand & clay top of water	34'	no odors - set perfs - PVC pipe at 20' - cased to surf
27		0 - 8' 8 - 11' 11 - 26' 26 - 30' 27'	hard caliche gravel, sand, & caliche sand & clay - damp sand & gravel - water at 27'	30'	20' of perfs. - water at 27'
28		0 - 15' 15 - 20' 20 - 23' 23 - 24' 24 - 30'	hard caliche rock sand, caliche & clay clay & sand clay - damp sand & gravel	30'	20' of perfs - water at 24'

007053

<u>WELL #</u>	<u>FOOTAGE</u>	<u>DEPTH</u>	<u>SOIL SAMPLE</u>	<u>T-D</u>	<u>OTHER</u>
29		0 - 13' 13 - 18' 18 - 19' 19 - 30'	hard caliche rock gravel, clay & sand clay - damp sand & gravel - water at 19'	30'	20' of perfs - water at 19'
All wells were gravel packed from TD to within 6 ft of surface and cemented from 6 ft to surface.					

007054

007411



Byers Ex 13



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

007367

TONY ANAYA
GOVERNOR

September 18, 1984

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88240
(505) 393-6161

SUBJECT: SPECIAL WITNESSED CASING LEAK SURVEY
MONUMENT AREA

Gentlemen:

The Oil Conservation Division finds it necessary to conduct a casing leak survey on all wells listed on the attached schedule due to the fact that the Monument Community water well has developed a gaseous odor. We have found a pipeline leak nearby but in our effort to rule out any other possible source, we feel it is necessary to conduct a casing leak survey on all wells in the immediate vicinity.

All wells involved in this survey shall be readied as outlined below.

- (1) All wells shall be shut in for 24 hours prior to testing.
- (2) All cellars shall be dug in such manner as to expose outlets of bradenheads from the first string of pipe cemented in the well and all subsequent heads to and include the tubinghead.

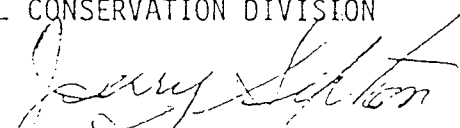
The wells marked with an asterisk (*) on the schedule have Form C-103 filed stating that the cellar has been inspected by an OCD inspector and it will not be necessary to dig these wells out for this survey.

- (3) One opening from all bradenheads shall be connected to a second valve above the surface and this valve must be closed in to comply with Paragraph (1).
- (4) Operators shall furnish connections, accurate pressure gauges, and personnel necessary to assist in opening of valves.
- (5) Operators are requested to meet OCD Field Inspector at the time and place indicated on the attached schedule.

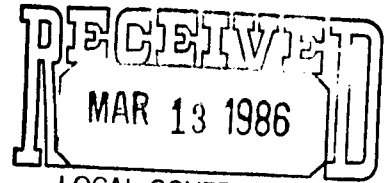
If you have questions concerning this survey, please contact, Eddie Seay, Evelyn Downs, or myself at (505) 393-6161.

Very truly yours,

OIL CONSERVATION DIVISION


Jerry Sexton, Supervisor, Dist I

Boyer Ex 12



March 12, 1986

TO: Thomason Construction Company, Mr. Jerry Morris
Monument Water Users Cooperative, Mr. W. E. Copeland
Texas-New Mexico Pipeline, Mr. Dan Nerbonne
N.M.E.I.D., Mr. Bill Weber
N.M.E.I.D., Mr. Tom Burt
✓ Local Government Division, Mr. Jacob Block
N.M.O.C.D., Mr. Jerry Sexton

FROM: William M. Hicks, E.I. *W.H.*

SUBJECT: MONUMENT WATER SYSTEM IMPROVEMENTS

This letter is to notify you of a Pre-Construction Conference for the above referenced Project to be held on Monday, March 17, at 10 o'clock am at the office of PETTIGREW AND ASSOCIATES, 1110 North Grimes, Hobbs, New Mexico.



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

50 YEARS



1935 - 1985

TONEY ANAYA
GOVERNOR

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88240
(505) 393-6161

August 26, 1985

Mr. Joe Williams
PO Box 215
Monument, NM 88265

RE: Monument Water Situation

Dear Mr. Williams:

From the drilling reports of both the Oil Conservation Division and the Texas-New Mexico Pipeline Company, there appears to be two separate problems in the area.

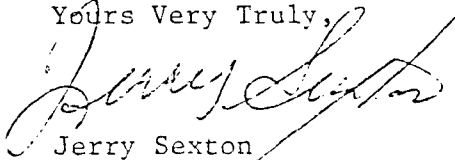
One problem appears to have occurred from a Texas-New Mexico Pipeline Company oil leak. The boundaries of this are right around the leak site and is well defined from the drilling of test wells.

The other problem is further South from the Tex-Mex spill and my best guess is that it occurred some time in the past from casing leaks or spills which probably occurred many years ago. This area appears to be "trapped" in its present location. There appears to be a clay streak on the West side, and as your wells indicated, a pinch out of the sand is to the Southeast.

Since we cannot pinpoint any movement of this oil and the time frame in which it got into the water, I'm not sure how further investigation into this would be accomplished.

Dave Boyer is the Oil Conservation Division's hydrologist and will be more than willing to discuss the hydrology of the area with you.

Yours Very Truly,


Jerry Sexton
Supervisor, District I

JE/ea
pc: file



PETTIGREW AND ASSOCIATES

P. O. DRAWER 807
CLOVIS, NEW MEXICO 88101
505 762-3716

DATE July 31, 1985

TO: Oil Conservation Division

P.O. Box 2088

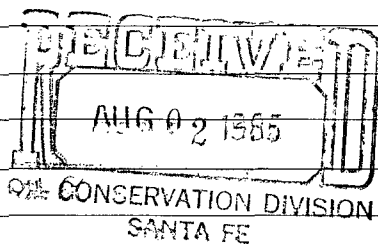
Santa Fe, NM 87501

ATTN: Dave Boyer

SUBJECT: Monument Water Users Cooperative

Dear Mr. Boyer:

Enclosed please find a copy of the current correspondence requested
per our telephone conversation July 31, 1985 reference above subject.



SIGNED

William Hicks
William Hicks, E.I.

AMERADA HESS CORPORATION

June 19, 1985

P. O. DRAWER "D"
MONUMENT, NEW MEXICO 88265

Monument Water Users Cooperative
P. O. Box 48
Monument, New Mexico 88265

Attn: Mr. W. E. Copeland

Dear Sir:

Amerada Hess Corporation agrees to underwrite the \$15,000 shortfall in funding required for renovation of the Monument water system, as described in your letter of June 14, 1985. Donations have been solicited from other Companies in the area and it is anticipated that the full amount of \$15,000 is forthcoming. The willingness of Amerada Hess Corporation to underwrite the additional funding is in no way an admission of liability on the Company's part for any of the contamination found in Monument's water supply.

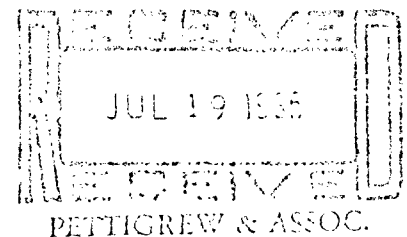
Yours Very truly,



S. W. Small
District Superintendent

SWS/db

cc: Johnny Cope - Community Development Council
Debra Hicks - Pettigrew and Associates
J. I. Johnson - Amerada Hess



STATE OF
NEW MEXICO

OIL
CONSERVATION
DIVISION



MEMORANDUM OF MEETING OR CONVERSATION

☒ Telephone

☐ Personal

Time

Date

7/31/85

Originating Party

Other Parties

David Boyer

Bernie Lednicki, Tex Mex Pipeline
William Hicks, Pettigrew & Assoc

Subject

Monument - Update on community well status

Discussion

Conversation with Lednicki. Focused on proposed presentation to WQCC on status of cleanup and progress toward new well replacement. Lednicki will not be ready til September, at earliest for a report. Hicks stated that Pettigrew drilled 3 pilot holes in North 1/2 Section 20 (1/2 - 1 mile South of area with best chance for greatest saturated thickness). Wanted well that has capability of producing 250 - 300 gpm. Only 55 ft saturated thickness but probably can produce 200 - 250 gpm and certainly 150 gpm needed at present. Hicks also reported that Monument had

Conclusions or Agreements

dropped former Home application because of cost of repayment. Amerade-Hess has put up \$15,000 to make up Shortfall and asked others to contribute. CDC will have to approve since receiving emergency state money was conditioned on receiving FHA money for balance of cost.

Distribution

Monument file.

Signed

David Boyer



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

May 22, 1985

Mr. B. L. Lednicky, District Manager
Texas-New Mexico Pipeline Company
P. O. Box 2528
Hobbs, New Mexico 88240

Dear Mr. Lednicky:

The Oil Conservation Division (OCD) has received the proposed agreement for work to be accomplished by Texas-New Mexico in connection with the Monument water well. The document has been reviewed by our legal counsel, technical, and field staff. As a result of their comments, we are revising the proposed document and discussing it with other agencies involved.

One problem with the document as submitted was the signature line. No one person representing a single agency can sign for the five separate governmental entities listed in the agreement. Since this agency has the responsibility for ensuring cleanup and mitigation of oil spills such as occurred in Monument last September, we have revised the document to include only your company, the Monument Water Users Cooperative, and the OCD. In lieu of having the other state executive agencies sign any agreed upon settlement, we have submitted the proposal to them for comment with the understanding that review and comments will be given quickly. After reviewing their comments, we will send you a revised agreement.

Before this agency can make a final determination as to the adequacy of the proposed agreement with respect to long term protection of ground water in the spill area, the OCD will need an updated status report detailing recovery efforts conducted since last November's report, and presenting estimates of the migration and fate of hydrocarbons left in the subsurface at cessation of the recovery efforts concurrent with new well start-up. The report should include the following information:

1. An estimate of total crude oil lost in the pipeline break and the basis for such estimate;
2. An estimate of recovery to date from both contaminated soil, and operation of the recovery well, including recovery volumes since last update and a revised product recovered vs. time graph;
3. Any change in operational configuration from last report including addition of new recovery or monitoring wells, and changes in recovery methods;
4. Revised product thickness map;
5. Weekly depth to water and product thickness field measurements, except those previously submitted to OCD;
6. Chemical analyses made by the company of fluid in the monitor wells, including hydrocarbons dissolved in the ground water;
7. Any other information, including physical and chemical analysis of the oil, to show the extent of current contamination for which the company may be responsible and to demonstrate the company's contention that "more than one source of water well contamination exists in the vicinity of (Monument) Association's water wells"; and
8. An estimate of the amount of oil and dissolved hydrocarbons which will not or cannot be recovered; and their migration and fate, if recovery efforts cease upon start-up of a new community well.

By providing this information and any other material which the company feels is relevant in this matter, the OCD will be better able to determine if the proposed settlement is in the best interests of the citizens and the State of New Mexico.

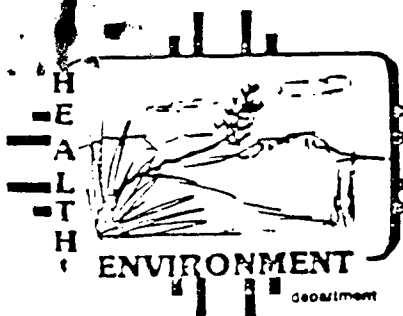
If you have any questions, please contact me at the above address or by phone at 827-5812.

Sincerely,

A handwritten signature in black ink, reading "David G. Boyer". The signature is written in a cursive style with a large, looping initial "D".

DAVID G. BOYER,
Geologist, Environmental Bureau

DGB/dr



STATE OF NEW MEXICO

ENVIRONMENTAL IMPROVEMENT DIVISION

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

May 22, 1985

Mr. Richard Stamets, Director
Oil Conservation Division
Land Office Building
Santa Fe, New Mexico 87501

RE: MONUMENT WATER WELL SETTLEMENT AGREEMENT

Dear *Dick* Mr. Stamets:

At the request of David Boyer, Oil Conservation Division (OCD), Environmental Improvement Division (EID) staff from the Legal Services Bureau and the Ground Water/Hazardous Waste Bureau were asked to review the above-referenced document. We appreciate the opportunity to present our comments. The reviewers have found the document to be legally and technically unacceptable.

The settlement is legally inadequate in that it is inconsistent with the Water Quality Control Commission (WQCC) regulations. Specifically, the settlement constitutes a variance from the ground-water standards outlined in Section 3-103. OCD cannot legally grant a variance from any WQCC regulation since Section 1-210 provides that only the WQCC may grant a variance. In addition, the settlement provides no review/approval mechanisms, no aquifer restoration criteria, and no settlement termination mechanisms.

The settlement is technically inadequate in that it fails to require a complete hydrogeologic investigation to define the extent of the contamination, future monitoring of the contamination, contingency for problems that may arise due to future migration of the contamination, or an aquifer restoration program.

On May 12, 1981, The WQCC assigned the responsibility for administering the WQCC regulations to the OCD as they apply to oil and gas transmission pipelines up through refinement, and to EID as they apply to petroleum-product transmission pipelines after refinement. EID has continually briefed the WQCC on all aspects of this Division's settlement agreements in similar cases (e.g., EID versus Standard Transpipe). This proposed settlement agreement, referenced above, is inconsistent with all similar cases which have been settled, and are in the process of being settled, by this Division.

Mr. Richard Stamets
May 22, 1985
Page 2

We would appreciate an opportunity to review this matter with you before the settlement is executed. If the Oil Conservation Division wishes to pursue the settlement in its present form, we will request WQCC review of the agreement.

Sincerely,



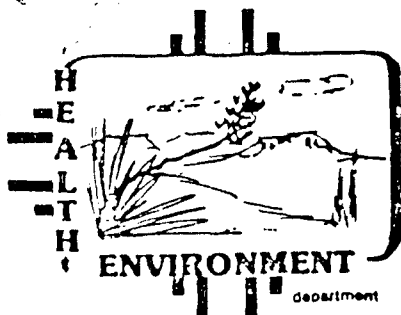
Denise Fort

DF:DEJ:dej

cc: Paul Biderman, EMD
Dave Boyer, OCD
Richard Perkins, EID, GW/HWB
Duff Westbrook, EID, LSB
Weldon Merritt, EID, LSB

TONEY ANAYA
GOVERNOR

DENISE D. FOR
DIRECTOR



STATE OF NEW MEXICO

ENVIRONMENTAL IMPROVEMENT DIVISION

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

May 22, 1985

Mr. Richard Stamets, Director
Oil Conservation Division
Land Office Building
Santa Fe, New Mexico 87501

RE: MONUMENT WATER WELL SETTLEMENT AGREEMENT

Dick
Dear Mr. Stamets:

At the request of David Boyer, Oil Conservation Division (OCD), Environmental Improvement Division (EID) staff from the Legal Services Bureau and the Ground Water/Hazardous Waste Bureau were asked to review the above-referenced document. We appreciate the opportunity to present our comments. The reviewers have found the document to be legally and technically unacceptable.

The settlement is legally inadequate in that it is inconsistent with the Water Quality Control Commission (WQCC) regulations. Specifically, the settlement constitutes a variance from the ground-water standards outlined in Section 3-103. OCD cannot legally grant a variance from any WQCC regulation since Section 1-210 provides that only the WQCC may grant a variance. In addition, the settlement provides no review/approval mechanisms, no aquifer restoration criteria, and no settlement termination mechanisms.

The settlement is technically inadequate in that it fails to require a complete hydrogeologic investigation to define the extent of the contamination, future monitoring of the contamination, contingency for problems that may arise due to future migration of the contamination, or an aquifer restoration program.

On May 12, 1981, The WQCC assigned the responsibility for administering the WQCC regulations to the OCD as they apply to oil and gas transmission pipelines up through refinement, and to EID as they apply to petroleum-product transmission pipelines after refinement. EID has continually briefed the WQCC on all aspects of this Division's settlement agreements in similar cases (e.g., EID versus Standard Transpipe). This proposed settlement agreement, referenced above, is inconsistent with all similar cases which have been settled, and are in the process of being settled, by this Division.

Mr. Richard Stamets
May 22, 1985
Page 2

We would appreciate an opportunity to review this matter with you before the settlement is executed. If the Oil Conservation Division wishes to pursue the settlement in its present form, we will request WQCC review of the agreement.

Sincerely,



Denise Fort

DF:DEJ:dej

cc: Paul Biderman, EMD
Dave Boyer, OCD
Richard Perkins, EID, GW/HWB
Duff Westbrook, EID, LSB
Weldon Merritt, EID, LSB



TONY ANAYA
GOVERNOR

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

May 22, 1985

50 YEARS



1935 - 1985

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

Mr. B. L. Lednicky, District Manager
Texas-New Mexico Pipeline Company
P. O. Box 2528
Hobbs, New Mexico 88240

Dear Mr. Lednicky:

The Oil Conservation Division (OCD) has received the proposed agreement for work to be accomplished by Texas-New Mexico in connection with the Monument water well. The document has been reviewed by our legal counsel, technical, and field staff. As a result of their comments, we are revising the proposed document and discussing it with other agencies involved.

One problem with the document as submitted was the signature line. No one person representing a single agency can sign for the five separate governmental entities listed in the agreement. Since this agency has the responsibility for ensuring cleanup and mitigation of oil spills such as occurred in Monument last September, we have revised the document to include only your company, the Monument Water Users Cooperative, and the OCD. In lieu of having the other state executive agencies sign any agreed upon settlement, we have submitted the proposal to them for comment with the understanding that review and comments will be given quickly. After reviewing their comments, we will send you a revised agreement.

Before this agency can make a final determination as to the adequacy of the proposed agreement with respect to long term protection of ground water in the spill area, the OCD will need an updated status report detailing recovery efforts conducted since last November's report, and presenting estimates of the migration and fate of hydrocarbons left in the subsurface at cessation of the recovery efforts concurrent with new well start-up. The report should include the following information:

1. An estimate of total crude oil lost in the pipeline break and the basis for such estimate;
2. An estimate of recovery to date from both contaminated soil, and operation of the recovery well, including recovery volumes since last update and a revised product recovered vs. time graph;
3. Any change in operational configuration from last report including addition of new recovery or monitoring wells, and changes in recovery methods;
4. Revised product thickness map;
5. Weekly depth to water and product thickness field measurements, except those previously submitted to OCD;
6. Chemical analyses made by the company of fluid in the monitor wells, including hydrocarbons dissolved in the ground water;
7. Any other information, including physical and chemical analysis of the oil, to show the extent of current contamination for which the company may be responsible and to demonstrate the company's contention that "more than one source of water well contamination exists in the vicinity of (Monument) Association's water wells"; and
8. An estimate of the amount of oil and dissolved hydrocarbons which will not or cannot be recovered; and their migration and fate, if recovery efforts cease upon start-up of a new community well.

By providing this information and any other material which the company feels is relevant in this matter, the OCD will be better able to determine if the proposed settlement is in the best interests of the citizens and the State of New Mexico.

If you have any questions, please contact me at the above address or by phone at 827-5812.

Sincerely,

A handwritten signature in black ink, reading "David G. Boyer". The signature is written in a cursive style with a large, looped "D" and "B".

DAVID G. BOYER,
Geologist, Environmental Bureau

DGB/dr



TONEY ANAYA
GOVERNOR

RECEIVED
MAY 20 1985
OIL CONSERVATION DIVISION
SANTA FE

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

May 17, 1985

50 YEARS



1935 - 1985

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88240
(505) 393-6161

MEMO TO: Dave Boyer
FROM: Jerry Sexton
SUBJECT: Monument Water Well Settlement Agreement

I don't think anyone from District I is really able to comment on the Monument Water Well Settlement Agreement.

We have not been in on any of the negotiations with Texas-New Mexico Pipeline except for the meeting in Pettigrew's Hobbs Office where you were also in attendance.

The agreement settled on at that time is so different from your agreement draft and really came about with Santa Fe's contact with Texas New Mexico Pipeline Company that we can't really make comments on it.

If you and Texas New Mexico like it it is fine with us.

P.O. BOX 807
CLOVIS, NM 88101
(505) 762-3716

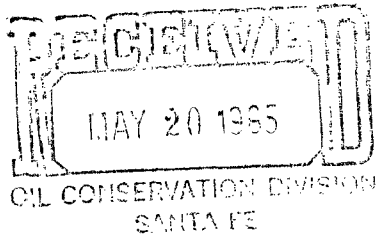
PETTIGREW & ASSOCIATES

P.O. BOX 5769
HOBBS, NM 88241
(505) 393-9827



RICHARD R. PETTIGREW, P.E.-L.S.

May 16, 1985



RE: MONUMENT WATER USERS COOPERATIVE

Gentlemen:

Farmers Home Administration has called for a meeting on Thursday, May 23, 1985, 10:00 am, regarding the emergency situation at Monument, New Mexico. Monument has applied for a loan from Farmers Home Administration. All interested parties are invited to attend.

The meeting will be held at our office, PETTIGREW & ASSOCIATES, 1110 North Grimes, Hobbs, New Mexico.

Sincerely,

PETTIGREW & ASSOCIATES

DEBRA P. HICKS, E.I.

DH:dd

xc: Mr. W. E. Copeland
Mr. Johnny Cope
Mr. B. L. Lednicky
Mr. Jack C. Block
Mr. Bill Weber
Mr. Steve Massey
Mr. Jerry Sexton
Mr. Dave Boyer ←
Farmers Home Administration

Memo

From
DAVID G. BOYER
Hydrogeologist

To Dick - Friday 5/10

I ran into Gus at a meeting here in Morgan Hall. He said they are meeting Tuesday PM with EID lawyers to talk about the Monument settlement agreement and prepare a letter to us with their ^{only} comments. We agreed that ^{only} OGD ^{needs to sign off} since we enforce the WGCC regs in this area. I told him to say that in their comment letter, and I would agree to provide them with a draft copy of our response for tech-

Oil Conservation Division
P.O. Box 2088 Santa Fe, N.M. 87501

(over)

meal reviews before we send it out.

I called Jerry to see what Tex Mex had given them recently and he said Eddie had received a lot. He said you were coming down next week so I thought I could see what they had given us. Let me know the dates and I'll plan to go along and maybe sample.

David

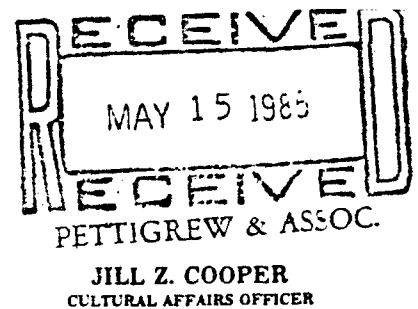


TONEY ANAYA
GOVERNOR

STATE OF NEW MEXICO
OFFICE OF CULTURAL AFFAIRS
HISTORIC PRESERVATION DIVISION

VILLA RIVERA, ROOM 101
228 EAST PALACE AVENUE
SANTA FE, NEW MEXICO 87503
(505) 827-8320

THOMAS W. MERLAN
DIRECTOR



May 9, 1985

Mr. Walter F. Glover, Director
District V
Farmers Home Administration
P.O. Box 1104
Clovis, New Mexico 88101

Re: Monument Water Well Project

Dear Mr. Glover:

The application by Monument Water Users Association for Farmers Home Administration, Water and Waste Disposal Program assistance to drill a new well, relocate an existing storage tank, and construct 2 1/2 miles of water line in the vicinity of Monument, New Mexico has been reviewed by this office.

No properties entered in or determined eligible for inclusion in the National Register of Historic Places will be directly affected by the proposed water system improvements. However, after reviewing the Archaeological Records Management System files and consulting with professional archaeologists with a particular knowledge of the affected area, it is my opinion that significant cultural resources may be adversely affected by land-disturbing activities associated with this undertaking, but that adequate data to make a formal determination of effect do not exist.

It is known that a number of significant archaeological sites, including several which have been entered in the State Register of Cultural Properties and can be considered eligible for inclusion in the National Register, are located in the vicinity of Monument. Based on this information, other equally important sites can be expected to occur in or near the proposed locations for the well and water line. However, no archaeological surveys of record have been performed at these locations, and the locations of expected archaeological sites cannot be determined without accurate survey data.

Therefore, in accordance with the provisions of 36 CFR 800.4(a), I recommend that an intensive cultural resource survey of the affected area be performed by

Mr. Walter F. Glover

May 9, 1985

Page Two

a qualified professional archaeologist to determine if archaeological or historical resources are present and if so, to provide documentation of those resources. This information can then be used to evaluate the importance of any resources, and to consider measures necessary to mitigate adverse effects of the undertaking on resources eligible for inclusion in the National Register. Upon receipt of a report on the results of the recommended survey, I am prepared to continue this consultation as further specified in 36 CFR 800.

Should you have any questions regarding my comments and recommendations on the above application, please contact this office.

Sincerely,



Thomas W. Merlan
State Historic Preservation Officer

TWM:DER:bc/Log 1493

cc: Debbie Hicks



MEMORANDUM OF MEETING OR CONVERSATION

☒ Telephone ☐ Personal

Time 3PM

Date 5/19/85

Originating Party

Other Parties

Bernie Lednicky

D. Boyer O&B

Texas New Mexico Pipeline

Subject Sign off on settlement agreement for monument spill

Discussion

Lednicky wanted to know why we hadn't signed off on agreement. He said it was important to have all this settled by May 23 because Monument meeting with Farmers Home about a loan. I told him we had some problems with it in current form: (1) Will probably need separate signatures and may not need anyone but O&B and possibly E&B to sign. Certainly no one agency head is going to sign for five different agencies. (2) Our lawyers reviewing for other legal issues and liability problems. ~~He~~ Lednicky asked when this would be complete and I told him I didn't

Conclusions or Agreements

know but would ask Jeff (3) I'm reviewing for technical adequacy and will have a list of technical questions such as current status of system, how much recovered, how much left, etc. I told him that I felt it not unreasonable

Distribution

Signed

(Con't next page)

STATE OF
NEW MEXICO

OIL
CONSERVATION
DIVISION



MEMORANDUM OF MEETING OR CONVERSATION

Page 2
Edmiky Phone Call
5/10/85

☐

Telephone

☐

Personal

Time

Date

Originating Party

Other Parties

Subject

For Texas-New Mexico to provide a summary before we released them via a settlement agreement. I told him briefly of the type of information needed and he said he provided lots of information to Jerry. I told him that we would get from Jerry those items he had, but that they would likely need to provide some additional technical data. (4) I asked him about the trenching and he said they would only provide the ditching and not backfill. He thought this was all understood in earlier meetings.

Conclusions or Agreements

I told him we would get a letter out to him as soon as possible commenting on the proposed settlement agreement, but that it would be unlikely we would "sign off" by May 23.

Distribution

Monument Hydrocarbon
Contamination File
Dick Stamets.

Signed

David H. Roy

TEXAS-NEW MEXICO PIPE LINE COMPANY

B L Lednicky
District Manager

PO Box 2528
Hobbs NM 88241
505 393 2135

May 2, 1985

Mr. Jerry Sexton
State of New Mexico
Oil Conservation Division
P. O. Box 1980
Hobbs, New Mexico 88241

Dear Jerry:

Re: Monument Water Wells

In response to a request by Eddie Seay for an update on Monument, we attach an updated map including our most recent monitor wells and the wells that OCD drilled. The wells marked in red are those that now show contamination.

We are currently recovering 55 gallons of oil per day from both wells.

Yours very truly,



BLL/CSJ

cc: [unclear]
[unclear]
[unclear]



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

TONY ANAYA
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 627-5800

M E M O R A N D U M

TO: RICHARD L. STAMETS

FROM: MICHAEL E. STOGNER *M.S.*

SUBJECT: OSCAR SIMPSON'S VISIT TO THE OIL CONSERVATION
DIVISION OF MAY 1, 1985

In short I authorized Oscar Simpson to copy the entire file on the Monument Tex-New Mex water well problem and the Tex New Mex proposed pipeline agreement files, all of which David Boyer surrendered to him for inspection. In David Boyer's and your absence I took it upon myself as Acting Director to contact Neal Weber, Deputy Director of EID who verified that Mr. Simpson was authorized by him to obtain this information.

May 1, 1985
fd/

cc: David Boyer, Environmental Bureau Chief
Gus Cordova, EID
Neal Weber, EID



MEMORANDUM OF MEETING OR CONVERSATION

☒ Telephone ☐ Personal

Time 3:30 PM

Date 4/25/85

Originating Party

Dave Boyer

Other Parties

Pat Olanchea
Local Gov. Dir (4950)

Subject

Monument Water Well Replacement

Discussion

I called Pat to see about status of C&C replacement project. He said community is applying for Farmers Home Admin loan for remaining money (about \$40,000?). He is hoping they will expedite grant application or else they may not have emergency. Application will take 4-5 months to process after receipt. Also Tex. Mex has sent proposed settlement agreement for signature which does not include any further cleanup after new facilities are in, and only

Conclusions or Agreements

Pat will send copy of grant application and will discuss matter with him on 5/2 or 5/3

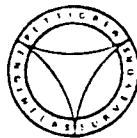
agrees to trenching and not covering or pipe laying.

Distribution

Signed

Dave Boyer

PETTIGREW & ASSOCIATES



RICHARD R. PETTIGREW, P.E.-L.S.

April 24, 1985

Lea County Board of Commissioners
P.O. Box 1539
Lovington, New Mexico 88260

Attention: Mr. Lech Faris
County Manager

Re: Monument Water Users Co-operative

Dear Mr. Faris:

Attached hereto is a copy of the 'Proposed' Agreement by Texas-New Mexico Pipe Line Company for their participation in work to be accomplished in the Project.

By copies of this letter we are transmitting the Agreement for review to: Messrs. Darnell, County Attorney; Jerry Sexton, O.C.D.; Gus Cordova, E.I.D.; and Jacob Block, Local Government Division - for their review.

We respectfully request this as an Agenda Item, May 7, 1985.

Respectfully Submitted,

PETTIGREW & ASSOCIATES

Debra P. Hicks

DEBRA P. HICKS, E.I.

DP:dd

xc: Mr. Darnell, County Attorney
Mr. Jerry Sexton, O.C.D.
Mr. Gus Cordova, E.I.D. ←
Mr. Jacob Block, Local Government Division
Mr. B. L. Lednicky, Hobbs District Manager

Encls.

MONUMENT WATER WELL AGREEMENT

This Agreement by and among Texas-New Mexico Pipe Line Company ("Company") and the Monument Water Users' Association ("Association"), the County of Lea ("County"), and the State of New Mexico and certain of its agencies, including the Environmental Improvement Division, the Oil Conservation Division, the Department of Finance and Administration, the Community Development Council, and the Southeastern New Mexico Economic Development District ("State").

WHEREAS, Association's water well in Section 29, T19S, R37E, NMPM ("existing well") must be replaced due to oil contamination; and

WHEREAS, Company has offered to replace the existing well with a comparable new well which would provide equal service and be located near Association's existing water lines; and

WHEREAS, Association, County and State have determined that in lieu of said comparable new well, a new well should be provided for the Association of better quality than the existing well and located approximately three (3) miles north of the existing water line; and

WHEREAS, more than one source of water well contamination exists in the vicinity of Association's water wells; and

WHEREAS, Company is presently operating existing recovery wells but further extensive pumping of these existing recovery wells may result in migration of existing contamination in the vicinity of existing wells of the Association;

NOW, THEREFORE, in consideration of the foregoing and the mutual covenants and promises herein, Company and Association, County, and State agree as follows:

1. Company, at its sole expense, shall excavate a trench up to three miles long suitable for installation of a water line to connect the contemplated new well of Association with Association's existing water facilities. Said trench shall be a minimum of 48 inches deep and 14 inches wide. Where necessary due to obstacles such as crossings of existing pipelines the trench will be deepened and/or widened to the extent necessary for the water line installation. The excavation will be made along a route approximately as shown in Exhibit A hereto and staked at intervals not to exceed 400 feet.
2. Company shall discontinue its recovery efforts in and around the existing well, discontinue pumping Company's existing recovery wells, and remove its recovery equipment from the site upon completion and startup of the

new water well facilities.

3. Association, County, and State individually and collectively release Company from any claim, demand, or cause of action arising out of, or in connection with, or in any way incidental to, the contamination of Association's existing well, including, without limitation, claims for any other expenses not accepted by Company herein relating to construction of the new well, water line and associated facilities, including, but not limited to, expenses of hauling, stringing and installing pipe, surveying, construction of fence gaps, boring of roads, padding, backfilling, testing, reseeding, and acquiring necessary rights of way for the trench. Further, Association, County, and State individually and collectively agree not to sue nor to be a party to any claim, demand, cause of action, or litigation in connection with, arising out of, or in any way incidental to, the contamination of Association's existing well and for construction of the new well, water line and associated facilities.

4. Company's execution of this Agreement is not an admission of responsibility or liability in connection with the contamination of the existing well.

5. The provisions of this Agreement shall extend to and be binding on the respective successors and assigns of Company, Association, County, and State.

