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REPORTS

DATE:

2002

TIERRA
Technical Consultants

June 4, 2002

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ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

1000345
1R374

Mr. Paul Sheeley
Environmental Engineer Specialist
New Mexico Oil Conservation Division
1625 N. French Dr.
Hobbs, NM 88240

RE: PETROLEUM CONTAMINATION AT FORMER WELL SITES, McNEILL RANCH, NEW MEXICO

Dear Mr. Sheeley:

This correspondence has been sent on behalf of Mr. William McNeill and the McNeill Ranch, Hobbs, New Mexico. In April 2002, Mr. McNeill performed a visual survey of a portion of the McNeill Ranch property, specifically, Township 19S, Range 38E, Sections 8, 9, and 10. As a result of the survey, Mr. McNeill identified 12 sites that potentially contained petroleum contaminated soil in excess of the New Mexico Oil Conservation Division's (OCD) *Guidelines for Remediation of Leaks, Spills, and Releases* (1993). These sites generally represent old wellhead, disposal pit, and battery areas.

Subsequent to the visual survey, TIERRA Technical Consultants (TIERRA) and Phoenix Environmental, L.L.C. (Phoenix) were employed to further investigate these 12 sites. The purpose of TIERRA's site visit was to collect soil samples at each of the sites, and, based upon laboratory analytical data, assess whether the sites had been adversely impacted by petroleum contamination. Mr. Allen Hodge of Phoenix and his crew also participated in sample collection. Utilizing a backhoe, Phoenix personnel had excavated exploration pits at most of the sites April 17 through April 20, 2002, in preparation of sampling activities. These pits ranged in depth from about 2 feet to 11 feet, and provided access to the subsurface for soil sampling. During sampling activities with TIERRA personnel, Phoenix supplied a hang-auger and the backhoe for additional exploration pit excavation.

A minimum of 2 soil samples was collected from each site for a total of 38 soil samples. The depth of collection ranged from 1 foot to 11 feet below surface grade (bsg). Soil samples were collected by either scraping the pit walls/bottom by hand until previously undisturbed soil was encountered, or with the hand-auger. When the hand-auger was employed, the auger bucket was decontaminated immediately after each use. The bucket was washed in a water and soap solution, and then rinsed with clean potable water. The soil sample was packed tightly into laboratory-supplied, 4-ounce glass jars. The jars were labeled, sealed into zip-lock plastic bags, and placed into a cooler with ice. At the end of sampling on Friday, April 26, all samples were packed into a cooler with "blue-ice" packs, and, with the proper chain-of-custody forms, sent via Federal Express to

Anachem Inc. analytical laboratory in Allen, Texas for analysis. All samples were analyzed for chlorides via the U.S. Environmental Protection Agency (EPA) method 300.0; benzene, toluene, ethylbenzene, and total xylenes (BTEX) via EPA method 8021; and total petroleum hydrocarbons (TPH) by means of EPA method 418.1.

Table 1 on the following page summarizes the laboratory results, given in mg/Kg (parts per million), for all the soil samples collected (Note: "**ND**" indicates a non-detect for that contaminant).

We respectfully request that OCD require either the past or current operator of these leases to comply with the *Guidelines for Remediation of Leaks, Spills, and Releases* (1993), and the regulations of the New Mexico Water Quality Control Commission. The attached topographic map identifies the location of each of the sites.

For further information regarding this matter, please contact either:

Mr. James P. Lyle
Attorney at Law
Law Offices of James P. Lyle, P.C.
1116 2nd St. NW
Albuquerque, NM 87102
505-843-8000

or myself:

