September 11, 2003

New Mexico Oil Conservation Division
1220 So. St. Francis Drive
Santa Fe New Mexico 87505

District 2
1301 West Grand Avenue
Artesia New Mexico 88210

Ms. Wrotenbery,

The purpose of our presence today is to discuss the problems encountered in Otero County by Threshold Development Company due to lax regulations or lack of proper regulations in order to protect the fresh water zones discovered by oil and gas drilling.

There has been gross neglect by Threshold Development Company's policy on drilling fluids, which are a pollutant to the surface and sub-surface fresh water.

The Chiricahua R 21 Federal #1 is a prime reason to have a complete review of policy for new pit regulation language and an opportunity to develop regulations that will not only protect the fresh water, it will also prevent any controversy which adversely affects the drilling companys themselves.

I am submitting this request, which has been compiled by industry and the scientific community, that will partially resolve any future problems encountered in the karst formations of Otero County and will allow the oil and gas industry to continue to explore and develop a much needed resource for Otero County, New Mexico, and the Nation.

Additionally, the applications for the development of the water resource can be pursued without the threat of contamination from oil and gas development. The water crisis in New Mexico and the region will have to be resolved by new water discoveries and the development of those resources. The water industry and the oil and gas industry can compliment each other by various means. They can share the knowledge of the underground formations and the possibility of an electric generating plant being built in southern Otero County, which will require the use of both natural gas and water.

Greg Duggar
Resident of Otero County
P.O. Box 96
Dell City Texas 79837

The following attachment is a list of suggestions relating to new language regarding the pit regulations:

PIT CLOSURE OTERO COUNTY

Pits will be excavated to remove all contaminates, tested for compliance with the attached standards, filled with clean soil, covered with adequate top soil and re-vegetated.

Pits will be closed within 30 days after drilling operations cease.

No pits allowed for work over operations.

No synthetic liners may be buried on site.

All contents of pits must be disposed of at a waste disposal site approved by NMOCD and in conformity with all NMOCD rules.

Suggested Language for Pit Regulations pertaining to Otero County

B. 1.(b) 30 day notice shall be provided to land owners, mineral owners, towns, villages, cities, and counties within a (2) two mile radius for each drilling, production or work over pit.

C. 2.(a) Location. No pit shall be located in any watercourse, flood plain, lakebed, sinkhole, or playa lake. Pits adjacent to any such watercourse or depression shall be located safely above the ordinary high-water mark of such watercourse or depression. No pit shall be located in any wetland. The division may require additional protective measures for pits located in groundwater sensitive areas.

E. Drilling Fluids and Cuttings. Drilling pits and work over pits must be tested and comply with WQCC Regulations and the attached standards. No contents may be left on site unless operator has demonstrated the contents will not endanger fresh water, surface water, public health or the environment, including surface damage, and storm water runoff. Liquids will be removed 20 days after drilling operations cease.

F.1. Closure. Except as otherwise specified in Subsection 53 of 19.15.2 NMAC, a pit or below-grade tank shall be properly closed within 60 days after cessation of use and in accordance with WQCC Regulations. In Appropriate cases, the division may require the operator to file a detailed closure plan before closure may commence. The division for good cause shown may grant a six-month extension of time to accomplish closure. Upon completion of closure a Closure Report, Form C-144, or Sundry Notice shall be submitted to the division. Where the pit's contents could possibly migrate and cause ground water or surface water to exceed Water Quality Control Commission standards, the pit's contents and the liner shall be removed and disposed of in a waste disposal site approved by the division. Pit's will be excavated to remove all contaminates, tested for compliance with the attached standards and filled with clean soil. No synthetic liners may be buried on site.

F. 2. Surface Restoration. Within 90 days of the completion of closure of a pit the pit shall be capped with 12" of uncontaminated material approved by the division and contoured to prevent erosion and ponding of rainwater.

G. 3. Exemptions. Exemptions may be granted administratively after consultation and consent of a local committee, appointed by the Otero County Grazing Advisory Board, provided the operator has issued 60 day notice to land owners, mineral owners, towns, villages, cities, and counties within a (2) mile radius for each exemption requested.

COMPLIANCE CRITERIA

Maximum Concentrations

Metals:	mg/l
Arsenic	5.0
Barium	100
Cadmium	1.0
Chromium	5.0
Lead	5.0
Mercury	0.2
Selenium	1.0
Silver	5.0

Volatiles:	mg/l
Benzene	0.5
Carbon Tetrachloride	0.5
Chlorobenzene	100
Chloroform	6.0
1,2-Dichloroethane	0.5
1,1-Dichloroethane	0.7
Methyl Ethyl Ketone	200
Tetrachloroethylene	0.7
Trichloroethylene	0.5
Vinyl Chloride	0.2

Semivolatiles:	mg/l
o-Cresol	200
m-Cresol	200
p-Cresol	200
2,4-Dinitrotoluene	0.13
Hexachlorobenzene	0.13
Hexachlorobutadiene	0.5
Hexachloroethane	3.0
Nitrobenzene	2.0
Pentachlorophenol	100
Pyridine	5.0
2,4,5-Trichlorophenol	400
2,4,6-Trichlorophenol	2.0
1,4-Dichlorobenzene	7.5

Chloride	mg/l
Chloride	250.0

Total Petroleum hydrocarbon	mg/l
TPH	100

COMMENTS
DRAFT PIT RULE

B. Application

1. (b) 30 day notice to land owner, mineral owners, towns, villages, cities and counties (within 2 miles) should be required.

C. Design, Construction and Operational Standards.

2. (a) Add flood plain.

2. (a) Remove "except when the pit is to be used in a transient operation such as drilling or work over."

Alternative – The contents of all pits located in any watercourse, flood plain, lakebed and sinkhole or playa lake will be removed within 20 days after drilling operation is completed. No work over pits will be allowed in these areas.

2. (d) Define Hydrocarbon-based drilling fluids (how much hydrocarbons are allowed, .002% - .02%)?

E. 1. Drilling pits and work over pits must be closed in accordance with WQCC Regulations. No contents may be left on site unless operator has demonstrated that the contents will not endanger fresh water, surface water, public health or the environment, including surface damage, and storm water runoff. Liquids will be removed 20 days after drilling operations cease. Closure standards are attached.

F. (1) See E above. Pits will be closed within 60 days, in accordance with WQCC Rules and Regulations.

(2) Pits should be capped with 12" clean material within 90 days of closure.

G. (3) Public notice should also be required.

19.15.2 ___ Pits and Below-Grade Tanks.

A. Permit Required. Discharge into, or construction of, any pit or below-grade tank is prohibited absent possession of a permit issued by the division, unless otherwise herein provided or unless the division grants an exemption pursuant to Subsection G of 19.15.2.53 NMAC. Facilities permitted by the division pursuant to Section 711 of 19.15.9 NMAC or Water Quality Control Commission regulations are exempt from Section 53 of 19.15.2 NMAC.

B. Application.

1. Where Filed; Application Form.

(a) Downstream Facilities. An operator shall apply to the division's environmental bureau for a permit to construct or use a pit or below-grade tank at a downstream facility such as a refinery, gas plant, compressor station, brine facility, service company, or surface waste management facility that is not permitted pursuant to Section 711 of 19.15.9 NMAC or Water Quality Control Commission regulations. The operator shall use a Form C-144, Application to Discharge Into A Pit or Below-Grade Tank. The operator may submit the form separately or as an attachment to an application for a discharge permit, best management practices permit, surface waste management facility permit, or other permit.

(b) Drilling or Production. An operator shall apply to the appropriate district office for a permit for use of a pit or below-grade tank in drilling, production, or operations not otherwise identified in Subparagraph (a) of 19.15.2.53.B.1 NMAC. The operator shall apply for the permit on the Application for Permit to Drill or on the Sundry Notices and Reports on Wells, or electronically as otherwise provided in this Chapter. Approval of such form constitutes a permit for all pits and below-grade tanks annotated on the form. A separate form C-144 is not required.

2. General Permit; Individual Permit. An operator may apply for a permit to use an individual pit or below-grade tank, or may apply for a general permit applicable to a class of like facilities.

3. When Filed.

(a) New Pits or New Below-Grade Tanks. After (effective date of rule), operators shall obtain a permit before constructing a pit or below-grade tank.

(b) Existing Pits or Below-Grade Tanks. For pits or below-grade tanks in existence prior to (effective date of rule) that have not received an exemption after hearing as allowed by OCC Order R-3221 through R-3221D inclusive, the operator shall submit a notice by January 15, 2004 indicating whether use of those pits or below-grade tanks will continue. If use of a pit or below-grade tank is to be discontinued, discharge into the pit or use of the below-grade tank shall cease by June 30, 2005. If use of a pit or below-grade tank will continue, the operator shall file a permit application by June 30, 2004. If an operator files a timely, administratively complete application for continued use, use of the pit or below-grade tank may continue until the division acts upon the application.

C. Design, Construction, and Operational Standards.

1. In General. Pits, sumps and below-grade tanks shall be designed, constructed and operated so as to contain liquids and solids to prevent contamination of fresh water and protect public health and the environment.

2. Special Requirements for Pits.

(a) Location. No pit shall be located in any watercourse, lakebed, sinkhole, or playa lake except where the pit is to be temporarily used in a transient operation such as drilling or a workover. Pits adjacent to any such watercourse or depression shall be located safely above the ordinary high-water mark of such watercourse or depression. No pit shall be located in any wetland. The division may require additional protective measures for pits located in groundwater sensitive areas.

(b) Liners.

(i) Drilling Pits, Workover Pits. Each drilling pit or workover pit shall contain, at a minimum, a single liner appropriate for conditions at the site. The liner shall be designed, constructed, and maintained so as to prevent the contamination of fresh waters, and protect public health and the environment. Pits used to vent or flare gas during drilling or workover operations that are designed to allow liquids to drain to a separate pit do not require a liner.

(ii) Disposal or Storage Pits. Each disposal pit (including, but not limited to, any separator pit, tank drain pit, evaporation pit, blowdown pit used in production activities, pipeline drip pit, or production pit) and each storage pit (including any brine pit, salt water pit, fluid storage pit for an LPG system, or production pit) shall contain, at a minimum, a primary and a secondary liner appropriate to the conditions at the site. Liners shall be designed, constructed, and maintained so as to prevent the contamination of fresh waters, and protect public health and the environment.

(iii) Alternative Liner Media. The division may approve liners that are not constructed in accordance with division guidelines only if the operator demonstrates to the division's satisfaction that the alternative liner protects fresh water, public health, and the environment as effectively as those prescribed in division guidelines.