TEXAS-NEW MEXICO PIPE LINE COMPANY

BY

B. J. Leary

MONUMENT WATER USERS ASSOCIATION

BY

M. G. Capeland

COUNTY OF LEA/LEA COUNTY BOARD OF COMMISSIONERS

BY

STATE OF NEW MEXICO

Environmental Improvement Division

Oil Conservation Division

Department of Finance and Administration

Community Development Council

Southeastern New Mexico Economic Development District

BY

ACKNOWLEDGEMENTS

State of New Mexico
County of Lea

The foregoing instrument was acknowledged before me this
17th day of April, 1985 by B. L. Lednicky,
(Name)

District Manager, of Texas-New Mexico Pipe Line
(Title)

Company on behalf of said Company.

My Commission Expires:

10/30/87

Margaret Criswell
Notary Public in and for Lea
County, New Mexico.

State of New Mexico

County of Lea

The foregoing instrument was acknowledged before me this
_____ day of _____, 19__, by _____,
(Name)

_____ of Monument Water Users Association
(Title)

on behalf of said Association.

My Commission Expires:

Notary Public in and for
Lea County, New Mexico.

State of New Mexico

County of Lea

The foregoing instrument was acknowledged before me this
_____ day of _____, 19____, by _____,
(Name)

_____, of the County of Lea on behalf of
(Title)

said County.

My Commission Expires:

Notary Public in and for Lea
County, New Mexico.

State of New Mexico

County of _____

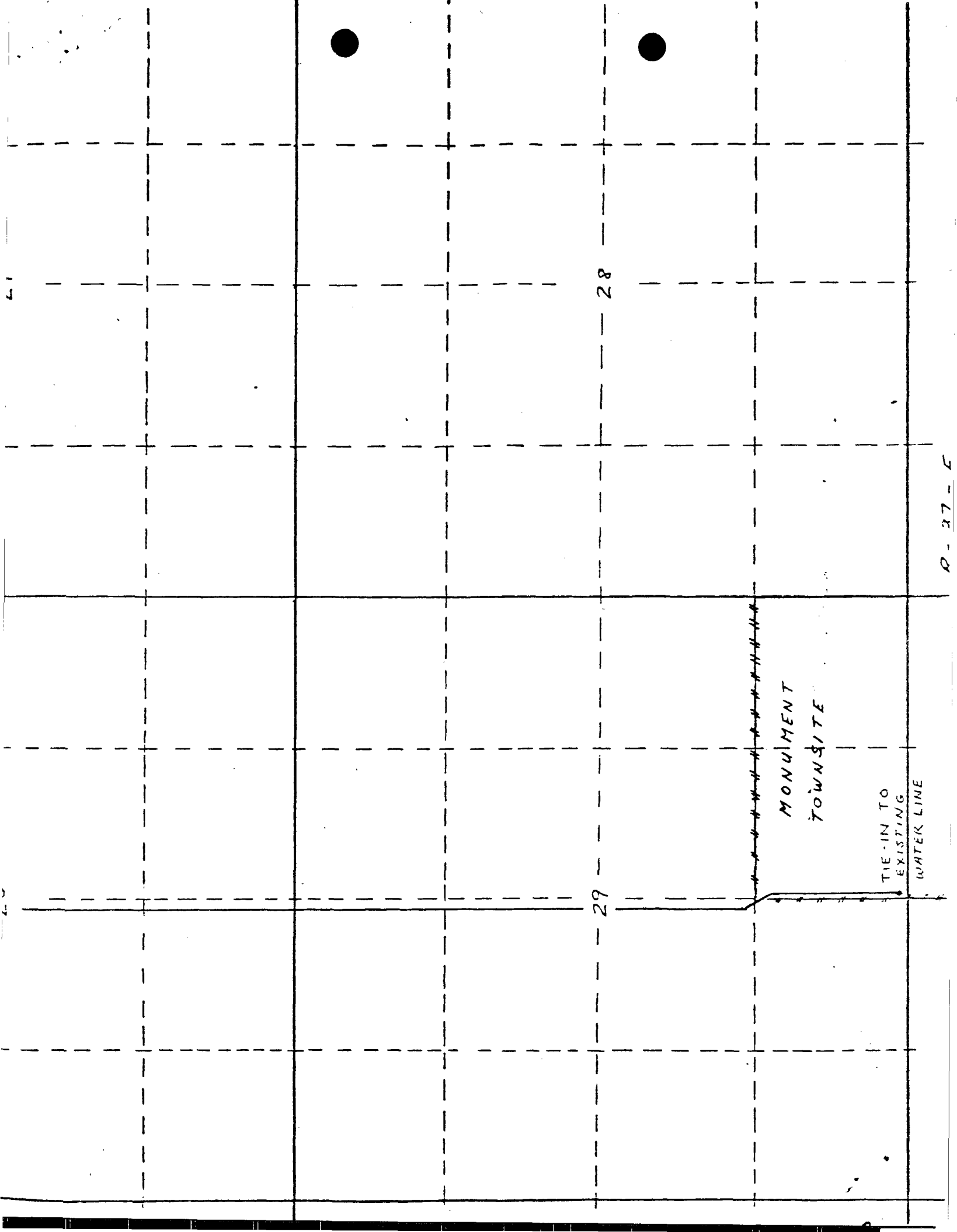
The foregoing instrument was acknowledged before me this
_____ day of _____, 19____, by _____,
(Name)

_____ of the State of New Mexico on
(Title)

behalf of said State.

My Commission Expires:

Notary Public in and for
_____ County, New Mexico.



28

29

MONUMENT
TOWNSITE

TIE-IN TO
EXISTING
WATER LINE

D-37-C

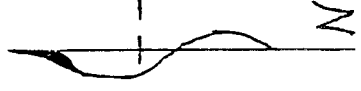
EXHIBIT A

PROPOSED
WELL SITE

16

17

APPROX.
ROUTE



T

19

STATE OF NEW MEXICO
DEPARTMENT OF FINANCE AND ADMINISTRATION
LOCAL GOVERNMENT DIVISION
NEW MEXICO COMMUNITY ASSISTANCE PROGRAM

GRANT AGREEMENT

Project No. 84-N-RS-I-05-GA791

THIS GRANT AGREEMENT made and entered into as of this 22 day of April, 1985, by and between the Department of Finance and Administration, State of New Mexico, acting through the Local Government Division, Room 206, Lamy Building, Santa Fe, New Mexico 87503-2783, hereinafter called the DIVISION, and the County of Lea hereinafter called the GRANTEE.

WITNESSETH:

WHEREAS, this Grant Agreement is made by and between the Department of Finance and Administration, State of New Mexico, acting through the Local Government Division, and the Grantee, pursuant to the authority of the New Mexico Community Assistance Act, as amended.

NOW, THEREFORE, the parties hereto do mutually agree as follows:

ARTICLE I - SCOPE OF WORK

- A. The Grantee agrees that it will implement, in all respects, the program outlined in its Project Description, attached hereto as Exhibit "A" and made a part of this Grant Agreement.
- B. The Grantee agrees to make no change in the Project Description herein described without first submitting a written request to the Division and obtaining the Division's written approval of the required change.
- C. The Grantee shall provide all the necessary qualified personnel, material, and facilities to implement the program described herein.

ARTICLE II - LENGTH OF GRANT AGREEMENT

- A. The term of this Grant Agreement shall be from _____ 198_, through _____, 198_, and SHALL NOT BECOME EFFECTIVE UNTIL APPROVED BY THE DIVISION.
- B. In the event that, due to unusual circumstances, it becomes apparent that this Grant Agreement cannot be brought to full completion within the time period set forth in Paragraph A of this Article II, the Grantee shall so notify the Division in writing at least thirty (30) days prior to the termination date of this Grant Agreement, in order that the Grantee and the Division may review the work accomplished to date and determine whether there is need or sufficient justification to amend this Grant Agreement to provide additional time for completion of the same.

ARTICLE III - REPORTS

A. Progress Reports

1. In order that the Division may adequately evaluate the progress of the Grant Agreement, as indicated in Exhibit "B" Project Schedule attached hereto and made part of this agreement, the Grantee shall be required to make periodic Progress Reports to the Division. The said reports shall contain a description of the work accomplished to date, the methods and procedures used, a detailed budget breakdown of expenditures to date, a statement of the impact of the project, and such other information as may be of assistance to the Division in its evaluation.
2. One (1) copy of said Progress Report shall be submitted to the Division not later than, 1) _____, 198_, 2) _____, 198_; and, 3) _____, 198_, for review and approval.

B. Final Report

1. The Grantee shall submit to the Division one (1) copy of the Final Report of this project. The report shall include all of the information called for in Article III, Paragraph A.1, for the entire term of the agreement.
2. The Final Report shall include sufficient detail to evaluate the effectiveness of the project and shall be submitted no later than _____, 198_.

ARTICLE IV - CONSIDERATION AND METHOD OF PAYMENT

- A. In consideration of the Grantee's satisfactory completion of all work and services required to be performed under the terms of this Grant Agreement, and in compliance with all other Grant Agreement requirements herein stated, the Division shall pay to the Grantee a sum not to exceed One Hundred and Twenty Five Thousand Dollars (\$125,000). The funds are to be expended in accordance with the proposed budget attached as Exhibit "C" and made a part hereof. It is understood and agreed that the Grantee's expenditure of these monies shall not deviate from the line items of said budget without the prior written approval of the Division.
- B. The funds mentioned in Paragraph A above shall constitute full and complete payment of monies to be received by the Grantee from the Division.
- C. It is understood and agreed that should any portion of the funds paid hereunder by the Division to the Grantee for the purpose designated herein remain unexpended after all conditions of this Grant Agreement have been satisfied, the said unexpended funds shall revert to the Division for disposition by the New Mexico Community Development Council.
- D. The Grantee shall complete the attached Initial Disbursement Planning Schedule, Exhibit "D" made a part hereof, for purposes of the State Board of Finance.
- E. All payments will be made on a reimbursement basis and upon receipt by the Division of a completed Request for Reimbursement Form, Exhibit "E" made a part hereof, along with appropriate documentation.

ARTICLE V - MODIFICATION AND TERMINATION

- A. The Division, by written notice to the Grantee, shall have the right to terminate this Grant Agreement if, at any time, in the judgment of the Division the provisions of this Agreement have been violated or the activities described in the Project Description do not progress satisfactorily. In this regard, the Division may demand refund of all or part of the funds dispersed to the Grantee.
- B. The parties may modify any and all terms and conditions of the Grant Agreement by mutual agreement between the Grantee and the Division.

ARTICLE VI - CERTIFICATION

The Grantee hereby assures and certifies that it will comply with State regulations, policies, guidelines, and requirements with respect to the acceptance and use of funds for this program. Also, the Grantee gives assurances and certifies with respect to the grant that:

- A. It has the legal authority to receive and expend the funds as described in the Project Description.
- B. It will meet all requirements of the New Mexico Community Assistance Act.
- C. It will finance its share (if any) of the costs of the project, including all project overruns.
- D. It will submit all project related contracts, subcontracts, agreements and subsequent amendments to the Division for review and approval prior to execution. Amendments to existing contracts also must be submitted to the Division for review and approval prior to execution. In addition, any project related contract, subcontract, or agreement and related amendments executed prior to this Grant Agreement must be submitted for review and approval by the Division.
- E. It will adhere to all financial and accounting requirements of the Department of Finance and Administration.
- F. It will comply with all applicable conditions and requirements prescribed by the State Board of Finance in relation to receipt of severance tax bond funds.
- G. When real property is acquired by the Grantee either through purchase or donation as a part of this project and within the project period, the Grantee shall submit documentation of the acquisition to the Division including legal description of the property, the date the property was acquired, a certified copy of title to the property, and an appraisal report by a qualified appraiser.
- H. It will finance the operation and maintenance of the facility being acquired and/or developed according to standards established by the State of New Mexico, for so long as is required.
 - 1. Sanitation and sanitary facilities shall be maintained in accordance with applicable health standards and regulations.
 - 2. Project properties shall be kept safe for public use.
 - 3. Buildings, roads, and other structures and improvements shall be kept in reasonable repair for the standard life of the project to prevent undue deterioration.
- I. It shall not at any time convert any property acquired or developed pursuant to this agreement to other than the public uses specified in the scope of work as defined in the Grant Agreement without the prior approval of the Division.

- J. No member, officer, or employee of the Grantee, or its designees or agents, no member of the governing body of the locality in which the program is situated, and no other public official of such locality or localities who exercises any functions or responsibilities with respect to the program during his/her tenure or for one year thereafter, shall have any interest, direct or indirect, in any contract or subcontract, or the process thereof, for work to be performed in connection with the program assisted under the grant, and the Grantee shall incorporate, in all such contracts or subcontracts, a provision prohibiting such interest pursuant to the purposes of this certification.
- K. It will comply with the Administrative Procedures attached as Exhibit "F" and made a part hereof and all other applicable state laws, rules and regulations.
- L. Assistance from the State of New Mexico, Community Development Council, shall be acknowledged by project signs erected at the project site prior to construction. Project signs shall include the name of the project, the name of the grantee, total cost of the project, a listing of the financial participation by dollar amount from all sources. Project signs shall be weatherproof and shall be carefully maintained until the project has been completed. Signs shall not be smaller than 4' x 6' nor larger than 8' x 8' except to meet special or local requirements. No other information shall be included on project signs.

ARTICLE VII - RETENTION OF RECORDS

- A. The Grantee shall keep such records as will fully disclose the amount and disposition of the total funds from all sources budgeted for the Grant Agreement period, the purpose of undertaking for which such funds were used, the amount and nature of all contributions from other sources, and such other records as the Division shall prescribe. Such records shall be preserved for a period of not less than six (6) years following completion of the project.

ARTICLE VIII - GRANTEE REPRESENTATIVE

- A. The grantee hereby designates the person listed below as the official Grantee Representative responsible for overall supervision of the approved project.

Name: _____ Address: _____

Telephone: _____

ARTICLE IX - SPECIAL TERMS AND CONDITIONS

- 1) Should litigation on the issue of contamination result in full participation by the Oil Company(s), the grant will be considered a loan to be paid back to the State.
- 2) The grantee will provide the Local Government Division a complete project breakdown including (1) who is providing funding for project (cash and in-kind) (2) what portion of the project will be done with identified funds.

IN WITNESS WHEREOF, the Grantee and the Division do hereby execute this Grant Agreement as of the date of first above written.

THIS GRANT AGREEMENT has been approved by:

GRANTEE

By: _____ Date _____
Mayor, County Commission Chairman,
Association President

Notary: Subscribed and sworn to before me at _____
_____ this _____ day of _____,
198__.

Notary Public

My Commission Expires: _____

DEPARTMENT OF FINANCE AND ADMINISTRATION
LOCAL GOVERNMENT DIVISION

BY: _____ Date _____
Director

Notary: Subscribed and sworn to before me at _____
_____ this _____ day of _____,
198__.

Notary Public

My Commission Expires: _____

EXHIBIT "A"
PROJECT DESCRIPTION

Name of Grantee: Lea County

Grant No.: 84-N-RS-I-05-GA791

Grant Amount: \$125,000.00

Design, inspect and construct water system improvements for the Monument Water Users' Association. The improvements will consist of drilling, development, testing and equipping a water well capable of producing up to 100 gpm. The improvements will also include the construction of approximately 2 3/4 miles of 6" water transmission line to tie-in to an existing line, and the relocation of an existing storage tank to the new well site. NMCA funds can be used for property acquisition easements and permits. The grantee will try to hire locally. This grant is contingent on the grantee obtaining an additional \$40,000 in matching funds. This grant is an emergency/contingency grant funded by the New Mexico Community Development Council.

PROJECT SCHEDULE

Grant No. _____

DEPARTMENT OF FINANCE AND ADMINISTRATION LOCAL GOVERNMENT DIVISION

Name of Applicant Completion Date of Project

Starting Date of Project

	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
--	----------	----------	----------	----------

Objective

Milestones

Objective

Milestones

Objective

Milestones

NEW MEXICO COMMUNITY ASSISTANCE
PROJECT BUDGET ESTIMATES

Date _____

TYPE OF BUDGET:

(a) Application _____ (b) Revision _____ (c) Final Contract _____

TYPE OF NMCA GRANT REQUESTED:

- a) Full Funding Grant (100% of project value) _____
 b) Supplementary Grant For Prior NMCA Project _____
 c) Matching Grant for Federal or Local Funds _____
 d) Funding For Ongoing Project _____

CALCULATION OF BUDGET

<u>Cost Classification</u>	<u>NMCA Contribution</u>	<u>Local and Federal Matching Funds</u>	<u>Total Amount</u>
Administrative Expenses	<u>not eligible</u>	_____	_____
Architect/Engineer Fees	_____	_____	_____
Other Professional Services Fees	_____	_____	_____
Inspection Fees	_____	_____	_____
Property Acquisition Costs	_____	_____	_____
Construction Costs	_____	_____	_____
Other Costs	_____	_____	_____
SUBTOTAL	_____	_____	_____
Contingencies	_____	_____	_____
TOTAL PROJECT COSTS	_____	_____	_____

OPERATIONS & MAINTENANCE

Estimated Annual Operating Expenses _____
 Estimated Annual Maintenance Expenses _____

PROPOSED FUNDING SOURCES

New Mexico Community Assistance _____
 Municipal/County _____
 State _____
 Federal _____
 Others _____
 TOTAL FUNDING _____

EXHIBIT D

Form #1
B.O.F.

INITIAL DISBURSEMENT PLANNING SCHEDULE

A. Project Identification (number) (name) (location) (description) Date Submitted

B. Project Benchmarks

1. Start Date	
2. Completion date	
3. Benchmark	Budget Estimate
1	\$
2	
3	
4	
5	
6	
7	
8	
9	
10	
Total	

C. Anticipated Funding Needs

Source	Project Start (1)	First Quarter			Second Quarter	Third Quarter	Fourth Quarter	2nd Year	3rd Year	4th Year
		1st Month	2nd Month	3rd Month						
Federal Funds		\$	\$	\$	\$	\$	\$	\$	\$	\$
Severance Bond Funds										
Other State										
Local										
In Kind										
Other										
Total		\$	\$	\$	\$	\$	\$	\$	\$	\$

NEW MEXICO COMMUNITY ASSISTANCE PROGRAM REIMBURSEMENT REQUEST

Political Subdivision		NACA Project #		Reporting Period			
Architect/Engineer		Contractor		Billing #			
Amount	Amount Total	Matching Funds	Matching Expended	NACA Budget	Previous	Current NACA Request	Cumulative Total NACA
Cost Classification	Budget						
Administrative Expenses							
Architect/Engineer Fees							
Other Professional Service Fees							
Inspection Fees							
Property Acquisition Cost							
Construction Cost							
Other Costs							
Subtotal							
Contingencies							
Totals							
BUDGET:							
NACA	Total						
	Total						
	Total						
	Total						
	Total						
City	Total						

I certify that all the above expenditures are true and correct and are for appropriate purposes in accordance with the terms and conditions of the Community Assistance Program and that payment therefor has not been received.

Signature of Authorized Official _____ Typed or Printed Name _____ Date _____

**NEW MEXICO COMMUNITY ASSISTANCE PROGRAM
ADMINISTRATIVE PROCEDURES**

Upon execution of the NMCA Grant Agreement, the Grantee shall follow the procedures listed below:

1. Copies of all executed contracts, subcontracts, agreements, and related amendments entered into by the applicant shall be submitted to the Division.
2. An engineering and/or architect agreement, or letter of certificate if employing staff engineers or architects, for review and approval shall be submitted to the Division within 60 days after the execution of the Grant Agreement.
3. All plans and specifications and related addenda for the project must be submitted to the Division for review and approval before the project is advertised for sealed construction bids. All subsequent change orders must be submitted to the Division for prior review and approval.
4. All work relating to easements, rights of way, other property rights, and financing provisions shall be completed prior to advertising for sealed bids.
5. Competitive bidding, in accordance with applicable State laws (including local wage determinations as provided for in Section 13-4-11, NMSA, 1978), shall be used for awarding of contracts. Contracts shall be awarded to the responsible bidder who submits the lowest acceptable bid, or as provided for by State law.
6. Copies of all pay estimate vouchers shall be available to the Division upon request.
7. Two copies of all requests for reimbursement shall be submitted on the appropriate form and shall be accompanied by appropriate documentation to assure that those costs being reimbursed are correct and within the approved scope of work and budget. Requests shall include expenditures to date by category.
8. Performance, statutory and payment bonds in the amount of 100 percent of the project bid will be required of each contractor and copies of said documents will be filed with the Division.
9. The Division shall approve payments and certify Grantee's compliance with the provisions of the Grant Agreement.
10. A special account for each grant shall be kept by the Grantee and shall be available for auditing purposes for at least six years after completion of the project.

11. The Division will determine the procedure for interim payments of NMCA funds to the Grantee. Ten percent of grant funds may be withheld until completion and inspection of the project, or five percent may be withheld at the option of the Division after half the project has been completed.
12. Interim payments will be made as the work progresses. Said payments will be based upon estimates prepared and certified by the Grantee or Grantee's engineer/architect to include value of work performed, materials on hand, and materials in place in accordance with the contract. Interim payments for engineering, inspection, legal services or other approved services shall be made in accordance with the approved contracts or agreements.
13. The Division shall monitor all projects as authorized by the New Mexico Community Assistance Act and shall require progress reports to address both the progress of construction work as approved in the scope of work and the status of funds expended and other budgetary considerations.
14. If the project is in the design stage when funded, the Grantee shall submit status reports as requested by the Division to address in narrative form the status of specific items of the approved scope of work and whether they are or are not meeting the timeframes as projected in the approved application. If such deadlines are not being met, the Grantee will be required to explain why and to state problems being encountered. The Grantee may ask for an extension of time to proceed with the project if such timeframes cannot be met for justifiable reasons.
15. Upon completion of the project, final payment shall be made after requirements for interim payments have been met, final inspection has been made, and the following have been provided and reviewed by the Division.
 - a. Final certified pay estimate prepared by the architect/engineer and approved by the Grantee.
 - b. A statement by the project engineer/architect that work has been satisfactorily completed and that the contractor has fulfilled all of the obligations required under the contract documents with the Grantee, or if payment and materials performance bonds are "called," an acceptable close-out settlement to the Grantee and contractors shall be submitted to the Division for review and approval.
 - c. Final engineering statement and recap of all architectural/engineering services, legal, administrative and other approved expenses and a final Request for Reimbursement from Exhibit "E" showing such expenditures.
 - d. Certification by the Grantee that the Labor Standards Contract Provisions have been met.
 - e. Favorable final inspection report from the Division.

- f. Submission of record drawings by the Grantee to the Division.
 - g. Submission by the Grantee of a final budget, Exhibit "C", showing all funding sources utilized for costs incurred for the project by designated budget categories.
 - h. Complete and legally effective releases or waivers (satisfactory to the Grantee) of all liens arising out of the contract documents and the labor and services performed and the material and equipment furnished thereunder. In lieu thereof and as approved by the Grantee, contractor may furnish receipts or releases in full; an affidavit of contractor that the releases and receipts include all labor, services, materials, and equipment for which a lien could be filed and that all payrolls, material, and equipment bills, and other indebtedness connected with the work for which Grantee or his property might in any way be responsible, have been paid or otherwise satisfied.
 - i. Written consent of the Surety, if any, to final payment.
- 16. If the contractor has a disputed and pending claim for damages or payment against the Grantee, the contractor will have the right to sign an alternate final pay estimate. Upon approval of the alternate final pay estimate, the Division may pay the Grantee the retained sum found to be due after deducting all previous payments and all amounts to be retained or deducted under the provisions of the contract.
 - 17. All prior interim payments shall be subject to correction in the final estimate and payment.
 - 18. The project will not be considered complete until the work as defined in the awarded contract has been fully performed and finally and unconditionally accepted by the Grantee and the Division.



TONEY ANAYA
GOVERNOR

STATE OF NEW MEXICO

OFFICE OF THE GOVERNOR

SANTA FE

87503

COMMUNITY DEVELOPMENT COUNCIL

March 22, 1985

9:00 a.m.

Morgan Hall
Old Santa Fe Trail
Santa Fe, New Mexico

AGENDA

- A. Call to Order
- B. Approval of Agenda
- C. Approval of Minutes of Previous Meeting
- D. Code of Conduct and Open Meetings Resolution
- E. Staff Reports
 - 1. Notice of CDBG Allocation and Revisions to Regulations
 - 2. HUD Monitoring Visits
 - 3. CAC 81-78 El Valle de Los Ranchos
 - 4. CDBG 84 Quay County
 - 5. NMCA 84-776 Ramah WSD
 - 6. CDBG 84-402 City of Lordsburg
- F. Review and Action on CDBG Economic Development Set-Aside Requests
- G. Review and Action on Emergency/Contingency Requests
- H. Project Amendments
 - NMCA 84-738 Bluewater WSD
 - CDBG 84-360 Santa Fe County
 - CAC 81-045 McKinley County
- I. Other Business
- J. Adjournment

The Community Development Council may, if necessary, discuss or take action on items not listed on the official agenda.

Lea County Commission:

ERNEST MCNUTT
District 1
Chairman

V. H. "BUDDY" WESTBROOK
District 2

PAT W. MCCASLAND
District 3

LEA COUNTY
Board of County Commissioners

Telephone (505) 396-8521 P.O. Drawer 1539
Lovington, New Mexico 88260

LEON FARIS
County Manager

DONNA BENGE
Secretary



March 20, 1985

The Honorable Toney Anaya
Governor of New Mexico
State Capitol
Santa Fe, New Mexico 87503

Attn: Clarence V. "Porky" Lithgow, Director
Local Governments Division

Dear Governor Anaya,

At the November meeting of the Community Development Council in Las Vegas, the County of Lea requested \$ 164,000 in Emergency Contingency money for the purpose of providing a new water source to the community of Monument. We were awarded \$ 85,000 with a contingency to come back for more if needed.

The Monument Water Users Association is seeking a Farmers Home Administration loan for \$ 40,000, but still need \$ 40,000 to complete the project. We are requesting the remaining \$ 40,000 from the CDC Emergency Contingency fund.

We would appreciate your consideration of this request on behalf of Lea County and the citizens of Monument.

Sincerely,

Lea County Board of Commissioners
Ernest Mc Nutt, Chairman
V. H. (Buddy) Westbrook, Member
Pat W. McCasland, Member

By: Leon Faris, County Manager

LF/jj

cc: Jackie Block, Project Director

STATE OF NEW MEXICO

GOVERNOR'S CABINET

DEPARTMENT OF

FINANCE AND ADMINISTRATION

LOCAL GOVERNMENT DIVISION

TONY ANAYA
GOVERNOR

Daniel H. Lopez
SECRETARY

CLARENCE V. LITHGOW
DIRECTOR

206 LAMY BUILDING
SANTA FE, NM 87503 2783
(505) 827-8050

TOLL FREE 1-800-432-7108

March 1, 1985

The Honorable William H. Brininstool
Chairman, Lea County Commission
Lea County Courthouse
Lovington, New Mexico 88260

RE: Monument Water Users Assoc.
NMCA Emergency Project

Dear Chairman Brininstool:

On February 21, 1985, members of my staff along with representatives of Environmental Improvement Division and the Oil Conservation Division traveled to Hobbs to meet regarding the Monument Water problems. In attendance at the meeting, which took place in the offices of Pettigrew and Associates, were representatives of the Southeastern New Mexico Economic Development District, Monument Water Users Association, Texas-New Mexico Pipeline Company, Pettigrew Associates, engineers and Johnny Cope, the Community Development Council member for District 6. The main purpose of this meeting was to evaluate the cost estimate for the development of a new water supply for the Village of Monument, New Mexico, and to ascertain, if any, additional funding would be needed and who would provide it.

During the meeting, the engineer's preliminary cost estimates were reduced from \$445,101 to approximately \$164,000 not including trenching for the pipeline which Texas-New Mexico Pipeline Company indicated they might provide. Pettigrew's staff agreed to provide us with revised cost estimates including construction, engineering design fees, other engineering fees such as surveying fees, inspection fees, administration, legal fees, contingencies and others for different options available to solve the Monument water supply problem. Lea County is the Grantee for this project, therefore, we would like to request from Lea County, the following:

1. A breakdown of any contribution, cash or in-kind, that the County will be able to contribute towards the project (administration, legal, etc.).
2. Obtain a firm commitment from Texas-New Mexico pipeline as to the work they will contribute towards the project.

Honorable William H. Brininstool
March 1, 1985
Page -2-

Once all this has been accomplished, we will review the different options and present an update to the Community Development Council, at their March 22, meeting for action if needed. We appreciate your cooperation on this matter. If you have any questions, please contact me or Mr. Jack Block, Project Representative at toll free 1-800-432-7108.

Sincerely,

6
CLARENCE V. LITHGOW

Clarence V. Lithgow
Director

CVL:mv

cc: Johnny Cope
New Mexico-Texas Pipeline Company
S.E.N.M.E.D.D.
Monument Water Users Association
Pettigrew & Associates
Environmental Improvement Division
Oil Conservation Division.

STATE OF NEW MEXICO

GOVERNOR'S CABINET

DEPARTMENT OF
FINANCE AND ADMINISTRATION
LOCAL GOVERNMENT DIVISION

TONEY ANAYA
GOVERNOR

Daniel H. Lopez
SECRETARY

CLARENCE V. LITHGOW
DIRECTOR

206 LAMY BUILDING
SANTA FE, NM 87503-2783
(505) 827-8050

TOLL FREE 1-800-432-7108

March 1, 1985

The Honorable William H. Brininstool
Chairman, Lea County Commission
Lea County Courthouse
Lovington, New Mexico 88260

RE: Monument Water Users Assoc.
NMCA Emergency Project

Dear Chairman Brininstool:

On February 21, 1985, members of my staff along with representatives of Environmental Improvement Division and the Oil Conservation Division traveled to Hobbs to meet regarding the Monument Water problems. In attendance at the meeting, which took place in the offices of Pettigrew and Associates, were representatives of the Southeastern New Mexico Economic Development District, Monument Water Users Association, Texas-New Mexico Pipeline Company, Pettigrew Associates, engineers and Johnny Cope, the Community Development Council member for District 6. The main purpose of this meeting was to evaluate the cost estimate for the development of a new water supply for the Village of Monument, New Mexico, and to ascertain, if any, additional funding would be needed and who would provide it.

During the meeting, the engineer's preliminary cost estimates were reduced from \$445,101 to approximately \$164,000 not including trenching for the pipeline which Texas-New Mexico Pipeline Company indicated they might provide. Pettigrew's staff agreed to provide us with revised cost estimates including construction, engineering design fees, other engineering fees such as surveying fees, inspection fees, administration, legal fees, contingencies and others for different options available to solve the Monument water supply problem. Lea County is the Grantee for this project, therefore, we would like to request from Lea County, the following:

1. A breakdown of any contribution, cash or in-kind, that the County will be able to contribute towards the project (administration, legal, etc.).
2. Obtain a firm commitment from Texas-New Mexico pipeline as to the work they will contribute towards the project.

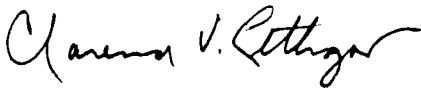
Honorable William H. Brininstool

March 1, 1985

Page -2-

Once all this has been accomplished, we will review the different options and present an update to the Community Development Council, at their March 22, meeting for action if needed. We appreciate your cooperation on this matter. If you have any questions, please contact me or Mr. Jack Block, Project Representative at toll free 1-800-432-7108.

Sincerely,



Clarence V. Lithgow
Director

CVL:mv

cc: Johnny Cope
New Mexico-Texas Pipeline Company
S.E.N.M.E.D.D.
Monument Water Users Association
Pettigrew & Associates
Environmental Improvement Division
Oil Conservation Division.

P.O. BOX 807
CLOVIS, NM 88101
(505) 762-3716

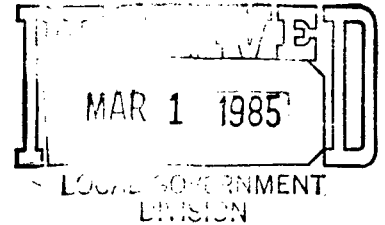
PETTIGREW & ASSOCIATES



RICHARD R. PETTIGREW, P.E.-L.S.

February 27, 1985

P.O. BOX 5769
HOBBS, NM 88241
(505) 393-9827



Dept. of Finance & Administration
Local Government Division
505 Don Gaspar
Santa Fe, NM 87503

ATTN: Jacob Block

RE: NEW MEXICO COMMUNITY ASSISTANCE
FOR MONUMENT WATER USERS

Dear Mr. Block:

Enclosed herein, please find a Cost Estimate submitted by our Firm, utilizing the requests made by Pat Olachea.

The Scope of Work consists of the drilling, development and testing of one water well, construction of approximately 2 3/4 miles transmission line to tie-in to an existing line, and relocation of the existing storage tank to the well site location.

The last item of work is proposed to cause gravity flow in the transmission line. This in turn reduces electrical control costs to the Village of Monument and the need for the existing pressure tank.

As can be noted, trenching of the pipeline has been omitted. Texas New Mexico Pipeline Company has made a verbal commitment to take responsibility for the trenching.

Respectfully submitted,

PETTIGREW & ASSOCIATES

Debra P. Hicks, E.I.