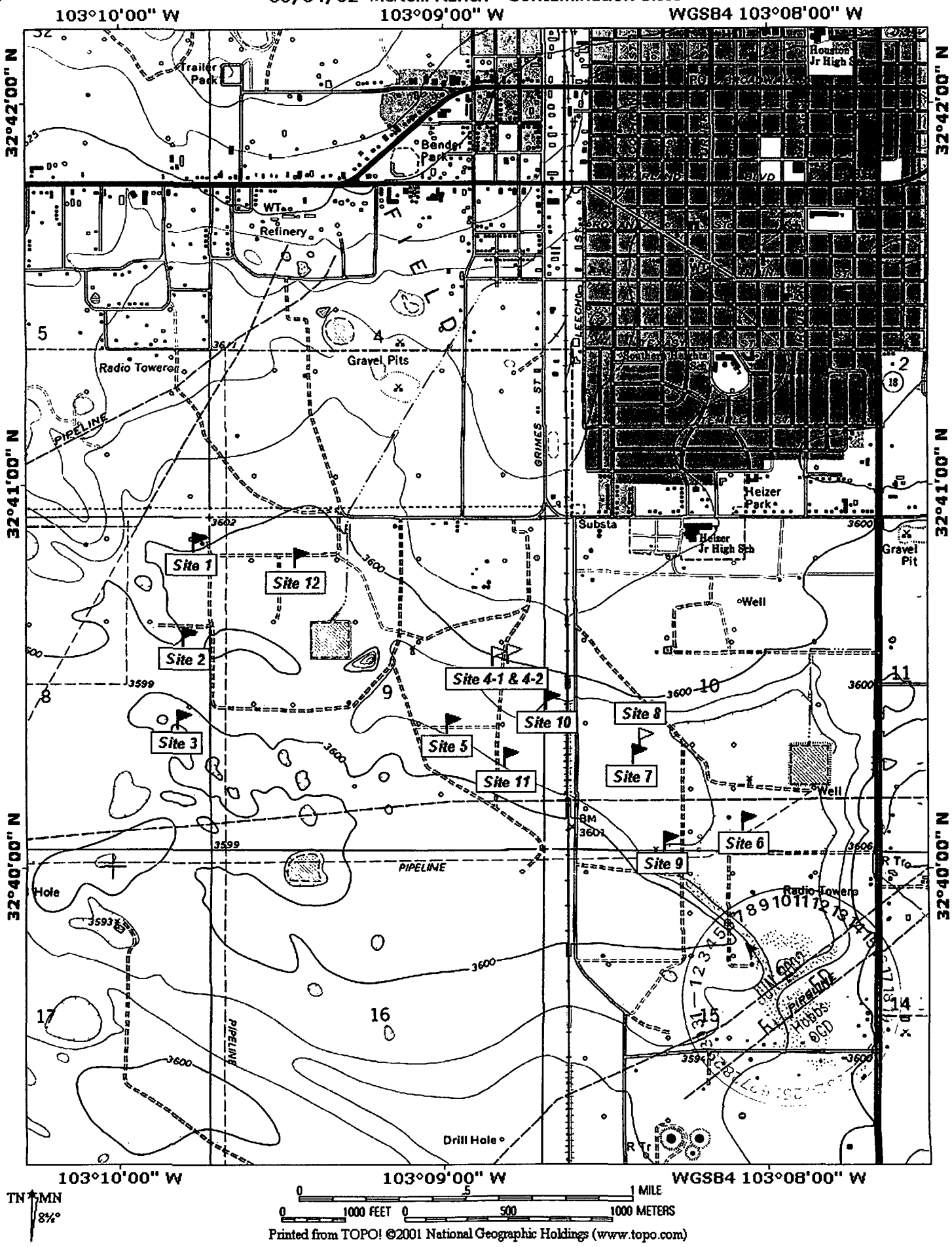
Richard M. Renn, P.G., C.P.G.
Principal
TIERRA Technical Consultants
1694 Tierra Del Rio NW
Albuquerque, NM 87107
Office: 505-345-6866; Cell: 505-400-1083

Thank you for your prompt attention to this matter.

Respectfully,

Richard M. Renn, P.G., C.P.G.
Principal

Cc: William McNeill
James P. Lyle
File



Olson, William

From: Olson, William
Sent: Tuesday, November 20, 2001 4:20 PM
To: Coss, David
Cc: Wrotenbery, Lori; Anderson, Roger
Subject: McNeill Property Sites - Phase II Assessment

Below are my comments on Kleinfelder's November 16, 2001 work plan that you asked the New Mexico Oil Conservation Division (OCD) to look at. The comments are based upon a review of the technical elements that the OCD would require of a company performing such an investigation

1. The work plan states that the New Mexico Environment Department is responsible for oversight of the sites if ground water is impacted. This is not correct. The OCD is the regulatory agency responsible for all oil and gas environmental issues, including ground water, except for RCRA hazardous waste and air quality issues.

2. A 3rd soil sample should also be taken from the 3-5 foot depth interval at each boring location to determine the undisturbed source concentrations near the surface of the contaminated areas.

3. The plan states that one of the boring soil samples collected for laboratory analysis "will be collected from the most likely area of contamination", but does not specify how this decision will be made. This sample should be obtained from the sample interval that exhibits the highest PID reading in the interval between the water table sample and the 3-5 foot depth sample.

4. The plan does not specify where the monitor well screen will be placed. The wells should be screened with at least 5 feet of well screen above the water table and 10 feet of well screen below the water table.