(c) Leak Detection. A leak detection system shall be installed between the primary and secondary liner in each disposal or storage pit. The leak detection system shall be designed, installed, and operated so as to prevent the contamination of fresh waters, and protect public health and the environment. The operator shall notify the division at least twenty-four hours prior to installation of the primary liner so a division representative may inspect the leak detection system before it is covered.

(d) Drilling and Workover Pits. Each drilling or workover pit shall be of an adequate size to assure that a supply of mud-laden fluid is available and sufficient to confine oil, natural gas, or water within its native strata. Hydrocarbon-based drilling fluids shall be contained in tanks made of steel or other division approved material.

(e) Disposal or Storage Pits. Liquids with greater than two-tenths of one percent free hydrocarbon shall not be discharged to a pit. Spray evaporation systems shall be operated such that all spray-borne solids remain within the perimeter of the pond's lined portion.

(f) Fencing and Netting. All pits shall be fenced or enclosed to prevent access by livestock or wildlife. Active drilling or workover pits may have a portion of the pit unfenced to facilitate operations. All tanks exceeding 16 feet in diameter, exposed pits, and ponds shall be screened, netted, covered, or otherwise rendered non-hazardous to migratory birds. Drilling and workover pits are exempt

from the netting requirement during drilling or workover operations if the pits are kept reasonably free of oil. Upon written application, the division may grant an exception to screening, netting, or covering requirements upon a showing that an alternative method will adequately protect migratory birds or that the tank or pit is not hazardous to migratory birds.

(g) Unlined Pits.

(i) General Prohibition. After June 30, 2005 use of, or discharge into, any unlined pit that has not been previously permitted pursuant to Section 711 of 19.15.9 NMAC or Water Quality Control Commission regulations is prohibited, except as otherwise provided in Section 53 of 19.15.2 NMAC. After (effective date of rule), construction of unlined pits is prohibited unless otherwise provided in Section 53 of 19.15.2 NMAC.

(ii) Exemptions for Good Cause. The division may grant an exemption to the prohibition set out in Subsubparagraph (i) of 19.15.2.53(C)(2)(g) only if the operator demonstrates to the division's satisfaction that the unlined pit will not contaminate fresh water and that public health and the environment are protected.

(iii) Unlined Pits Exempted By Previous Order. An operator of an unlined pit existing on (effective date of rule) for which a previous exemption was received after hearing as allowed pursuant to Commission Orders No. R-3221 through R-3221D inclusive, shall not be required to reapply for an exemption pursuant to Subparagraph (g) of 19.15.2.53(C)2 NMAC provided the operator notifies the division, no later than January 15, 2004, of the existence of each unlined pit it believes is exempted by Order, the location of the pit, and the nature and amount of any discharge into the pit. Such order shall constitute a permit for the purpose of Subparagraph (g) of 19.15.2.53(C)2 NMAC . The division may terminate any such permit in accordance with paragraph (2) of 19.15.2.53(G) NMAC. Any pit constructed after (effective date of this rule) shall comply with the permitting/lining and other standards of Section 53 of 19.15.2 NMAC, notwithstanding any previous Order to the contrary.

(iv) Unlined pits shall be allowed in the following areas provided that the operator has submitted, and the division has approved, an application for permit as provided in Subsection 53 of 19.15.2 NMAC:

TOWNSHIP 19 SOUTH, RANGE 30 EAST, NMPM Sections 8 through 36;
TOWNSHIP 20 SOUTH, RANGE 30 EAST, NMPM Sections 1 through 36;
TOWNSHIP 20 SOUTH, RANGE 31 EAST, NMPM Sections 1 through 36;
TOWNSHIP 20 SOUTH, RANGE 32 EAST, NMPM Sections 4 through 9,
Sections 16 through 21; and Sections 28 through 33;
TOWNSHIP 21 SOUTH, RANGE 29 EAST, NMPM Sections 1 through 36;
TOWNSHIP 21 SOUTH, RANGE 30 EAST, NMPM Sections 1 through 36;
TOWNSHIP 21 SOUTH, RANGE 31 EAST, NMPM Sections 1 through 36;
TOWNSHIP 22 SOUTH, RANGE 29 EAST, NMPM Sections 1 through 36;
TOWNSHIP 22 SOUTH, RANGE 30 EAST, NMPM Sections 1 through 36;
TOWNSHIP 23 SOUTH, RANGE 29 EAST, NMPM Sections 1 through 3,
Sections 10 through 15, Sections 22 through 27, and Sections 34 through 36;
TOWNSHIP 23 SOUTH, RANGE 30 EAST, NMPM Sections 1 through 19;

that area within San Juan, Rio Arriba, Sandoval, and McKinley Counties that is defined as being outside the valleys of the San Juan, Animas, Rio Grande, and La Plata Rivers, which is bounded by the topographic line on either side of the river that is 100 vertical feet above the river channel measured perpendicularly to the river channel, and which is outside those areas that lie within 50 vertical feet,

measured perpendicularly to the drainage channel, of all perennial and ephemeral creeks, canyons, washes, arroyos, and draws located within the oil and gas producing areas of the San Juan Basin in northwestern New Mexico, provided that the areas do not lie between the above-named rivers and the Highland Park Ditch, Hillside Thomas Ditch, Cunningham Ditch, Farmers Ditch, Halford Independent Ditch, Citizens Ditch, or Hammond Ditch and the pit site is not located in water bearing alluvium, no protectable ground water is present or if present, will not be adversely affected by the discharge, and the discharge is not located within a Wellhead Protection Area; or

any area where the discharge quality meets New Mexico Water Quality Control Commission ground water standards.

3. Special Requirements for Below-grade Tanks. All below-grade tanks shall be constructed with secondary containment and leak detection. The operator of any below-grade tank constructed prior to (effective date of this rule) shall demonstrate its integrity annually and shall remove it or equip it with leak detection at the time of any major repairs.

4. Sumps. Integrity of all sumps shall be demonstrated annually.

D. Emergency Actions.

1. Permit Not Required. In an emergency an operator may construct a pit without a permit to contain fluids, solids, or wastes if an immediate danger to fresh water, public health, or the environment exists.

2. Construction Standards. A pit constructed in an emergency shall be constructed, to the extent possible given the emergency, in a manner consistent with the requirements of Section 53 of 19.15.2 NMAC and that prevents the contamination of fresh waters, and protects public health and the environment.

3. Notice. The operator shall notify the appropriate district office as soon as possible (if possible before construction begins) of the need for construction of such a pit.

4. Use and Duration. The pit may be used only for the duration of the emergency. If the emergency lasts more than forty-eight (48) hours, the operator must seek approval from the division for continued use of the pit. All fluids and solids must be removed within 24 hours after cessation of use unless the division extends that time period.

5. "Emergency Pits." Subsection (D) of 19.15.2.53 NMAC shall not be construed to allow construction of so-called "emergency pits," which are pits constructed as a precautionary matter to contain a spill in the event of a release. Construction or use of any such pit shall require a permit issued pursuant to Subsection 53 of 19.15.2 NMAC.

E. Drilling Fluids and Cuttings. Drilling fluids and drill cuttings contained in any pit or below-grade tank shall be recycled or dried and disposed of in a manner approved by the division and in such a manner as to prevent contamination of fresh water, or danger to public health or the environment. The operator shall describe the proposed disposal method in the Application for Permit to Drill or the Sundry Notice.

F. Closure and Restoration.

1. Closure. Except as otherwise specified in Subsection 53 of 19.15.2 NMAC, a pit or below-grade tank shall be properly closed within six months after cessation of use. In appropriate cases, the division may require the operator to file a detailed closure plan before closure may commence. The division for good cause shown may grant a six-month extension of time to accomplish closure. Upon completion of closure a Closure Report, Form C- 144, or Sundry Notice shall be submitted to the division. Where the pit's contents will likely migrate and cause ground water or surface water to exceed Water Quality Control Commission standards, the pit's contents and the liner shall be removed and disposed of in a manner approved by the division.

2. Surface Restoration. Within one year of the completion of closure of a pit, the operator shall contour the surface where the pit was located to prevent erosion and ponding of rainwater.

G. Exemptions; Additional Conditions.

1. The division may attach additional conditions to any permit upon a finding that such conditions are necessary to protect fresh waters, public health, or the environment.

2. The division may grant exemptions from any requirement upon a finding that the granting of such exemption will not endanger fresh waters, public health, or the environment. The division may revoke any such exemption after notice to the owner or operator of the pit and opportunity for a hearing.

3. Exemptions may be granted administratively without hearing provided that the operator gives notice to the surface owner of record where the pit is to be located and to such other persons as the division may direct and (a) written waivers are obtained from all persons to whom notice is required, or (b) no objection is received by the division within 30 days of the time notice is given. If any objection is received and the director determines the objection has technical merit or that there is significant public interest the director shall set the application for hearing. The director, however, may set any application for hearing.

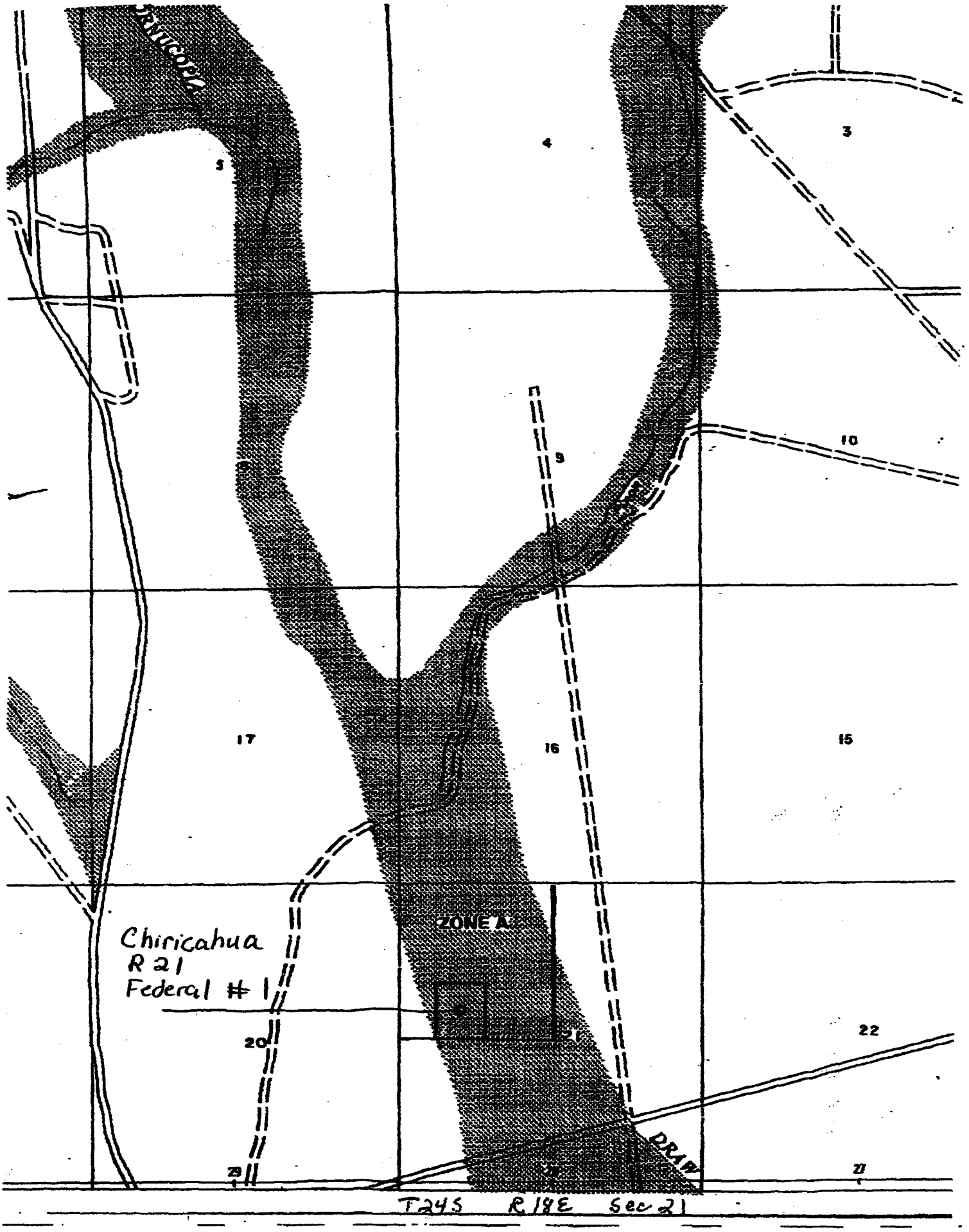
Concerns with Respect to the Salt Basin Groundwater System Associated with Oil & Gas Exploration/Production