DPH:bjc

ESTIMATED PROJECT COSTS

WATER FIELD DEVELOPMENT IN OGALLALA

NO.	DESCRIPTION	UNIT	QUAN.	UNIT PRICE	AMOUNT
1) DEVELOPMENT OF WATER WELL					
	MOBILIZE & DEMOBILIZE	1	ls	\$600.00	\$600.00
	DRILL PILOT HOLE 8" DIA	120	ft	\$4.50	\$540.00
	REAM PILOT HOLE 24" DIA	40	ft	\$26.00	\$1,040.00
	REAM PILOT HOLE 16" DIA	120	ft	\$14.50	\$1,740.00
	18" ID CONDUCTOR PIPE	40	ft	\$31.64	\$1,265.60
	BLANK CASING, 8-5/8" ID	80	ft	\$8.00	\$640.00
	WELL SCREEN	40	ft	\$135.00	\$5,400.00
	GAUGE LINE	90	ft	\$3.30	\$297.00
	GRAVEL PACK IN PLACE	10	cy	\$100.00	\$1,000.00
	DEVELOPMENT	48	hr	\$70.00	\$3,360.00
	TEST PUMPING	48	hr	\$80.00	\$3,840.00
	GEOPHYSICAL LOGS	1	ls	\$4,000.00	\$4,000.00
	WELL STERILIZATION	1	ls	\$600.00	\$600.00
	PUMP	1	ea	\$2,400.00	\$2,400.00
	WATER METER	1	ea	\$1,050.00	\$1,050.00
	POWER LINE	0	ft	\$3.41	\$0.00
	ELECTRICAL	1	ls	\$2,500.00	\$2,500.00
	GATE VALVE	1	ea	\$400.00	\$400.00
	CHECK VALVE	1	ea	\$435.00	\$435.00
TOTAL ESTIMATED COST OF WELL					\$31,107.60
2) PROPERTY, EASEMENTS & PERMITS					\$20,000.00
TOTAL PROPERTY, EASEMENTS AND PERMITS					\$20,000.00
SUBTOTAL WATER SUPPLY DEVELOPMENT					\$51,107.60

DATE: FEB. 27, 1985

ESTIMATED PROJECT COSTS CONTINUED

WATER FIELD DEVELOPMENT IN OGALLALA

NO.	DESCRIPTION	UNIT	QUAN.	UNIT PRICE	AMOUNT
3) 6" TRANSMISSION LINE AND CONNECTION TO THE WATER STORAGE RESERVOIR.					
	BEDDING	14,534	ft	\$0.75	\$10,900.50
	LAY PIPE AND BACKFILL	14,534	ft	\$2.50	\$36,335.00 (-11,000)
	PIPE C-900 PVC	14,534	ft	\$2.50	\$36,335.00
TOTAL EST. COST OF TRANSMISSION LINE					\$83,570.50
4) RELOCATION OF STORAGE TANK TO NEW WELL SITE					
	TANK SUPPORT	1	ls	\$2,000.00	\$2,000.00
	BEDDING	10	cy	\$50.00	\$500.00
	RELOCATION TO WELL SITE	1	ls	\$1,500.00	\$1,500.00
	REPAIR OF BOLTED SEAMS	1	ls	\$1,000.00	\$1,000.00
					\$5,000.00
5) ENGINEERING, LEGAL & CONTINGENCIES					
	PREL. & DESIGN ENGR.				\$11,854.00
	SURVEYING				\$7,216.00
	INSPECTION				\$6,500.00
	MATERIALS TESTING				\$1,100.00
TOTAL					\$26,670.00
CONTINGENCIES					\$2,000.00
TOTAL ESTIMATED ENGINEERING AND CONTINGENCIES					\$28,670.00
TOTAL ESTIMATED COST OF PROJECT					\$168,348.10
					(-25,000)
					143,348.10

DATE: FEB. 27, 1985

===== PETTIGREW & ASSOCIATES =====



MEMORANDUM OF MEETING OR CONVERSATION

☒ Telephone

☐ Personal

Time 11 AM

Date 2/25/85

Originating Party

Dave Boyer OCB

Other Parties

Gus Cordova, EID Water Supply
Dave Quintana, EID Engineer

Subject

Capacity of Monument Water Supply System

Discussion

Before contamination of well #1, The system had a 50 gpm total capacity according to an EID annual inspection survey dated Oct 25, 1982. Well #1 had 28 gpm capacity but well #2 was unreported. Well #1 was contaminated by the pipeline break and is out of service. #2 has been reported as having a capacity of 120 gpm. However, the 1982 inspection reported maximum daily use at 40 gpm (58,500 gpd). Well #2 can provide entire capacity for community if not

Conclusions or Agreements

(by Dave Boyer) Quality impaired
The likely capacity of well #2 is ~~likely~~ 40 to 70 gpm (max) and not 120 gpm. In any event, a replacement well of 100 gpm should be adequate based on current numbers.

Distribution

Signed

Dave Boyer

2/21/85
Meeting of EID-OCB-LGD & Pettigrew
on Monument

Reports of agencies -

OCB - 2 plumes - one near break
gets 2 bbls/day @ 2 recovery wells
2nd plume being monitored
but not to well.

EID - Sampled ^{OCB} well last week - No VOC
Test pumped OCB well at 95gpm
with 1 in drawdown (!?)
Still have "imminent threat" since
oil is moving toward wells.
(From Copeland - School well
pump burnt out (only pumped
~25gpm). East well @ 80gpm
back online!

Pat for CDC - Costs too high, don't
need a fancy system.

Pettigrew - Has stopped work until
settle who pays for pipeline
trenching. But believes that
figures he has ~~presented~~ provided
are supportable.

Pat - said that Iga County is grantee and not
monument, and County not here today

Bernie - Would like to provide the trenching only and do own cost bidding on that.

Pat - No money for land acquisition - get it anyway you can. No grant agreement has yet been signed @ Lea County.

John Cope Will pay Pettigrew for their costs to date. Don't worry about that now. Got to get county involved to finish. Talk about picking up table top diff. between revised designs and \$85,000 given by council.

Boys - Well seems over designed for just a replacement - drop to 100-150 gpm & pipeline to 4 or 6" Location OK - got to get North of oil patch. Remember, have new OCB drilled well can be used as backup.

John - will work out #'s today on revised cost

Final cost: 100 gpm well about 2 1/2 miles 6" pipeline: \$164,000
(Worked out Thurst PM with consultants and CBC.

NAME	AGENCY - COMPANY	ADDRESS	PHONE NO.
Tom Burt	FIELD	414 W. Taylor, Hobbs	393-2373
A. Cope	CDC	1870 E. Albertson	393-9161
B. L. LEDWICK	TNMP L.C.O.	BROADMOR BLVD	393-2135
D. J. MORGONIE	"	"	"
Peggy Blair	NCT- FIELD	200 E. 5th, Roswell 88201	623-6989
W. E. Copeland	N.M.	MONUMENT NM, 88265	393-3060
HURST (QUINTANA)	SNMEDI	ROSWELL - PO BOX 5639 RIAC	347-5425
STEVE MASSEY	SNMEDI	ROSWELL - PO BOX 5639 RIAC	347-5425
Eddie W. Long	DCD	Hobbs	393-6161
Evelyn Downs	OCB	Hobbs	393-6161
Jimmy Supt	OCB	Hobbs	393-6161
Dave Boyer	OCB	Santa Fe	827-5812
Chris Collier	GIL	Santa Fe	827-9205
Jack Bloch	Local Govt. Div.	Santa Fe	827-4950
Pat O'Aechen	Local Govt. Div.	Santa Fe	827-4950
DEBRA HICKS	Peterson & Assoc	Hobbs	393-1167 393-3870
Ray Hohstadt	"	"	" 393-9827
Richard R. Pettigrew	"	"	"
Norris M. [unclear]	"	"	"

ESTIMATED PROJECT COST
PETTIGREW & ASSOCIATES

MONUMENT WATER USER COOPERATIVE

WATER SYSTEM DEVELOPMENT IN OGALLALA

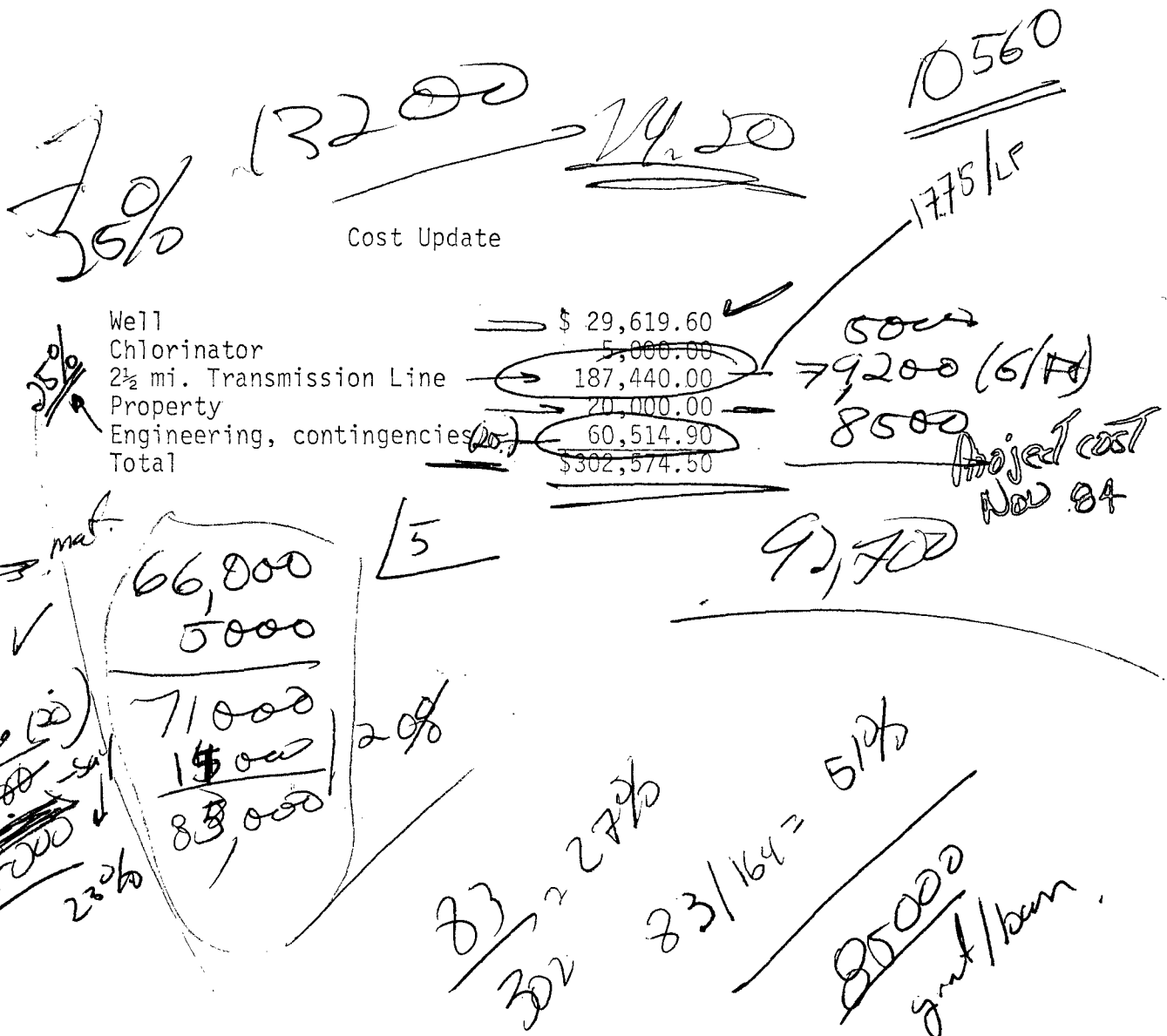
	UNIT		COST/UNIT	AMOUNT
DEVELOPMENT OF WATER WELLS				
DRILLING	300	ft	17.5	\$5,250.00
CASING	300	ft	7.54	\$2,262.00
GRAVEL PACK	9	cy	25	\$225.00
PUMP	1	ea	4200	\$4,200.00
PUMP HOUSE	1	ea	3500	\$3,500.00
WATER METER	1	ea	800	\$800.00
STEEL SCREEN	50	ft	100	\$5,000.00
PUMP TESTING	1	ea	2500	\$2,500.00
COST - ONE WELL				\$23,737.00 ✓
COST - TWO WELLS				\$47,474.00
CHLORINATION FOR WATER SYSTEM				
UNIT COMPLETE	1	ea	5000	\$5,000.00
TRANSMISSION LINE SYSTEM				
PIPE LINE W/FAC	10560	ft	7.5	\$79,200.00
OTHER COSTS				
ENGR, ADM, & CONT.				\$32,918.50
TOTAL ESTIMATED PROJECT COSTS				\$164,592.50

Project cost
Sept. 84

Monument Water Users Update

There has been a dramatic change in the water contamination situation in Monument since the Oct. 18 CDC meeting. At that time the contamination was over ½ mile (2640 ft.) from the only water source in Monument. It was thought that at that time the contamination could be cleaned up with no immediate danger to the water system.

As of Oct. 30, a monitor well 600 ft. from the community water source showed contamination. As of Nov. 10, contamination was picked up 250 ft. from the well. This shows the very rapid movement of the contamination in the present reservoir.



TEXAS-NEW MEXICO PIPE LINE COMPANY

B L Lednicky
District Manager

PO Box 2528
Hobbs NM 88241
505 393 2135

February 7, 1985

Mr. Jerry Sexton
State of New Mexico
Oil Conservation Division
P.O.Box 1980
Hobbs, New Mexico 88241

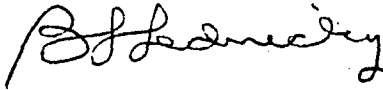
Dear Jerry:

Re: Monument Water Wells

As per our discussion today attached is an analysis of the water samples taken on January 9, 1985. When Cliff Harper and myself visited with you and Eddie Seay about January 9 you requested that we obtain the samples on the wells drilled by the Oil Conservation Division.

I had previously given this information to Eddie Seay by telephone.

Yours very truly,



BLL:DDM
Attachment

Preliminary

EASYLINK MBX 5733473A001 15JAN85 12:08/12:35 EST
FROM: TLX 752858 ORS INC GRN UD
OIL RECOVERY SYSTEMS INC
TO: 62725550

Laboratory Test Results

1/15/85
Report No. 20-2050-8
Submitted to:

Cliff Harper
Groundwater Technology
5047 Clayton Rd.
Concord, CA 94519

HOBBS OFFICE FILE JAN 21 1985	
PLAGE NOTE	DATE NOTED
B. L. J.	
L. H. N.	
J. B. H.	
K. H. S.	
U. D. K.	
D. J. N.	
J. D. H.	

The attached report covers water samples 13536-13546 taken by C. Harper at site 20-2050, Monument, New Mexico and analyzed by GC/FID Static Headspace Analysis for volatile hydrocarbons, analysts D.G. and J.P.

Method Detection Limits (MDL) listed are the levels above which quantitation is considered reliable: benzene and toluene 1 ppb, ethylbenzene 2 ppb, total xylenes 6 ppb. The level for reliable quantitation for total aliphatic hydrocarbons and miscellaneous aromatics is 20 ppb.

If noted on report, MDL is increased by a factor of 44 for dilutions made in order to maintain calibrated range. Precision for levels above 10 times MDL is 10%. Precision at MDL equals 30%. Hexane and ortho-xylene used as calibration standards for aliphatic hydrocarbons and miscellaneous aromatics, respectively.

Respectfully submitted,
Michael D. Webb
Technical Director

MMMM

EASYLINK MBX 5736521A001 15JAN85 12:18/12:35 EST
 FROM: TLX 752858 ORS INC GRN UD
 OIL RECOVERY SYSTEMS INC

Sample	I.D.	SAMPLED	RUN	HYDROCARBONS IN WATER ug/L (ppb)				TOLUENE	E.BENZ	T.XYLENES	ALIHEDRO	MISC.ARO	TOTAL
				BENZENE	TOLUENE	E.BENZ	T.XYLENES						
13536	BLANK	1/9/85	1/14/85	ND	ND	ND	ND	ND	ND	ND	TRACE	ND	TRACE
13537	OCD 1	1/9/85	1/14/85	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
13538	OCD 2	1/9/85	1/14/85	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
13539	OCD 3	1/9/85	1/14/85	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
13540	OCD 4	1/9/85	1/14/85	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
13541	OCD 6	1/9/85	1/14/85	ND	ND	ND	ND	ND	ND	ND	TRACE	ND	ND
13542	MW 12	1/9/85	1/14/85	3780	132	ND	95	ND	ND	ND	1470	65	5550 *2
13543	MW 25	1/9/85	1/14/85	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
13544	MW 26	1/9/85	1/14/85	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
13545	MW 27	1/9/85	1/14/85	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
13546	MW 28	1/9/85	1/14/85	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

*NOTES:

ND = NONE DETECTED

TRACE = COMPOUND DETECTED BUT BELOW LEVEL FOR RELIABLE QUANTITATION.

2 = METHANE DETECTED AT 100-1000 PPB

REPORT NO. 20-2050-8



GROUNDWATER TECHNOLOGY LABORATORY

ANALYTICAL & CONSULTING SERVICES

Division of Oil Recovery Systems, Inc.

4 Mill St., Greenville, NH 03048

Tel: (603) 878-2500

Consulting Offices:

Needham, MA — Redondo Beach, CA

Chadds Ford, PA — Concord, CA

Novi, MI

Laboratory Test Results

10/11/84

Report No. 20-2050-1

Submitted to:

Cliff Harper

Groundwater Technology

5047 Clayton Rd.

Concord, CA 94519

The attached report covers water samples 12442-12443 taken by C. Harper at site 20-2050, Monument, New Mexico and analyzed by GC/FID Static Headspace Analysis for volatile hydrocarbons, analyst J.P.M.

Method Detection Limits (MDL) listed are the levels above which quantitation is considered reliable: benzene and toluene 1 ppb, ethylbenzene 2 ppb, total xylenes 6 ppb, total aliphatic hydrocarbons and miscellaneous aromatics 20 ppb.

If noted on report, MDL is increased by a factor of 44 for dilutions made in order to maintain calibrated range. Precision for levels above 10 times MDL is 10%. Precision at MDL equals 30%. Hexane and ortho-xylene used as calibration standards for aliphatic hydrocarbons and miscellaneous aromatics, respectively.

Respectfully submitted,



Michael D. Webb
Technical Director

VOA Report No.
20-2050-1

HYDROCARBONS IN WATER $\mu\text{g/L}$ (ppb)

SAMPLE NO.	I.D.	DATE SAMPLED	DATE RUN	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	C4-C12		MISC.		TOTAL
								ALIPHATIC HYDROCARBONS	AROMATIC C7-C10			
12442	SW	10/4/84	10/9/84	ND	ND	ND	ND	ND	ND	ND	ND	ND
12443	FDW	10/4/84	10/9/84	ND	ND	ND	ND	ND	ND	ND	ND	ND

*NOTES:

ND = NONE DETECTED
SW = SCHOOL WELL
FDW = FIRE DEPARTMENT WELL

GROUNDWATER TECHNOLOGY LABORATORY
14 Mill Street, Greenville, New Hampshire 03048

VOA Report No.

20-2050-2

HYDROCARBONS IN WATER $\mu\text{g/L}$ (ppb)

SAMPLE NO.	I.D.	DATE SAMPLED	DATE RUN	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	C4-C12		MISC.		TOTAL
								ALIPHATIC HYDROCARBONS	AROMATICS C7-C10			
12509	MW1	10/11/84	10/20/84	ND	ND	ND	ND	ND	ND	ND	ND	TRACE
12513	MW2	10/11/84	10/22/84	ND	ND	ND	ND	ND	ND	ND	ND	TRACE *5
12511	MW3	10/11/84	10/22/84	ND	ND	ND	ND	ND	ND	ND	ND	29
12514	MW4	10/11/84	10/22/84	221	102	10	26	357	TRACE	716	*2	716
12512	MW5	10/11/84	10/22/84	ND	ND	ND	ND	ND	ND	ND	ND	ND
12515	MW6	10/11/84	10/22/84	ND	ND	ND	ND	ND	ND	ND	ND	ND
12508	MW7	10/11/84	10/20/84	16600	10400	669	1710	3520	1570	34500	*1,4	34500
12510	MW8	10/11/84	10/20/84	2	ND	ND	ND	TRACE	ND	ND	2	2

*NOTES:

ND = NONE DETECTED

TRACE = COMPOUND(S) DETECTED BUT BELOW LEVEL FOR RELIABLE QUANTITATION

1 = METHANE DETECTED AT 10-100 PPB.

2 = METHANE DETECTED AT 100-1000 PPB.

4 = SAMPLE DILUTED; MDL TIMES 44

5 = UNCATEGORIZED COMPOUND(S) PRESENT.

GROUNDWATER TECHNOLOGY LABORATORY
14 Mill Street, Greenville, New Hampshire 03048

VOA Report No.

20-2050-3

HYDROCARBONS IN WATER $\mu\text{g/L}$ (ppb)

SAMPLE NO	I.D.	DATE SAMPLED	DATE RUN	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	C4-C12		MISC.		TOTAL
								ALIPHATIC HYDROCARBONS	AROMATICS C7-C10			
12533	W14	10/16/84	10/18/84	15800	9710	1870	1480	6410	878	36200	*5	
12534	W15	10/16/84	10/18/84	17300	11100	1970	1960	6370	1160	40000	*5	
12535	W2	10/16/84	10/18/84	TRACE	2	ND	ND	TRACE	ND	2	*5	
12536	W8	10/16/84	10/18/84	ND	ND	ND	ND	ND	ND	ND		
12537	W.W.	10/16/84	10/18/84	ND	ND	ND	ND	ND	ND	ND		
12538	BLANK	10/16/84	10/18/84	ND	ND	ND	ND	ND	ND	ND		

*NOTES:

ND = NONE DETECTED

TRACE = COMPOUND(S) DETECTED BUT BELOW LEVEL FOR RELIABLE QUANTITATION

W.W. = WATER WELL

S = UNCATEGORIZED COMPOUND(S) PRESENT.

GROUNDWATER TECHNOLOGY LABORATORY
14 Mill Street, Greenville, New Hampshire 03048

VOA Report No.

20-2050-4

HYDROCARBONS IN WATER $\mu\text{g/L}$ (ppb)

SAMPLE NO.	I.D.	DATE SAMPLED	DATE RUN	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	C4-C12		MISC.		TOTAL
								ALIPHATIC HYDROCARBONS	AROMATIC C7-C10			
12551	MW3	10/17/84	10/24/84	ND	ND	ND	ND	ND	ND	ND	ND	TRACE *1
12549	MW4	10/17/84	10/24/84	ND	ND	ND	ND	ND	ND	ND	ND	39
12554	MW5	10/17/84	10/24/84	ND	ND	ND	ND	ND	ND	ND	ND	TRACE
12548	MW6	10/17/84	10/23/84	ND	ND	ND	ND	ND	ND	ND	ND	164
12550	MW9	10/17/84	10/24/84	ND	ND	ND	ND	ND	ND	ND	ND	195
12553	MW13	10/17/84	10/24/84	ND	TRACE	ND	ND	ND	ND	ND	ND	TRACE
12552	MW19	10/17/84	10/24/84	ND	ND	ND	ND	ND	ND	ND	ND	ND

*NOTES:

ND = NONE DETECTED

TRACE = COMPOUND(S) DETECTED BUT BELOW LEVEL FOR RELIABLE QUANTITATION

1 = METHANE DETECTED AT 10-100 PPB.

GROUNDWATER TECHNOLOGY LABORATORY
 84 Mill Street, Greenville, New Hampshire 03048

VOA Report No.

20-2050-5

HYDROCARBONS IN WATER $\mu\text{g/L}$ (ppb)

SAMPLE NO.	I.D.	DATE SAMPLED	DATE RUN	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	C4-C12		MISC.		TOTAL
								ALIPHATIC HYDROCARBONS	AROMATICS C7-C10			
12627	MW3	10/25/84	10/31/84	ND	ND	ND	ND	180	ND	ND	180	*1
12628	MW4	10/25/84	10/31/84	1020	82	ND	53	2290	36	36	3480	*7
12629	MW5	10/25/84	10/31/84	ND	ND	ND	ND	TRACE	ND	ND	TRACE	*6
12630	MW6	10/25/84	10/31/84	ND	ND	ND	ND	TRACE	ND	ND	TRACE	
12631	MW8	10/25/84	10/31/84	ND	ND	ND	ND	ND	ND	ND	ND	
12632	MW9	10/25/84	10/31/84	6450	3320	296	430	258	3760	3760	14500	
12633	MW13	10/25/84	10/31/84	ND	ND	ND	ND	ND	ND	ND	ND	
12634	MW15	10/25/84	10/31/84	19100	12100	2020	1690	10800	1940	1940	46500	
12635	MW17	10/25/84	10/31/84	1520	79	ND	148	866	154	154	2770	*2

*NOTES:

ND = NONE DETECTED

TRACE = COMPOUND(S) DETECTED BUT BELOW LEVEL FOR RELIABLE QUANTITATION

1 = METHANE DETECTED AT 10-100 PPB.

2 = METHANE DETECTED AT 100-1000 PPB.

6 = UNCATEGORIZED COMPOUND PRESENT; POSSIBLY NOT GASOLINE RELATED.

7 = TOTAL ALIPHATICS INCLUDES METHANE.

SAMPLES OF MW12, 18, & 19 WERE BROKEN VIA SHIPPING.

GROUNDWATER TECHNOLOGY LABORATORY
 14 Mill Street, Greenville, New Hampshire 03048

20-20-6

HYDROCARBONS IN WATER $\mu\text{g/L}$ (ppb)

SAMPLE NO.	I.D.	DATE SAMPLED	DATE RUN	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	C4-C12		MISC.		TOTAL
								ALIPHATIC HYDROCARBONS	AROMATICS C7-C10			
12809	MWW	11/6/84	11/12/84	ND	ND	ND	ND	ND	ND	ND	ND	ND
12810	MWWS	11/6/84	11/12/84	ND	ND	ND	ND	ND	ND	ND	ND	ND
12811	MW 23	11/6/84	11/12/84	ND	ND	ND	ND	ND	ND	ND	ND	ND
12812	BLNK	11/6/84	11/12/84	ND	ND	ND	ND	ND	ND	ND	ND	ND

*NOTES:

ND = NONE DETECTED

MWW = MUNI WATER WELL

MWWS = MUNI WATER WELL STANDBY

BLNK = BLANK

GROUNDWATER TECHNOLOGY LABORATORY

4 MILL STREET, GREENVILLE, NEW HAMPSHIRE 03048





DAVID G. BOYER
Hydrogeologist

P.O. BOX 2088
LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
505-827-5812

LABORATORY

12/6/84
SLD Priority 2

LAB NUMBER

OR 1082 A, B.

84-1082-C

SLD Users Code No. 59680

ALL CONTAINERS WHICH THIS FORM ACCOMPANIES ARE COLLECTIVELY REFERRED TO AS "SAMPLE".

CERTIFICATE OF FIELD PERSONNEL

Sample Type: Water ☒ Soil ☐ Other _____

Water Supply and/or Code No. Monument Community Loc CTY

City & County Monument Mon. Well #12

Collected (date & time) 8411280825 By (name) BOYER

pH= _____; Conductivity= _____ umho/cm at _____ °C; Chlorine Residual= _____

Dissolved Oxygen= _____ mg/l; Alkalinity= _____; Flow Rate= _____

Sampling Location, Methods & Remarks (i.e. odors etc.)

Monument Mon. Well #12 (Bailed from well)

I certify that the statements in this block accurately reflect the results of my field analyses, observations and activities. Signed David G. Boyer

I certify that I witnessed these field analyses, observations and activities and concur with the statements in this block. Signed _____

Method of Shipment to Laboratory _____

THIS FORM ACCOMPANIES 2 septum vials with teflon-lined discs identified as:

specimen X; duplicate X; triplicate _____; blank(s) _____

and _____ amber glass jug(s) with teflon-lined cap(s) identified as _____

and _____ other container(s) (describe) _____ identified as _____

Containers are marked as follows to indicate preservation (circle):

NP: No preservation; sample stored at room temperature (~20°C).

P-ICE: Sample stored in an ice bath.

P-Na₂O₃S₂: Sample preserved with 3 mg Na₂O₃S₂/40 ml and stored at room temperature.

CERTIFICATE(S) OF SAMPLE RECEIPT

I (we) certify that this sample was transferred from _____ to _____
at (location) _____ on _____

(date & time) _____ and that the statements in this block are correct.

Disposition of Sample _____ Seal(s) Intact: Yes ☐ No ☐

Signature(s) _____

I (we) certify that this sample was transferred from _____ to _____
at (location) _____ on _____

(date & time) _____ and that the statements in this block are correct.

Disposition of Sample _____ Seal(s) Intact: Yes ☐ No ☐

Signature(s) _____

ANALYSES REQUESTED

LAB. NO.

PLEASE CHECK THE APPROPRIATE BOXES BELOW TO INDICATE THE TYPE OF ANALYTICAL SCREENS REQUIRED. WHENEVER POSSIBLE LIST SPECIFIC COMPOUNDS SUSPECTED OR REQUIRED.

org-1082

QUALITATIVE	QUANTITATIVE	PURGEABLE SCREEN	QUALITATIVE	QUANTITATIVE	EXTRACTABLES SCREEN
		ALIPHATIC HYDROCARBON SCREEN			ALIPHATIC HYDROCARBONS
X	X	AROMATIC HYDROCARBON SCREEN			CHLORINATED HYDROCARBON PESTICIDES
		HALOGENATED HYDROCARBON SCREEN			CHLOROPHENOXY ACID HERBICIDES
		GAS CHROMATOGRAPH/MASS SPECTROMETER			HYDROCARBON FUEL SCREEN
					ORGANOPHOSPHATE PESTICIDES
					POLYCHLORINATED BIPHENYLS (PCB's)
					POLYNUCLEAR AROMATIC HYDROCARBONS
		SPECIFIC COMPOUNDS			SPECIFIC COMPOUNDS
		<i>Benzene, Xylenes, Toluene</i>			

REMARKS:

ANALYTICAL RESULTS

COMPOUND	CONC-ENTRATION	COMPOUND	CONC-ENTRATION
<i>halogenated purgables</i>	<i>none detected</i>	<i>1,3,5-trimethyl-benzene</i>	<i>40 µgm/l</i>
<i>benzene</i>	<i>4760 µgm/l</i>		
<i>toluene</i>	<i>120 "</i>		
<i>ethyl-benzene</i>	<i>20 "</i>		
<i>p-xylene</i>	<i>140 "</i>		
<i>m-xylene</i>	<i>160 "</i>		
<i>o-xylene</i>	<i>140 "</i>		
		* DETECTION LIMIT	<i>10 µgm/l</i>

REMARKS: *Other substituted aromatics also detected, but not identified. Detection limit for benzene is 100 µgm/l.*

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes No Seal(s) Broken by _____ date _____
 I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements in this block and the analytical data on this page accurately reflect the analytical results for this sample.
 Date(s) of analysis *6 Dec 84*. Analysts signature *DL Finney*
 I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block. Reviewers Signature: *DL Finney*

84-1083-C

OIL
CONSERVATION
DIVISIONDAVID G. BOYER
HydrogeologistP.O. BOX 2088
LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
505-827-5812

LABORATORY

SLD Priority 2

LAB NUMBER

OR 1083 A, B.

SLD Users Code No. 59600

ALL CONTAINERS WHICH THIS FORM ACCOMPANIES ARE COLLECTIVELY REFERRED TO AS "SAMPLE".

CERTIFICATE OF FIELD PERSONNEL

Sample Type: Water ☒ Soil ☐ Other ☐

Water Supply and/or Code No. Monument Community Supply

City & County Monument East School Well, Lea County

Collected (date & time) 8/1/28-0905 By (name) BOYER

pH= ; Conductivity= umho/cm at °C; Chlorine Residual=

Dissolved Oxygen= mg/l; Alkalinity= ; Flow Rate=

Sampling Location, Methods & Remarks (i.e. odors etc.)

East School Well (FROM pump spigot, No odor)

I certify that the statements in this block accurately reflect the results of my field analyses, observations and activities. Signed David G. Boyer

I certify that I witnessed these field analyses, observations and activities and concur with the statements in this block. Signed

Method of Shipment to Laboratory

THIS FORM ACCOMPANIES 2 septum vials with teflon-lined discs identified as:

specimen ☒; duplicate ☒; triplicate ☐; blank(s) ☐and ☐ amber glass jug(s) with teflon-lined cap(s) identified asand ☐ other container(s) (describe) identified as

Containers are marked as follows to indicate preservation (circle):

NP: No preservation; sample stored at room temperature (~20°C).

P-ICE: Sample stored in an ice bath.

P-Na₂O₃S₂: Sample preserved with 3 mg Na₂O₃S₂/40 ml and stored at room temperature.

CERTIFICATE(S) OF SAMPLE RECEIPT

I (we) certify that this sample was transferred from to
at (location) on

(date & time) and that the statements in this block are correct.

Disposition of Sample Seal(s) Intact: Yes ☐ No ☐

Signature(s)

I (we) certify that this sample was transferred from to
at (location) on

(date & time) and that the statements in this block are correct.

Disposition of Sample Seal(s) Intact: Yes ☐ No ☐

Signature(s)

LAB. NO.

org-1083

REMARKS :

REMARKS: No purgeables detected.