5. The monitor wells should not be purged and sampled until at least 24 hours after they have been developed.

6. The monitor well development and purge water should be drummed until the laboratory analyses have been received. If the water is below New Mexico Water Quality Control Commission (WQCC) standards then the water could be disposed of on the surface at the sites. If the water is above WQCC standards it should be disposed of at an OCD approved facility.

If you have any questions, please feel free to call me at (505) 476-3491.

RESULTS OF SITE VISIT
AND WORKPLAN FOR
LIMITED SUBSURFACE ASSESSMENT
MCNEIL PROPERTY SITES
HOBBS, NEW MEXICO

PROJECT NO. 59-014096

November 16, 2001

Prepared For: Mr. David Coss
New Mexico State Land Office
310 Old Santa Fe Trail
P.O. Box 1148
Santa Fe, New Mexico 87504-1148

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KLEINFELDER
An employee owned company

November 16, 2001
File No: 59-014096

Mr. David Coss
New Mexico State Land Office
310 Old Santa Fe Trail
P.O. Box 1148
Santa Fe, New Mexico 87504-1148

SUBJECT: RESULTS OF SITE VISIT AND WORKPLAN FOR LIMITED SUBSURFACE ASSESSMENT MCNEIL PROPERTY SITES HOBBS, NEW MEXICO

Dear Mr. Coss:

Kleinfelder, Inc. is pleased to submit this draft workplan to the New Mexico State Land Office (NMSLO) to perform the next phase of the Phase II Limited Subsurface Assessment services for the above referenced site. This workplan was developed after discussions with the Client and is a preliminary understanding of the Client's request. In addition, Mr. Steve Woodall and Mr. Bernard Bockisch of Kleinfelder's Albuquerque office visited the property on October 24 through 26, 2001. Accompanying Kleinfelder personnel was Mr. David Coss, Mr. Mike Matush, Mr. Leon Anderson, and Ms. Myra Meyers, all with NMSLO.

Kleinfelder is committed to providing quality service to its clients, commensurate with their wants, needs, and desired level of risk. If a portion of this workplan does not meet the needs of the Client, or if those needs have changed, Kleinfelder will consider appropriate modifications, subject to the standards of care to which we adhere as professionals. Modifications, such as changes in scope, methodology, scheduling, and contract terms may result in changes to the risks assumed by the Client, as well as adjustments to our fees.

INTRODUCTION AND SITE VISIT OBSERVATIONS

The subject property consisted of three petroleum pit sites. These sites were generally located in Section 2, Township 21 south, Range 37 east, to the south of Hobbs, New Mexico (see Figure 1, Site Location Map). The topography of each of the subject properties appeared to be generally flat. Initially it was believed that each site was abandoned. However, it may be possible that there are active leases associated with each site in which case a responsible party may be present to assist with any further investigation and remediation.

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Kleinfelder discussed the subject properties with Mr. Paul Sheeley and Mr. Larry Johnson of the State of New Mexico Oil Conservation Division (OCD). According to Mr. Sheeley, the presence of light non-aqueous phase liquids (LNAPLs) on the ground water is known to occur in the general area of the sites. The presence of LNAPLs occurs when product encounters the ground water table in an amount that is large enough to cause pooling. A description of each site follows.

Site No. 1

This site consisted of a large sandy area with two obvious petroleum stained areas (see Figure 2a, Site Plan, Site No. 1). The latitude and longitude coordinates for this site are N 03°08'19.7", W 32°30'59.3". Surface indications of petroleum releases consisted of dark grey and black stained soil. In some areas, the soil appeared to be "spongy", indicated petroleum saturation. An above ground pipe and a truncated valve were located to the south of the stained areas (See Figure 3a, Site Photographs). Two pump-jacks were located near the site, one to the west and one to the south.

Site No. 2

This site consisted of a petroleum stained area which appeared to have been covered with caliche (see Figure 2b, Site Plan, Site No. 2). The latitude and longitude coordinates for this site are N 32°30'32.7", W 103°08'28.7". Surface indications of petroleum releases consisted of dark grey stained soil and an asphaltic surface covering. Two above ground storage tanks and an above ground pipe were located to the northeast of the stained area (see Figure 3b, Site Photographs). Two pump-jacks were located near the site, one to the north and one to the northeast.

Site No. 3

This site consisted of a fenced compound which included four above ground tanks, and a pumping area (see Figure 2c, Site Plan, Site No. 3). The latitude and longitude coordinates for this site are N 32°30'22.4", W 103°08'14.5". Two petroleum release areas were located to the east of the fenced compound. Surface indications of petroleum releases consisted of dark grey stained soil and an asphaltic surface covering (see Figure 3c, Site Photographs).