The recent oil and gas exploration activity in the Salt Basin in Southern Otero County, New Mexico has brought to light the fact that there are competing resources in this area. The two resources that appear to be in competition with one another are the "potential" hydrocarbons and the "actual" groundwater. Recent developments and data regarding what appears to be the standard operating procedure of the oil and gas industry in the Salt Basin suggests that it is acceptable to sacrifice the vast groundwater resource in this area in order to explore for and produce the potential hydrocarbon resource.

The residents of the Salt Basin are terribly concerned that the water resource will be contaminated during the search for and possible production of hydrocarbons and that not enough is being done to ensure that the quality of the groundwater resource is not compromised. Considering the current state of water (or lack thereof) in the State of New Mexico and the southwest in general, contamination of such a valuable resource is unacceptable. Some of the reasons that the residents of the Salt Basin are concerned and the reasons that the State of New Mexico should be concerned include the following:

- The Salt Basin groundwater is the sole source of water for residents in a ~2000 square mile area of southern Otero County, New Mexico.
  - See map illustrating the Salt Basin and the associated groundwater wells.
  - The residents of the towns of Pinon and Timberon are on public water supply systems. The remainder of the residents in the Salt Basin rely upon the groundwater from their individual wells for their livelihoods.
    - **This does not mean that this water is used to wash the car and to fill the pool.**
    - **This water is used for human consumption, domestic purposes, to water stock, and to irrigate crops. These are the primary sources of income for the majority of the residents in the Salt Basin.**
- Protecting the groundwater resource from below.
  - The well casing program developed by the BLM was done so with the intention to provide maximum protection to the "fresh" groundwater system(s).
  - The well casing program developed by the BLM was done so with little to no information with respect to depths at which "fresh" groundwater might be encountered. The reason for this being that the BLM uses the best available information in developing the casing program standards, however, very little information is available.
  - As information becomes available (Chiricahua R-21 Federal #1) this should be used to modify the requirements on subsequent wells on a real-time basis (Mescalero and Chino wells).
- Protecting the groundwater resource from above.

- **The BLM APDs for these first three exploratory wells in the Salt Basin (Crow Flats area) require that only "fresh" water be used as a drilling fluid to the depth that intermediate casing string is set (2550').**
- **The BLM definition of "fresh" water is <1000 ppm TDS and not toxic for human and animal consumption.**
- **Recent results from samples taken from a fluid pit at the Chiricahua R-21 Federal #1 well site indicate a TDS level of ~7600 ppm along with the presence of both E. coli and coliform bacteria.**
  - **Armed with this information the BLM fails to test for these or any other contaminants in assessing the "freshness" of the drilling fluid water. Therefore, the groundwater has the potential to be contaminated during the drilling process.**
  - Current regulations allow for the fluid pits to dry following drilling and then they can be covered over without removing liner or the solids. It is not unreasonable to think that at some point the integrity of the liners will be compromised and that the solids will be flushed into the groundwater system with rainfall events. Under the vast majority of circumstances the natural geologic system of the unsaturated zone might serve to trap some or all of the constituents in the fluid pits. However, in this area the host rock of the groundwater system is present at or near the ground surface and the host rock is a karst system. Therefore, any contaminants in the pit would have an almost direct pipeline to the groundwater system.
- The current BLM regulations prohibit the siting of oil and gas wells in a declared flood plane.
  - **The map below was provided by the US Ag Service Center. It shows the Chiricahua R-21 Federal #1 well site in relation to the FEMA designated flood plain.**


ZONE A
Chiricahua
R 21
Federal # 1
DRAW
T24S R18E Sec 21

Sandia National Laboratories
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Phone: (505) 234-0067
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Internet: acsnide@sandia.gov

date: July 23, 2003

to: David Chace, Dept. 6822

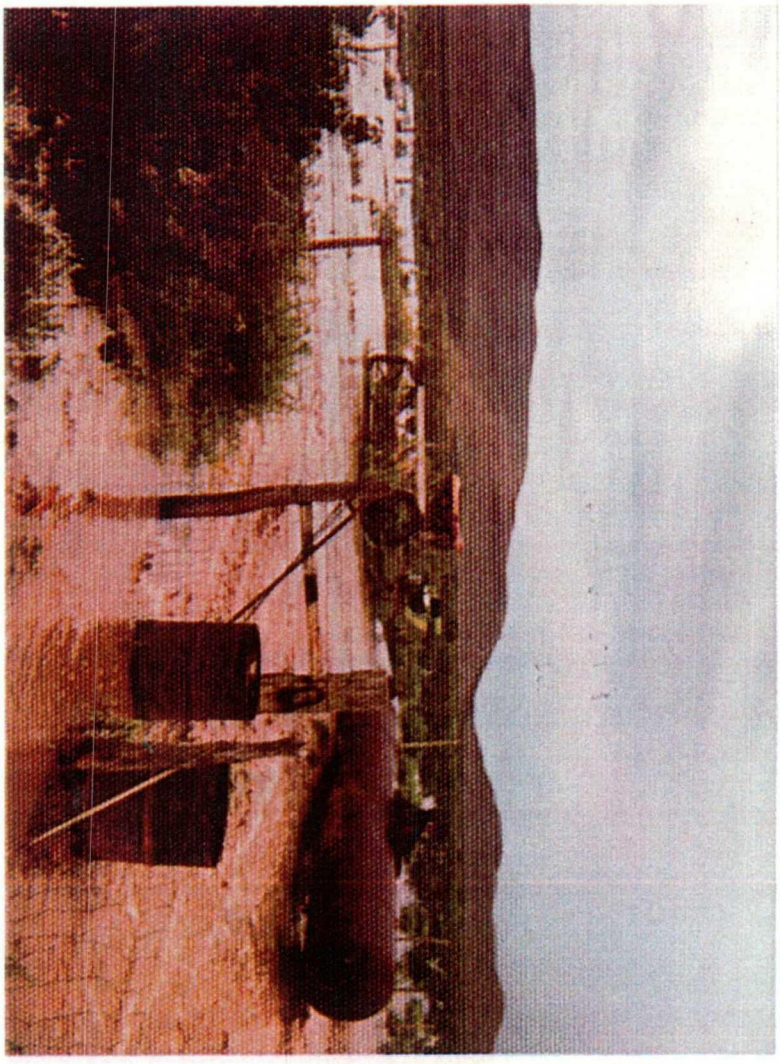
from: Anna Snider, Dept. 6822

subject: Analysis of Water Samples

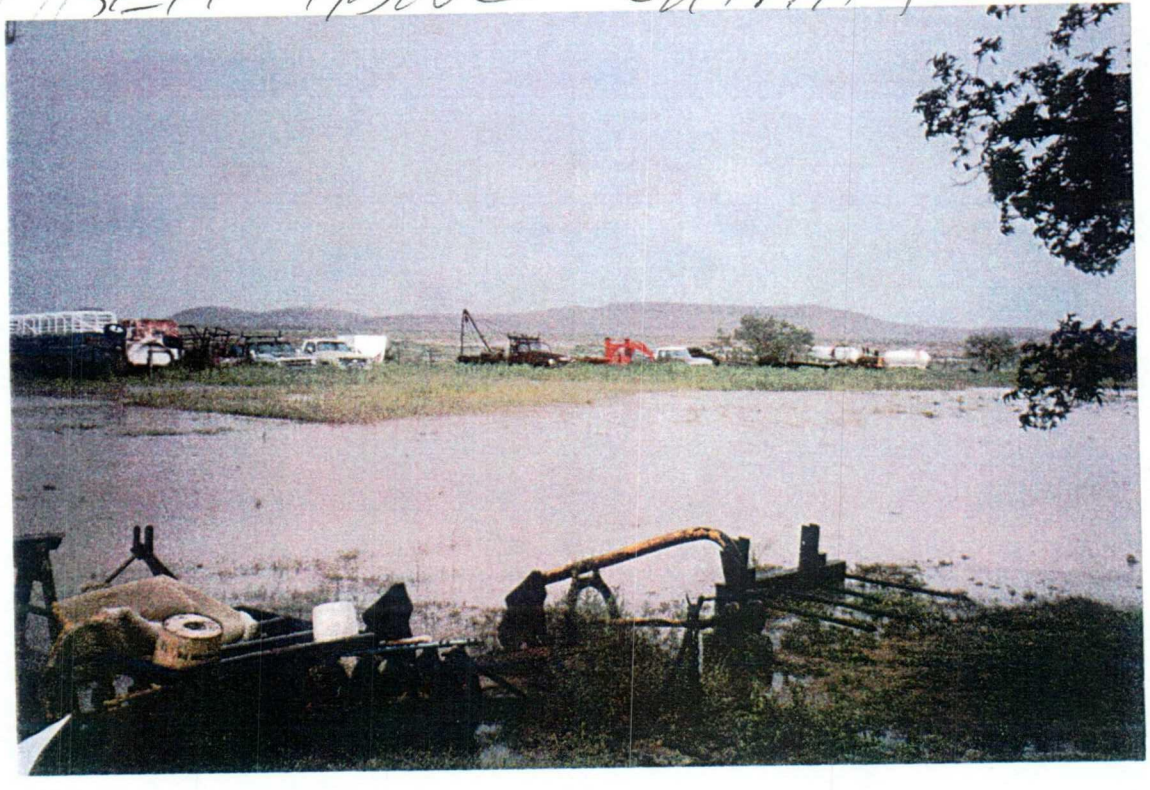
Table 1. Analysis results.