Seal(s) Intact: Yes No . Seal(s) Broken by _____ date _____
I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements in this block and the analytical data on this page accurately reflect the analytical results for this sample.
Date(s) of analysis 6 Dec 84 . Analysts signature J. J. Finney
I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block. Reviewers Signature: _____

84-1085-C

OIL
CONSERVATION
DIVISIONDAVID G. BOYER
HydrogeologistP.O. BOX 2088
LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
505-827-5812LABORATORY SLD Priority 2
LAB NUMBER OR 1085, A, B..SLD Users Code No. 59600

ALL CONTAINERS WHICH THIS FORM ACCOMPANIES ARE COLLECTIVELY REFERRED TO AS "SAMPLE".

CERTIFICATE OF FIELD PERSONNEL

Sample Type: Water ☒ Soil ☐ Other ☐Water Supply and/or Code No. Monument Community LocalityCity & County Mon. Well #20Collected (date & time) 1/10/85 8411280925 By (name) BOYERpH= ; Conductivity= umho/cm at °C; Chlorine Residual= Dissolved Oxygen= mg/l; Alkalinity= ; Flow Rate=

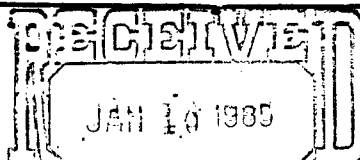
Sampling Location, Methods & Remarks (i.e. odors etc.)

Mon. Well #20 (Bailed Heavy Oil on water)I certify that the statements in this block accurately reflect the results of my field analyses, observations and activities. Signed David G. BoyerI certify that I witnessed these field analyses, observations and activities and concur with the statements in this block. Signed Method of Shipment to Laboratory THIS FORM ACCOMPANIES 2 septum vials with teflon-lined discs identified as:specimen X; duplicate X; triplicate ; blank(s) and amber glass jug(s) with teflon-lined cap(s) identified as and other container(s) (describe) identified as

Containers are marked as follows to indicate preservation (circle):

NP: No preservation; sample stored at room temperature (~20°C).ICE: Sample stored in an ice bath.P-Na₂O₃S₂: Sample preserved with 3 mg Na₂O₃S₂/40 ml and stored at room temperature.

CERTIFICATE(S) OF SAMPLE RECEIPT

I (we) certify that this sample was transferred from to
at (location) on (date & time) and that the statements in this block are correct.Disposition of Sample . Seal(s) Intact: Yes ☐ No ☐Signature(s) I (we) certify that this sample was transferred from to
at (location) on (date & time) and that the statements in this block are correct.Disposition of Sample . Seal(s) Intact: Yes ☐ No ☐Signature(s) OIL CONSERVATION DIVISION
SANTA FE

ANALYSES REQUESTED

LAB. NO.

PLEASE CHECK THE APPROPRIATE BOXES BELOW TO INDICATE THE TYPE OF ANALYTICAL SCREENS REQUIRED. WHENEVER POSSIBLE LIST SPECIFIC COMPOUNDS SUSPECTED OR REQUIRED.

029-1085

QUALITATIVE	QUANTITATIVE	PURGEABLE SCREEN	QUALITATIVE	QUANTITATIVE	EXTRACTABLES SCREEN
		ALIPHATIC HYDROCARBON SCREEN			ALIPHATIC HYDROCARBONS
X	X	AROMATIC HYDROCARBON SCREEN			CHLORINATED HYDROCARBON PESTICIDES
		HALOGENATED HYDROCARBON SCREEN			CHLOROPHENOXY ACID HERBICIDES
		GAS CHROMATOGRAPH/MASS SPECTROMETER			HYDROCARBON FUEL SCREEN
					ORGANOPHOSPHATE PESTICIDES
					POLYCHLORINATED BIPHENYLS (PCB's)
					POLYNUCLEAR AROMATIC HYDROCARBONS
		SPECIFIC COMPOUNDS			SPECIFIC COMPOUNDS
		Benzenes, Xylenes, Toluene			

REMARKS:

ANALYTICAL RESULTS

COMPOUND	CONC-ENTRATION	COMPOUND	CONC-ENTRATION
halogenated purgables	none detected	n-propyl-benzene*	260 $\mu\text{g}/\text{g}$
benzene*	6000 $\mu\text{g}/\text{g}$	1,3,5-tri-methyl-benzene*	310 "
toluene*	3400 "		
ethyl-benzene*	600 "		
p-xylene*	250 "		
m-xylene*	480 "	# DETECTION LIMIT	100 $\mu\text{g}/\text{g}$
o-xylene*	400 "	⊙ DETECTION LIMIT	200 $\mu\text{g}/\text{g}$

REMARKS:

Other substituted aromatics also detected but not identified.

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes No Seal(s) Broken by _____ date _____
 I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements in this block and the analytical data on this page accurately reflect the analytical results for this sample.
 Date(s) of analysis 6 Dec 84 Analysts signature A. Finney
 I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block. Reviewers Signature: _____

Memo

From

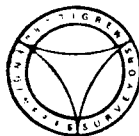
PHILIP L. BACA
Environmental Engineer

To

- 1.) Flow Spec. — Pipe Schedule
- 2.) Pump Spec. — Discharge Pressure
— Motor HP
- 3.) Can easily go to 6" line with
200 gpm.
6" → System $\Delta P \approx 90 - 100$ psi
6" → velocity = 2.2 ft/s
4" → System $\Delta P \approx 225 - 250$ psi
4" → velocity = 5.0 ft/s
- 4.) At 500 gpm
8" → System $\Delta P \approx 95 - 110$ psi
8" → velocity = 3.2 ft/s

P.O. BOX 807
CLOVIS, NM 88101
(505) 762-3716

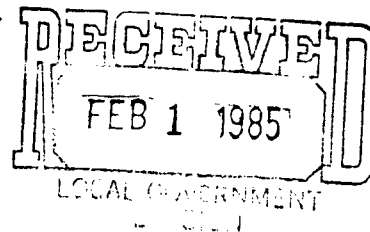
PETTIGREW & ASSOCIATES



RICHARD R. PETTIGREW, P.E.-L.S.

P.O. BOX 5769
HOBBS, NM 88241
(505) 393-9827

January 28, 1985



Department of Finance & Administration
Local Government Division
505 Don Gaspar
Santa Fe, New Mexico 87503

ATTN: Jackie Block

Re: New Mexico Community
Assistance for Monument,
New Mexico

Dear Mr. Block:

Our firm herein is submitting a cost estimate to develop a new water supply for the Village of Monument, New Mexico. Page 1 of the attached cost estimate reflects the approved amount of \$85,000 from the New Mexico Community Assistance Grant Program, and Page 2 indicates the total cost to complete the Project.

The Scope of Work consists of the construction, development and testing of a water supply and test well, construction of approximately three miles of transmission line and connection to the water storage reservoir.

As indicated on Page 1 of the cost estimate, it will require \$76,144.60 for the construction and development of a water supply and property acquisition. The remainder of the \$85,000 is shown as engineering and contingencies.

Department of Finance & Administration
January 28, 1985
Page 2

Page 2 of the cost estimate indicates the amount necessary to complete the Project as outlined in the above-mentioned Scope of Work, which will require \$368,956.75 additional funding. The cost of the 8 inch transmission line, including trenching, bedding and backfilling, is \$287,020.80. The trenching will be primarily in rock, which is the result of the high cost estimate for the pipeline construction. However, Texas-New Mexico Pipeline Company has indicated that they would work with the Village of Monument concerning the trenching since pipelines are their primary business. If the pipeline company provides the trenching, this would decrease the additional funding of the Project by \$133,056. Texas-New Mexico Pipeline Company has indicated a commitment, one way or the other, after the bids for the transmission line have been opened.

Should you have any questions concerning this Project, please do not hesitate to contact me.

Respectfully submitted,

PETTIGREW & ASSOCIATES


Ray A. Hohstadt

RAH

Attachments

ESTIMATED PROJECT COSTS

WATER FIELD DEVELOPMENT IN OGALLALA

NO.	DESCRIPTION	UNIT	QUAN.	UNIT PRICE	AMOUNT
=====					
1)	DEVELOPMENT OF WATER WELL				
	MOBILIZE & DEMOBILIZE	1	ls	\$1,000.00	\$1,000.00
	DRILL PILOT HOLE 8" DIA	160	ft	\$14.00	\$2,240.00
	REAM PILOT HOLE 24" DIA	40	ft	\$28.00	\$1,120.00
	REAM PILOT HOLE 16" DIA	120	ft	\$18.00	\$2,160.00
	18" ID CONDUCTOR PIPE	40	ft	\$31.64	\$1,265.60
	BLANK CASING, 10" ID	100	ft	\$18.72	\$1,872.00
	WELL SCREEN	60	ft	\$160.00	\$9,600.00
	GAUGE LINE	90	ft	\$6.30	\$567.00
	GRAVEL PACK IN PLACE	10	cy	\$150.00	\$1,500.00
	DEVELOPMENT	100	hr	\$70.00	\$7,000.00
	TEST PUMPING	48	hr	\$80.00	\$3,840.00
	GEOPHYSICAL LOGS	1	ls	\$4,000.00	\$4,000.00
	WELL STERILIZATION	1	ls	\$600.00	\$600.00
	PUMP	1	ea	\$4,200.00	\$4,200.00
	WATER METER	1	ea	\$1,050.00	\$1,050.00
	POWER LINE	3,000	ft	\$3.41	\$10,230.00
	ELECTRICAL	1	ls	\$2,500.00	\$2,500.00
	GATE VALVE	1	ea	\$650.00	\$650.00
	CHECK VALVE	1	ea	\$750.00	\$750.00
					=====
	TOTAL ESTIMATED COST OF WELL				
					\$56,144.60
2)	PROPERTY, EASEMENTS & PERMITS				
					\$20,000.00
					=====
	TOTAL PROPERTY, EASEMENTS AND PERMITS				
					\$20,000.00
					=====
	SUBTOTAL WATER SUPPLY DEVELOPMENT				
					\$76,144.60
3)	ENGINEERING AND CONTINGENCIES				
					\$8,855.40
					=====
					\$8,855.40
					=====
	TOTAL ESTIMATED COST OF NO.'S 1, 2 AND 3				
					\$85,000.00
	=====				
	PETTIGREW & ASSOCIATES=====				

ESTIMATED PROJECT COSTS CONTINUED

WATER FIELD DEVELOPMENT IN OGALLALA

=====					
NO.	DESCRIPTION	UNIT	QUAN.	UNIT PRICE	AMOUNT
=====					
4) 8" TRANSMISSION LINE AND CONNECTION TO THE WATER STORAGE RESERVOIR.					
	TRENCHING	15,840	ft	\$8.40	\$133,056.00
	BACKFILL, BEDDING, ETC.	15,840	ft	\$3.12	\$49,420.80
	PIPE C-900 PVC	15,840	ft	\$3.85	\$60,984.00
	TIE-IN, TESTING	15,840	ft	\$2.75	\$43,560.00
=====					
TOTAL ESTIMATED COST OF TRANSMISSION LINE					\$287,020.80
5) ENGINEERING, ADMINISTRATIVE, LEGAL & CONTINGENCIES					\$90,791.35
LESS ENGINEERING & CONTINGENCIES FROM PAGE 1					\$8,855.40
=====					
TOTAL ESTIMATED ENGINEERING, ADMINISTRATIVE, LEGAL & CONTINGENCIES					\$81,935.95
=====					
SUBTOTAL OF PIPELINE CONSTRUCTION COST					368,956.75
=====					
TOTAL ESTIMATED COST OF PROJECT					\$445,101.35



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

TONY ANAYA
GOVERNOR

February 5, 1985

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88240
(505) 393-6161

MEMO TO: Mr. R. L. Stamets
FROM: Jerry Sexton
SUBJECT: Monthly Report - District I

Monument-- Pettigrew & Associates are getting close to having their report finished, so a meeting will probably be called before long.

*Set for
Feb 21*

The UIC Meeting was informative, but it appears that EPA wants to turn the UIC program from a workable program to a reporting program. All states in attendance stated that the states have a money pinch and anything EPA requires in reporting will be taken out of operation of the program.

A meeting was held with the Vacuum flood operators to discuss waterflow problems. The OCD District personnel will look at the material submitted by the companies and determine the aerial extent of the waterflow problem. After this is done another meeting will be called to discuss the next step.

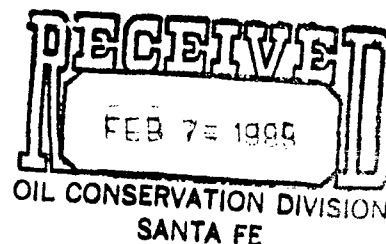
I had a fellow in today wondering what we knew about PCB contamination in an approved oilfield pit. He understood the federal people were working on the problem. I have no idea whether this is correct or not.

*Dave
Phase check
this*

I am to give a talk on April 11th to the Lea County Soil Conservation Board of Directors on the water situation in Lea County. I have done this for the past 6 years or at least every other year for this time period, so I guess this is not a problem.

We are getting close to making a decision on hiring our last Field Rep. I will call before making the final selection. We have some excellent looking applications.

The revision on the rules on the SE New Mexico prorated gas pools will be ready anytime you call a general meeting.

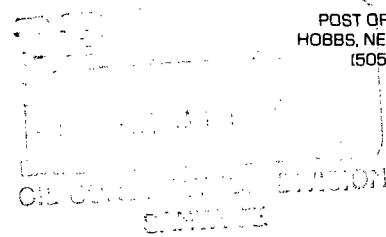




STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

TONEY ANAYA
GOVERNOR

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88240
(505) 393-6161



MEMO TO: Mr. R. L. Stamets
FROM: Jerry Sexton *[Signature]*
DATE: January 18, 1985
SUBJECT: Monument Water Well Situation

Bernie Lednikey with Texas New Mexico Pipeline received a call from Oscar Simpson about test pumping the standby well the OCD drilled for the Monument situation.

When the OCD drilled the well it was pump tested for a four hour period at 45 GPM with drawdown so slight it was not measurable with the equipment we had. Since that time, the well has been tested and the water checked okay.

The EID refused to allow Texas-New Mexico to drill the well in the first place and now they want them to pump test the well which they have nothing to do with.

Would you please check with Gus and see if they have changed policy as per what they want Texas-New Mexico to do and why they did not coordinate any request through Eddie or myself.

Also, I would like to have you ask the EID for a copy of the weekly water analysis they have been taking on the monitor wells we drilled.



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

TONEY ANAYA
GOVERNOR

POST OFFICE BOX 1880
HOBBS, NEW MEXICO 88240
(505) 393-6161

OIL CONSERVATION DIVISION
Test Well #6

This well is located 1,000 feet NW of spill site
Drill with 4 1/2" bit first to test then changed to 8 3/4" bit to complete

200

Footage

0' - 1'	Top Soil
1' - 3'	Hard Caliche
3' - 19'	Soft Caliche
19' - 24'	Sand
24' - 26'	Clay & Sand - wet
26' - 60'	Gravel & Sand - good water formation

Had red clay at 57' - TD is 60'
Ran 6" PVC w/40' of perfs
gravel packed with a Bentonile Cap - will cement later
will test water quantity later - 85 ppm Cl

12-6-84 - Pump test on #6

pump set @ 55 1/2 feet with a 3 hp pump
1 1/2" discharge: 45 gallons per minues in 2 1/2 hrs
field test was 200 ppm



MEMORANDUM OF MEETING OR CONVERSATION

☒ Telephone ☐ Personal

Time 8:15 AM

Date 1/8/85

Originating Party

DAVE BOYER

Other Parties

ROLF RUSSEMER
EIA-Hobbs

Subject

SAMPLING OF MONUMENT WELLS

Discussion

I called ROLF RUSSEMER to see if he had sampled the new monitor well and the large monitor well installed for emergency use. He had not and was waiting for bailers from Dennis to sample.

Conclusions or Agreements

I told ROLF that Dennis was making up bailers and should be sent shortly.

Distribution

Monument File

Signed

Dave Boyer



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

January 3, 1985

TONEY ANAYA
GOVERNOR

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

Mr. Gustavo Cordova
Program Manager, Water Supply Section
New Mexico Environmental Improvement
Division
P. O. Box 968
Santa Fe, New Mexico 87504-0968

Dear Gus:

Attached is the proposed contingency plan for an emergency hook-up to Monument's community water system of the recently-drilled OCD 6"-diameter monitor well. A maximum of eight hours of time is estimated to be needed for installation and hook-up, at an estimated cost of about \$5,000. I understand that payment for an emergency hook-up would be provided out of National Guard monies. Also, I believe that the monitor well has been, or shortly will be, sampled by the EID for water quality adequacy and would appreciate copies of all results when they are available.

Since the OCD has provided technical assistance and a monitor well that can be used as an emergency replacement well, we request that future press releases or other public notification be coordinated and jointly issued by both agencies to the extent possible. By cooperating in this manner, staff of both divisions can then present a single state government position, and more knowledgeably answer questions from the press and general public.

Thank you for your continued cooperation in this matter.

Sincerely,

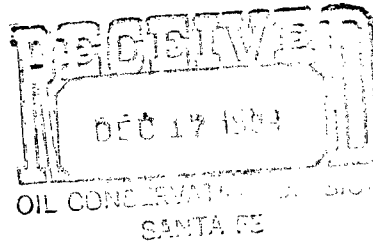
DAVID G. BOYER,
Environmental Bureau Chief

cc: R. L. Stamets
Jerry Sexton
Paul Biderman



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

TONY ANAYA
GOVERNOR



POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88240
(505) 393-6161

MEMO TO: Mr. R. L. Stamets
Director

FROM: Jerry Sexton *JS*

DATE: December 14, 1984

SUBJECT: HOOK UP OF TEMPORARY WATER WELL AT MONUMENT
(Emergency Contingency Plan)

The following are estimated costs as well as time required for hooking up a temporary water well to the Monument Water System.

<u>Item</u>	<u>Service</u>	<u>Cost</u>	<u>Time Required</u>
Electric (Amerada secondary line)			
Dixie Electric	Set pole, cut-off switch fuse box and line	\$1900.00	6 hrs.
<u>Water line</u>			
Walton Constr.	2" PVC fast line installed	\$1710.00	8 hrs.
<u>Pump for water well</u>			
Larry's Pump Co.	5 HP 50 gal per min pump installed	\$1200.00	4 hrs.
Water well in place with 6" PVC casing.			
Miscellaneous cost		\$ 200.00	
Total estimated cost		\$5,010.00	Maximum time 8 hrs.

November 29, 30, 31, & Dec. 3

OCD TW #1 125 ft North of School well

0-4 loose Rock
4-11 Caliche Soft
11-16 Hard Caliche
16-19 Clay + Caliche
19-21 Clay + Sand
21-28 Clay
28-29 Clay + Sand
29-TD 35 Sand + H₂O

Water at 28.

Run 5 in PVC to 32 ft - 3 ft of fill back.

20 ft of Perforations.

Gravel Packed and Capped with Bentonite + Native soil.

Will cement Surface.

OCD TW #3 Located halfway between TW #2 319 ft

0-1 Top Soil
1-16 Rock + Hard Caliche
16-20 Clay + Sand
20-22 $\frac{1}{2}$ Clay - wet
22 $\frac{1}{2}$ water

TD 31 Run 5 in PVC

18 ft of Perforations

gravel Packed with Bentonite cap. & Will cement surface

1-4 Drilled with 78 bit

OCD TW #4 located 250 West of School well

0-1 Top Soil

1-13 Soft Caliche

13-20 Hard Caliche

21-24 Caliche + Sand

24-25 Clay + Sand

25-~~5~~ TD Sand

Spray of H₂O 25 ft

TD - 34 ft Run 5/8" PVC

20 ft of Perfor. Gravel packed + Bentonite Cap. will
cement surface later.

OCD TW #2 located 200 ft NW of school well.

0-1 Top Soil

1-6 Soft Caliche

6-14 Sand + Caliche

14-20 Hard Caliche

20-22 Sand + Caliche

22-24 Clay + Sand

24-25 Clay

25 - Water

TD 34 Run 5/8" PVC

20 ft of Perfor. Gravel Packed with Bentonite cap.
will cement later.

OCD Tw #5 located $\frac{3}{4}$ of mile North of School
Drill $8\frac{3}{4}$ Bit

0-1 Top Soil

1-6 Hard Rock

6-10 Hard Caliche

10-12 Soft Caliche

12-15 Sand + Gravel

15-17 Sand + Caliche

17-20 Sand

22-80 ft Sand + Clay

small show of water.

TD-80 - Plugged Well.

OCD Tw #6 located 1000 ft NW of Spill site

Drill with $4\frac{1}{2}$ bit first to test

change to $8\frac{3}{4}$ bit to complete.

0-1 Top Soil

1-3 Hard Caliche

3-19 Soft Caliche

19-24 Sand

24-26 Clay + Sand wet

26-60 Gravel + Sand - good water formation

Red Clay at 57 TD 60

Ran 6 in PVC with 40 ft of Perfs:

Gravel Packed with a Bentonite Cap

will cement later.

Will test water quantity later.

85 ppm Cl.

Diamond Bits
Downhole Drilling Tools
Hobbs, New Mexico 505-392-6506
Box 160 88240
Midland — Odessa, Texas 915-563-1342
Monahans, Texas 915-943-2222

64023

9 SACKS CEMENT	6.50	59.50
5 LOCKS	7.20	36.00
5 BOLTS	1.50	7.50
4 YARDS GRAVEL	30.00	120.00
10 5" CAPS	8.50	85.00
2 6" CAPS	10.50	21.00
61.5 FT 4" PVC	3.00	184.50
143.5 5" PVC	2.10	301.35
TEST PUMP WELL IN		280.00
CEMENT S WELL CASE	1.75	00
PREFABRICATED CEMENT CASE	70.00	
Drilling Time 27 Hr		3375.00
BIT		200.00

Tx
Tx

700.
~~511~~

591585

LARRY'S DRILLING & PUMP CO.
2601 WEST BENDER
HOBBBS, NEW MEXICO 88240

18767

**Customer's
Order No.**

Date _____

13-18

78

Name NEW MEXICO OIL CONSERVATION DIVIS
Address P.O. Box 1980

HOBBS, NEW MEXICO

[illegible]

ALL claims and returned goods MUST be accompanied by this bill.

Rec'd By

Submarine Cables

Memo

From

EDDIE W. SEAY
Field Representative

To 12-6-84

Pump test on #6

Set at 55½ ft 3hp Pump

1½ discharge: 45 gal per min
2

2½ hr.

Pump test

8:22 5'25 AT site - No res -

9:20 WATER TABLE - Static 17'

Pumping 45 gpm (est) began 9:30 AM

9:50 1 1/2 gal water = 1-2 gpm red sand

10:00 AM Pump stopped - 1-1/2 gal - stopped - no turbidity - Cessoline added to generate -

10:15 AM - Sound sand sp - slightly turbid - some amount of sand -

10:46 - Sand sample #3 - approx 1/3 the previous amount of sand - no turbidity -

11:00 - Sampling begun for chem analysis

3:00 PM Samples packed & for SLD Albuquerque by Revolution

Discharge 3 hp submersible - 42' from top of casing
1" ID at valve - 1/2" drop pipe to top of casing - pipe = PVC + galvanized -

Pump Test 50706 #6



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

TONY ANAYA
GOVERNOR

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

M E M O R A N D U M

TO: PAUL BIDERMAN, SECRETARY

FROM: R. L. STAMETS, DIRECTOR

SUBJECT: NOVEMBER 27 MEETING IN HOBBS - MONUMENT
CONTAMINATION PROBLEM

On the subject date a meeting was held in our Hobbs office between a large number of interested persons relative to the Monument contamination problem. The meeting resulted in the following:

- (1) affirmation that the EID and OCD would like to see the permanent supply well located outside the immediate area to avoid potential old contamination problems;
- (2) OCD assistance to the community's contractor in well site selection;
- (3) development of a scheme to quickly establish a contingency plan for prompt drilling of a closer replacement well and connection to the system if the remaining wells should become contaminated;
- (4) the understanding by all participants that the majority of the changes to and expenses for the desired new system result from upgrading the system and not from simply replacing the system;
- (5) that Texas New Mexico Pipeline (TNM) stands ready to drill and tie in a replacement well 1000 feet North of the contaminated well at an expected cost of \$20,000 to \$35,000;

Page 2
Memorandum to Paul Biderman
November 28, 1984

- (6) there is a preliminary indication that TNM will participate in the upgrading of the system to some as yet unspecified degree;
- (7) the community's engineering firm will have the design and estimated costs of the new system completed by the end of January, 1985; and
- (8) the OCD and EID will help facilitate any required reviews or permitting.

The meeting was very amicable and a high degree of cooperation was exhibited by participants from the OCD and EID. Jerry Sexton added significantly to the meeting through his suggestion of a contingency plan. The OCD will shortly be drilling four or five monitor wells in the area to provide early warning of any problem which might be moving toward the well now in use.

November 28, 1984
fd/

cc: ✓ Dave Boyer
Jerry Sexton

Monument Meeting 11/27/84

Naming
RICHARD R. PETTIGREW

Johnny Cope

LARRY FELKINS

Judy Mulkey

DEBRA Hicks

HUBERT H. QUINTANA

Stephen Massey

Lee Scott

Alvin McKay

Loy Hohstadt

W.F. Capeland

Darison McCashin

PHIL BACA

Terry M. Sholin

Rolf Ruffner

Tom Burt

Percy Blair

B. L. LEDNICKY

L. H. Nusz

Eddie W. Dean

Evelyn Downs

David Boyer

R. L. Stomets

Jeff Taylor

GUS CORDOVA

Organization
PETTIGREW & Assoc.

CAC

LARRY'S DAILLING

KBIM-TV

Pettigrew & Assoc.

SNMEDD

SNMEDD

Lea County

KYKK-KZOR news, Hobbs

Pettigrew & Assoc.

President Monument water wps

EID - Roswell

OCD

NEWS-SUN

EID - Hobbs

EID - Carlsbad/Hobbs

EID - Roswell

TEXAS-NEW MEXICO PIPE LINE CO

Texas-New Mexico Pipe Line Co.

OCD Hobbs

OCD Hobbs

OCD Santa Fe

OCD Santa Fe

OCD Santa Fe

EID Santa Fe



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

TONY ANAYA
GOVERNOR

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

November 21, 1984

MEMORANDUM

TO: R. L. STAMETS, DIRECTOR
OIL CONSERVATION DIVISION

FROM: DAVID BOYER, HYDROGEOLOGIST *DB*

SUBJECT: HYDROCARBON CONTAMINATION OF MONUMENT COMMUNITY
WATER SYSTEM - CDC ACTION AND SITUATION UPDATE

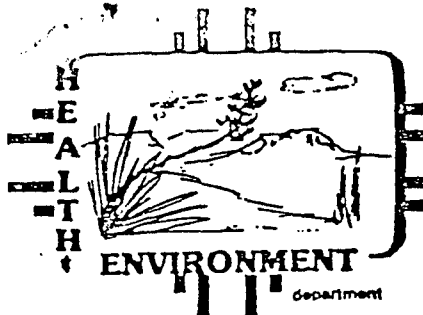
Yesterday, (November 20), I attended the Community Development Council meeting in Las Vegas and explained the Monument contamination situation to the council. Gus Cordova, Chief of the EID's Water Supply Program also attended. The Southeastern New Mexico Economic Development District (represented by Hubert Quintana and Steve Massey) requested \$164,000 in emergency funding to provide alternate source of supply for the community system.

Instead, the CDC staff recommended that the council pass an appropriation of \$85,000 from the State Emergency Fund for pipeline and well engineering, chlorinator, pipeline materials plus 20% contingency funds. The location of the well was specified to be two to three miles north of the community. The CDC also directed that Lea County negotiate between the company and Monument's consultant, Pettigrew & Associates, and that EID would be the lead agency for review of design and other considerations regarding system replacement.

In a separate discussion with Jon Thompson, (head of EID Community Support Services Bureau) and Gus Cordova prior to the CDC meeting, Gus stated that Section 103 of the Water Supply Regulations prohibits construction or modification of a facility without first having EID approval. Also, since the agent for Monument was Pettigrew & Associates, plans, specifications and engineering drawings, would need to come from Pettigrew to EID for review.

This morning I was informed that Tex-Mex was starting drilling to locate a replacement well about 1,000 feet north of the existing well. I contacted Mr. Lednicky and informed him of the EID requirements. After he requested an EID letter stating these requirements, I contacted Richard Holland, Deputy EID Director, who said EID would provide such a letter today. Mr. Lednicky said he would not proceed pending receipt of the letter. Also, Jerry Sexton informed me this morning that Tex-Mex did not detect oil in Monitoring Well No. 28 and that the report was due to a Tex-Mex error by a field person.

As a result of today's events, a meeting has been scheduled for 9:30 a.m., Tuesday, November 27, at the OCD office in Hobbs with all the parties involved. I am also planning to remain on site to be present Wednesday for sampling during initiation of the drilling of the four OCD monitoring wells near the Monument school wells.



TONEY ANAYA
GOVERNOR

STATE OF NEW MEXICO

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

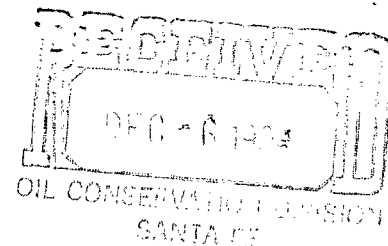
(505) 827-9811
DENISE FORT, DIRECTOR

Review and Initial:

Prog. Mgr. _____
Eng. II _____
Eng. I _____
Env. Sci. _____
Env. Sci. _____
Secy _____

November 21, 1984

B. L. Lednický, District Manager
Texas-New Mexico Pipeline Company
P. O. Box 2528
Hobbs, NM 88240



SUBJECT: MONUMENT WATER COOPERATIVE

Dear Mr. Lednický:

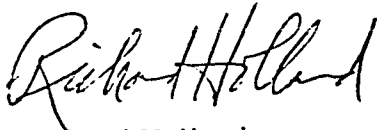
The Oil Conservation Division has advised this office that your company would like to drill a replacement well for the Village of Monument. The Environmental Improvement Division (EID) agrees that a replacement well must be drilled as expeditiously as possible, but the following steps must be taken prior to construction:

1. The Village's Consulting Engineer must design the plans for construction and develop the specifications for the work to be performed.
2. The engineer must determine that adequate water rights are available or can be transferred to the new well. He should also assist the Community in acquiring the necessary easements for the transmission line.
3. The plans and specifications for the project must be reviewed and approved by EID prior to any construction.
4. Texas-New Mexico Pipeline should work directly with the consulting engineer in providing any forced account work such as drilling and trenching for the project.
5. Both EID and the consulting engineer will provide construction oversight and inspections as necessary during the course of construction.

Mr. B. L. Lednicky
November 21, 1984
Page -2-

EID appreciates the positive steps that your company has taken in helping the Village of Monument with their water supply needs. Hopefully, through the efforts of all concerned, a safe and adequate water supply can be developed for the citizens of Monument.

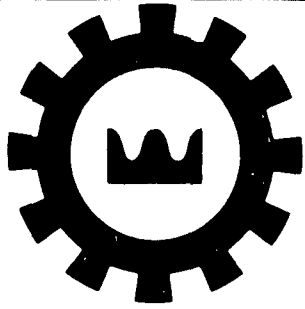
Sincerely,



Richard Holland
Deputy Director

RH:eem

cc: W. E. Copeland, President/Monument Coop
Charles Nylander, Bureau Chief, SWQB
Gustavo Cordova, Program Manager/WSS/CSSB
David Boyer, OCD



SOUTHEASTERN NEW MEXICO
ECONOMIC DEVELOPMENT DISTRICT

P.O. BOX 5639 R. I. A. C.

ROSWELL, NEW MEXICO 88201

505- 347-5425

HUBERT H. QUINTANA Executive Director

November 21, 1984

Mr. David G. Boyer
Hydrogeologist
State of New Mexico
Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87501

Dear Mr. Boyer:

Your assistance with the Monument Water Users grant application was greatly appreciated. Your testimony and report on behalf of the Village to the Community Development Council was most helpful in enabling us to obtain \$85,000 in emergency/contingency funds to repair their water system.

If I or my staff can ever be of assistance to you, please do not hesitate to contact us.