SCOPE OF SERVICES

Each of these sites fall under the regulatory jurisdiction of the OCD. However, in the event that ground water is impacted, the New Mexico Environment Department (NMED) Ground Water Bureau (GWB) becomes the regulatory agency. The OCD then becomes the managing agency who is responsible for performing investigation, remediation, and monitoring activities.
The following scope of services is intended to meet the requirements for establishing the General Site Characteristics (Section III (A)) as defined by the OCD "Guidelines for Remediation of Leaks, Spills, and Releases". The three main requirements of the General Site Characteristics are to characterize:

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- The depth to ground water.
- The wellhead protection area. This is defined as the horizontal distance from all water sources including private and domestic water sources from the release area.
- Distance to the nearest surface water body.

By establishing these parameters, each of the sites may be ranked in accordance with the OCD ranking criteria. Establishment of these criteria will provide judgement as to whether the site will require further investigation or remediation.

Task 1 – Limited Subsurface Assessment

Project Preparation

- Kleinfelder will notify the OCD and NMSLO at a minimum, 96 hours prior to the commencement of on-site activities.
- A Health and Safety Plan (HSP) will be generated for the project.
- New Mexico One-Call will be notified to have underground utilities located.

Subsurface Exploration

- **Boring Installation** – Kleinfelder proposes to advance a total of four borings at the property. All of these borings would be installed to a total depth of approximately 80 feet below ground surface and converted to ground water monitoring wells. The depth of the borings is based upon our best estimate of the depth to ground water in the area and our conversations with the OCD.

  All down hole equipment will be decontaminated prior to the installation of new borings or previously decontaminated equipment will be used. The borings will be installed using a CME-75 hollow stem auger drill rig. In the event that difficult drilling conditions are encountered, the drill rig will have the ability to convert to air rotary. Kleinfelder proposes advancing borings at the following locations:

  - Site One: One boring located near the eastern portion of the large spill area (see Figure 2a, Site Plan, Site No. 1)
  - Site Two: One boring to be located in the spill area adjacent to the roadway (see Figure 2b, Site Plan, Site No. 2)
  - Site Three: One boring to be located in each of the spill areas (see Figure 2c, Site Plan, Site No. 3), for a total of two borings at this site.

  Upon completion of the monitor well installation, Kleinfelder will insure that the site is swept and restored to near its original condition.

- **Soil Sampling Program** – All of the borings will be sampled every 5 feet using a 2" x 24" split spoon. Cuttings will be logged continuously using the Unified Soil Classification System (USCS). Prior to the collection of each soil sample, the split spoon will be

decontaminated using a solution of Alconox and clean tap water. The split spoon will then be rinsed with additional clean tap water. New disposable latex gloves will be used for all soil sampling procedures to minimize the potential for cross contamination.

Soil samples will be collected for field screening using the heated headspace method. Kleinfelder will use a Rae Systems Inc. Model PGM-761S Photo-ionization Detector (PID). The PID will be calibrated to 100 ppm daily using isobutylene span gas. The samples used for field screening purposes will be collected from each distinct lithologic unit and obviously stained areas.

In addition to the collection of field screen samples, a minimum of two soil samples from each boring will be collected for laboratory analysis. Samples selected for laboratory analysis will be collected from the most likely area of contamination and from above the apparent water table.

The samples selected for laboratory analysis will be collected using the methanol extraction method and submitted to Hall Environmental Analytical Laboratories (HEAL) under established chain of custody procedures. All samples will be kept on ice until submittal to the laboratory. The selected samples will be analyzed for Total Petroleum Hydrocarbons (TPH) by EPA method 8015 for Gasoline Range Organics (GRO) and Diesel Range Organics (DRO). In addition, the soil samples will also be analyzed for Benzene, Toluene, Ethylbenzene, and Xylene (BTEX), and Methyl-Tert-Butyl-Ether (MTBE), by EPA method 8021.

- **Groundwater Monitor Well Installation** –All of the borings will be converted to ground water monitoring wells. The ground water monitor wells will be constructed with 2-inch I.D., Schedule 40, flush-joint, threaded PVC casing and screen. Well construction will consist of a threaded PVC bottom plug and 15 feet of flush-joint, threaded, factory-slotted well screen (0.010 slot). The remainder of the well will be constructed with approximately 5 feet of flush-joint, threaded PVC blank casing to the ground surface and a PVC expanding 2-inch diameter locking top plug.