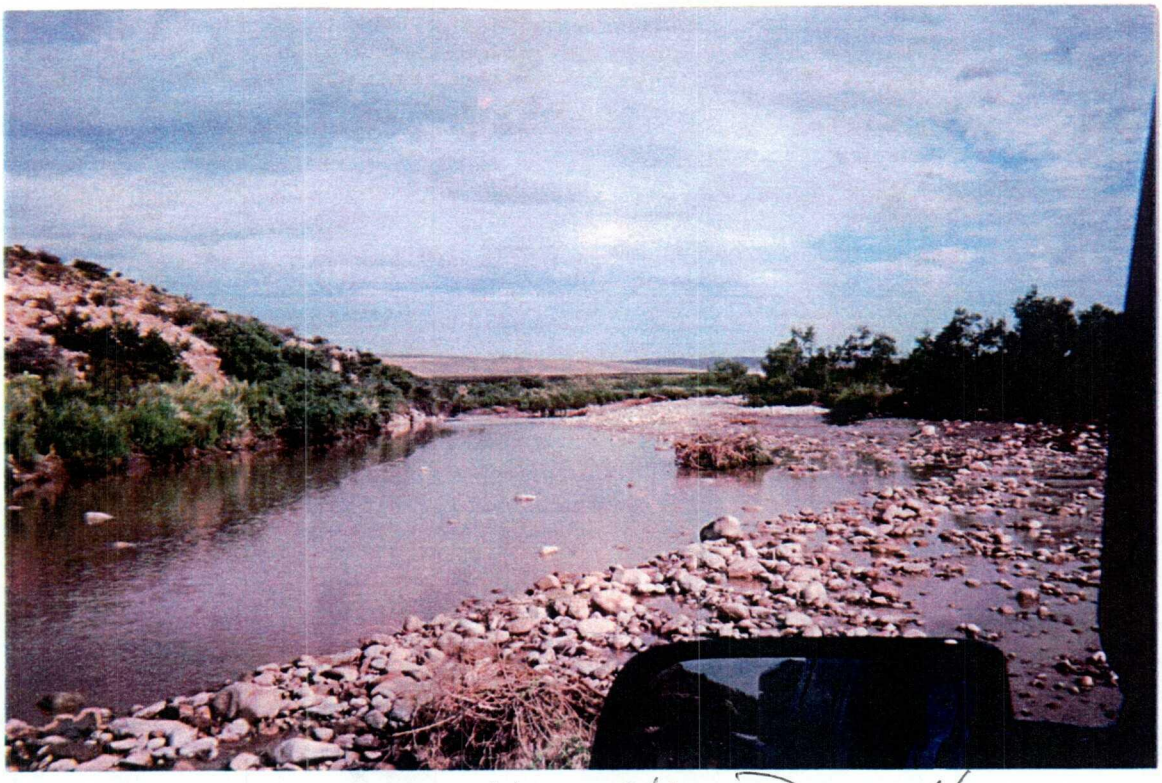
	Sample	Mg (mg/L)	Ca (mg/L)	Na (mg/L)	K (mg/L)	Cl^- (mg/L)	SO_4 (mg/L)	HCO_3^- (mg/L)	% diff
1112.16	Chiricachua, outside pit	85.2	205	40.8	2.46	42	598	138.9	19.91
1159.10	Chiricachua, outside pit P	87.2	212	40.4	2.6	42	631	138.9	17.96
7637.5	Chiricachua, inside pit	22.4	58	2485	22.6	3722	389	940.5	-11.83
7459.7	Chiricachua, inside pit P	24	69.6	2504	22.6	3722	377	940.5	-10.39
991.82	Schaefer well	60.8	189	14.7	142	10.9	112	308	