Sincerely,


Hubert H. Quintana
Executive Director

HHQ:cp

WELL #	FOOTAGE	DEPTH	SOIL SAMPLE	T-D	OTHER
8	175' W of water well	0 - 2' 2 - 11' 11 - 22' 23 - 24' 24 - 26' 27'	hard caliche sand & gravel hard caliche clay - soil sample clay & sand wet sand, gravel, & water	36'	no smell or show of oil - bale sample: no show - good water - perfs at 15' of surf.
9	approx. 150' NE of WW & 15' from SW pipeline	0 - 2' 2 - 5' 5 - 7' 7 - 15' 15 - 20' 20 - 23' 23 - 28'	calichi - discolor sample caliche - discolor sample sand & gravel caliche sand, gravel, & clay - took sample clay & sand - sample clay, gravel, & sand	35'	water at 27' - perfs at 14' of surf - slight oil odor - caught bale sample - ran out of dis- color soil & caliche at approx. 20'.
10	100' N of WW	0 - 1' 1 - 5' 5 - 7' 7 - 10' 10 - 18' 18 - 22' 22 - 29'	top soil hard caliche soft caliche & sand hard rock & caliche sand, caliche, & gravel - sample sand & clay - sample clay & sand	35'	hit water at 29' - perfs at 14' of surface - bale sample - show of oil - no discoloration or smell
11	approx. 500' SE of WW	0 - 1' 1 - 5' 5 - 14' 14 - 16' 16 - 18' 18 - 23' 23 - 26' 26 - 30'	top soil hard rock caliche, sand, & gravel - sample hard caliche gravel & caliche - slight smell of oil clay & sand - sample clay & sand - hard rock clay, sand, & gravel - smell of oil	37½'	hit water at 30' - 20' perfs - smell of oil - bale sample - pulled PVC up 4' - show of oil.

WELL #	FOOTAGE	DEPTH	SOIL SAMPLE	T-D	OTHER
12	150' SE of well #11	0 - 1' 1 - 19' 19 - 25' 25' 30'	top soil hard caliche clay, sand, & gravel clay & sand water	35'	water at 30' - cased to 34½' - 25' perfs. - rig back of #11 - to bale & pull up csg at 4' - top perfs - 13'
13	200' SW of WW	0 - 1' 1 - 2' 2 - 14' 14 - 17' 17 - 20' 20 - 28'	top soil rock hard caliche soft caliche & sand hard caliche sand, clay, & gravel	35'	25' of perfs - hit water at 29'
14	approx. 1/10 mile SE from WW	0 - 19' 19' 19 - 28' 28 - 30' 30 - 35'	caliche small & soft water & oil - smell at 16' caliche, sand, & clay sand & clay gravel, sand, & clay		bale sample - strong oil odor - 25' of perfs
15	approx. 500' SE of WW	0 - 7' 7 - 11' 11 - 19' 19 - 21' 21 - 23' 23 - 25' 25 - 35'	caliche sand & gravel caliche - oil smell at 17' clay, gravel, & caliche water at 19' clay & gravel clay & sand clay, sand, gravel - water at 27'	35'	25' of perfs - bale sample - strong oil odor
16	300' SE of WW	0 - 1' 1 - 17' 17 - 19' 19 - 25'	top soil caliche - smell at 16' sand & gravel sand & clay - water at 19'	25'	20' of perfs - bale has oil show - smell at 16'
17	1/2 way between #16 & #1	0 - 1' 1 - 10' 10 - 13' 13 - 16' 16 - 19' 19 - 23' 23 - 30'	loose rock sand, gravel, & clay clay & gravel hard caliche sand & gravel - smell at 17' clay & sand clay, sand, & gravel	30'	water at 25' - 20' of perfs - smell at 17'

WELL #	FOOTAGE	DEPTH	SOIL SAMPLE	T-D	OTHER
18	approx. 75' SW of #12 & approx. 100' NW of #14	0 - 1' 1 - 12' 12 - 16' 16 - 18' 18 - 19' 19 - 22' 22 - 28'	loose rock caliche, sand - soft hard caliche - smell at 16' sand, gravel & caliche sand & gravel clay & sand sand & gravel	28'	perfs at 20' - water at 20' - smell at 16'
19	approx. 100' W of #10 & approx. 250' NW of WW	0 - 6' 6 - 8' 8 - 14' 14 - 18' 18 - 20' 20 - 28' 28 - 35'	top soil caliche sand & gravel sand & hard caliche sand, clay, & gravel sand & clay sand & gravel - water at 31'	35'	water at 31' - 25' of perfs - no smell - so sign
20	approx. 150' SE of #21	0 - 6' 6 - 17' 17 - 27' 27 - 30'	top soil & loose rock caliche - soft to 12' sand & clay sand	30'	water at 18'
21	approx. 150' NE of #20 & near sec line corner	0 - 6' 6 - 12' 12 - 18' 18 - 19' 19 - 21' 21 - 22' 22 - 25' 25 - 27' 27 - 30'	caliche & chert - sample caliche & chert - sample caliche & sand - sample sand - damp - no odor clay, sand, & gravel - no odor top of water - clay - no water yet no water - damp clay - no odor top of water TD & cased w/2 jts of PVC	30'	cased w/2 jts of PVC pipe - water sample from baler - water standing 12' in hole at 30'
22		0 - 6' 6 - 12' 12 - 15' 16' 19' 30'	caliche - sample caliche - sample caliche soil - odor of oil or gas pure crude oil appeared in hole top of water clay & sand	30'	baler sample of water

WELL #	FOOTAGE	DEPTH	SOIL SAMPLE	T-D	OTHER
23		0 - 10' 10 - 12' 12 - 16' 16 - 18' 18 - 30'	caliche - sample caliche - sample caliche & sand - oil odor oil coming in hole sand, gravel, clay & oil	30'	pipel & cased PVC - probe showed 2' of oil on water
24	29-19-37	0 - 12' 12 - 16' 16 - 20' 20 - 22' 24'	caliche - sample caliche - oil odor caliche - faint odor clay, sand, gravel - no odor water	24'	bailer sample showed oil on water - set 20' PVC pipe & cased hole to top - top of water at 24'
25	29-19-37	0 - 10' 10 - 15' 15 - 18' 18 - 24'	sand, caliche, & gravel sand - top of water - no odor sand, clay, & gravel - no odor sand & clay	24'	set 20' perf - PVC pipe & cased hole to top
26		0 - 6' 6 - 8' 8 - 12' 12 - 18' 18 - 32' 32 - 34'	sand, gravel, & caliche sand, gravel, & caliche caliche sand & gravel sand & clay top of water	34'	no odors - set perfs - PVC pipe at 20' - cased to surf
27		0 - 8' 8 - 11' 11 - 26' 26 - 30'	hard caliche gravel, sand, & caliche sand & clay - damp sand & gravel - water at 27'	30'	20' of perfs. - water at 27'
28		0 - 15' 15 - 20' 20 - 23' 23 - 24' 24 - 30'	hard caliche rock sand, caliche & clay clay & sand clay - damp sand & gravel	30'	20' of perfs - water at 24'

<u>WELL #</u>	<u>FOOTAGE</u>	<u>DEPTH</u>	<u>SOIL SAMPLE</u>	<u>T-D</u>	<u>OTHER</u>
29		0 - 13' 13 - 18' 18 - 19' 19 - 30'	hard caliche rock gravel, clay & sand clay - damp sand & gravel - water at 19'	30'	20' of perfs - water at 19'

WELL NUMBER	FOOTAGE	DEPTH	SOIL SAMPLE	TOTAL DEPTH	OTHER
3	approx. 200' NW of Monument water well	28'	water & sand	39'	hole was drilled approx. NW edge of spill - no smell or oil visible - approx. 90' SW from actual leak - slotted PVC to 26 perfs.
4	approx. 165' NW of water well - hole 21' S of ditch line & 140' SE of leak	0 - 6' 6 - 10' 10 - 17'	discolored soil & caliche - oil smell no oil odor - visible discoloration in caliche no oil odor - visible discoloration in sand & caliche	35'	spray of water at 18' - 20-25' sample clay & sand - water at 26' - pipe to 34' - one sample taken - bale sample slotted pipe - 26' of perfs.
5	NE of pipeline - approx. 100' N of pipeline	9' 15' 2 - 9' 9 - 15' 15 - 21' 21'	sand & caliche mix sand & clay sand & caliche sand & caliche & clay clay spray sand & gravel	35'	water sample from baleing - water at 26' - 26' perfs.
6	125' NE of pipeline	0 - 2' 2 - 10' 10 - 15' 15 - 20' 21 - 35'	clay & black soil hard caliche soft caliche wet clay & sand & caliche water, sand & gravel		drill to 39' - fill back to 35' - collect bale samples - 26' perfs.
7	240' E Monument water well & approx. 20' E of Texas-NM pipeline	0 - 5' 5 - 17' 17 - 20' 20' 32'	hard caliche soft caliche & sand clay & sand clay of sand & show of water water	35'	bale sample - show a sheen of oil & strong odor - perfs at 14' of surface

MONUMENT TEST WELLS

		Depth to Water(ft.)	Depth to Product(ft.)	Product Thickness(ft.)	Date	Time
Monitor Well/	#1	20.41	19.89	0.52	11-12-84	9:00 AM
	#2	19.23	none	-	11-12-84	10:20 AM
	#3	15.52	none	-	11-12-84	10:09 AM
	#4	15.97	none	-	11-12-84	10:15 AM
	#5	16.53	none	-	11-12-84	10:11 AM
	#6	16.47	none	-	11-12-84	10:13 AM
	#7	18.60	18.53	0.07	11-12-84	9:07 AM
	#8	20.26	none	-	11-12-84	10:17 AM
	#9	15.93	none	-	11-12-84	10:15 AM
	#10	20.68	18.73	1.95	11-12-84	9:04 AM
	PUMPING #11		21.18		11-12-84	9:13 AM
	#12	16.67	none	-	11-12-84	10:24 AM
	#13	19.63	none	-	11-12-84	10:18 AM
	#14	16.96	16.36	0.60	11-12-84	9:24 AM
	#15	18.23	none	-	11-12-84	10:30 AM
	#16	19.31	18.74	0.57	11-12-84	9:11 AM
	#17	18.83	none	-	11-12-84	10:22 AM
	#18	17.08	none	-	11-12-84	10:27 AM
	#19	17.09	none	-	11-12-84	10:07 AM
	#20	19.13	17.33	1.80	11-12-84	9:42 AM
	#21	17.79	17.79	Trace	11-12-84	10:45 AM
	#22	18.16	16.90	1.26	11-12-84	9:38 AM
	#23	15.56	13.67	1.89	11-12-84	9:34 AM
	#24	16.07	14.73	1.34	11-12-84	9:48 AM
	#25	16.15	none	-	11-12-84	10:50 AM
	#26	17.32	none	-	11-12-84	10:40 AM
	#27	16.91	none	-	11-12-84	10:35 AM
	#28	18.35	none	-	11-12-84	10:32 AM
	#29	14.98	none	-	11-12-84	10:37 AM
Recovery Well	#1	34.24	31.26	2.98	11-12-84	8:49 AM
No oil false info		{ #28 #6		Trace Trace	11-19-84 "	



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

TONEY ANAYA
GOVERNOR

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

MEMORANDUM

TO: R. L. STAMETS, DIRECTOR, NEW MEXICO OIL
CONSERVATION DIVISION

DENISE FORT, DIRECTOR, ENVIRONMENTAL IMPROVEMENT
DIVISION

FROM: DAVE BOYER, GEOLOGIST, NEW MEXICO OIL
CONSERVATION DIVISION

DENNIS McQUILLAN, WATER RESOURCE SPECIALIST,
NEW MEXICO ENVIRONMENTAL IMPROVEMENT DIVISION

SUBJECT: HYDROCARBON CONTAMINATION OF MONUMENT COMMUNITY
WATER SYSTEM

Date: 11/19/84 *AWB*
Summary of Observations

On Friday, November 16, 1984, we visited the location of the Monument community water system and met with Jerry Sexton, OCD District Supervisor; Roelf Ruffner, EID Environmentalist, Hobbs; and Mr. Copeland, President of the Monument Water Users Association; the representative of the Texas-New Mexico Pipeline Company was unavailable. After introductions, the two of us, accompanied by Roelf Ruffner inspected the pumping community well, the contaminated well, the second recovery well, the monitoring wells installed by the pipeline company, and the cleaned-up area of the spill. Since the monitoring well caps were unlocked, we visually observed the interior of the white PVC pipe casing and attempted to detect odors from the the wellbore. Walls of those monitoring wells known to contain oil on top of the water were discolored (brown) and had a strong odor characteristic of petroleum. Other monitoring wells, not known to be contaminated, also had strong odors, while the remainder of the wells had either no characteristic odor, or odors of indeterminate origin. Although we brought sampling equipment, no monitoring well samples were taken since the pipeline company representative was not present. (Earlier EID sampling of

the remaining community well and an existing standby well now connected to the system has not detected hydrocarbon contamination).

This morning, Jerry Sexton of the Hobbs office notified me that Tex-Mex had detected a trace of oil Sunday, November 18, in an additional monitoring well (No. 28) located 120 feet east of the second community well. Via a conference call, Dennis McQuillan and I contacted Mr. Bernie Lednicky of Texas-New Mexico Pipeline Company who told me that oil contamination was detected on their water level probe during the daily monitoring of water elevations. He also said that he had directed his field person to shut off the second community well and pump only the standby well near the old school building. He also said that because of the seriousness of the situation, his company was willing to move immediately to drill a replacement well of comparable worth about 1,000 feet north of the contaminated well.

Based on this information, Dennis and I conveyed the following to Mr. Lednicky:

- 1) Only the standby well should be pumped due to the closeness of oil contamination to the second community well.
- 2) Increased EID sampling of the community and standby wells for organics will be requested;
- 3) Available current water level data, and analyses for dissolved aromatic hydrocarbons should be provided immediately by telephone;
- 4) Tex-Mex should move immediately to put locks on the monitoring wells to insure well integrity and prevent tampering.

I explained to Mr. Lednicky our preference to have a replacement well or wells drilled several miles north of the immediate area of the Monument oil pool, and that both of us would need to consult with our supervisors and other agencies involved. I told him we would get back to him as soon as possible regarding these developments.

Below is a summary of known monitoring well information (refer to the attached sheet for location information):

- 1) 29 monitoring wells have been drilled by the pipeline company;
- 2) 19 have been installed near the pipeline break, the contaminated well, or topographically down-gradient from the break and well;
- 3) Of the 19 wells, six (6) have confirmed oil on top of the water and another six were observed by us to have strong hydrocarbon odors.
- 4) The remaining ten (10) wells are closer to the second community well than to the pipeline break, but up-gradient from this uncontaminated well.
- 5) Of the remaining ten (10) wells, seven (7) have confirmed oil on top of the water, and no strong odors were detected by us in the other five. Since the pipeline has been excavated along its entire length in this area with no additional leaks detected, the source of the oil in monitoring wells Nos. 14, 20, 22, 23 and 24 is unknown but is not due to additional pipeline leaks. (Note: The presence of strong odors does not necessarily mean the aquifer is contaminated, since the vapors may be coming from the vadose (unsaturated) zone if the wellbore is perforated above the water table or from the solvent cement used to glue the well casing.)
- 6) The distance between the second community well and the closest monitoring well (No. 28) showing contamination is 120 feet. By comparison, the contaminated community well is 300 feet topographically down-gradient from the pipeline break location (although surface contamination from the break extended about 200 feet down-gradient). The second well is about 1550 feet south (down-gradient) of the break.

Information Needs

In order to further evaluate the hydrogeological situation (including ground water and contaminant movement) and to assess the potential for contamination of the remaining community well and the standby well, the following information needs to be provided by the pipeline company or the Hobbs OCD office:

- 1) Best approximation of the volume of crude oil lost and estimated length of time between break and its discovery. Evaluation by pipeline engineers of whether break was a rupture or whether loss had been preceded by gradually increasing leakage. Date of last pipeline integrity test and/or inspection.
- 2) Monitoring well completion information including date, driller, total depth, method drilled, lithologic log, gravel pack/cement details, length and setting of screen or perforations, screen information and number and size of openings per foot. Was PVC cement used in the well completion? Was the well completed such that the screen or any perforations are open above the water table?
- 3) Water levels in monitoring well upon completion and before sampling (if possible). Include date, method used, and measurement reference point. Current water levels.
- 4) For those wells containing oil, provide an estimate of the oil thickness and indicate whether oil was present upon well completion or was later detected. Provide date if later detected.
- 5) Provide information on the sampling methodology used to sample the monitoring wells including the following:
 - a. Were bailers used? If so, were dedicated bailers used or were they cleaned between samples to prevent cross contamination?
 - b. How many bore volumes were removed prior to sampling.
 - c. How was sampling of dissolved constituents

performed in those wells that had an oil fraction on top of the water?

d. Who performed the actual sampling?

- 6) Provide information on the number of water samples taken from each well to date, laboratory used, constituents analyzed for, type of analysis (purgeable scan, mass spec., etc.). (Note: The most useful information on petroleum constituents will be provided by a quantitative purgeable scan for benzene, toluene, ethylbenzene, ortho-, meta-, and para-xylene.)
- 7) Indicate whether oil samples were taken from those wells contaminated with oil. If so, provide details on analyses made and results.
- 8) Provide details of the oil recovery system in use including schematics, type of equipment, cone of depression and other calculations, installation details, and system recovery expectations.
- 9) OCD files should be researched to provide information on past production, casing leaks, spills or other incidents that could have released crude oil to the subsurface in this area (S 1/2, Section 29, Township 19 South, Range 37 East). Information desired includes locations, dates, description of problem, estimated volumes lost (if known or available), and resultant action or clean-up.

Recommendations for Immediate Action

- 1) Now that the recovery system is in operation and the standby well is in use, provide current and accurate water level information to determine the potentiometric surface. This will allow calculation of the hydrologic gradient and allow direction and estimated rate of ground water movement to be determined.
- 2) Sample or provide existing purgeable analyses for monitor wells Nos. 27 and 28. These are the wells closest to the uncontaminated community well and they must be checked for dissolved petroleum constituents.
- 3) Install locks on the monitoring wells to provide

integrity and prevent tampering.

- 4) Immediately drill at least four (4) additional monitoring wells up-gradient from the uncontaminated second community well and the standby well. Due to instances of past contamination in the area and the close proximity of oil (120 feet) near the second community well, these new wells are necessary to provide advance warning of contamination to the remaining community wells, while the information requested above is obtained and evaluated. The approximate locations of proposed OCD wells Nos. 1, 2, 3, and 4 are shown on the attached map. If oil is found while drilling any of the wells, an additional monitoring well should be drilled between the contaminated well and the potentially affected water supply well. Prior to drilling any new monitoring wells, completion details should be discussed and agreed upon between the driller and OCD/EID hydrogeologists.
- 5) Work should begin immediately to locate and provide an alternate source of water for the community. Such a source should be sited out of the area of past and present heavy oil-field activity. We feel that the most likely area to find uncontaminated water is several miles north of the existing community on the Caprock of the Ogallala Formation.

Additional Considerations

Upon receipt and assessment of the information requested above, and information derived from the new monitor wells, several options for future action can be evaluated as to effectiveness, cost, and assured future community water supply. These options may include:

- 1) The need to provide more than one new water well several miles north of the existing well and out of the area of past and present heavy oil field activity;
- 2) Continuing remedial efforts at the spill site and include ground water restoration of dissolved constituents; and
- 3) Initiating recovery and restoration efforts in the vicinity of the currently unaffected wells.

It must be stressed that at this time these are only future options and no informed decisions can be made until the information requested above is provided and evaluated. In the meantime, and because of the seriousness of the situation, continued monitoring of the system for contamination is absolutely necessary.

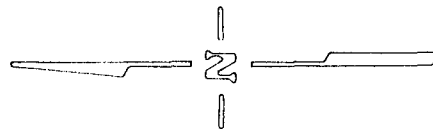
November 19, 1984

cc: R. Holland, EID
A. Drypolcher, EID
R. Perkins, EID
J. Thompson, EID
G. Cordova, EID
EID District IV - Roswell
EID Hobbs
OCD Hobbs
P. Olachea, DFA Local Government Division

TEXAS-NEW MEXICO PIPE LINE CO.

MONUMENT TEST WELLS

SEC. 29, T19S, R37E, N.M.P.M.,
Lea County, New Mexico



LOCATION	RELATIVE ELEVATION	NORTH COORD	EAST COORD
SW Sec. Cor.	N/A	000	000
SE Sec. Cor.	N/A	-16.9	5277.1
RW 1	100.0	2056.2	2514.9
RW 2			
MW 11	96.6	1755.0	2881.6
MW 1	100.8	1928.2	2542.8
MW 2	99.4	1754.6	2630.7
MW 3	99.5	2314.4	2459.0
MW 4	98.6	2207.6	2593.9
MW 5	100.7	2383.8	2660.6
MW 6	99.3	2234.3	2759.5
MW 7	99.5	1983.3	2765.6
MW 8	102.1	1993.6	2387.0
MW 9	97.8	2108.4	2652.4
MW 10	100.7	2138.1	2507.7
MW 11			
RW 2	96.6	1755.0	2881.6
MW 12	95.9	1636.2	2971.6
MW 13	100.7	1829.3	2422.3
MW 14	94.8	1372.1	3034.4
MW 15	97.6	1582.7	2804.6
MW 16	98.8	1827.7	2798.8
MW 17	99.4	1887.5	2675.3
MW 18	96.0	1549.9	2951.1
MW 19	102.2	2336.6	2306.9
MW 20	93.7	932.5	3039.2
MW 21	95.7	1195.7	2870.9
MW 22	93.9	1134.9	3057.5
MW 23	91.2	1257.1	3178.2
MW 24	93.3	1520.3	3185.9
MW 25	96.1	1811.2	3060.2

LEGEND

○	Monitor Well
⊠	Recovery Well
()	Relative Elevation
---	Electric Line
Δ	Vent
⊕	Domestic Well
⊙	Oil Well
□	Storage Tank
⊞	Tank Battery
—	Fence
---	Buried Pipeline

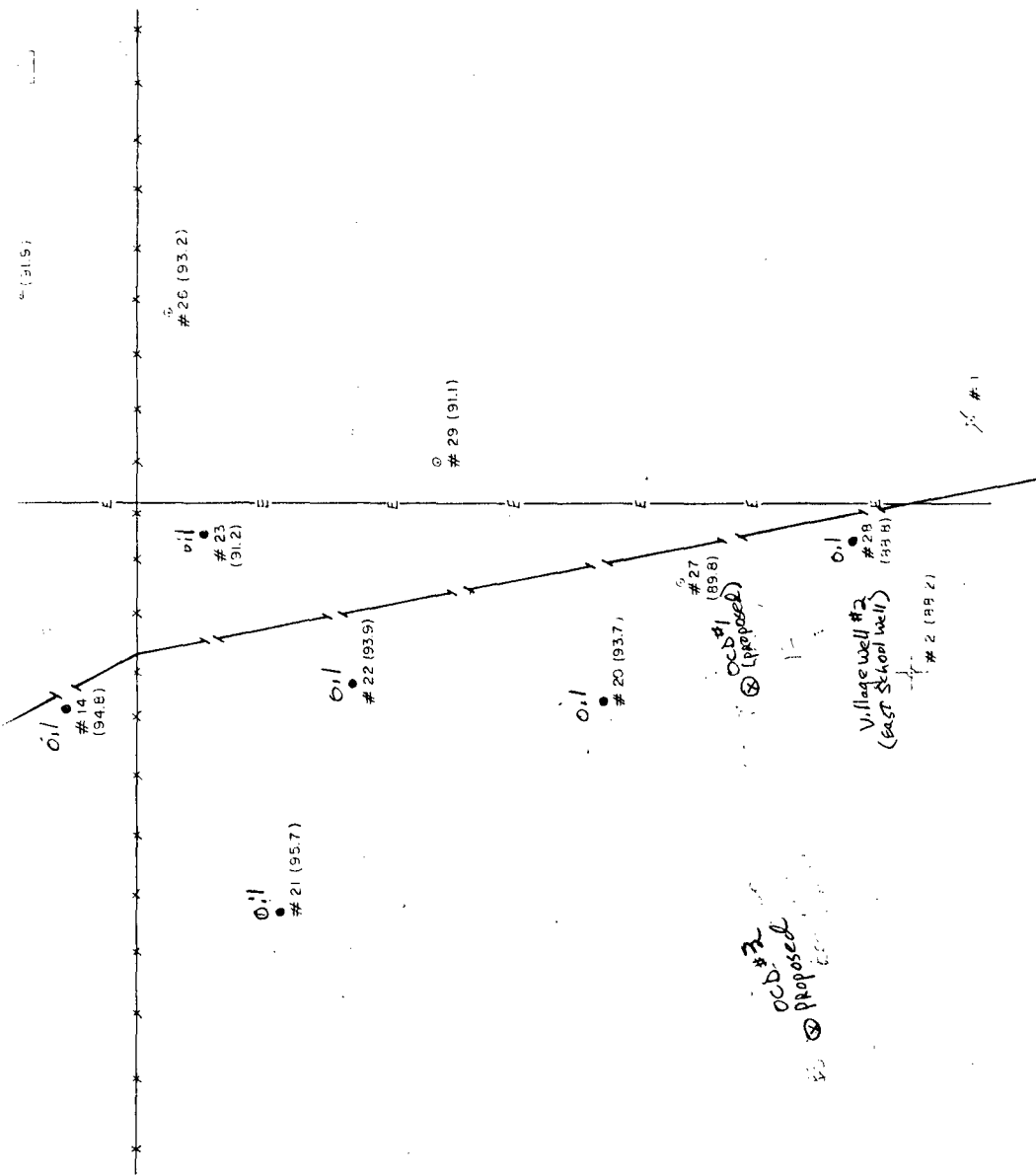
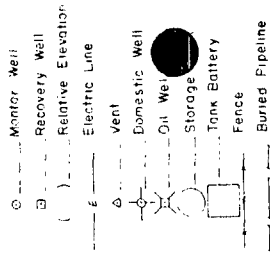
MW 24	93.3	1522.2	3155.8
MW 25	96.1	1811.2	3060.3
MW 26	93.2	1286.5	3357.2
MW 27	89.8	866.7	3133.6
MW 28	88.8	726.6	3166.3
MW 29	91.1	1053.6	3235.3
Vent Pt. 1	92.1	1419.4	3370.9
Vent Pt. 2	91.9	1402.7	3371.9
DW 1	94.5	523.4	2574.8
DW 2	88.2	679.2	3060.1
DW 3	89.6	521.6	3690.5
Pwr. Ln. (No. 1)	N/A	2027.5	3207.5
Pwr. Ln. (So. 1)	N/A	697.8	3198.8
Oil Well 1	N/A	629.8	3267.2
Oil Well 2	N/A	1957.7	3262.5
Storage Tank	N/A	2159.7	2998.1
Tank Battery	N/A	1406.9	3560.0
Fence (E)	N/A	1312.2	3294.1
Fence (W)	N/A	1314.5	2893.6
Pipeline (N)	N/A	2499.6	2461.3
Pipeline (P.I. 1)	N/A	1312.6	3080.1
Pipeline (S)	N/A	566.4	3219.4

ocd #1 Proposed 12.5 feet N of Village Well #2 Toward Well #20
ocd #2 Proposed 200 feet NW of West School well
ocd #3 Proposed 275 feet (approximately) west of ocd #1 toward ocd #2
(location approximate depending on drilling results of ocd #1 & 2.)
ocd #4 Proposed 250 feet west of the West School well,

Annotated by D. Boyer
11/19/84



LEGEND



OCB #2
Proposed

Proposed
#2

Standby well
(West School well)
#1 (94.5)

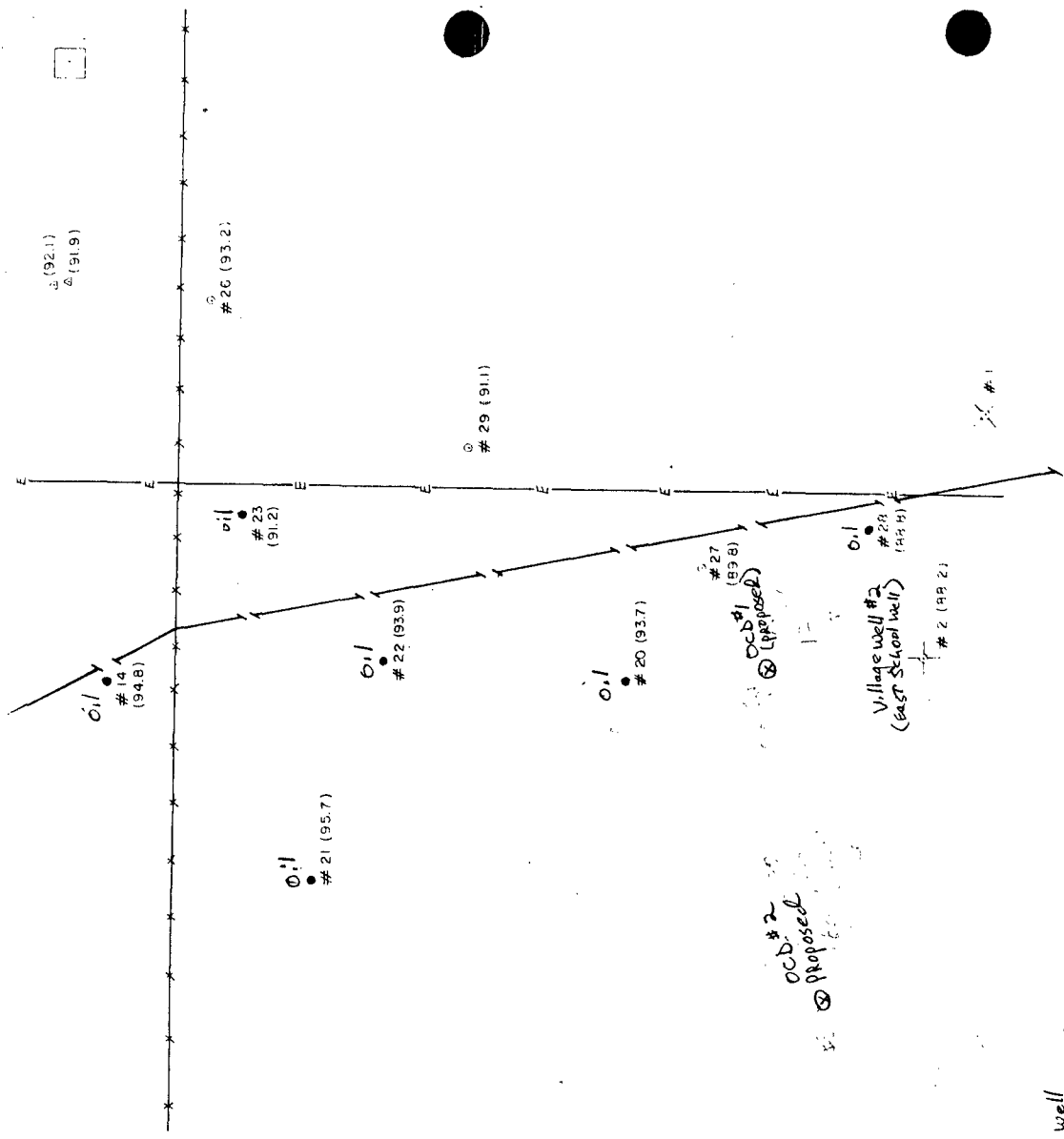
531.70' N 00° 11' E

STATE ROAD 322

N 99° 49' W

2704.00'

29 28
32 33



STATE ROAD 322

2704.00'

N 89° 49' W

2573.10'

Standby well
(west school well)
#1 (94.5)

OCD #4
⊗ proposed

OCD #2
⊗ proposed

OCD #1
⊗ proposed

Village well #2
(east school well)
#2 (94.2)

O.I.
#20 (93.7)

O.I.
#22 (93.9)

O.I.
#21 (95.7)

#20 (93.2)

O.I.
#23 (91.2)

O.I.
#14 (94.8)

#29 (91.1)

integrity and prevent tampering.

- 4) Immediately drill at least four (4) additional monitoring wells up-gradient from the uncontaminated second community well and the standby well. Due to instances of past contamination in the area and the close proximity of oil (250 feet) near the second community well, these new wells are necessary to provide advance warning of contamination to the remaining community wells, while the information requested above is obtained and evaluated. The approximate locations of proposed OCD wells Nos. 1, 2, 3, and 4 are shown on the attached map. If oil is found while drilling any of the wells, an additional monitoring well should be drilled between the contaminated well and the potentially affected water supply well. Prior to drilling any new monitoring wells, completion details should be discussed and agreed upon between the driller and OCD/EID hydrogeologists.

Options for Long-Term Action

Upon receipt and assessment of the information requested above, and information derived from the new monitor wells, several options for future action can be evaluated as to effectiveness, cost, and assured future community water supply. These options may include:

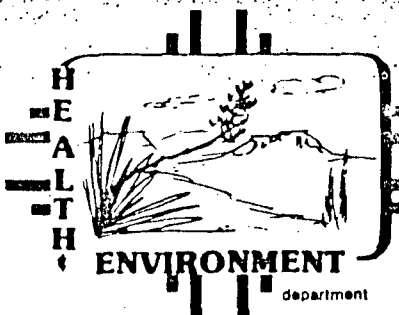
- 1) Providing a new community well within one mile up-gradient from the existing community well;
- 2) Providing one or more new water wells several miles north of the existing well and out of the area of past and present heavy oil field activity;
- 3) Continuing remedial efforts at the spill site and include ground water restoration of dissolved constituents; and
- 4) Initiating recovery and restoration efforts in the vicinity of the currently unaffected wells.

It must be stressed that at this time these are only future options and no informed decisions can be made until the information requested above is provided and evaluated. In the meantime and because of the seriousness of the

situation, continued monitoring of the system for contamination is absolutely necessary.