POSITIVE COLIFORM
POSITIVE E. COLI

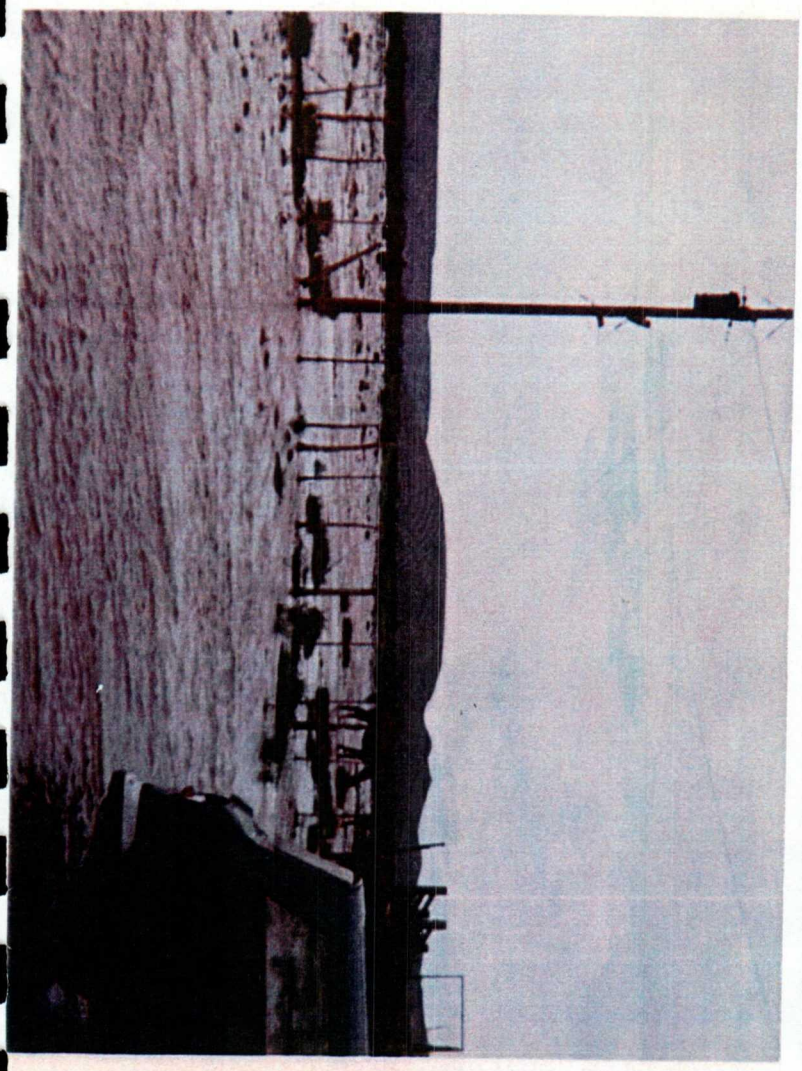


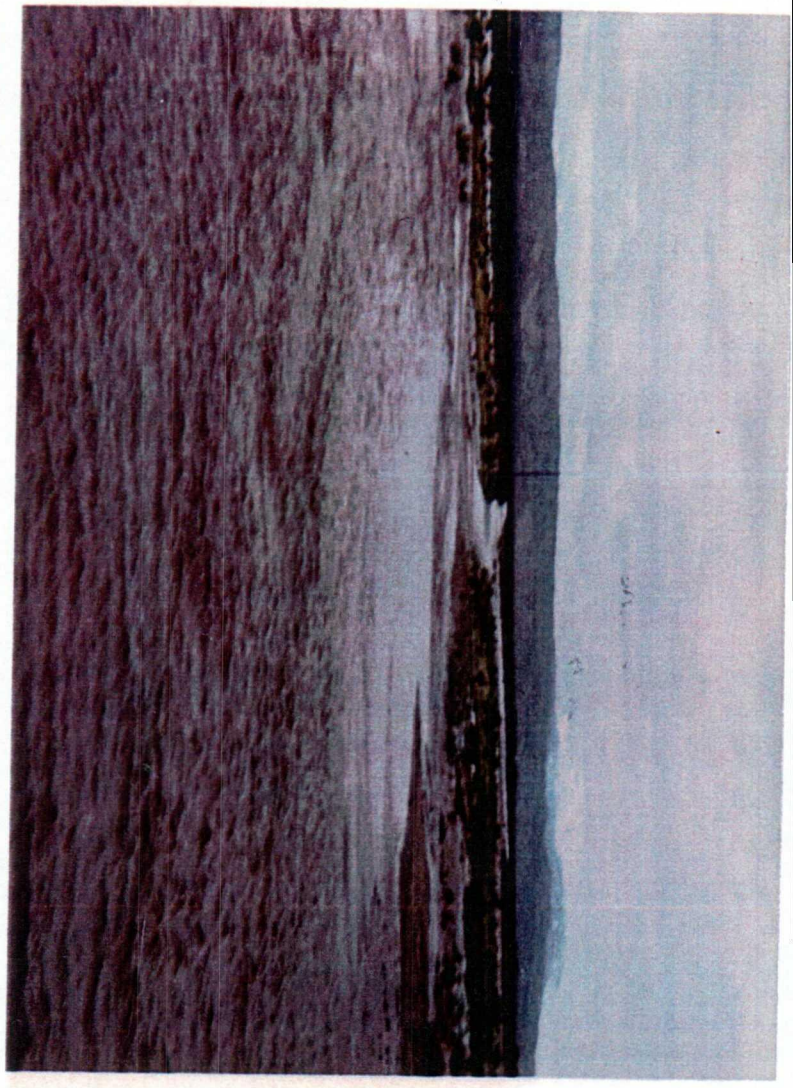
AREA Above Chir. #1



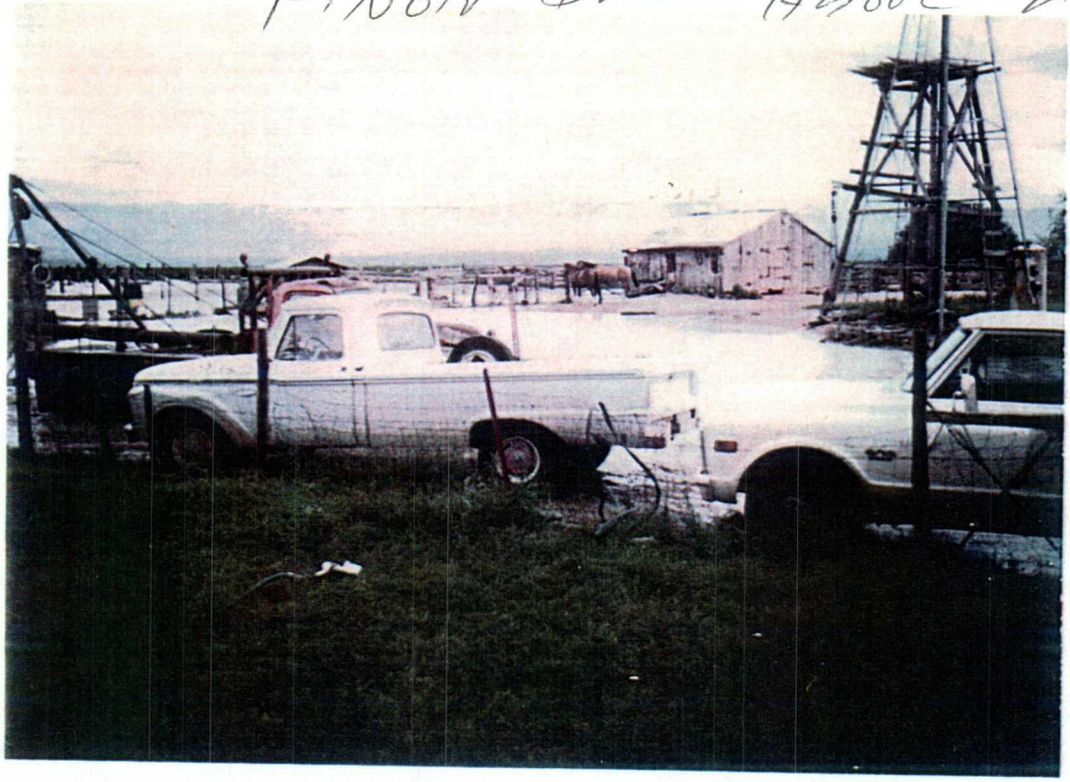


CORIVICOPIA DRAW





PINON DRAW ABOVE LOCATION



Fresh #2 Pit
Before
Drilling
Began

September 11, 2003

Oil Conservation Division
District 2
1301 West Grand Avenue
Artesia New Mexico 88210

Please accept this as a formal complaint in regards to the removal of drilling fluids by Threshold Development Company from the Chiricahua R21 Federal #1 Well site located in S21, T24S, 18E in Otero County New Mexico.

The intent of this complaint is twofold, first as residents of the Salt Basin and Crow Flat, we have no intention of interfering with the production of oil and gas. As a matter of fact, we need development in this area for an increase of tax dollars and the creation of jobs locally. Secondly, there is a statewide water crisis. The probability of the Salt Basin water being needed to mitigate a portion of that crisis is a certainty.

The Chiricahua R 21 Federal # I well site is located within the boundaries of a declared Zone A flood plain. Therefore, our objections to the procedures followed by Threshold Development Company are due to the fact that the actions of the Company are in complete disregard of the Oil Conservation Division's rules and regulations for the disposal of drilling fluids. The Last Chance Water Company should not be responsible for negligent actions by the oil company.

One member of the Last Chance Water Company was told by a local farmer that the Chiricahua Well had produced an excess amount of drilling fluids which were removed from the well site. He and another water truck driver hauled drilling fluids from the Chiricahua Well to a farm and ranch, located approximately five (5) miles east of the well site. The farmer said he had hauled seven (7) loads of the excess drilling fluids and put on his farmland and another truck driver hauled seven (7) loads of the excess drilling fluids and put it on some ranch roads. These areas are also located within a flood plain area.

Late on the evening of August 7, 03, and during that same night, another member of the Last Chance Water Company saw two (2) separate water trucks coming to and from the Chiricahua Well site and the farm/ranch to the east of the well site. This date corresponds with the drilling fluid hauling incident referenced above.

I was told there would be a log of activity recorded, regarding the drilling of the Chiricahua Well available to Threshold Development Company and the Bureau of Land Management There is presently a preliminary water test, which was collected from the mud pit at the Chiricahua Well site, showing the presence of contaminants. As President of the Last

Chance Water Company, I am requesting a copy of the fresh water well log. I demand that someone from the Oil Conservation Division qualified to inspect and monitor the drilling of oil and gas wells be present to witness the work being done on this well and subsequent wells drilled in this area. I want to be notified of any and all fluid movements away from these wells and the location of the approved disposal site if disposed of within Otero County.

Thank you.

Sincerely,

Greg Duggar
President of the Last Chance Water Company
P. O. Box 96
Dell City Texas 79837

Cc: Oil Conservation Division, Sante Fe
Senator Pete Domenici
Senator Jeff Bingaman
Doug Moore, Otero County Commission
Linda Rundell, New Mexico State BLM Director
Jerry King, State Land Office
New Mexico Environmental Department
Jim Scarantino, New Mexico Wilderness Alliance
Carl Lane Johnson

OCD Rule Book

[redacted] Produced Water shall mean those waters produced in conjunction with the production of crude oil and/or natural gas and commonly collected at field storage, processing, or disposal facilities including but not limited to: lease tanks, commingled tank batteries, burn pits, LACT units, and community or lease salt water disposal systems and which may be collected at gas processing plants, pipeline drips and other processing or transportation facilities.

(7) Producer shall mean the owner of a well or wells capable of producing oil or natural gas or both in paying quantities.

(8) Product means any commodity or thing made or manufactured from crude petroleum oil or natural gas, and all derivatives of crude petroleum oil or natural gas, including refined crude oil, crude tops, topped crude, processed crude petroleum, residue from crude petroleum, cracking stock, uncracked fuel oil, treated crude oil, fuel oil, residuum, gas oil, naphtha, distillate, gasoline, kerosene, benzene, wash oil, lubricating oil, and blends or mixtures of crude petroleum oil or natural gas or any derivative thereof.

(9) Proration Day shall consist of 24 consecutive hours which shall begin at 7 a.m. and end at 7 a.m. on the following day. The language in this paragraph is different than that which was filed 02-28-97 (effective

(10) Proration Month shall mean the calendar month which shall begin at 7 a.m. on the first day of such month and end at 7 a.m. on the first day of the next succeeding month.

(11) Proration Period shall mean for oil the proration month and for gas the twelve-month period which shall begin at 7 a.m. on January 1 of each year and end at 7 a.m. on January 1 of the succeeding year or other period designated by general or special order of the Division.

(12) Proration Schedule shall mean the order of the Division authorizing the production, purchase, and transportation of oil, casinghead gas, and natural gas from the various units of oil or of natural gas in allocated pools.

(13) Proration Unit is the area in a pool that can be effectively and efficiently drained by one well as determined by the Division or Commission (See NMSA 1978 Section 70-2-17.B) as well as the area assigned to an individual well for the purposes of allocating allowable production pursuant to a prorationing order for the pool. A proration unit will be the same size and shape as a spacing unit. All proration units are spacing units but not all spacing units are proration units.

(14) Prospective Spacing Unit is a hypothetical spacing unit that does not yet have a producing well.

Q. Reserved.

R. Definitions Beginning with the Letter "R":

(1) Recomplete shall mean the subsequent completion of a well in a different pool from the pool in which it was originally completed.

(2) Regulated Naturally Occurring Radioactive Material (Regulated NORM) shall mean naturally occurring radioactive material (NORM) contained in any oil-field soils, equipment, sludges or any other materials related to oil-field operations or processes exceeding the radiation levels specified in 20 NMAC 3.1., Section 1403.

(3) Release shall mean all breaks, leaks, spills, releases, fires or blowouts involving crude oil, produced water, condensate, drilling fluids, completion fluids or other chemical or contaminant or mixture thereof, including oil field wastes and natural gases to the environment.

(4) Remediation Plan shall mean a written description of a program to address unauthorized releases. The plan may include appropriate information, including assessment data, health risk demonstrations, and corrective action(s). The plan may also include an alternative proposing no action beyond the submittal of a spill report.

(5) Responsible Person shall mean the owner or operator who must complete Division approved corrective action for pollution from releases.

(6) Royalty Interest Owners are owners of an interest in the non-executive rights including lessors, royalty interest owners and overriding royalty interest owners. Royalty interests are non-cost bearing.

S. Definitions Beginning with the Letter "S":

(1) Secondary Recovery shall mean a method of recovering quantities of oil or gas from a reservoir which quantities would not be recoverable by ordinary primary depletion methods.

(2) Shallow Pool shall mean a pool which has a depth range from 0 to 5000 feet.

(3) Shortage Or Underproduction shall mean the amount of oil or the amount of natural gas during a proration period by which a given proration unit failed to produce an amount equal to that authorized in the proration schedule.

(4) Shut-In shall be the status of a production well or an injection well which is temporarily closed down, whether by closing a valve or disconnection or other physical means.

(5) Shut-In Pressure shall mean the gauge pressure noted at the wellhead when the well is completely shut in, not to be confused with bottom hole pressure.

(6) Significant Modification Of An Abatement Plan shall mean a change in the abatement technology used excluding design and operational parameters, or relocation of 25% or more of the compliance sampling stations, for any single

[redacted] REMOVAL OF PRODUCED WATER FROM LEASES AND FIELD FACILITIES

A. Transportation of any produced water by motor vehicle from any lease, central tank battery, or other facility, without an approved Form C-133 (Authorization to Move Produced Water) is prohibited.

B. Authorization to transport produced water may be obtained by filing three copies of Form C-133 with the Director of the Division in Santa Fe.

C. No owner or operator shall permit produced water to be removed from its leases or field facilities by motor vehicle except by a person possessing an approved Form C-133.

[1-1-50...2-1-96; 19.15.9.709 NMAC - Rn, 19 NMAC 15.I.709, 11-30-00]

[redacted] DISPOSITION OF TRANSPORTED PRODUCED WATER

A. No person, including any transporter, may dispose of produced water on the surface of the ground, or in any pit, pond, lake, depression, draw, streambed, or arroyo, or in any watercourse, or in any other place or in any manner which will constitute a hazard to any fresh water supplies.

B. Delivery of produced water to approved salt water disposal facilities, secondary recovery or pressure maintenance injection facilities, or to a drill site for use in drilling fluid will not be construed as constituting a hazard to fresh water supplies provided the produced waters are placed in tanks or other impermeable storage at such facilities.

C. The supervisor of the appropriate district office of the Division may grant temporary exceptions to Paragraph A. above for emergency situations, for use of produced water in road construction or maintenance, or for use of produced waters for other construction purposes upon request and a proper showing by a holder of an approved Form C-133 (Authorization to Move Produced Water).

D. Vehicular movement or disposition of produced water in any manner contrary to these rules shall be considered cause, after notice and hearing, for cancellation of Form C-133.