November 19, 1984

cc: R. Holland, EID
A. Drypolcher, EID
R. Perkins, EID
J. Thompson, EID
G. Cordova, EID
EID District IV - Roswell
EID Hobbs
OCD Hobbs
P. Olachea



STATE OF NEW MEXICO

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

MEMORANDUM

TO: JON F. THOMPSON, BUREAU CHIEF, COMMUNITY SUPPORT
SERVICES BUREAU

FROM: *D. McQ.* DENNIS McQUILLAN, WATER RESOURCE SPECIALIST, GROUND
WATER/HAZARDOUS WASTE BUREAU

DGB DAVID G. BOYER, GEOLOGIST, OIL CONSERVATION DIVISION

SUBJECT: HYDROCARBON CONTAMINATION OF GROUND WATER IN THE
MONUMENT AREA

DATE: NOVEMBER 19, 1984

As you know, due to the hydrocarbon contamination of Monument's well #1, the community has been relying upon the east and west Schoolhouse wells (located approximately 500 feet apart) for its water supply.

On Sunday, November 18, 1984, the Texas-New Mexico Pipeline Company detected a trace of oil in monitoring well #28, located 120 feet east of the east Schoolhouse well. This well has been shut off and the west Schoolhouse well currently produces 100% of the public water supply. There are, however, no monitoring wells located in a hydraulically upgradient direction from the west Schoolhouse well. Additional geotechnical information is being collected.

Due to the history of ground water contamination in the Monument area, and due to the seriousness of the recent findings of oil in 13 of the 29 monitoring wells, we strongly recommend that an alternate source of water for the community be provided as soon as possible. Such a source should be sited out of the area of past and present heavy oil-field activity. We feel that the most likely area to find uncontaminated water is several miles north of the existing community on the Caprock of the Ogallala Formation. These recommendations are made strictly upon hydrogeological considerations and not upon water rights, funding sources and other issues.

DM/DB/ps

cc: Richard Perkins
Richard Stamets
Richard Holland
Anthony Drypolcher
Denise Fort
EID District IV
OCD Hobbs



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

TONY ANAYA
GOVERNOR

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

MEMORANDUM

TO: PAUL BIDERMAN, SECRETARY
FROM: R. L. STAMETS, DIRECTOR
SUBJECT: MONUMENT WATER CONTAMINATION PROBLEM

On Friday, November 16, 1984, Dave Boyer of the OCD and Dennis McQuillan of the EID traveled to Hobbs and Monument to investigate the Monument water contamination problem. They conferred with Jerry Sexton and our Hobbs staff reviewing all actions taken since the problem was found and the results of the Texas-New Mexico's monitor well program. They also visited the site. As a result, the following actions will be taken:

- 1) Details from TNM's monitor well drilling will be requested. This information will be used to better define the problem and evaluate the threat to currently used community wells. A separate memorandum detailing those needs is being prepared by Dave and Dennis.
- 2) The OCD will examine its contract for monitor well drilling to determine if it can be used to drill monitor wells closer to the community wells. These are needed to assure that the early warning of impending contamination is provided.

There may have been some presentations to the Governor relative to taking legal action against TNM for causing the contamination. I would strongly urge that such action not be taken without a lot of further consideration. Reasons for this recommendation include:

- 1) Available geotechnical data is being collected by OCD and EID and additional data is likely to be requested. Until this data is available and has been evaluated by staff, the actual

subsurface situation will remain unclear. It would seem unwise to initiate legal action at this time without having all of the available facts and information.

- 2) This is an area of numerous past casing leaks. Such leaks could have resulted in multiple sources of contamination in the area complicating the work of pin-pointing the actual source of any problem. My understanding is that Dennis McQuillan is pursuing a method of dating, relatively, the age of hydrocarbon contamination on ground water. This work should be done. Preliminary analysis of data from the monitor wells seems to indicate two separate sources of contamination in the immediate area.
- 3) TNM has been very cooperative in this matter. They have agreed to replace the contaminated well if necessary. A suit could result in ending this cooperation and that of others in future contamination problems. TNM has drilled over 20 monitor wells in the area. These are wells which might have been required from our budget without TNM's cooperation.
- 4) There may be public relations benefits derived from filing suit. These same benefits might result from publicity associated with a industry-government response to a community problem that results in a long-term improvement of the situation.

November 19, 1984



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

TONEY ANAYA
GOVERNOR

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

MEMORANDUM

TO: R. L. STAMETS, DIRECTOR

FROM: DAVE BOYER, GEOLOGIST IV *DB*

SUBJECT: ADDITIONAL MONITORING WELL CONTAMINATION AT
MONUMENT

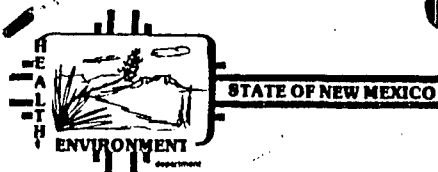
This morning, Jerry Sexton of the Hobbs office notified me that Tex-Mex had detected a trace of oil Sunday, November 18, in an additional monitoring well (No. 28) located 120 feet east of the second community well. Via a conference call, Dennis McQuillan and I contacted Mr. Bernie Lednický of Texas-New Mexico Pipeline Company who told me that oil contamination was detected on their water level probe during the daily monitoring of water elevations. He also said that he had directed his field person to shut off the second community well and pump only the standby well near the old school building. He also said that because of the seriousness of the situation, his company was willing to move immediately to drill a replacement well of comparable worth about 1,000 feet north of the contaminated well.

Based on this information, Dennis and I conveyed the following to Mr. Lednický:

- 1) Only the standby well should be pumped due to the closeness of oil contamination to the second community well.
- 2) Increased EID sampling of the community and standby wells for organics will be requested;
- 3) Available current water level data, and analyses for dissolved aromatic hydrocarbons should be provided immediately by telephone;
- 4) Tex-Mex should move immediately to put locks on the monitoring wells to insure well integrity and prevent tampering.

I explained to Mr. Lednicky our preference to have a replacement well or wells drilled several miles north of the immediate area of the Monument oil pool, and that both of us would need to consult with our supervisors and other agencies involved. I told him we would get back to him as soon as possible regarding these developments.

November 19, 1984



MEMORANDUM

DATE: November 9, 1984

TO: Jon Thompson, Bureau Chief,
Community Support Service Bureau

FROM: Tom Burt, HPM I., Carlsbad/Hobbs *TBS*

SUBJECT: Monument Water Co-op - Petroleum Contaminated Well

Reference is made to Garrison McCaslin's memo to John Guinn dated September 20, 1984 and his memo to the file dated September 26, 1984. These memos give pertinent early information. The map he sketched indicates the pipeline running from S.W. to N.E. when it acutally goes from N.W. to S.E. I have indicated that change in the attached copy. I have also added the approximate location of a pipeline break of which we became aware several years ago. The direction which that pipe travels is unknown to us at this time.

Since the time of McCaslin's correspondence, Trans-New Mexico Pipeline Company has hired Oil Recovery Systems, Inc. of 5047 Clayton Rd., Concord, California 94521, (415) 671-2387 to assist them in their efforts to reclaim this aquifer. At present, there have been twenty-nine (29) monitoring wells drilled and only two have reportedly shown oil contamination. One of the monitoring wells showing oil is about 100' southeast of Monument Well #1 and one is about 600' northeast of the schoolhouse well.

The efforts of Oil Recovery Systems, Inc. have so far been to have the monitoring wells drilled, collect and analyze samples from them and pump the original Monument well such that normal drawdown will influence the oil on the surface of the water table to concentrate in that well. There has been a small amount of oil recovered from the well (estimated at about three barrels per day). The excess water from this pumping -about 100 gpm- is being injected underground by West Engineering in one of their regulated injection wells.

T-NM has assisted the Co-op in preparing a second schoolhouse well, approximately 300 feet east of the first schoolhouse well, such that it can also be used as a back-up for the one now pumping into the system. As of yesterday, crews were ditching and laying pipe to connect this well to the system. T-NM Pipeline Company is reportedly preparing a map of the wells, etc. and we hope to obtain one next week.

The monitoring well which was last reported as showing oil and which is located 600 ft. from the schoolhouse well was reported to me yesterday morning. As a result of this information being forwarded to

RECEIVED

NOV 13 1984

LIQUID

POWER

Santa Fe, it has been determined that a "public health emergency", now exists and efforts are to be made immediately for a safe, new source of water to be obtained for the Monument Water Co-op. Subsequent to my becoming informed of this, I contacted T-NM. Shortly thereafter, I was invited to attend a meeting of EID, OCD, Monument Water Co-op and T-NM Pipeline Co. The meeting will be in T-NM offices in the Broad-moor Bldg., Hobbs at 9:00am on Tuesday, November 13, 1984.

TB:rap

Encl.

xc: John Guinn, HPM II., Roswell
Gus Cordova, HPM I., Water Supply Section
Hobbs EID Office
✓ Dennis McQuillan, Groundwater, Santa Fe
File

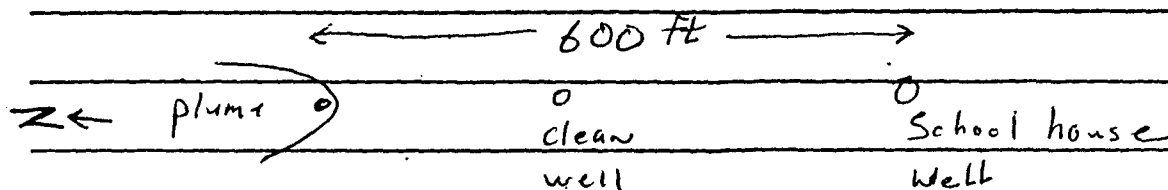
MEMORANDUM OF MEETING OR CONVERSATION

<input checked="" type="checkbox"/> Telephone <input type="checkbox"/> Personal	Time 0750	Date 841109
Originating Party Longmine		Other Parties Dr William Deever Texaco 409-989-6363

Subject Monument Area

Discussion

plume is 600 ft from school house well



3 sets of samples

1st set clean but some cross contamination

2nd set clean

3rd not run yet

Well originally contaminated 6 ppm BTX

Conclusions or Agreements

7 ppm B 7 ppm T EX ~ 1 Ethylbenzene

~ /

Distribution

Signed

Phil Longmine

WATER SUPPLY PROGRAM
POLICY NO. 10

Date: November 5, 1984

HYDROCARBON CONTAMINATION OF DRINKING WATER SUPPLIES

1. PURPOSE: The purpose of this policy is to establish uniform procedures and health guidelines in the event of hydrocarbon contamination of drinking water supplies.
2. APPLICABILITY: This policy applies to all public water systems under the jurisdiction of the "New Mexico Regulations Governing Water Supplies". It should be used as a guidance whenever hydrocarbon contamination is encountered in private systems.
3. GENERAL: A potable water supply can be suspected of having severe gasoline or other petroleum contamination if hydrocarbon products can be detected sight, by smell, taste, or it will flame when exposed to a lit match. Under these conditions Action Level #1 (see addendum) should be instituted immediately and water samples should be sent to the SLD for emergency testing. Testing should include a purgeable screen with a quantitative analysis for benzene. Sample points need to include the water source (well head), reservoir (or reservoirs), and representative points on the distribution system. All sampling schemes must be coordinated through the EID Water Supply Section.

When immediate public notification is required, then telephoning the medical community and making media announcements must be instituted in addition to the mail notification. To assist with the extensive notification process, two sample letters have been attached, one to the medical community and one to the water consumer.

The following HED offices require immediate telephone notification and continuous updates when a potable water supply is suspected of being contaminated:

HED Epidemiology Office (24 Hr. Number 505/827-3201)
EID Water Supply Section (Office Hours: 505/827-9805 or 24-Hour
Emergency Number: 505/827-9329)

The EID Water Supply Section will coordinate with the appropriate EID District Office, EID Ground Water and Hazardous Waste Bureau, the Scientific Laboratory Division, and the HED Office of Epidemiology.

RATIONALE:

Gasoline and other hydrocarbon fuels are a complex mixture of at least 200 different hydrocarbons, including alkenes, alicyclics, olefins and aromatic compounds. In addition to these hydrocarbons, gasoline may contain fuel

additives (325 inorganic and organic fuel additives known as of 1972). The acute and chronic toxicities of most of these compounds, especially when oral exposure is involved, are unknown. Further, the possible synergistic effects of exposure to sub-toxic levels of many substances are not currently known.

The toxicity of gasoline is usually gauged by analysis of the aromatic hydrocarbons. The aromatics are highly soluble and will disperse in water. One particular aromatic compound, benzene, has been selected as a marker for hydrocarbon contamination because; a) benzene is one of the few gasoline components for which a relatively large amount of toxicological data is available to perform a risk analysis; b) benzene is nearly always present when the contaminating substance is gasoline; c) benzene in water can be quantitatively analyzed by the New Mexico Scientific Laboratory Division to a concentration of 1 ug/l (1 ppb); and, d) benzene is generally considered to be one of the most toxic, if not the most toxic, regular constituent of gasoline.

Benzene at high levels is extremely toxic to the central nervous system. Its toxicity at lower levels is the result of bone marrow effects which may result in fatal outcomes. If a water supply contains more than 230 ppb of benzene, the water must be considered toxic and should not be used for any type of domestic use. This value of 230 ppb was selected because of benzene's bone marrow toxicity, and is based on an advisory opinion for benzene issued by the U. S. Environmental Protection Agency.

If initial sampling indicates a benzene level between 230 ppb and 70 ppb, a water supply may remain in operation for a maximum of ten days without posing a threat to the public health. These limits were calculated by the U. S. Environmental Protection Agency from toxicology data on rats^{1,2} and incorporate a safety factor of 100. The ten day operation period is permitted to allow for resampling and delineating the extent of contamination.

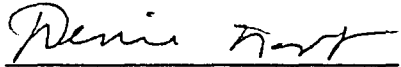
The long term exposure limit for water contaminated with benzene in the range of 1 to 69 ppb is six months. This time period is permitted so that city and state authorities can correct the contamination problem or seek an alternative water source. After six months benzene levels at the consumers tap must be below 1 ppb. This limit is based on a concept of maximum public health protection which acknowledges that benzene is a recognized carcinogen. Further, the synergistic effect that benzene may have with other compounds is unknown and it is prudent to avoid long-term human exposure. Benzene does not occur naturally and must be considered as being indicative of a man-made hydrocarbon contamination.

4. REFERENCES:

1. Dirchmann WB, MacDonald WE and Bernal E. 1963. The hemopoietic tissue toxicity of benzene vapors. *Toxicol. Appl. Pharmacol.* 5:201-224.

2. Wolf MA, Rowe VK, McCollister DD, Hollingworth RL, and Oyen F, 1956.
Toxicological studies of certain alkylated benzenes and benzene.
Experiments of laboratory animals. AMA Arch. Ind. Health 14:387-398.

5. APPROVED:



DENISE FORT
Director, Environmental
Improvement Division

RECOMMENDATIONS OF
THE NEW MEXICO HEALTH AND ENVIRONMENT DEPARTMENT
OFFICE OF EPIDEMIOLOGY
REGARDING
HYDROCARBON CONTAMINATION OF DRINKING WATER SUPPLIES

<u>Action Level</u>	<u>Highest Concentration of Benzene in the Distribution System</u>	<u>Required Response</u>
#1	Greater than 0.23mg/l (230 ppb)	Immediate suspension of water supply for drinking, cooking, or bathing. Provide alternate water supply and immediate public notification.
#2	0.23 mg/l (230 ppb) to 0.07 mg/l (70 ppb)	Continue operating water supply for a maximum of 10 days. Provide immediate public notification.
#3	0.069 mg/l (69 ppb) to 1.0 ug/l (1.0 ppb)	Continue operating water supply for a maximum of 187 days (6 months). Provide public notification. After 187 days the benzene concentration must be reduced below 1.0 ppb or an alternate water supply must be provided.
#4	< 1.0 ug/l (1.0 ppb) to laboratory detection limit	Continue operating water supply. The EID Water Supply Section and the water supply operator must be notified so an ongoing monitoring schedule can be instituted.

EXAMPLE

Date _____

Dear Doctor

The New Mexico Health and Environment Department wants to inform you directly about a potential public health problem involving the _____ Community Water System. On _____ water samples from the public water system have been found to have evidence of contamination with hydrocarbons, most probably involving gasoline (or whatever substance is suspected). Various steps have been taken to find the source(s) of contamination and to resolve the water quality problem.

Attached is a copy of the Health and Environment Department policy regarding hydrocarbon contamination of drinking water supplies. If you, or your patients, have any concerns or additional questions about this entire issue, please contact the Epidemiology Office at 827-3201.

Very Sincerely Yours,

Harry F. Hull, M.D.
State Epidemiologist

District EID Manager

EXAMPLE

Public Water Contamination Notice
Community of _____

Date _____

The Community of _____ and the New Mexico Health and Environment Department are notifying consumers on the _____ Community Water System that gasoline has been discovered in the public water system. People are advised (Insert appropriate warning)

Action Level 1. _____ to immediately stop using the water supply for drinking, cooking or bathing purposes. Boiling of water will not eliminate the contamination. You should seek an alternative water source such as bottled water or water from (give location of water supply). The New Mexico Health and Environment Department and the Community of _____ are working to determine the source of the contamination and correct the problem. You will receive another notice when we have determined that the water supply is safe for human use.

Action Level 2. & 3. that trace amounts of gasoline were discovered in the Community of _____ Water Supply System. Tests indicate that the levels of contamination are low and will not cause any known immediate health problems. The long term effects of this contamination are not known. As a result, the New Mexico Health and Environment Department and the Community of _____ are working to determine the source of the contamination and correct the problem. You will receive another notice when we have determined that the water supply is free of any contaminants.

If you have any questions call the Community office at _____ or the New Mexico Health and Environment Department Environmental Improvement Division at _____.

Mayor, Community of _____

District Manager, New Mexico
Environmental Improvement Division

TONEY ANAYA
GOVERNOR



STATE OF NEW MEXICO

ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 827-98 11
DENISE FORT, DIRECTOR

MEMORANDUM

TO: JOHN GUINN, DISTRICT MANAGER
TOM BURT, HPM I, CARLSBAD
DENNIS McQUILLAN, WATER RESOURCE SPEC.
JOS CORDOVA, HPM I, WATER SUPPLY

FROM: *[Signature]* JON F. THOMPSON, CHIEF
COMMUNITY SUPPORT SERVICES BUREAU

SUBJECT: MONUMENT WATER WELL (ATTACHED CORRESPONDENCE)

DATE: OCTOBER 31, 1984

Attached is correspondence from Texas-New Mexico Pipeline Company and the Oil Conservation Division in relation to captioned subject.

All staff involved are encouraged to follow-up as necessary to determine adequacy of aquifer restoration and possible new well replacement.

JFT:lr

cc: Don Gonzales, LGD w/enclosure
Steve Massey, Southwestern New Mexico Economic Development District
JFT Water Supply File



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

TONEY ANAYA
GOVERNOR

October 23, 1984

*Just → eq's sent to Bureau
John B.
Don B.
Donna M.*

*State Manager
Don Gonzales*

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88240
(505) 393-6161

RECEIVED

OCT 30

Mr. John F. Thompson
Chief, Community Support Services Bureau
Environmental Improvement Division
Box 968
509 Camino De Los Marquez
Santa Fe, NM 87504-0968

COMMUNITY SUPPORT
SERVICES SECTION

SUBJECT: Texas New Mexico Pipeline Leak and Water Well Cleanup

Gentlemen:

Attached is a copy of the letter requested by the Oil Conservation Division regarding a replacement water well in Monument, New Mexico.

Texas New Mexico Pipeline has fully cooperated with cleanup and have agreed to supply Monument with a replacement well.

If you have further questions, please feel free to call.

Very truly yours,

OIL CONSERVATION DIVISION

Jerry Sexton
Jerry Sexton
Supervisor, District I

JS/ES/ed

Encl.



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

TONEY ANAYA
GOVERNOR

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88240
(505) 393-6161

Date: October 23, 1984

MEMO TO: Mr. R. L. Stamets

FROM: Jerry Sexton

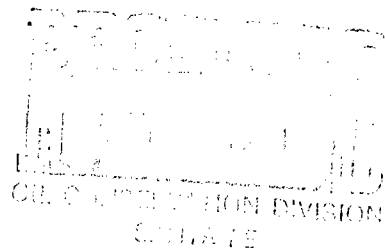
SUBJECT: Texas-New Mexico Pipeline Leak and Water Well Cleanup

Attached you will find a copy of the letter from Mr. Lednicky with Texas-New Mexico Pipeline Company covering what they have done in the way of cleanup. He also states they have purchased and installed water pump in the Monument standby well and they will drill a replacement well if necessary.

I have forwarded a copy of Mr. Lednicky's letter to the following:

Mr. Steve Massey
Mr. Patrick G. Olacchia
Mr. John F. Thompson
Mr. Porky Lithgow
Mr. Copeland

cc: Mr. Gilbert Quintana



Steve Massey
Planning & Development Specialist (Monument Village Representative)
Southeastern New Mexico
Economic Development District
P.O. Box 5639 R.I.A.C.
Roswell, NM 88202-5639

Patrick G. Olachea, P.E. Engineer
Community Development Programs
Local Government Division 287-7901
Dept. of Finance & Administration
527 Don Gaspar 827-4950
Santa Fe, NM 87503

John F. Thompson
Chief
Community Support Services Bureau
Environmental Improvement Division
P.O. Box 968
509 Camino De Los Marquez
Santa Fe, NM 87504-0968

Porky Lithgow
Local Government Division
Department of Finance & Administration
527 Don Gaspar
Santa Fe, NM 87503

TEXAS-NEW MEXICO PIPE LINE COMPANY

B. L. LEDNICKY
DISTRICT MANAGER

P. O. BOX 2528
HOBBS, NEW MEXICO 88240

October 22, 1984

Mr. Jerry T. Sexton
State of New Mexico
Energy and Minerals Department
Oil Conservation Division
P.O. Box 1980
Hobbs, New Mexico 88240

Dear Sir:

Re: Monument Water Well

This is in response to a telephone conversation with Mr. Eddie Seay of your office this morning. As you know, a leak was discovered on our crude oil pipeline near the Monument Water Well that was found contaminated with hydrocarbons. We have taken actions to control the contamination as if it was caused by our pipeline leak.

We have also told Mr. Copeland, President of the Monument Water Users Association, that, if necessary, we will drill and equip another water well to provide them with clean water for their system. We have already purchased and paid for installation of a water pump in the existing standby well behind the old Monument School Building.

Yours very truly,



BLL:DDM
Attachment



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

TONY ANAYA
GOVERNOR

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

October 18, 1984

MEMORANDUM

TO: R. L. Stamets, Acting Division Director

FROM: Gilbert P. Quintana, Petroleum Engineer *GPQ*

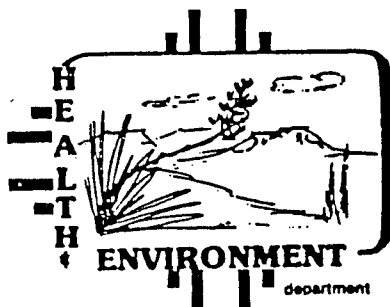
RE: Texas-New Mexico Pipeline Clean-up of Monument Water Well

Today I attended the Community Development Council meeting as you asked of me. I relayed the information to the Council concerning the efforts of Tex-Mex to remedy the situation. Monuments' request for emergency funding to drill new water wells was tabled pending written confirmation of Tex-Mex's verbal agreement with the village of Monument. It was requested of us to have Tex-Mex send a copy of their commitment to the Village of Monument, the Council and the following people listed on the attached sheet.

I stressed to the council the situation was well under control, and that Tex-Mex was committed to cooperating with everyone to remedy the situation. The Council and the Monument Village representative seemed satisfied and a motion was carried to table Monument's request. I then returned to the office.

cc: Paul Biderman

TONEY ANAYA
GOVERNOR



STATE OF NEW MEXICO

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

(505) 827-9811
DENISE FORT, DIRECTOR

October 18, 1984

Community Assistance Council
Local Government Division
Santa Fe, New Mexico 87503

Attn: Orlando Romero, CDBG Program Coordinator

Re: Monument Water Users' Cooperative (Lea County, New Mexico)

Dear Mr. Romero:

Recent events affecting the Monument Water Users' Cooperative in Monument, Lea County, New Mexico, have given the New Mexico Environmental Improvement Division cause to consider the status of that system's current sources of water.

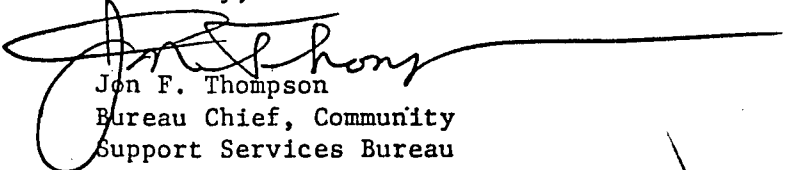
The sources of water for the Cooperative are two water wells located approximately one-half mile apart. The northernmost well (#1) was recently polluted with petroleum products to such an extent that it can no longer be used for drinking water purposes. The southern well, designated the "School House Well", is currently pumping potable water at a rate of approximately 100 gallons per minute (gpm).

The potential for contamination appears to be very real for the one remaining well. Water samples obtained from a monitoring well placed approximately 150 feet south of the recently contaminated well indicates oil contamination. This contamination has occurred within 30 days of the oil line break. We also know that a livestock watering well to the west about the same distance has been polluted by petroleum for several years. On the south side of the School House Well, brine contamination has been detected. At present, there is no back-up source.

Considering the potential for contamination and the lack of a currently available back-up source of water, it is the opinion of this Division that the Monument Water Users' Cooperative faces an imminent threat to the safety of their only available source of drinking water. The need for emergency funding is based on this imminent threat and will allow the Cooperative to respond in a proactive manner before a public health emergency would manifest itself.

Should you have any questions regarding this matter, do not hesitate to call us.

Sincerely,


Jon F. Thompson
Bureau Chief, Community
Support Services Bureau

JFT:eam

cc: Steve Massey, SNMEDD; Gustavo Cordova, Prog. Mgr., WSS/CSSB;
Tom Burt, Prog. Mgr., EID Carlsbad; Dennis McQuillan, WRS, GW&HWB

RECEIVED

OCT 19 1984

LIQUID WASTE/GROUND WATER
SURVEILLANCE

WATER-QUALITY AND HAZARDOUS-WASTE ASPECTS OF THE OIL AND GAS INDUSTRY NOT INCLUDING REFINED PETROLEUM PRODUCTS

A Statement by Denise Fort, Director, Environmental Improvement Division for the
New Mexico Oil and Gas Association

October 1, 1984

The oil and gas industry discharges a complex variety of wastes including water, oil, oil-water emulsion and sludge. With the exception of EID's hazardous-waste and NPDES programs, OCD regulates such industrial discharges that occur in oil fields, crude petroleum pipeline areas, refineries and processing plants. EID, however, interacts with OCD in several ways:

1. EID is often the first governmental agency to receive citizen complaints about water-quality problems. Such "stinky water" complaints usually, but not always, result from waste discharges. If so, EID tries to determine who is responsible for the problem and, if successful, which agency regulates the discharger. Such dischargers sometimes are under the jurisdiction of OCD.
2. As the primary environmental advocate of New Mexico state government, EID has the most extensive resources at its disposal including earth scientists, epidemiologists, attorneys, laboratory capabilities and field equipment. OCD sometimes requests EID assistance on water-quality matters.
3. EID is establishing a computerized inventory of ground-water and/or soil contamination statewide. All contamination, regardless of whether the discharger is under the jurisdiction of EID, OCD or another state agency, is being inventoried. There are many reasons why such an inventory is needed, not the least of which is for the purpose of expediting EID's troubleshooting of "stinky water" complaints.
4. The Monument area of Lea County has a decades-long history of private water-well pollution, some of which has been caused by the petroleum industry. Two different types of pollution exist in the area: 1) excessive mineralization by

inorganic parameters such as chloride; and 2) excessive hydrocarbon contamination with little or no increase in chloride. OCD, historically, has virtually relied upon monitoring chloride which is often, but not always, a diagnostic parameter indicative of contamination by the petroleum industry. EID has been encouraging OCD to develop the capabilities for monitoring organic contaminants.

Two weeks ago, a well serving the Monument Water Users Association became severely polluted with crude oil. EID regulates such public water-supply systems statewide. EID's monitoring detected benzene at 7,000 micrograms per liter (ug/L) in the well water; the health standard for benzene is 10 ug/L. OCD's monitoring showed that chloride, however, was relatively low. Fortunately, the well was of smaller capacity than the other public supply well which, to date, has not been polluted. The National Guard hauled potable water to the community while the system was flushed with clean water.

In summary, EID is concerned about the long-term implications of ground-water pollution from the petroleum industry, not only in Monument, but also in the communities of West Hobbs, Jal, Lovington and Flora Vista. EID has found the petroleum industry to be highly cooperative with regard to such problems and expects this relationship to continue.

LEA COUNTY AND MONUMENT

Lea County has a decades-long history of ground-water pollution that is in the same league with the notorious South Valley of Albuquerque. Both regions contain numerous wells that have been polluted by domestic sewage and/or industrial discharges. The key factor, of course, is a shallow water table.

Regarding the petroleum industry, ^{the Village of} Monument provides a good example. In 1961, two U.S. Geological Survey investigators stated that in the Monument area, "Water is obtained from private shallow wells bottomed in Quaternary alluvium. The wells in the area are adequate, but there is danger of contamination." Their warning was accurate.

Severe chloride pollution has occurred in an area ^m covering several square miles located southwest of the village. Contaminant sources include past discharges of oil-field brine and wastes from a chemical manufacturing plant. The polluted ground water appears to be migrating to the southeast rather than towards the village. Several private wells, however, already have been contaminated.

A different type of ground-water pollution, involving low chloride but excessive hydrocarbon concentrations, exists near the village center. At least two private wells became contaminated with hydrocarbons in the late 1970's. One well has produced both crude oil and water for five years. Just recently, one of two wells serving the Monument Water Users Association also became contaminated with crude oil. Benzene at 7,000 micrograms per liter (ug/L) was detected in the well water; the health standard for benzene is 10 ug/L. Fortunately, the well was of smaller capacity than the other public

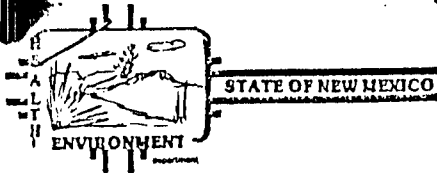
supply well which, to date, has not been polluted. The National Guard hauled potable water to the community while the system was flushed with clean water. At least two crude-oil pipeline spills are strongly suspected of contributing to the hydrocarbon pollution in this area. In fact, the pollution of Monument's public water^{well}_^ led to the discovery of one such spill.

Dennis McQuillan

Sept. 28, 1984

File Monument at WATER -

MEMORANDUM



RECEIVED

SEP 27 1984

DATE: September 26, 1984

TO: File

CARLSBAD OFFICE

FROM: Garrison McCaslin, Environmental Supervisor, Hobbs.

SUBJECT: MONUMENT, NEW MEXICO OIL SPILL

On September 24, 1984, I visited the Monument Oil Spill site to sample water and discuss the condition of Well #1 with Mr. W. E. Copeland. Mr. Bernie Lednickey, Texas/New Mexico Pipeline Company, and Dr. William Deever, Texaco Oil, were at the Monument Grocery Store. Mr. Deever is an Environmental/Customer Service Representative with Texaco, and was present to sample Well #1. I accompanied Mr. Lednickey, Dr. Deever, and Mr. Copeland to Well #1 and conducted three (3) tests:

Explosivity -- off the scale on high side, above 80 percent by volume

Depth/Conductivity -- to determine presence and thickness of oil on well water surface, determined to be 1/8 inch to 1/10 inch thick crude oil floating on water surface.

Sampling for Purgeables -- done by and for William Deever, Texaco Oil Company.

Dr. Deever clearly stated that whole crude oil has soaked down to the water table in the area of the spill and was clearly responsible for the contamination of the water in Well #1.

Dr. Deever and myself discussed the possibility of the well water being stripped, skimmed, flared off to produce water having fewer than 3-4 parts per million and then pump the well over extended time to see if the water clears of oil contamination. I referred him to Dennis McQuillan, Groundwater Section in Santa Fe. This proposal has been discontinued or at least tabled as an option because pumping the well is not likely to noticeably improve the water quality.

On September 25, 1984, I, again, visited the Monument spill site to sample water and observe progress of the cleanup. A second water well (not currently used) located approximately 300 feet due west of the Schoolhouse Well #2, is being proposed as a replacement well for the contaminated one.

September 26, 1984

I have located two other private water wells that are down-gradient from the spill site to use as monitor wells. Both are very near to the intersection of Routes 8 and C-42.

Cleanup Procedures:

Cleanup is progressing rapidly. Oil soaked soil has been removed down to a depth of $2\frac{1}{2}$ feet below grade in most areas, and $3\frac{1}{2}$ -4 feet below grade near the pipeline itself. At no time did excavation and removal of oil-soaked soil exceed a depth of 4 feet despite the fact that pooling oil was found at the level of the pipeline extending both east and west of the break site. I pointed out to Mr. Lednickey the fact that oil was surfacing westward along the pipeline and requested to be present when he excavated that area. Excavation took place on September 25, 1984; Mr. Lednickey telephoned me to inform me that the work was done and no oil was present. I inspected the area and found that considerable oil had, in fact, leaked westward along the pipeline and had formed small pools after excavation to a depth of 3 feet, 4 inches below the bottom of the pipe. Dry soil had been thrown into the pools to soak up the oil.