[2-1-82...2-1-96; 19.15.9.710 NMAC - Rn, 19 NMAC 15.I.710, 11-30-00]

19.15.9.711 APPLICABLE TO SURFACE WASTE MANAGEMENT FACILITIES ONLY:

A. A surface waste management facility is defined as any facility that receives for collection, disposal, evaporation, remediation, reclamation, treatment or storage any produced water, drilling fluids, drill cuttings, completion fluids, contaminated soils, bottom sediment and water (BS&W), tank bottoms, waste oil or, upon written approval by the Division, other oilfield related waste. Provided, however, if (a) a facility performing these functions utilizes underground injection wells subject to regulation by the Division pursuant to the federal Safe Drinking Water Act, and does not manage oilfield wastes on the ground in pits, ponds, below grade tanks or land application units, (b) if a facility, such as a tank only facility, does not manage oilfield wastes on the ground in pits, ponds below grade tanks or land application units or (c) if a facility performing these functions is subject to Water Quality Control Commission Regulations, then the facility shall not be subject to this rule.

(1) A commercial facility is defined as any surface waste management facility that does not meet the definition of centralized facility.

(2) A centralized facility is defined as a surface waste management facility that accepts only waste generated in New Mexico and that:

(a) does not receive compensation for waste management;

(b) is used exclusively by one generator subject to New Mexico's "Oil and Gas Conservation Tax Act" Section 7-30-1 NMSA-1978 as amended; or

(c) is used by more than one generator subject to New Mexico's "Oil and Gas Conservation Tax Act" Section 7-30-1 NMSA-1978 as amended under an operating agreement and which receives wastes that are generated from two or

OCD Rule book

well as provided in Rule 407. [8-23-77...2-1-96]

1130.B. The operator shall state, to the best of his knowledge, the reasons for disconnecting any gas well from gas transportation facilities. [8-23-77...2-1-96]

1130.C. The Division shall furnish the New Mexico Public Service Commission with any Form C-130 indicating that a disconnected gas well may or will be reconnected to a gas transportation facility for ultimate distribution to consumers outside of the State of New Mexico. [8-23-77...2-1-96]

1131 MONTHLY GAS STORAGE REPORT (Form C-131-A) ANNUAL LPG STORAGE REPORT (Form C-131-B)

1131.A. Each operator of an underground natural gas storage project shall report its operation monthly on Form C-131-A. Form C-131-A shall be filed in DUPLICATE (one copy to the appropriate district office) and shall be postmarked not later than the 24th day of the next succeeding month. [2-1-78...2-1-96]

1131.B. Each operator of an underground liquefied petroleum gas storage project approved by the Division shall report its operation annually on Form C-131-B. [7-1-81...2-1-96]

1133 AUTHORIZATION TO MOVE PRODUCED WATER

1133.A. Each person who is a transporter of produced water shall obtain approval of Form C-133, Authorization to Move Produced Water, in accordance with Rule 709 C. prior to any such transportation. [2-1-82...2-1-96]

1133.B. Approval of a single Form C-133 is valid for all leases served by such transporter. [2-1-82...2-1-96]

1134 RESERVED

1135 GAS WELL CONNECTION, RECONNECTION, OR DISCONNECTION NOTICE

Every gas transporter accepting gas for delivery from a wellhead or central point of delivery shall notify the Division within thirty (30) days of a new connection or reconnection to or disconnection from the gathering or transportation system by filing Form C-135 in DUPLICATE with the appropriate District office of the Division. [2-1-91...2-1-96]

1136 APPLICATION FOR APPROVAL TO USE AN ALTERNATE GAS MEASUREMENT METHOD (FORM C-136)

1136.A. Form C-136 shall be used to request and approve use of an alternate procedure for measuring gas production from a well which is not capable of producing more than 15 MCFD (Rule 403.B.(1)) or for any well which has a producing capacity of 100 MCFD or less and is on a multi-well lease (Rule 403.B.(2)). [12-23-91, 2-1-96]

1136.B. All applicable information required on Form C-136 shall be filled out with the required supplemental information attached, and shall be submitted in QUADRUPLICATE to the appropriate district office of the Division. [12-23-91; 2-1-96]

July 30, 2003

Mr. Fleming,

RE: Our telephone conversation yesterday regarding the contaminated water that was in the reserve mud pit at the Chiricahua R21 Federal #1 well site.

On late Friday evening, July 11, 2003, two water hauling trucks came to our house. They were lost and talked to my mother, Jane Schafer. They said they had come from the Heyco oil and gas exploratory well on the Texas side of the state line and were hunting the Chiricahua well site. The directions they had were for the Chino well site which is to be located on the Pete Lewis allotment. The truck driver told Mom that they were instructed to bring the water from the Heyco well and put it into the mud pit at the well site in New Mexico. Mom remarked that it looked like it would cost the oil company more than what it was worth to haul the water that far. The truck driver said that this water was free, that it was running every where from the Heyco well, and they had to do something with it. He also said that they would be hauling water all night. The trucks had JWS on the doors.

Saturday July 12, 2003 We saw water hauling trucks coming and going to the site all day. The trucks dumped water into the inside pit and also on the road and pad site. We saw lights coming and going to the well site during the night after being alerted by the dogs barking.

Sunday July 13, 2003 Trucks again hauling water to the site. Water still being put in the pit and on the road/pad. We think they hauled at night again as the dogs barked off and on again all night.

Monday July 14, 2003 The last water truck we saw at the site was at 7:30 a.m. I went to the site and took pictures of the pits. The water in the outside pit was clear and clean, but the water in the inside pit was black and smelled like sewage. I came back and e-mailed Joe Torrez, at the Las Cruces BLM office, and told him of the water being hauled all weekend from the Heyco well and I felt that there was possible contamination in the inside pit. Joe answered me and forwarded my e-mail to Gary Tidmore, with Threshold Development Co. Mr. Tidmore e-mailed me and said that he had been told that only about 3 loads of fresh water had been hauled from the Heyco well. The remainder of the water used to water the roads etc. had come from an irrigation well a few miles to the south in New Mexico. He assured us that it was all "fresh" water.
I answered by another e-mail that we begged to differ with his information as there had been considerable more than 3 loads of water hauled to the Chiricahua site. I also told him that there were people who lived within sight of the irrigation well and also the highway in which the trucks travel and no one saw any water being hauled from the irrigation well. The trucks came from the south, up the highway, as if they were coming from Dell City. He answered me by e-mail again saying that the point he was trying to make was that it did not matter where the water came from, it was all fresh water. He said if I had evidence that the water was not fresh to contact him immediately.

Thursday July 17, 2003 I went to the well site and there was a water truck unloading water into the inside pit, the dirty water. I talked to the truck driver and ask him where the water was coming from. He said it was dirty water coming from the well on Jim Kiehne's (i.e. the Heyco well). I ask him if it was coming directly out of the oil well and he said yes. He said that someone had to come to the Chiricahua site on Friday, July 11, and pumped the clean water out of the inside pit into the outside pit, then they started hauling the dirty water to the inside pit. He said he had hired on only for part time, but the bosses had required them to haul all day and night throughout the weekend. He said if they could not get rid of all of the dirty water, they would have to start hauling it to somewhere in Carlsbad. The name on this truck door was Kauffman Well Service, tractor license plate # NM 14405, and trailer license plate # NM 7713 ETA.

Wednesday July 22, 2003 Joe Torrez and J. R. Hogwood, both from the BLM, stopped by our house. I was not there, but they told Dale Leith that the water in the inside pit had tested over 1000 ppm and must be removed. It is not to be used for drilling, on the road or the pad site. I sent an e-mail that evening to Joe Torrez and ask him for the results of their test. He answered by e-mail saying that on the inside pit it tested at: 3,300 ppm chlorides and 120 mg/L calcium. He said they did not run any further tests since they were asking Threshold to remove the water. He said the inside pit had characteristics similar to those of oilfield produced water, which was probably transported in a dirty water tanker. He said the outer pit had tested 300 ppm chlorides and 400 mg/L calcium. He said the company was going to remove the water from the inside pit.

Thursday July 24, 2003. We were not here during the day, but do know that trucks were coming and going most all of the night. As of 8 a.m. Friday, July 25, 2003 the water was all removed from the inside pit. All that remained was black, stinky, muck.

That is my recollection of how the water was delivered to and removed from the Chiricahua well site. I followed Mr. Tidmore's advice and took the necessary steps to find out if the water was contaminated. Preliminary results did indeed show contamination, and as you know, we are still waiting on the final results.

I hope this helps and please call if you have any questions.

Thank you.

Jonna Lou Schafer
505 963 2846

Cc: Tim Sanders, Las Cruces BLM
Doug Moore, Otero County Commissioner
Bobby Jones, Chairman of the Federal Trust Lands Committee
Ronnie Merritt, Chairman of the Enviromental Conservation Organization
Range Improvement Task Force, NMSU

Ranchers Fight for Otero Mesa

Groups Join Battle To Limit Drilling

BY TANIA SOUSSAN
Journal Staff Writer

Otero Mesa ranchers and a group that campaigns to protect private property rights are joining environmentalists in a fight to limit new oil and gas drilling in a remote but highly valued expanse of southern New Mexico.

"What's right is right," said G.B. Oliver III, executive vice president of the Paragon Foundation and president of Western Bank in Alamogordo. "Our goal is the same."

The biologically rich grassland, which could hold significant natural gas reserves, has attracted national attention.

Environmentalists say new drilling and the roads that go along with it would damage one of the last remnants of healthy Chihuahuan Desert grassland in New Mexico and reduce wildlife habitat. Oil and gas drillers have said the BLM's restrictions would pose an economic hardship.

Directors of Alamogordo-based Paragon, devoted to defending private property rights, voted this week to get involved on behalf of the area ranchers and to work with the New Mexico Wilderness Alliance. The ranchers and the foundation are mainly concerned with the potential for ground-water contamination and damage to rangeland.

"There's some areas out there that should be out of the

See **OTERO** *on* **PAGE A2**

JOURNAL FILE

TESTING GROUND: An exploratory gas well has been drilled on Otero Mesa. Ranchers and a private property rights group are joining a fight to limit new oil and gas drilling in the area in southern New Mexico.

JOURNAL FILE

NATURAL LANDSCAPE: Cholla is one of many desert plants found on Otero Mesa.

Otero Mesa Battle Joined

from PAGE A1

drilling because they're vulnerable," said Bob Jones, a rancher with public land leases on Otero Mesa and Paragon Foundation president.

"It's a matter of survival for all of us," he said. "If we can't get them stopped, we're through. All we got out of it is destruction."

The ranchers and Paragon are the latest voices that have joined the fight to protect Otero Mesa this year.

New Mexico Gov. Bill Richardson has already asked Interior Secretary Gale Norton to protect the area from expanded drilling until a significant wilderness area is set aside.