This type of procedure is not, in my opinion, a completely acceptable method of cleanup. I contend that deeper and wider excavations should have been made to extract a larger portion of oil soaked soil, especially along the pipeline itself. I further contend that dry soil placed over the oil soaked soil to absorb excess oil should have been removed prior to final fill and grading.

Based upon the quantity of oil that flowed out of soil to form pools during excavations, upon the depth and lateral extent of oil soaked soil, and upon the fact that whole crude oil soaked down seventeen (17) feet to the water table, I conclude that the leak was a very large one and likely began several days before detection.

cc John Guinn, HPM II, Roswell
Tom Burt, HPM I, Carlsbad/Hobbs
Dennis McQuillan, Groundwater Surveillance, ✓
Santa Fe
• Jerry Sexton, OCD, Hobbs



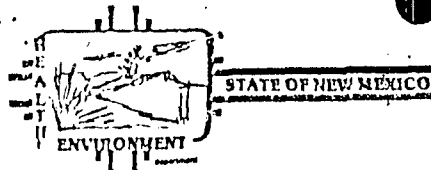
WILLIAM R. DEEVER, PH.D.
SENIOR PROJECT CHEMIST

ENVIRONMENTAL &
CUSTOMER SERVICES
PORT ARTHUR RESEARCH LAB.
TEXACO U.S.A.
A DIVISION OF TEXACO INC.

P.O. BOX 1608
PORT ARTHUR, TX 77640
(409) 989-6363

WATER - Monument -

MEMORANDUM



DATE: September 20, 1984

RECEIVED

SEP 24 1984

CARLSBAD OFFICE

TO: John Guinn, HPM II, Roswell

FROM: Garrison McCaslin, Environmental Supervisor, Hobbs

SUBJECT: MONUMENT OIL SPILL & RESULTANT PUBLIC WATER SUPPLY CONTAMINATION

09-17-84 Mr. W. E. Copeland, director and operator of the Monument Water Users Association, Monument, New Mexico, called the Hobbs field office, Environmental Improvement Division, at 1:00 p.m. on September 17, 1984, to inform EID of a strong gas/oil odor in the potable water. Mr. Copeland said that the contaminated water was coming from Well #1, (the smaller of two wells supplying water for the public water supply). The association serves 74 homes and three (3) businesses in Monument, NM.

Tom Burt, HPM I, Carlsbad, and I discussed the situation by telephone, and Mr. Copeland and I discussed water testing, extent and distribution of the oil odor in the water system, and corrective procedures.

09-18-84 Tom Burt and I traveled to Monument to appraise the situation. Mr. Copeland had located the probable source--a crude oil spill immediately to the west of the water well and issuing from a six inch pressure line owned by Texas/New Mexico Pipeline Company. We viewed the spill observing that approximately a three (3) acre area was covered with crude which had ponded in depressions to a depth of 14 inches. Coloration of soil showed that the level of ponded oil had previously been three (3) inches higher and had soaked into the surface soil thus reducing the existing surface level. The actual break site was easily recognized by bubbling and spouting oil coming to the surface and currents of flowing oil moving through vegetation. The largest ponded oil was in a shallow wash area approximately 100 feet from the #1 water well, Monument Water Users Association.

Returned to the Monument Grocery Store, Mr. Copeland's operating center, and discussed corrective procedures. The system had been drained, storage tank flushed twice, the contaminated well shut off from the line, chlorination increased to two times the normal operating level, and the system flushed with the freshly chlorinated water solely from Well #2. We looked at the whole system and reviewed potential problems that might occur and issued a statement to the users that water should not be used until further notice.

Samples were taken from the contaminated Well #1, from Well #2, and mid-line in the system. A sample was also taken from a bottle of water collected by Mr. Copeland from the line at the Monument Grocery on September 16, 1984. This sample had a notable content of "sour gas" odor and taste.

Returned to the EID office in Hobbs and issued radio announcement to Monument residents that water should not be used in cooking or drinking until further notice.

Returned to the spill site and observed the beginning of clean-up operations being conducted by Texas/New Mexico Pipeline Company. Mr. B. Lednickey, representative of Tex-N.M. Pipeline Co., was directing the cleanup. Also in attendance were Mr. Larry Squires, rancher and owner of Pollution Control, Inc., formerly "Laguna Gatuna," an OCD approved oil field waste disposal site.

Mr. Eddie Seay of OCD was present. Mr. Squires stated that he believed that the oil had only soaked into the soil "a foot or so" and could not have contaminated the water table because of the depth to groundwater--approximately 32 to 35 feet--and also because of the surface topography--the water well well being at a slightly higher elevation. I

September 20, 1984

disagreed, noting that there were too many variables to be considered before making such decisions: soil porosity, make up of the crude oil, etc., and that water and crude oil samples had been taken which would give us a much clearer view of kind and extent of pollution of the aquifer.

Cleanup had begun. A road scraper, a D-5 Dozer, and a front end loader were being used to scrape the surface soil that had been oil soaked, loaded into trucks, and hauled to the Pollution Control, Inc. site for disposal. Tank vacuum trucks from McCasland Trucking in Eunice, New Mexico were extracting ponded surface crude oil and hauling it away from the site.

Removal of soil had taken the level down to $2\frac{1}{2}$ feet below normal grade and oil soaked soil was still evident over the whole spill site.

09-19-84 Tom Burt, myself and Roelf Ruffner returned to the site and observed cleanup progress to date. Soil level was now down to $3\frac{1}{2}$ feet below grade and approximately 95 percent of the spill area was still oil soaked. The area immediately under the break site was excavated to a depth of six (6) feet (two (2) feet beneath the pipeline itself), and crude oil was rapidly flowing out of surrounding soil and puddling in freshly dug locations. Soaking oil into sandy soil brought to the area was not effective. Mr. Lednickey and Mr. Seay were present through all cleanup efforts that I observed. Mr. Seay, OCD, said that the oil had not reached the water table, in spite of the fact that no visible signs of reaching the lowest level of oil soaked soil were evident and that abundant oil was still flowing out of soil immediately adjacent to the pipeline break site. The pipeline was repaired early the previous day at which time I photographed the site.

September 20, 1984

Mr. Lednickey expressed a controlled interest in assuming some responsibility for the break but was not willing to concede that the spill was the source of water well contamination.

Tom Burt, myself, and Roelf Ruffner then traveled to the Pollution Control, Inc. Disposal site and observed the dumping of oil soaked soil.

At 3:00 p.m., I was interviewed on-site by Judy Mulkey, local television newsperson and by Hobbs Daily News-Sun photographer, Bob Smith.

National Guard from Hobbs, NM was requested by Tom Burt to provide potable water for Monument residents during the interim time while public water was not available.

Mr. Copeland requested that I issue a statement, via local radio, to residents of Monument that the water supply system has been cleaned and sanitized and is ready for use by residents. I sampled the system in-line, noted no residual oil taste nor odor, and proceeded to notify users that the water was, again, usable.

Mr. Copeland was hospitalized from the effects of Chlorine gas.

09-20-84 I had a telephone conversation with Dennis McQuillan, Groundwater Surveillance Section, Santa Fe. We discussed progress to date.

The following are concerns of EID, both here in Hobbs and Groundwater Section, Santa Fe:

- That - cleanup is adequate.
- identification of the source of oil contamination of the Monument Water Users Association Water Supply be made.
- identifiable source(s) of contamination be shut off to guard the quality of water for Monument residents and to limit further contamination of groundwater in the Monument area.

I plan to monitor cleanup operations for the next week.

to John Guinn

5

September 20, 1984

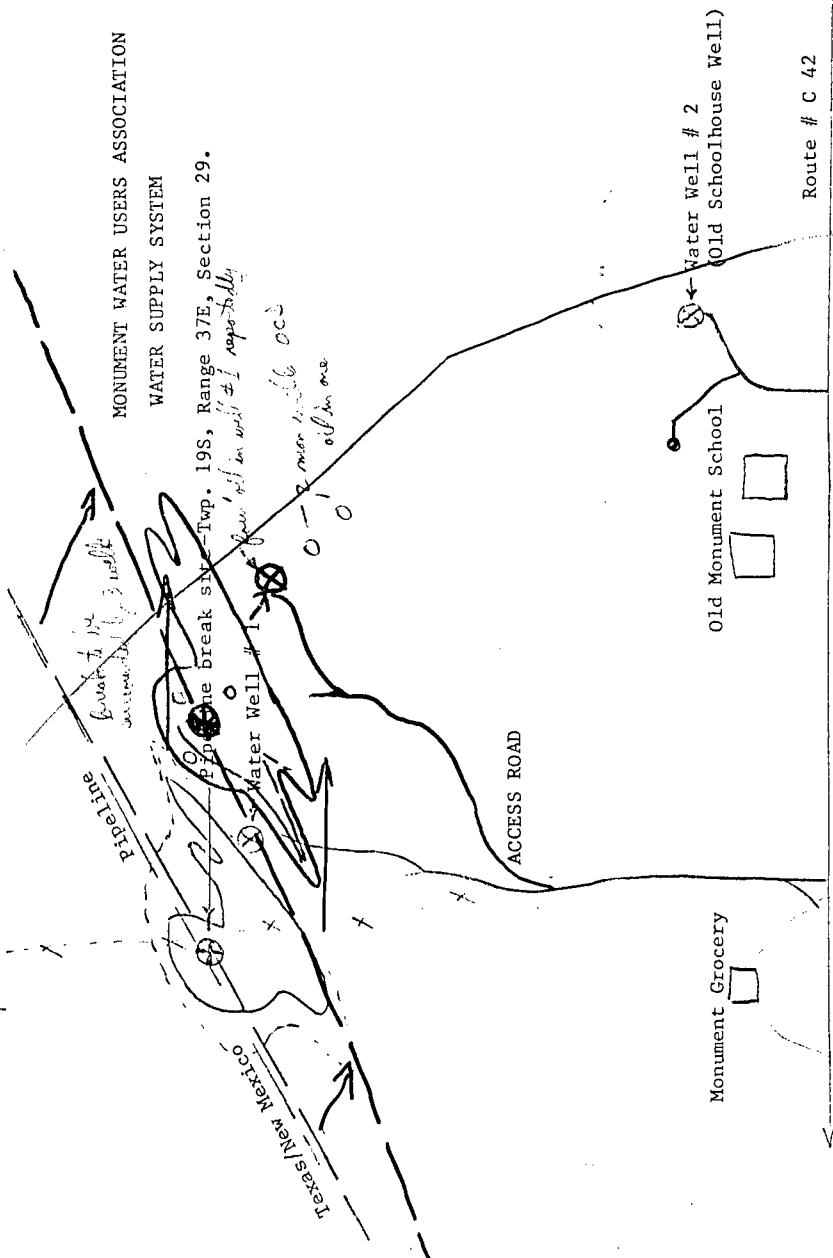
NOTE: Dennis Quintana, environmentalist, participated in the collection of samples September 18, 1984.

cc Tom Burt, HPM II, Roswell ✓
Hobbs EID Office

Attachment: Map of spill site

9-20-84

McQuillan



- Total spill area covered by crude oil

- Area having maximum oil coverage and ponding of crude oil

Storage Tank (Water)
Chlorinating Station
Pressure tank

DMF

T19S;R37E

NOVA

100

The map shows the northern Adriatic coastline, with Italy to the west and Slovenia to the east. Sampling stations are marked with numbers 1 through 10. Station 1 is located near the Italian coast, while stations 2 through 10 are further out in the sea. The map includes latitude coordinates (45° 30' N, 46° 00' N, 46° 30' N) and longitude coordinates (13° 30' E, 14° 00' E, 14° 30' E).

1

1

7851

UNITED STATES YEAR

1000

ИТЗ

10

TOTAL 57 Prod. Wells

SPECIAL SURVEY NEAR MONUMENT (due to Community Water Well gaseous odor)

DAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1 8:00 Amerada ----- 18 1:00 Marathon ----- 5	2 8:00 Gulf----- 11 11:00 ARCO ----- 1 1:00 Getty ----- 4	3 8:00 Shell----- 3 10:00 Great Western--3 1:00 Wiser Oil----- 3	4 8:00 Texaco -----6 10:00 C.E. Long----- 1 11:00 Hendrix----- 1 1:00 Petro Lewis-----1	5	6
	8	9	10	11	12	13

70.
R. J. Stamata
E. Nov. 1968
Hobbs

OIL CONSERVATION DIVISION
BRADENHEAD TEST SURVEY SCHEDULE

OPERATOR: TEXACO INC.

No. of wells to be tested 6

TEST DATE: Oct 4, 1984

TEST TIME: 8:00 AM

MEETING PLACE Monument Cafe

WELLS TO BE TESTED LISTED BELOW:

<u>LEASE</u>	<u>WELL #</u>	<u>LOCATION</u>
* Cook-Hartley	1-A	32-19-37
H.T. Mattern	1-L	20-19-37
"	2-M	"
"	3-N	"
"	4-K	"
"	5-L	"

* Indicates risers have been installed and cellar previously inspected by OCD and that a C-103 is on file in the OCD office. There will be no need to dig these wells out for this survey.

L CONSERVATION DIVISION
BRADENHEAD TEST SURVEY SCHEDULE

OPERATOR: C. E. LONG

No. of wells to be tested 1

TEST DATE: Oct 4, 1984

TEST TIME: 10:00 Am

MEETING PLACE Monument Cafe

WELLS TO BE TESTED LISTED BELOW:

<u>LEASE</u>	<u>WELL #</u>	<u>LOCATION</u>
Sinclair Federal	1-C	28-19-37

OIL CONSERVATION DIVISION
BRADENHEAD TEST SURVEY SCHEDULE

OPERATOR: JOHN H. HENDRIX CORPORATION

No. of wells to be tested 1

TEST DATE: Oct 4, 1984

TEST TIME: 11:00 Am

MEETING PLACE Monument Cafe

WELLS TO BE TESTED LISTED BELOW:

<u>LEASE</u>	<u>WELL #</u>	<u>LOCATION</u>
--------------	---------------	-----------------

* State T Bty 2	7-L	28-19-37
-----------------	-----	----------

* Indicates risers have been installed and cellar previously inspected by OCD and that a C-103 is on file in the OCD office. There will be no need to dig these wells out for this survey.

OIL CONSERVATION DIVISION
BRADENHEAD TEST SURVEY SCHEDULE

OPERATOR: PETRO LEWIS CORPORATION

No. of wells to be tested 1

TEST DATE: Oct 4, 1984

TEST TIME: 1:00 pm

MEETING PLACE Monument Cafe

WELLS TO BE TESTED LISTED BELOW:

<u>LEASE</u>	<u>WELL #</u>	<u>LOCATION</u>
--------------	---------------	-----------------

* State T	8-K	28-19-37
-----------	-----	----------

* Indicates risers have been installed and cellar previously inspected by OCD and that a C-103 is on file in the OCD office. There will be no need to dig these wells out for this survey.

Memo

From

R.L. STAMETS

Technical

Support Chief

To Paul

One of two municipal water wells at monument went bad. CID and OCD were there this morning. Problem apparently stems from a pipeline leak 100 yards north of the well. This was covered with weeds and could not be seen from the air. A pipeline crew is on the way. The well is only 48 feet deep. Jerry Sexton estimates with a little time and pumping, it should clear up.

CONSERVATION DIVISION
BRADENHEAD TEST SURVEY SCHEDULE

OPERATOR: WISER OIL COMPANY

No. of wells to be tested 3

TEST DATE: Oct 3, 1984

TEST TIME: 1:00 pm

MEETING PLACE Monument Cafe

WELLS TO BE TESTED LISTED BELOW:

<u>LEASE</u>	<u>WELL #</u>	<u>LOCATION</u>
Klingsmith B State	1-P	20-19-37
Luthy A State	1-G	29-19-37
Luthy A State	2-B	29-19-37

L CONSERVATION DIVISION
BRADENHEAD TEST SURVEY SCHEDULE

OPERATOR: GREAT WESTERN DRILLING CO.

No. of wells to be tested 3

TEST DATE: Oct 3, 1984

TEST TIME: 10:00

MEETING PLACE Monument Cafe

WELLS TO BE TESTED LISTED BELOW:

<u>LEASE</u>	<u>WELL #</u>	<u>LOCATION</u>
N.B. Bordages	1-D	33-19-37
Bordages	3-N	28-19-37
W.L. Crutchfield	1-H	32-19-37

CONSERVATION DIVISION
BRADENHEAD TEST SURVEY SCHEDULE

OPERATOR: SHELL WESTERN E & P INC.

No. of wells to be tested 3

TEST DATE: Oct 3, 1984

TEST TIME: 8:00 Am

MEETING PLACE Monument Cafe

WELLS TO BE TESTED LISTED BELOW:

<u>LEASE</u>	<u>WELL #</u>	<u>LOCATION</u>
State F	1Y-I	29-19-37
State F Com	1-I	"
State H	1-I	20-19-37

OIL CONSERVATION DIVISION
BRADENHEAD TEST SURVEY SCHEDULE

OPERATOR: GETTY OIL COMPANY

No. of wells to be tested 4

TEST DATE: Oct. 2, 1984

TEST TIME: 1:00 pm

MEETING PLACE Monument Cafe

WELLS TO BE TESTED LISTED BELOW:

<u>LEASE</u>	<u>WELL #</u>	<u>LOCATION</u>
Mexico X Com	1-H	29-19-37
* Skelly E State	1-H	"
Skelly E State	2-A	"
* State H	1-L	32-19-37

* Indicates risers have been installed and cellar previously inspected by OCD and that a C-103 is on file in the OCD office. There will be no need to dig these wells out for this survey.

OIL CONSERVATION DIVISION
BRADENHEAD TEST SURVEY SCHEDULE

OPERATOR ARCO OIL & GAS

Number of wells to be tested 1

TEST DATE: Oct 2, 1984

TEST TIME: 11:00 Am

MEETING PLACE Monument Cafe

WELLS TO BE TESTED LISTED BELOW:

<u>LEASE</u>	<u>WELL #</u>	<u>LOCATION</u>
* N.B. Bordages	1-M	28-19-37

- * Indicates risers have been installed and cellar previously inspected by OCD and that a C-103 is on file in the OCD office. There will be no need to dig this well out for this survey.

WATER CONSERVATION DIVISION
BRADENHEAD TEST SURVEY SCHEDULE

OPERATOR: GULF OIL CORPORATION

No. of wells to be tested 11

TEST DATE: Oct 2, 1984

TEST TIME: 8:00 AM

MEETING PLACE Monument Cafe

WELLS TO BE TESTED LISTED BELOW:

<u>LEASE</u>	<u>WELL #</u>	<u>LOCATION</u>
F.W. Kutter NCT-A	1-O	20-19-37
"	2-J	"
F.W. Kutter NCT-A Com	3-J	20-19-37
F.W. Kutter NCT-B	1-M	21-19-37
"	2-E	28-19-37
F.W. Kutter NCT-B	4-F	"
Fred Luthy	1-E	29-19-37
Fred Luthy	2-D	"
J.R. Phillips	2-A	31-19-37
D.A. Williams	1-J	29-19-37
"	2-O	"

OIL CONSERVATION DIVISION
BRADENHEAD TEST SURVEY SCHEDULE

OPERATOR: AMERADA HESS CORPORATION

No. of wells to be tested 18

TEST DATE: Oct 1, 1984

TEST TIME: 8:00 Am

MEETING PLACE Monument Cafe

WELLS TO BE TESTED LISTED BELOW:

<u>LEASE</u>	<u>WELL #</u>	<u>LOCATION</u>
D.F. Larsen	1-F	32-19-37
"	3-B	"
"	4-G	"
State K	1-F	29-19-37
"	2-C	"
State O	1-B	30-19-37
"	2-G	"
"	3-H	"
"	4-A	"
"	5-H	"
State P	1-L	29-19-37
"	2-M	"
State P Gas Com	3-K	"
State R	1-K	"
"	2-N	"
State U	1-E	32-19-37
"	2-D	"
State U Gas Com	2-C	"

CONSERVATION DIVISION
BRADENHEAD TEST SURVEY SCHEDULE

OPERATOR: MARATHON OIL COMPANY

No. of wells to be tested 5

TEST DATE: Oct 1, 1984

TEST TIME: 1:00 pm

MEETING PLACE Monument Cafe

WELLS TO BE TESTED LISTED BELOW:

<u>LEASE</u>	<u>WELL #</u>	<u>LOCATION</u>
Elliott State	1-J	30-19-37
"	2-I	"
"	3-O	"
"	4-P	"
"	5-P	"

November 29, 30, 31, & Dec. 3

OCD TW #1 125 ft North of School well

0-4 loose Rock

4-11 Caliche Soft

11-16 Hard Caliche

16-19 Clay + Caliche

19-21 Clay + Sand

21-28 Clay

28-29 Clay + Sand

29-TD 35 Sand + H₂O

Water at 28

Ran 5 in PVC to 32 ft - 3 ft of fill back:

30 ft of Perforation:

Gravel Packed and Capped with Bentonite + Native soil.
Will Cement Surface.

OCD TW #3 Located halfway between TW #2 319 ft

0-1 Top Soil

1-16 Rock + Hard Caliche

16-20 Clay + Sand

20-22 $\frac{1}{2}$ clay - wet

22 $\frac{1}{2}$ water

TD 31 Run 5 in PVC

18 ft of Perforation

gravel Packed with Bentonite cap. & Will cement sur.

1-4 Drilled with 78 bit

OCD TW #4 located 250 West of School well

0-1 Top Soil

1-13 Soft Caliche

13-20 Hard Caliche

21-24 Caliche & Sand

24-25 Clay & Sand

25-~~6~~ TD Sand

Spray of H₂O 25 ft

TD - 34 ft Run 5 in PVC

20 ft of Perfs. Gravel packed & Bentonite Cap. will cement surface later.

OCD TW #2 located 200 ft NW of school well.

0-1 Top Soil

1-6 Soft Caliche

6-14 Sand & Caliche

14-20 Hard Caliche

20-22 Sand & Caliche

22-24 Clay & Sand

24-25 Clay

25 - Water

TD 34 Run 5 in PVC

20 ft of Perfs. Gravel Packed with Bentonite cap. will cement later.

OCD Tw #1 located $\frac{8}{10}$ of Mil North of School
Drill $8\frac{3}{4}$ Bit

0-1 Top Soil

1-6 Hard Rock

6-10 Hard Caliche

10-12 Soft Caliche

12-15 Sand & Gravel

15-17 Sand & Caliche

17-20 Sand

22-80 ft Sand & Clay

small show of water.

TD-80 - Plugged Well.

OCD Tw #6 located 1000 ft NW of Spill site
Drill with $4\frac{1}{2}$ bit first to test
Change to $8\frac{3}{4}$ bit to complete.

0-1 Top Soil

1-3 Hard Caliche

3-19 Soft Caliche

19-24 Sand

24-26 Clay & Sand wet

26-60 Gravel & Sand - good water formation

Red Clay at 57 TD 60

Ran 6 in PVC with 40 ft of Perfs:

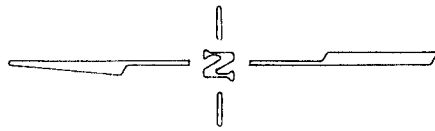
Gravel Packed with a Bentonite Cap

will cement later.

will test water quantity later.

85 ppm Cl.

SEC. 29, T19S, R37E, N.M.P.M.,
Lea County, New Mexico



LOCATION	RELATIVE ELEVATION	NORTH COORD	EAST COORD
SW Sec. Cor.	N/A	000	000
SE Sec. Cor.	N/A	-16.9	5277.1
RW 1	100.0	2056.2	2514.9
RW 2	96.6	1755.0	2881.6
MW 11	100.8	1928.2	2542.8
MW 2	99.4	1754.6	2630.7
MW 3	99.5	2314.4	2459.0
MW 4	98.6	2207.6	2593.9
MW 5	100.7	2383.8	2660.6
MW 6	99.3	2234.3	2759.5
MW 7	99.5	1983.3	2765.6
MW 8	102.1	1993.6	2387.0
MW 9	97.8	2108.4	2652.4
MW 10	100.7	2138.1	2507.7
MW 11	96.6	1755.0	2881.6
RW 2 (Pumping)	93.9	1636.2	2971.6
MW 12	100.7	1829.3	2422.3
MW 13	94.8	1372.1	3034.8
MW 14	97.6	1582.7	2804.6
MW 15	98.8	1827.7	2733.8
MW 16	99.4	1887.5	2675.3
MW 17	96.0	1549.9	2951.1
MW 18	102.2	2336.6	2306.9
MW 19	93.7	932.5	3039.2
MW 20	95.7	1195.7	2870.9
MW 21	93.9	1134.9	3057.5
MW 22	91.2	1257.1	3178.2
MW 23	93.3	1520.3	3185.9
MW 24	96.1	1811.2	3060.3
MW 25	93.2	1286.5	3357.2
MW 26	89.8	866.7	3133.6
MW 27	88.6	726.6	3166.3
MW 28	91.1	1064.6	3235.3
MW 29	93.1	1419.4	3370.9
Vent Pt. 1	91.9	1402.7	3371.9
Vent Pt. 2	94.5	523.4	2574.8
DW 1	88.2	679.2	3060.1
DW 2	89.6	521.6	3690.3
DW 3			
Pwr. Ln. (No.)	N/A	2027.5	3207.5
Pwr. Ln. (So.)	N/A	697.8	3198.8
Oil Well 1	N/A	629.8	3267.2
Oil Well 2	N/A	629.8	3267.2

11/2/84

DW DTP

20.71 19.89
19.23 NP
15.32 NP
15.97 NP
16.53 NP
16.47 Trace
18.60 18.53
20.26 NP
15.93 NP
20.68 18.73
21.18
16.67 NP
19.63 NP
16.96 16.36
18.23 NENE
19.31 18.74
16.83 NP
17.08 NP
17.09 NP
19.13 17.33
17.79 Trace
18.16 16.93
15.50 13.67
16.07 14.73
16.15 NP
17.32 NP
16.91 NP
18.55 Trace
14.98 NP

LEGEND

--- Monitor Well
--- Battery Well



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

TONEY ANAYA
GOVERNOR

September 18, 1984

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88240
(505) 393-6161

SUBJECT: SPECIAL WITNESSED CASING LEAK SURVEY
MONUMENT AREA

Gentlemen:

The Oil Conservation Division finds it necessary to conduct a casing leak survey on all wells listed on the attached schedule due to the fact that the Monument Community water well has developed a gaseous odor. We have found a pipeline leak nearby but in our effort to rule out any other possible source, we feel it is necessary to conduct a casing leak survey on all wells in the immediate vicinity.

All wells involved in this survey shall be readied as outlined below.

- (1) All wells shall be shut in for 24 hours prior to testing.
- (2) All cellars shall be dug in such manner as to expose outlets of bradenheads from the first string of pipe cemented in the well and all subsequent heads to and include the tubinghead.

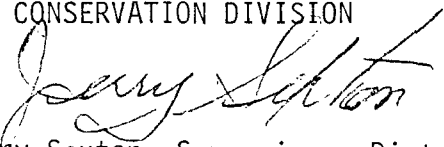
The wells marked with an asterisk (*) on the schedule have Form C-103 filed stating that the cellar has been inspected by an OCD inspector and it will not be necessary to dig these wells out for this survey.

- (3) One opening from all bradenheads shall be connected to a second valve above the surface and this valve must be closed in to comply with Paragraph (1).
- (4) Operators shall furnish connections, accurate pressure gauges, and personnel necessary to assist in opening of valves.
- (5) Operators are requested to meet OCD Field Inspector at the time and place indicated on the attached schedule.

If you have questions concerning this survey, please contact, Eddie Seay, Evelyn Downs, or myself at (505) 393-6161.

Very truly yours,

OIL CONSERVATION DIVISION


Jerry Sexton, Supervisor, Dist I

COMPLAINT TAKEN BY: JERRY SEXTONDATE: 9/17/84 TIME: 4:00 p.m.

PERSON COMPLAINING:

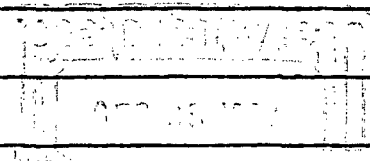
IN PERSON: _____ PHONE: xName: Dennis McQuillanComplaint: Gas in water well in Monument
water system.Address: w/EID - Santa Fe

_____Phone: _____

INVESTIGATION

INVESTIGATOR: Eddie Seay & Jerry Sexton DATE: 9/18/84 TIME: 8 amDESCRIBE INVESTIGATION AND FINDINGS: Met with Mr. Copeland and checked water well--
had gassy smell -- while at well OCD people found leak in Texas New Mexico Pipeline
transportation line located approximately 100 yds north of water well in N/2 29-19-37

_____ACTION TAKEN: DATE: 9/18/84 TIME: 9:00 a.m.Eddie Seay and Jerry Sexton met with TNM Pipeline people, Mr. Lednický -- a crew
was no location immediately. The line was repaired and area is in process of being
cleaned up. All oil soaked dirt will be removed and new soil replaced. Also,
approximately 300 ft of line will be replaced. A bradenhead survey on all wells
within a ½ mile radius of the water well will be conducted the first week in October.
This is a preliminary report & will be followed by any new information we obtain on this.

_____cc: Prentiss Childs

MONUMENT TEST WELLS

		Depth to Water(ft.)		Depth to Product(ft.)		Product Thickness(ft.)	Date	Time
Monitor Well	#1	20.41	19.89	0.52	11-12-84	9:00 AM		
	#2	19.23	none	—	11-12-84	10:20 AM		
	#3	15.52	none	—	11-12-84	10:09 AM		
	#4	15.97	none	—	11-12-84	10:15 AM		
	#5	16.53	none	—	11-12-84	10:11 AM		
	#6	16.47	none	—	11-12-84	10:13 AM		
	#7	18.60	18.53	0.07	11-12-84	9:07 AM		
	#8	20.26	none	—	11-12-84	10:17 AM		
	#9	15.93	none	—	11-12-84	10:15 AM		
	#10	20.68	18.73	1.95	11-12-84	9:04 AM		
PUMPING	#11		21.18		11-12-84	9:13 AM		
	#12	16.67	none	—	11-12-84	10:24 AM		
	#13	19.63	none	—	11-12-84	10:18 AM		
	#14	16.96	16.36	0.60	11-12-84	9:24 AM		
	#15	18.23	none	—	11-12-84	10:30 AM		
	#16	19.31	18.74	0.57	11-12-84	9:11 AM		
	#17	18.83	none	—	11-12-84	10:22 AM		
	#18	17:08	none	—	11-12-84	10:27 AM		
	#19	17.09	none	—	11-12-84	10:07 AM		
	#20	19.13	17.33	1.80	11-12-84	9:42 AM		
	#21	17.79	17.79	Trace	11-12-84	10:45 AM		
	#22	18.16	16.90	1.26	11-12-84	9:38 AM		
	#23	15.56	13.67	1.89	11-12-84	9:34 AM		
	#24	16.07	14.73	1.34	11-12-84	9:48 AM		
	#25	16.15	none	—	11-12-84	10:50 AM		
	#26	17.32	none	—	11-12-84	10:40 AM		
	#27	16.91	none	—	11-12-84	10:35 AM		
	#28	18.35	none	—	11-12-84	10:32 AM		
	#29	14.98	none	—	11-12-84	10:37 AM		
Recovery Well	#1	34.24	31.26	2.98	11-12-84	8:49 AM		

Wells 142?