The U.S. Bureau of Land Management is developing new rules to guide oil and gas development in the area, between Las Cruces and El Paso.

The BLM plans to limit surface disturbance in big chunks of healthy grassland. Only 5 percent of those blocks of land could be occupied by roads, well pads and other facilities at the same time.

Ranchers and the Paragon Foundation don't want to ban all drilling, Oliver said. They only want the area developed in a way that protects ground water and the land.

"I'm not going to let 'em destroy that," said Oliver, whose bank has loaned money to Otero Mesa ranchers.

The ranchers have been wary of new oil and gas development for a long time, but recent actions of one company triggered their anger.

Threshold Development Co. of Fort Worth dumped dirty water into a reserve pit at an Otero Mesa site where it plans to begin drilling soon.

The BLM issued a violation notice and ordered the company to remove the water, which it did. But the ranchers say a nasty sludge remains at the bottom of the pit.

"There's still muck," said rancher Joann Lou Shafer. "The black stinky stuff is still in the bottom."

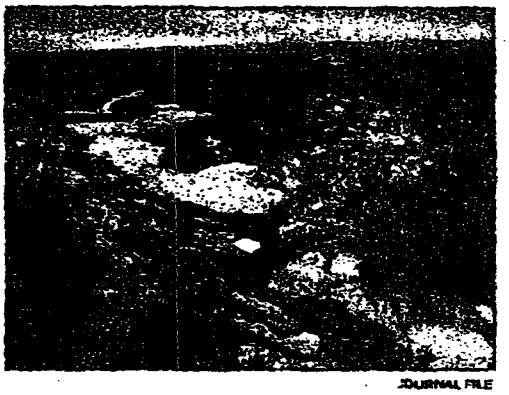
A test by Sandia National Laboratories found more than seven times the total dissolved solids normally in fresh water and the presence of E. coli and coliform bacteria.

The president and land manager for Threshold were out of town Wednesday and no one else at the company could comment.

The well pad and pit are on Shafer's BLM allotment on Crow Flat, about 25 miles northeast of Dell City.

Shafer said she wants Threshold to pump out the remaining sludge and install a new liner. She said she's also worried about soil contamination because the company was dumping water on the pad site and dirt road.

The ranchers are considering blockading the road to the well site to prevent Threshold from moving in a drilling rig until it finishes cleaning up the sludge, Oliver said.

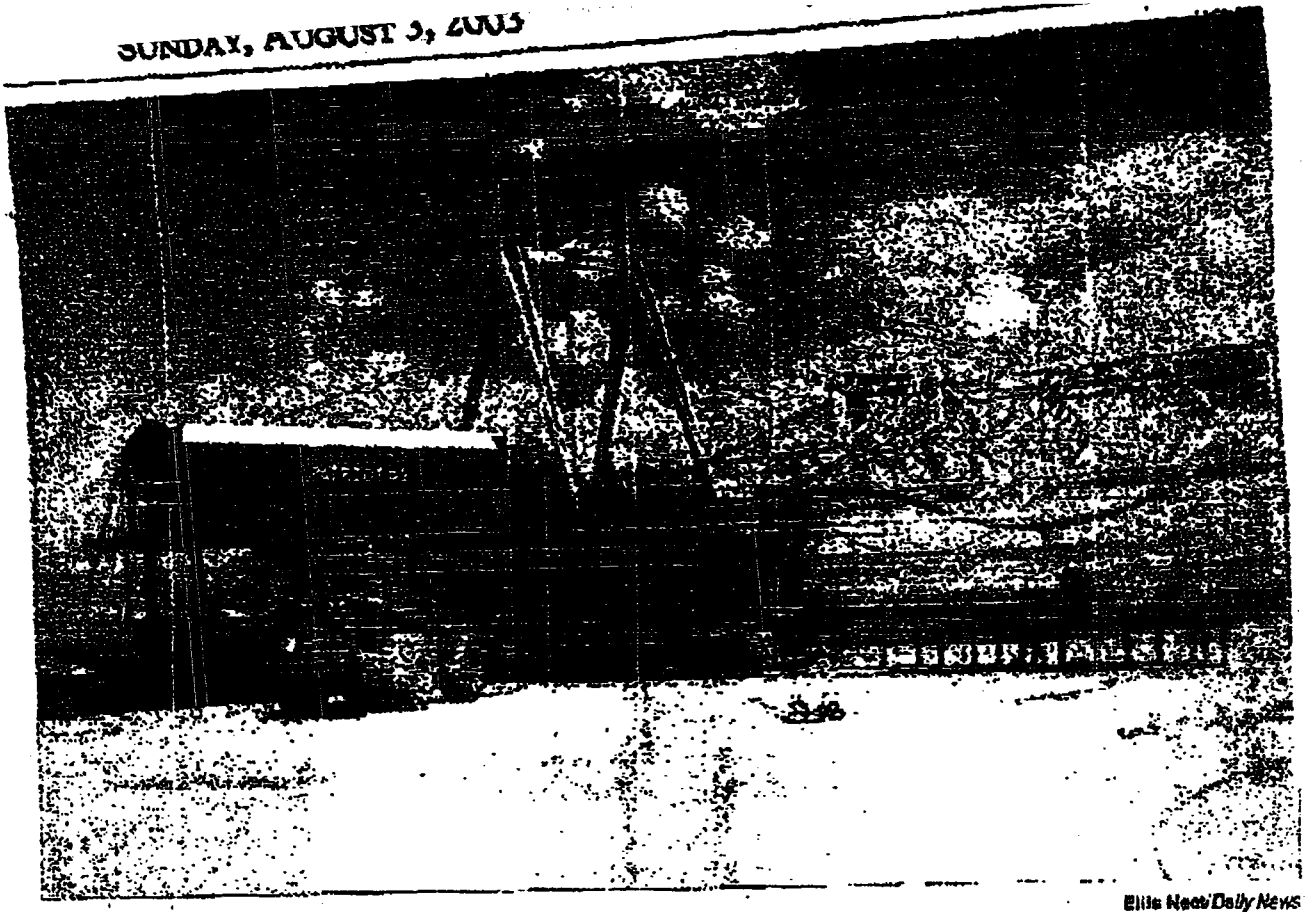


JOURNAL FILE

SIGNS FROM THE PAST: The ruins of a Butterfield Stagecoach stop can still be seen on Otero Mesa.

"It's a matter of survival for all of us. If we can't get them stopped, we're through. All we get out of it is destruction."

BOB JONES, RANCHER WITH PUBLIC LAND LEASES ON OTERO MESA AND PARAGON FOUNDATION PRESIDENT



Ellis Neel/Daily News

READY TO STAND HER UP – Threshold Development Corporation, out of Fort Worth, Texas, is getting ready to drill an exploratory well for oil and gas in Crow Flats.

Storm brewing on the Mesa

BY ELLIS NEEL
STAFF PHOTOGRAPHER/WRITER

An unlikely alliance of ranchers, environmentalists and a private property rights advocacy group has formed to protect what might be the largest pristine stretch of the Chihuahuan Desert.

The members, together with the Bureau of Land Management and the Paragon Foundation are concerned about ground water contamination and damage to grassland on the Otero Mesa and Crow Flats.

Threshold Development Company, out of Fort Worth, Texas, is drilling an exploratory well 28 miles northwest of Dell City, Texas, in Crow Flats, New Mexico, near where Crow Flats borders the Otero Mesa.

The well will be used to drill for oil and gas deposits believed to be hidden in the rock and geological formations beneath the surface of the mesa. Threshold believes there is a large deposit of natural gas waiting to be harvested.

Several ranchers, along with Otero County Commissioner Doug Moore and Paragon Foundation executive director GB Oliver III met with representatives from Threshold and the Bureau of Land Management at the drilling site Thursday to discuss a recent incident with "black water" at the site and to discuss safety concerns for the mesa.

The incident occurred on July 11.

"We had an incident," Morris Keith, Threshold Development Company operations manager said, talking about when Threshold was bringing in the first drilling rig and some "black water" was allegedly released into the environment. The incident Keith refers to concerns water with allegedly high levels of contaminants, e-coli, chlorides, etc.

"The first that we knew of it," said Joana Lou Shafer, "was July 11 at 7:55 p.m. when two separate water trucks ended up here at our house, Joel."

Shafer has a ranch on Crow Flats about

"They were hunting this Chiricahua well site and they said they came from a Texas well site, an exploratory oil and gas well in the Hueco Mountains. They told mom they were told to bring this water and dump it. There was water running everywhere at the well site (in the Hueco Mountains) they said and they said they'd probably be hauling water all night, which they did all Saturday, Saturday night, Sunday and Sunday night."

Shafer said her mother Jane Shafer visited the Crow Flats well site Monday, July 14, to look at the water being hauled in from out of state. They saw "how black it was. Yes, it stunk," Shafer said. "It smelled bad.

"We got Sandia to come get some samples. The man at Threshold when I first alerted the BLM that this water was here, the BLM turned it over to Threshold, and they said all the water they'd been hauling in here was fresh water and if I had evidence to the contrary I should contact them immediately.

See MESA Page 7A

Mesa

"So I gathered some evidence," Shafer said. "There was a collective effort out here to keep an eye on the drillers."

"Jonas Shafer called me and told me about it," Moore said. "She said there was some nasty black water in that pit (one of Threshold's drilling water pits), so I called the BLM to find out what their operator was doing."

The BLM reported back to Moore that Threshold said there was only fresh water in their pit. Moore, armed with conflicting information, took a drive out to Crow Flats to see for himself. He found a pit filled with black water and called on Threshold for an explanation.

There was "apparently a miscommunication between Threshold and its local supervisor," Moore said. "We got a sample of it, the ranchers actually got the sample, to see what it contained. And once they got the analysis back, it did not meet the standards for fresh water."

"On the 17th," Shafer continued, "I had gone over there to the pit. There was a driver there unloading some of that dirty water into the pit and I asked him where the water was coming from, and he says from that well in Texas ... And I asked him where was it coming from, was it in a pit or out of the well and he said it was coming directly from the well. And he told me that they had made him haul all weekend and he was here on midnight Saturday night July 12th. He told me that they had sent someone here to pump the clean water from the inside pit to the outside pit, and they were told to dump the dirty water in the inside pit."

Threshold, at the request of the BLM, removed all the water from the pit, except for the residue and the pit liner. The liner will be removed and transported out of state and replaced with a brand new uncontaminated liner.

Rancher Bob Jones explained the Otero Mesa and Crow Flats area is right above what is probably the largest reserve of potable water left in New Mexico, with an estimated 35 million-acre feet of water in reserve.

Moore initiated much discussion of water supply contamination and mentioned an incident in the recent past where well drillers ran into old, deep water at 6,500 feet and during drilling it contaminated a higher-level supply of potable water.