WELL NUMBER	FOOTAGE	DEPTH	SOIL SAMPLE	TOTAL DEPTH	OTHER
3	approx. 200' NW of Monument water well	28'	water & sand	39'	hole was drilled approx. NW edge of spill - no smell or oil visible - approx. 90' SW from actual leak - slotted PVC to 26 perfs.
4	approx. 165' NW of water well - hole 21' S of ditch line & 140' SE of leak	0 - 6' 6 - 10' 10 - 17'	discolored soil & caliche - oil smell no oil odor - visible discoloration in caliche no oil odor - visible discoloration in sand & caliche	35'	spray of water at 18' - 20-25' sample clay & sand - water at 26' - pipe to 34' - one sample taken - bale sample slotted pipe - 26' of perfs.
5	NE of pipeline - approx. 100' N of pipeline	9' 15' 2 - 9' 9 - 15' 15 - 21' 21'	sand & caliche mix sand & clay sand & caliche sand & caliche & clay clay spray sand & gravel	35'	water sample from baling - water at 26' - 26' perfs.
6	125' NE of pipeline	0 - 2' 2 - 10' 10 - 15' 15 - 20' 21 - 35'	clay & black soil hard caliche soft caliche wet clay & sand & caliche water, sand & gravel		drill to 39' - fill back to 35' - collect bale samples - 26' perfs.
7	240' E Monument water well & approx. 20' E of Texas-NM pipeline	0 - 5' 5 - 17' 17 - 20' 20' 32'	hard caliche soft caliche & sand clay & sand clay of sand & show of water water	35'	bale sample - show a sheen of oil & strong odor - perfs at 14' of surface

WELL #	FOOTAGE	DEPTH	SOIL SAMPLE	T-D	OTHER
8	175' W of water well	0 - 2' 2 - 11' 11 - 22' 23 - 24' 24 - 26' 27'	hard caliche sand & gravel hard caliche clay - soil sample clay & sand wet sand, gravel, & water	36'	no smell or show of oil - bale sample; no show - good water - perfs at 15' of surf.
9	approx. 150' NE of WW & 15' from SW pipeline	0 - 2' 2 - 5' 5 - 7' 7 - 15' 15 - 20' 20 - 23' 23 - 28'	calichi - discolor sample caliche - discolor sample sand & gravel caliche sand, gravel, & clay - took sample clay & sand - sample clay, gravel, & sand	35'	water at 27' - perfs at 14' of surf - slight oil odor - caught bale sample - ran out of dis- color soil & caliche at approx. 20'.
10	100' N of WW	0 - 1' 1 - 5' 5 - 7' 7 - 10' 10 - 18' 18 - 22' 22 - 29'	top soil hard caliche soft caliche & sand hard rock & caliche sand, caliche, & gravel - sample sand & clay - sample clay & sand	35'	hit water at 29' - perfs at 14' of surface - bale sample - show of oil - no discoloration or smell
11	approx. 500' SE of WW	0 - 1' 1 - 5' 5 - 14' 14 - 16' 16 - 18' 18 - 23' 23 - 26' 26 - 30'	top soil hard rock caliche, sand, & gravel - sample hard caliche gravel & caliche - slight smell of oil clay & sand - sample clay & sand - hard rock clay, sand, & gravel - smell of oil	37½'	hit water at 30' - 20' perfs - smell of oil - bale sample - pulled PVC up 4' - show of oil.

<u>WELL #</u>	<u>FOOTAGE</u>	<u>DEPTH</u>	<u>SOIL SAMPLE</u>	<u>T-D</u>	<u>OTHER</u>
12	150' SE of well #11	0 - 1' 1 - 19' 19 - 25' 25' 30'	top soil hard caliche clay, sand, & gravel clay & sand water	35'	water at 30' - cased to 34½' - 25' perfs. - rig back of #11 - to bale & pull up csg at 4' - top perfs - 13'
13	200' SW of WW	0 - 1' 1 - 2' 2 - 14' 14 - 17' 17 - 20' 20 - 28'	top soil rock hard caliche soft caliche & sand hard caliche sand, clay, & gravel	35'	25' of perfs - hit water at 29'
14	approx. 1/10 mile SE from WW	0 - 19' 19 - 19' 19 - 28' 28 - 30' 30 - 35'	caliche small & soft water & oil - smell at 16' caliche, sand, & clay sand & clay gravel, sand, & clay		bale sample - strong oil odor - 25' of perfs
15	approx. 500' SE of WW	0 - 7' 7 - 11' 11 - 19' 19 - 21' 21 - 23' 23 - 25' 25 - 35'	caliche sand & gravel caliche - oil smell at 17' clay, gravel, & caliche water at 19' clay & gravel clay & sand clay, sand, gravel - water at 27'	35'	25' of perfs - bale sam- ple - strong oil odor
16	300' SE of WW	0 - 1' 1 - 17' 17 - 19' 19 - 25'	top soil caliche - smell at 16' sand & gravel sand & clay - water at 19'	25'	20' of perfs - bale has oil show - smell at 16'
17	1/2 way between #16 & #1	0 - 1' 1 - 10' 10 - 13' 13 - 16' 16 - 19' 19 - 23' 23 - 30'	loose rock sand, gravel, & clay clay & gravel hard caliche sand & gravel - smell at 17' clay & sand clay, sand, & gravel	30'	water at 25' - 20' of perfs - smell at 17'

WELL #	FOOTAGE	DEPTH	SOIL SAMPLE	T-D	OTHER
18	approx. 75' SW of #12 & approx. 100' NW of #14	0 - 1' 1 - 12' 12 - 16' 16 - 18' 18 - 19' 19 - 22' 22 - 28'	loose rock caliche, sand - soft hard caliche - smell at 16' sand, gravel & caliche sand & gravel clay & sand sand & gravel	28'	perfs at 20' - water at 20' - smell at 16'
19	approx. 100' W of #10 & approx. 250' NW of WW	0 - 6' 6 - 8' 8 - 14' 14 - 18' 18 - 20' 20 - 28' 28 - 35'	top soil caliche sand & gravel sand & hard caliche sand, clay, & gravel sand & clay sand & gravel - water at 31'	35'	water at 31' - 25' of perfs - no smell - so sign
20	approx. 150' SE of #21	0 - 6' 6 - 17' 17 - 27' 27 - 30'	top soil & loose rock caliche - soft to 12' sand & clay sand	30'	water at 18'
21	approx. 150' NE of #20 & near sec line corner	0 - 6' 6 - 12' 12 - 18' 18 - 19' 19 - 21' 21 - 22' 22 - 25' 25 - 27' 27 - 30'	caliche & chert - sample caliche & chert - sample, caliche & sand - sample sand - damp - no odor clay, sand, & gravel - no odor top of water - clay - no water yet no water - damp clay - no odor top of water TD & cased w/2 jts of PVC	30'	cased w/2 jts of PVC pipe - water sample from baler - water standing 12' in hole at 30'
22		0 - 6' 6 - 12' 12 - 15' 16'	caliche - sample caliche - sample caliche soil - odor of oil or gas pure crude oil appeared in hole top of water clay & sand	30'	baler sample of water

WELL #	FOOTAGE	DEPTH	SOIL SAMPLE	T-D	OTHER
23		0 - 10' 10 - 12' 12 - 16' 16 - 18' 18 - 30'	caliche - sample caliche - sample caliche & sand - oil odor oil coming in hole sand, gravel, clay & oil	30'	pipel & cased PVC - probe showed 2' of oil on water
24	29-19-37	0 - 12' 12 - 16' 16 - 20' 20 - 22' 24'	caliche - sample caliche - oil odor caliche - faint odor clay, sand, gravel - no odor water	24'	bailer sample showed oil on water - set 20' PVC pipe & cased hole to top - top of water at 24'
25	29-19-37	0 - 10' 10 - 15' 15 - 18' 18 - 24'	sand, caliche, & gravel sand - top of water - no odor sand, clay, & gravel - no odor sand & clay	24'	set 20' perf - PVC pipe & cased hole to top
26		0 - 6' 6 - 8' 8 - 12' 12 - 18' 18 - 32' 32 - 34'	sand, gravel, & caliche sand, gravel, & caliche caliche sand & gravel sand & clay top of water	34'	no odors - set perfs - PVC pipe at 20' - cased to surf
27		0 - 8' 8 - 11' 11 - 26' 26 - 30'	hard caliche gravel, sand, & caliche sand & clay - damp sand & gravel - water at 27'	30'	20' of perfs. - water at 27'
28		0 - 15' 15 - 20' 20 - 23' 23 - 24' 24 - 30'	hard caliche rock sand, caliche & clay clay & sand clay - damp sand & gravel	30'	20' of perfs - water at 24'

Extra Copies.

WELL #	FOOTAGE	DEPTH	SOIL SAMPLE	T-D	OTHER
29	All wells were gravel packed from TD to within 6 ft of surface and cemented from 6 ft to surface.	0 - 13'	hard caliche rock gravel, clay & sand clay - damp sand & gravel - water at 19'	30'	20' of perms - water at 19'
13 - 18'					
18 - 19'					
19 - 30'					

NEW MEXICO OIL CONSERVATION COMMISSION
FIELD TRIP REPORT

Name Eddie Seay Date 10-4-84 Miles 42 District
Time of Departure 7 AM Time of Return 5 PM Car No. 70

In the space below indicate the purpose of the trip and the duties performed, listing wells or leases visited and any action taken.

Signature Eddie W. Seay

CLASSIFICATION
F U P 7
W O O 3

11 wells - Monument area - bradenhead test - Texaco, Petro Lewis, John Hendrix, & Wiser Oil - all wells checked out o.k.
1 other - Monument area - drilling monitor wells around Tex-Mex oil spill - well #1 located 120' S from monument water well - 35' deep - top water 19' with a show of oil on top - test well #2 located 190' S - no show of oil.

Mileage	Per Diem	Hours
UIC <u>32</u>	UIC <u>4.00</u>	UIC <u>7</u>
RFA <u> </u>	RFA <u> </u>	RFA <u> </u>
Other <u>10</u>	Other <u>2.00</u>	Other <u>3</u>

TYPE INSPECTION PERFORMED

INSPECTION CLASSIFICATION

NATURE OF SPECIFIC OR FACILITY INSPECTION

H - Housekeeping
P - Plugging
C - Plugging Cleanup
T - Well Test
R - Repair/Workover
F - Waterflow
M - Mishap or Spill
W - Water Contamination
O - Other

U - Underground Injection Control - Any inspection of or related to injection project, facility, or well or resulting from injection into any well. (SWD, 2ndry injection and production wells, water flows or pressure tests, surface injection equipment, plugging, etc.)
R - Inspections relating to Reclamation Fund Activity
O - Other - Inspections not related to injection or The Reclamation Fund

D - Drilling
P - Production
I - Injection
C - Combined prod. operations
S - SWD
U - Underground Storage
G - General Operations
F - Facility or Lease
M - Mishap or Spill
O - Other

E - Indicate some form of enforcement action taken in the field (show immediately below the letter U, R or O)

NEW MEXICO OIL CONSERVATION COMMISSION
FIELD TRIP REPORT

Name Eddie W. Seay Date 10-6-84 Miles 31 District 1
Time of Departure 7 AM Time of Return 5 PM Car No. 7360

In the space below indicate the purpose of the trip and the duties performed, listing wells or leases visited and any action taken.

Signature Eddie W. Seay

3 wells - Monument area - to drill and monitor test well - drilling around Texas-New Mexico leak - test well #6 - drilled 125' NE of pipeline area to 39' - no odor or evidence of oil - test well #7 - drilled 240' east of Monument water well - had slight oil odor at 17' - no visible oil seen - test well #8 - drilled 175' west of water well (536') - no odor or visible oil seen.

collected soil samples & take samples of water.

Mileage

UIC _____

RFA _____

Other 31

Per Diem

UIC _____

RFA _____

Other 6.00

Hours

UIC _____

RFA _____

Other 9

TYPE INSPECTION
PERFORMED

H - Housekeeping
P - Plugging
C - Plugging Cleanup
T - Well Test
R - Repair/Workover
F - Waterflow
M - Mishap or Spill
W - Water Contamination
O - Other

INSPECTION
CLASSIFICATION

U - Underground Injection Control - Any inspection of or related to injection project, facility, or well or resulting from injection into any well. (SWD, 2ndry injection and production wells, water flows or pressure tests, surface injection equipment, plugging, etc.)
R - Inspections relating to Reclamation Fund Activity
O - Other - Inspections not related to injection or The Reclamation Fund
E - Indicates some form of enforcement action taken in the field (show immediately below the letter U, R or O)

NATURE OF SPECIFIC WELL
OR FACILITY INSPECTED

D - Drilling
P - Production
I - Injection
C - Combined prod. inj. operations
S - SWD
U - Underground Storage
G - General Operation
F - Facility or location
H - Hauling
O - Other

NEW MEXICO OIL CONSERVATION COMMISSION
FIELD TRIP REPORT

Name Ronald Castleberry Date 10-31-84 Miles 50 District 1
Time of Departure 7 AM Time of Return 7 PM Car No. 6515

In the space below indicate the purpose of the trip and the duties performed, listing wells or leases visited and any action taken.

Signature

Ronald Castleberry

3 wells - Texas NM Pipeline Co. - 32-19-37 area - witnessed & recorded data - took water and soil samples every 6' to TD of 30' - well #s 24, 25, & 26 - odors and petroleum product was found on #24-32-19-37 - these are fresh water monitoring wells.

Mileage

Per Diem

Hours

UIC

UIC

UIC

RFA

RFA

RFA

Other 50

Other 13.00

Other 12

TYPE INSPECTION
PERFORMED

INSPECTION
CLASSIFICATION

NATURE OF SPECIFIC WELL
OR FACILITY INSPECTED

H - Housekeeping
P - Plugging
C - Plugging Cleanup
T - Well Test
R - Repair/Workover
F - Waterflow
M - Mishap or Spill
W - Water Contamination
O - Other

U - Underground Injection Control - Any inspection of or related to injection project, facility, or well or resulting from injection into any well. (SWD, 2ndry injection and production wells, water flows or pressure tests, surface injection equipment, plugging, etc.)
R - Inspections relating to Reclamation Fund Activity
O - Other - Inspections not related to injection or The Reclamation Fund

D - Drilling
P - Production
I - Injection
C - Combined prod. inj. operations
S - SWD
U - Underground Storage
G - General Operation
F - Facility or location
M - Mishap
W - Water
O - Other

E - Indicate some form of an agreement action taken in the

NEW MEXICO OIL CONSERVATION COMMISSION
FIELD TRIP REPORT

Name Eddie Seay Date 10-5-84 Miles 36 District 1
Time of Departure 7 AM Time of Return 5 PM Car No. 7360

In the space below indicate the purpose of the trip and the duties performed, listing wells or leases visited and any action taken.

Signature Eddie W Seay

3 wells - Monument area - to drill & monitor drilling of test wells around Texas-New Mexico Pipeline leak - test well #3 located 200' NW of water well - drill 639' - no odor or visible oil found - test well #4 - drilled 20' off TNN line where leak was encountered - show discolored soil down to left - no odor or oil in water - test wells #5 - drilled 100' N of pipeline - drilled to TD - 35' - no odor or evidence of oil.

Mileage

UIC _____

RFA _____

Other 36

Per Diem

UIC _____

RFA _____

Other 6.00

Hours

UIC _____

RFA _____

Other 9

TYPE INSPECTION PERFORMED	INSPECTION CLASSIFICATION	NATURE OF SPECIFIC WELL OR FACILITY INSPECTED
H - Housekeeping	U - Underground Injection Control - Any inspection of or related to injection project, facility, or well or resulting from injection into any well. (SWD, 2ndry injection and production wells, water flows or pressure tests, surface injection equipment, plugging, etc.)	D - Drilling
P - Plugging	R - Inspections relating to Reclamation Fund Activity	P - Production
C - Plugging Cleanup	O - Other - Inspections not related to injection or The Reclamation Fund	I - Injection
T - Well Test	E - Indicate some form of enforcement action taken in the field (shown immediately below the letter U, R or O)	C - Combined prod. inj. operations
R - Repair/Workover		S - SWD
F - Waterflow		U - Underground Storage
M - Mishap or Spill		G - General Operation
W - Water Contamination		F - Facility or location
O - Other		H - Hoisting
		O - Other

Ed L. Reed and Associates, Inc.

Consulting Hydrologists

MIDLAND - CORPUS CHRISTI
TEXAS

ED L. REED, P.E.
CHAIRMAN OF THE BOARD

A. JOSEPH REED
PRESIDENT

CHESTER F. SKRABACZ
VICE PRESIDENT FIELD OPERATIONS

1109 N. BIG SPRING
MIDLAND, TEXAS 79701
915 682-0556

V. STEVE REED
EXECUTIVE VICE PRESIDENT

OIL INDUSTRIES BLDG.
SUITE 315

723 UPPER N. BROADWAY
CORPUS CHRISTI, TEXAS 78403
512-883-1353

January 24, 1984

Mr. J. W. Maharg
Engineering Director
Permian Basin Region
Phillips Petroleum Company
Odessa, Texas 79762

Re: Ground Water Monitoring Program
Lusk Gasoline Plant Impoundment
Lea County, New Mexico

Dear Mr. Maharg:

This letter presents the information you requested in your letter of January 18, 1984 concerning development of a ground water sampling program for the Lusk Gasoline Plant Impoundment. The information needed are as follows:

- a. Optimum monitor well placements.
- b. Completion plans for monitor wells.
- c. Sampling procedure.


Monitor Well Locations

The basic requirement for the placement of the monitor wells is the positioning of three wells down the hydraulic gradient from the impoundment and at least one well up-gradient from the impoundment. The down-gradient wells will enable sampling of contaminant that may be present in the uppermost aquifer as a result leaching from the impoundment. The up-gradient well will enable sampling of uncontaminated ground water.

The uppermost formation of water-bearing potential consists of Quaternary alluvium fill. This is underlain by red and gray clays of Triassic age.

Fluid movement in the alluvium may be controlled by the topography of the Triassic surface since the alluvium is apparently not saturated. In this area the Triassic surface dips to the southeast at a relatively steep slope of 50 feet per mile.

The proposed locations for the monitor wells are shown on the



attached map. These are based on the anticipated direction of fluid movement which is southeast and on the need to drill the down-gradient wells as close as possible to the impoundment.

Construction Plans

The attached well profile diagram shows the design that is proposed for construction of the monitor wells. We recommend that a 12-inch hole be drilled to a depth of about 15 feet (base of caliche cap) and 8-inch steel casing cemented in place. After the cement has solidified a 6-3/4-inch hole should be air-drilled to the Triassic surface (approximately 50 feet) then the well cased with 4-inch PVC pipe and gravel packed. About 2 feet of clean sand should be placed above the gravel pack and the remainder of the hole cemented to the surface (about 13 feet of cement).

Although we anticipate that the alluvium is mostly unsaturated, care should be taken during the drilling of the 6-inch hole to sample any fluid encountered at regular intervals if possible.

Sampling Procedure

Once the well is constructed it should be developed by pumping or jetting depending on whether enough water is present. Development is complete when the pumped or bailed water is free of mud and sand. At this point a water sample should be collected and properly labeled.

Subsequent sampling of the monitor wells should be done on a regular basis; every three months would be adequate. Before collecting a sample the well should be pumped or bailed so that at least three casing volumes of water are removed. This will ensure that a representative ground water sample is obtained.

If you have any questions concerning this matter please call on us.

Very truly yours,

ED L. REED & ASSOCIATES, INC.

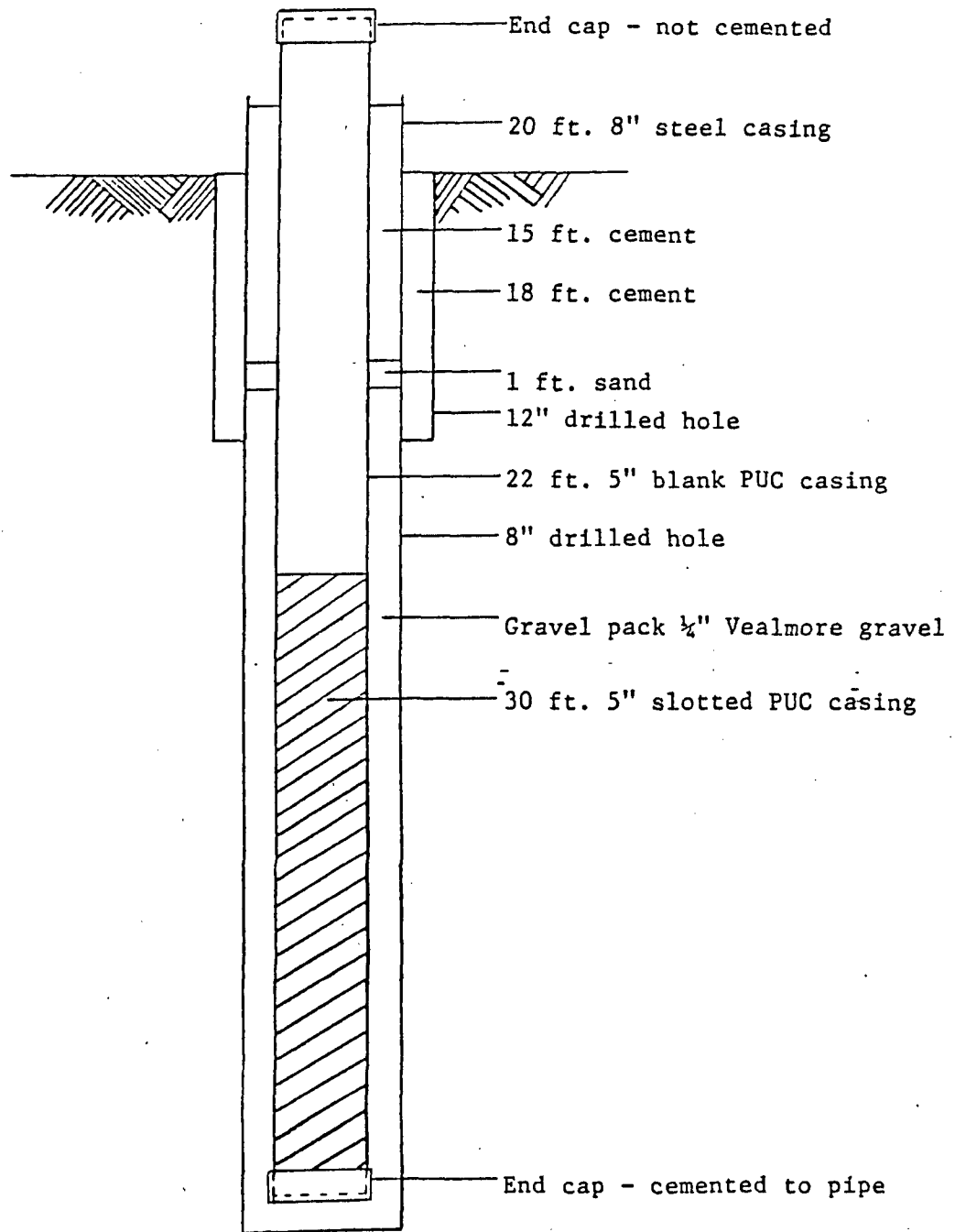


Ed L. Reed, P. E.

ELR:lb

Attachment VI

Lusk Gasoline Plant
Groundwater Sampling Well #1



19 S 37 E Sec 17 ~~Mon~~

20 None

Sec 29

29:

SE SE SW? L-5222 Hobbs School #16 (No record)

SE SE SW L-5314 " " "

SW SW? L-5525 ALton Roberts (No record)

SE SE L-5611 Monument Water Users

Don

Sec 17 NW L-2996-5-6 Log not found Never drilled? Famous Oil

NE SW L-3525 (Missile)

(SW NE SE L-6933 (Drilled 1972 Destroyed as of 2/13/75) Full 500 Oil drilling
100' Well, WL 65' 1' Soil 15' Brown tight sand 20' Brown
25' Caliche 4' " rock

Sec 20 None - No records 15' Brown sand 9' Gravel
" " Sandy clay 29-100 clay

Sec 29 SE NW NW L-1251

NW SW SE L-1252

NE SW L-2596

L-20 3922

" 3 3949

" 9 & 10 3976

" 15 4799

School well SE SE SW 4887 1' Hard Caliche, Dry to 55'

NE SE SE 5580 40' Gray Caliche 5' Dry Sand

N¹/₂ SW SW SE SW 5545 1st Baptist Church 5' Red Red

expe? 5790 Harshbarger (~60' No Log)

SW 6496 Mon. Water Users (No record)

OE Grove

~~L-6496~~ L-6496 O.E. Grove SW $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec 29

Total Depth of well 50'

Depth to water upon completion 27'

Principal water bearing strata 35-45'

0-2' Top Soil

2-16' gray caliche

16-35' gray sand + caliche

35-45' fine water sand

45-50' red shale

Drilled 4/16/69

5222
525

-L-5314 Hobbs School #16

old well SE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 29 19S 37E

new well NW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$

Old well depth to water 14'
Total depth of well 34.1'

-L-5611 Monument Water Users Coop

NE $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 32 19S 37E

-L-5611X Monument Water Users Coop

NE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec 29 19S 37E

Principal Water Bearing Strata 20-55'

Depth of well: 70'

Depth to water up completion 20'

0-10' caliche (hard)

10-20 caliche (soft)

→ 55-70 red bed

→ 20-55 water sand + gravel

<u>WELL NUMBER</u>	<u>FOOTAGE</u>	<u>DEPTH</u>	<u>SOIL SAMPLE</u>	<u>TOTAL DEPTH</u>	<u>OTHER</u>
3	approx. 200' NW of Monument water well	28'	water & sand	39'	hole was drilled approx. NW edge of spill - no smell or oil visible - approx. 90' SW from actual leak - slotted PVC to 26 perfs.
4	approx. 165' NW of water well - hole 21' S of ditch line & 140' SE of leak	0 - 6' 6 - 10'	discolored soil & caliche - oil smell no oil odor - visible discoloration in caliche no oil odor - visible discoloration in sand & caliche	35'	spray of water at 18' - 20-25' sample clay & sand - water at 26' - pipe to 34' - one sample taken - bale sample slotted pipe - 26' of perfs.
5	NE of pipeline - app. 100' N of pipeline	9' 15' 2 - 9' 9 - 15' 15 - 21' 21'	sand & caliche mix sand & clay sand & caliche sand & caliche & clay clay spray sand & gravel	35'	water sample from baleing - water at 26' - 26' perfs.
6	125' NE of pipeline	0 - 2' 2 - 10' 10 - 15' 15 - 20' 21 - 35'	clay & black soil hard caliche soft caliche wet clay & sand & caliche water, sand & gravel		drill to 39' - fill back to 35' - collect bale samples - 26' perfs.
7	240' E Monument water well & approx. 20' E of Texas-NM pipeline	0 - 5' 5 - 17' 17 - 20' 20' 32'	hard caliche soft caliche & sand clay & sand clay of sand & show of water water	35'	bale sample - show a sheen of oil & strong odor - perfs at 14' of surface

<u>WELL #</u>	<u>FOOTAGE</u>	<u>DEPTH</u>	<u>SOIL SAMPLE</u>	<u>T-D</u>	<u>OTHER</u>
8	175' W of water well	0 - 2' 2 - 11' 11 - 22' 23 - 24' 24 - 26' 27'	hard caliche sand & gravel hard caliche clay - soil sample clay & sand wet sand, gravel, & water	36'	no smell or show of oil - bale sample: no show - good water - perfs at 15' of surf.
9	approx. 150' NE of WW & 15' from SW pipeline	0 - 2' 2 - 5' 5 - 7' 7 - 15' 15 - 20' 20 - 23' 23 - 28'	calichi - discolor sample caliche - discolor sample sand & gravel caliche sand, gravel, & clay - took sample clay & sand - sample clay, gravel, & sand	35'	water at 27' - perfs at 14' of surf - slight oil odor - caught bale sample - ran out of dis- color soil & caliche at approx. 20'.
10	100' N of WW	0 - 1' 1 - 5' 5 - 7' 7 - 10' 10 - 18' 18 - 22' 22 - 29'	top soil hard caliche soft caliche & sand hard rock & caliche. sand, caliche, & gravel - sample sand & clay - sample clay & sand	35'	hit water at 29' - perfs at 14' of surface - bale sample - show of oil - no discoloration or smell
11	approx. 500' SE of WW	0 - 1' 1 - 5' 5 - 14' 14 - 16' 16 - 18' 18 - 23' 23 - 26' 26 - 30'	top soil hard rock caliche, sand, & gravel - sample hard caliche gravel & caliche - slight smell of oil clay & sand - sample clay & sand - hard rock clay, sand, & gravel - smell of oil	37½'	hit water at 30' - 20' perfs - smell of oil - bale sample - pulled PVC up 4' - show of oil.

<u>WELL #</u>	<u>FOOTAGE</u>	<u>DEPTH</u>	<u>SOIL SAMPLE</u>	<u>T-D</u>	<u>OTHER</u>
12	150' SE of well #11	0 - 1' 1 - 19' 19 - 25' 25' 30'	top soil hard caliche clay, sand, & gravel clay & sand water	35'	water at 30' - cased to 34½' - 25' perfs. - rig back of #11 - to bale & pull up csg at 4' - top perfs - 13'
13	200' SW of WM	0 - 1' 1 - 2' 2 - 14' 14 - 17' 17 - 20' 20 - 28'	top soil rock hard caliche soft caliche & sand hard caliche sand, clay, & gravel	35'	25' of perfs - hit water at 29'
14	approx. 1/10 mile SE from WM	0 - 19' 19' 19 - 28' 28 - 30' 30 - 35'	caliche small & soft water & oil - smell at 16' caliche, sand, & clay sand & clay gravel, sand, & clay		bale sample - strong oil odor - 25' of perfs
15	approx. 500' SE of WM	0 - 7' 7 - 11' 11 - 19' 19 - 21' 21 - 23' 23 - 25' 25 - 35'	caliche sand & gravel caliche - oil smell at 17' clay, gravel, & caliche water at 19' clay & gravel clay & sand clay, sand, gravel - water at 27'	35'	25' of perfs - bale sample - strong oil odor
16	300' SE of WM	0 - 1' 1 - 17' 17 - 19' 19 - 25'	top soil caliche - smell at 16' sand & gravel sand & clay - water at 19'	25'	20' of perfs - bale has oil show - smell at 16'
17	1/2 way between #16 & #1	0 - 1' 1 - 10' 10 - 13' 13 - 16' 16 - 19' 19 - 23' 23 - 30'	loose rock sand, gravel, & clay clay & gravel hard caliche sand & gravel - smell at 17' clay & sand clay, sand, & gravel	30'	water at 25' - 20' of perfs - smell at 17'

<u>WELL #</u>	<u>FOOTAGE</u>	<u>DEPTH</u>	<u>SOIL SAMPLE</u>	<u>T-D</u>	<u>OTHER</u>
18	approx. 75' SW of #12 & approx. 100' NW of #14	0 - 1' 1 - 12' 12 - 16' 16 - 18' 18 - 19' 19 - 22' 22 - 28'	loose rock caliche, sand - soft hard caliche - smell at 16' sand, gravel & caliche sand & gravel clay & sand sand & gravel	28'	perfs at 20' - water at 20' - smell at 16'
19	approx. 100' W of #10 & approx. 250' NW of WW	0 - 6' 6 - 8' 8 - 14' 14 - 18' 18 - 20' 20 - 28' 28 - 35'	top soil caliche sand & gravel sand & hard caliche sand, clay, & gravel sand & clay sand & gravel - water at 31'	35'	water at 31' - 25' of perfs - no smell - so sign
20	approx. 150' SE of #21	0 - 6' 6 - 17' 17 - 27' 27 - 30'	top soil & loose rock caliche - soft to 12' sand & clay sand	30'	water at 18'
21	approx. 150' NE of #20 & near sec line corner	0 - 6' 6 - 12' 12 - 18' 18 - 19' 19 - 21' 21 - 22' 22 - 25' 25 - 27' 27 - 30'	caliche & chert - sample caliche & chert - sample, caliche & sand - sample sand - damp - no odor clay, sand, & gravel - no odor top of water - clay - no water yet no water - damp clay - no odor top of water TD & cased w/2 jts of PVC	30'	cased w/2 jts of PVC pipe - water sample from baler - water standing 12' in hole at 30'
22		0 - 6' 6 - 12' 12 - 15' 16'	caliche - sample caliche - sample caliche soil - odor of oil or gas pure crude oil appeared in hole	30'	baler sample of water
		16'			
		19'	top of water		
		30'	clay & sand		

<u>WELL #</u>	<u>FOOTAGE</u>	<u>DEPTH</u>	<u>SOIL SAMPLE</u>	<u>T-D</u>	<u>OTHER</u>
23		0 - 10' 10 - 12' 12 - 16' 16 - 18' 18 - 30'	caliche - sample caliche - sample caliche & sand - oil odor oil coming in hole sand, gravel, clay & oil	30'	piped & cased PVC - probe showed 2' of oil on water
24	29-19-37	0 - 12' 12 - 16' 16 - 20' 20 - 22' 24'	caliche - sample caliche - oil odor caliche - faint odor clay, sand, gravel - no odor water	24'	bailer sample showed oil on water - set 20' PVC pipe & cased hole to top - top of water at 24'
25	29-19-37	0 - 10' 10 - 15' 15 - 18' 18 - 24'	sand, caliche, & gravel sand - top of water - no odor sand, clay, & gravel - no odor sand & clay	24'	set 20' perf - PVC pipe & cased hole to top
26		0 - 6' 6 - 8' 8 - 12' 12 - 18' 18 - 32' 32 - 34'	sand, gravel, & caliche sand, gravel, & caliche caliche sand & gravel sand & clay top of water	34'	no odors - set perfs - PVC pipe at 20' - cased to surf
27		0 - 8' 8 - 11' 11 - 26' 26 - 30'	hard caliche gravel, sand, & caliche sand & clay - damp sand & gravel - water at 27'	30'	20' of perfs. - water at 27'
28		0 - 15' 15 - 20' 20 - 23' 23 - 24' 24 - 30'	hard caliche rock sand, caliche & clay clay & sand clay - damp sand & gravel	30'	20' of perfs - water at 24'

<u>WELL #</u>	<u>FOOTAGE</u>	<u>DEPTH</u>	<u>SOIL SAMPLE</u>	<u>T-D</u>	<u>OTHER</u>
29		0 - 13' 13 - 18' 18 - 19' 19 - 30'	hard caliche rock gravel, clay & sand clay - damp sand & gravel - water at 19'	30'	20' of perfs - water at 19'
All wells were gravel packed from TD to within 6 ft of surface and cemented from 6 ft to surface.					