"I don't want that deep water to come up out of there and get in these people's drinking water," said Doug Moore, Otero County Commissioner. "My deal is I want to protect the shallow water. My concern is that we do, regardless of cost, the very best job we can do."

Threshold has been analyzing data from the Crow Flats site for two-and-a-half years and company representatives say drilling will take 10 days from the first day of drilling until they are done, providing they don't run into any problems.

"This is a wildcat exploratory well," said Keith.

"Our obvious objective," Keith said, "is to find oil and gas. Our second objective is to be so thorough on these wells – the Crow Flats well is the first of three to be dug – and do such a thorough job of exploration" that if the wells are dry, no one will bother to look at this site again.

Threshold will drill with 100 percent air.

"If we don't encounter water," Keith said, "it's going to blow mist and cuttings."

There is a chance drillers will hit water, even a chance of finding a prohibitive amount of water, but that is unlikely, Keith said. He did not believe there was any fresh water beneath the mesa.

In a short geography lesson Keith talked about the aquifer beneath the mesa and explained "all the fresh water swept away all the oil and gas out to your neighbors in Lea and Eddy counties" a long time ago. "For an oil and gas operation to be successful, there won't be any fresh water down there," he added.

Usually a well has about 200 feet of casing cemented to the surface. The Crow Flats well, properly called Chihuahua R21 Federal #1, will have 2,550 feet of casing cemented to the surface. The well will be approximately 4,000 feet deep. The data Threshold has collected and analyzed indicates they'll be able to drill to about 4,000, 4,200 feet before they hit granite and have to stop.

"The whole point of the exercise is to find the granite and look

From Page 1A

the granite," Keith said.

If the well is a producing well, Threshold will place casing all the way to the bottom of the well. If it turns out to be a dry hole, it will be plugged with concrete at several different levels, tagged and closed.

Moore originally wanted the hole cased completely and then plugged. The BLM engineers and geologists are saying plugs work better without the casing.

"It's more effective, from an engineer's point of view, in a non-cased environment," said Amy Lueders, BLM field manager. "Our concerns are not being driven by cost."

"My concern's the water," Moore said. "I hope you boys find a bunch of oil and get rich, but my deal is the water. I don't want to take the chance of contaminating the water."

Keith acknowledged it's best for the county that exploratory wells be done on BLM land because of the higher standards and the amount of inspections.

"I'm sure Threshold's a good company," Moore said. "I'm sure the BLM is good, but I've got a job to do."

"We live in this country too," said J.R. Hogwood, from the BLM Roswell field office, "and we don't want our water torn up either."

"There is going to be no movement on the third well site until all the data from the first well has been analyzed," Keith said. "The second well is a completely different scientific deal."

The second well is also an oil and gas exploration well, "but it's a different geological deal," Moore said. "The strata's different."

He explained the drilling system is similar to dominoes. If the first one doesn't fall, the others keep on standing.

"We just don't want to have an accident," said Jones.

Moore is concerned greed and haste could lead to the ruination of a pristine environment.

"I just can't afford to let this deal get screwed up," Moore said.

Moore also wants to know about the black water and if that water had been put on the ground, sprayed on the roads to keep the dust down.

"We have a real concern about something, a contaminant, getting on the ground here," Moore said.

The BLM is putting together a testing protocol and has not yet collected samples of soil around the drill site for testing. They are still waiting for clean uncontaminated equipment to do sample collecting.

Moore wants soil samples taken so he can determine a baseline, a standard, to compare and match later to samples from the drilling site to find out whether the site has become polluted according to EPA standards. He wants the ground tested because he thinks some of the black water was put on some of the roads out here.

Nobody is sure where the black water came from.

Keith tried to explain where he thought the black water came from: "What we did, we were buying water from Dell City and the ranchers complained and asked Dell City to not sell us any more water."

Threshold then made a deal with another contractor and was hauling on a rig with fresh water. The contractor asked if they could put three to four loads of fresh water in the inside pit at the well site.

"We moved five loads of water over here," Keith said.

The BLM inspected the site and called the water brine water.

No one was happy with the black water and no one had a good explanation of how the water ended up at the Crow Flats drilling site.

"We're at a complete loss to explain what happened," Keith said.

"I'm telling you for a fact we're not stupid enough to do something that's going to get us in trouble," said Gary Tidmore, vice president of Land, Threshold Development.

"Are you going to clean up that pit when you're done?" asked Jones.

"When we get finished," Keith said, "all of the disposal is at the discretion of the BLM. BLM specifications are very clear," Keith said.

To Whom It May Concern:

RE: Additional information to my complaint dated September 11, 2003.

Drilling fluid samples were collected from a drilling fluid pit at the Chiricahua R-21 Federal #1 well site in New Mexico Township 24 South, Range 18 East, Section 21 on July 21, 2003. This drilling fluid was trucked to this location from another drilling location in the State of Texas (HEYCO well) according to conversations with a driver of one of the water trucks dumping the drilling fluid into the pits at the Chiricahua R-21 Federal #1 well site. The drilling operation at this location was under the direction of Threshold Development Company. The drilling fluid was analyzed by an independent laboratory certified to conduct Safe Drinking Water Act Analysis. The results of the analysis is as follows:

• Chloride	=	3130 mg/L	MCL	=	250 mg/L
• TDS	=	7010 mg/L	MCL	=	500 mg/L
• Surfactants	=	2.0 mg/L	MCL	=	0.5 mg/L
• Manganese	=	0.20 mg/L	MCL	=	0.01 mg/L
• Gross Alpha	=	74.7 pCi/L	MCL	=	15 pCi/L
• Fluoride	=	3.4 mg/L	MCL	=	0.1 mg/L
• Diesel Range Organics	=	0.63 mg/L	MCL	=	0.50 mg/L
• E. coli	=	positive			
• Total Coliform	=	positive			

The application for permit to drill (APD) for the Chiricahua R-21 Federal #1 well restricted drilling fluids to "fresh" water for the upper 2500' of the borehole. The BLM definition of "fresh" water is "water containing not more than 1000 ppm total dissolved solids (TDS) provided that such water does not contain objectionable levels of any constituent that is toxic to animals, plant, or aquatic life unless otherwise specified in applicable notices or orders." It is clear that the drilling fluid in the pit at the Chiricahua R-21 Federal #1 well did not meet this definition of "fresh" water. Considering that these regulations were in place and that this definition of "fresh" water does exists, it is difficult to understand why this issue persisted as long as it did. The BLM was informed that there was drilling fluid of questionable quality in the fluid pits at the well site multiple times while it was being hauled in to the well site. Only after the BLM was informed that samples of the drilling fluid had been collected and were being analyzed by an independent third party did the BLM act. At that point the BLM obtained and analyzed samples of the drilling fluid and determined that the drilling fluid in the pit exceeded the "fresh" water limit for chloride and issued a notice of noncompliance to Threshold Development Company regarding the drilling fluid. The drilling fluid was subsequently removed. However, in the mean time, this drilling fluid had been applied to both the drilling pad and the roads in the area and the BLM never analyzed for any other

contaminants. Clearly, this was a serious oversight on the part of BLM considering the level of contaminants that the drilling fluids contained.

All of these contaminants are above the Safe Drinking Water Act standards. Of particular interest is the level of gross alpha radioactivity (5 times the maximum contaminant level (MCL)). This naturally occurring radioactive material (NORM) is often a result of drilling activities associated with oil and/or gas exploration. Along these lines, drilling fluids from the HEYCO well, mentioned above, are hypothesized to be the source of this NORM.

The residents of the Crow Flats and Otero Mesa in southern Otero County, New Mexico are terribly concerned that our sole source of water (groundwater from the underlying limestone aquifer) will be contaminated by one or more of the above listed constituents after witnessing, first-hand, the blatant disregard by the oil and gas industry for laws and regulations that have been developed to protect groundwater resources. We are concerned that this water was applied to both roads and private lands in the area (corroborated by testimony) and was not sufficiently tested to quantify potential levels of contamination. We feel that the following steps should be taken in order to deal with this situation:

1) Considering the results of the analysis provided above, that the OCD, BLM and/or some regulatory entity should obtain soil and vegetation samples from areas where it is suspected that this contaminated drilling fluid was applied to the ground to determined if the contaminants exist and whether we, or our livestock, are at risk of experiencing any adverse health effects as a result.
2) The source of the contamination should be determined. Threshold Development Company is of the opinion that the water hauling service stopped in Dell City, Texas on the way to the Chiricahua R-21 Federal #1 well site with "fresh water" and picked up a load of waste and delivered the entire load to the Chiricahua R-21 Federal #1 drilling fluid pits. This might account for the E. coli and coliform bacteria in the sample. However, if this is indeed the case, the dairy and the Department of Health should be aware that those cattle are contaminated with alpha radiation.
3) If, as it is suspected, the HEYCO well in Texas is the source of the contaminated drilling fluid then we would like to know why this type of contaminated material is allowed to be transported across state lines and used at will rather than being disposed of at a site designed to accommodate such material. It would seem that the transport of this material would be regulated in some manner.
4) In addition, we feel that it is necessary to more thoroughly dispose if the drilling fluid pit material. After containing drilling fluids having constituents as mentioned above, it is unacceptable to leave this material in place and only cover it as current regulations allow. We feel that it is necessary to completely remove all material associated with the drilling fluid pits and that they be disposed of at facilities designed and permitted to accommodate such materials. This would entail quantifying the constituents of the drilling fluids by an independent third party laboratory. This would avoid any perception of influence by involved entities.

Based upon the conduct of business that we have experienced associated with the Chiricahua R-21 Federal #1 drilling operation, it is clear that the existing regulations are either inadequate and/or that enforcement of existing regulations is insufficient. The geologic environment that exists in the Crow Flats/Otero Mesa is one of a karst limestone. Therefore, contaminants on the surface or in pits at the surface have essentially direct access to the underlying groundwater system through fractures and solution cavities. This means that surface contaminants have the potential to be moved quickly into the groundwater system through this karst environment.

The groundwater resource of the Crow Flats/Otero Mesa (New Mexico Salt Basin) region is extremely valuable on a local, state, regional, and international level. It is estimated that there are 15 million acre-feet of recoverable, potable water in the New Mexico portion of the Salt Basin. Contamination of any sort in this karst environment would move quickly and would result in huge amounts of unusable water that was once potable. Does the OCD, BLM, or any entity want to take responsibility for rendering a significant potable groundwater resource unusable because the regulations or enforcement mechanisms were not sufficient to protect it from oil and gas drilling activities???? Given the current situation in New Mexico and the southwest in general, we think that that would be a poor position in which to find oneself!!!

Thank you for your attention.

Greg Duggar