  The sand filter pack will consist of Colorado silica sand, No. 10-20 or equivalent, to a height of approximately 1-foot above the top of the screened interval. The sand pack will be followed by a 3/8-inch bentonite chip seal for a minimum thickness of approximately 2 feet, with the remainder of the annulus backfilled with a Portland cement/bentonite grout. The casing, the sand filter pack and bentonite seal and cement grout will be placed inside the annulus as the augers are withdrawn from the boring. Surface finishing of the wells will include installation of 8-inch diameter traffic rated utility bolt down manholes with a concrete apron installed at each well head at selected wells. In areas where vehicles are unlikely to travel (such as at Site No. 1), above-ground completions will be used for ease of finding the wells.

- After the monitor wells have been constructed, the wells will be appropriately developed using disposable bailers or a ground water pump. The wells will be developed until the parameters of temperature, conductivity, and pH have stabilized and turbidity is reduced as much as possible.

- **Water Sampling Program** – Ground water samples will be collected from each of the newly installed monitor wells and submitted under chain of custody procedures to HEAL. Prior to sampling, the depth to ground water will be measured using an interface probe. The interface probe will also be used to measure free product if any is present. Ground water samples will be collected after development of each of the wells. The samples will be collected in laboratory prepared 40 ml VOAs and preserved with mercuric chloride. Ground water samples will be kept on ice until laboratory submittal. The ground water samples will be analyzed for BTEX and MTBE by EPA Method 8021 and semi-volatile organics by EPA Method 8270 SIMS. New disposable latex gloves will be worn for each sampling event to mitigate the possibility of cross contamination.
- **Soil Cuttings and/or Spent Drilling Fluids** (including ground water) – Cuttings from the borings identified through field screening procedures as containing 100 ppm or greater Volatile Organic Compounds (VOCs) will be placed on polyethylene and disposed of at a regulated disposal facility. Costs for disposing of contaminated cuttings is not included in this proposal and will be submitted under a separate cover. Cuttings that are identified as containing less than 100 ppm VOCs will be thin-spread on-site. Ground water generated from well development and purging will be disposed of on the ground of the subject site unless LNAPLs are present. Recovered LNAPLs will be placed within a 55-gallon drum for future disposal. Costs for disposing of LNAPLs is not included in this proposal and will be submitted under a separate cover.
- **Decontamination** - The drill rig and all downhole drilling equipment will be decontaminated with a steam cleaner prior to mobilization to the site.
- **Health & Safety Considerations** - Personal protective clothing including steel-toed work boots, gloves, safety glasses and hard hats will be required (basic Level D requirements). Kleinfelder will provide a health and safety plan. The health and safety plan will be reviewed and signed by all on-site personnel.

  All drilling and sampling will be completed in accordance with our standard Quality Assurance/ Quality Control (QA/QC) procedures. These procedures have been designed to ensure that sampling will be performed in a manner to prevent cross-contamination between samples and to provide reliable laboratory results. Selected QA/QC procedures that would be applicable to this project are summarized below:

  Drilling Procedures

  - Steam cleaning of auger prior to beginning work.
  - Cleaning of used auger between each hole, if applicable.
  - No use of any petroleum-based oil or grease on auger. Only teflon grease will be used.

  Sampling Procedures

  - All sampling equipment is to be decontaminated using a solution of clean tap water and Alconox.

- After decontamination, the sampling equipment is to be rinsed with additional clean tap water.
- New disposable latex gloves are to be worn during each sampling event.

Protection of Personnel

The proposed field program may involve direct contact with contaminated soils. A Health and Safety Plan (HSP) will be established, with explicit requirements for worker protection during fieldwork. At this time, we do not anticipate that this program will require any elaborate protection. The HSP will include contingency plans to minimize the potential exposure of off-site personnel to potentially hazardous conditions.

If additional health and safety equipment is required for our personnel, the related costs will be reviewed and revised.

It should be understood that unsafe field conditions not covered by the site specific HSP will require a work stoppage until hazardous conditions are mitigated or the level of personnel protection is modified to compensate adequately for the situation.

TASK 2 – LIMITED SUBSURFACE ASSESSMENT REPORT

A report of the results of the LSA will be provided. The report will include a description of all procedures, results of all test procedures, and conclusions and recommendations. The report will include, at a minimum, the following figures:

- A scaled site plan showing the locations of all borings and wells.
- Boring Logs.
- Monitor Well Diagrams.

In addition, Kleinfelder will evaluate the wellhead protection area by performing a well search within one mile of each of the sites. A map search will also be performed to evaluate the distance to the nearest surface water body. Data obtained from the drilling and these searches will be used to provide a ranking of each site. Ranking of each site will then be used to establish the clean-up levels, if required.

SCHEDULE

Kleinfelder can schedule the drilling immediately and anticipates 6 working days to perform the fieldwork. Laboratory analytical data is anticipated to be received approximately 10 working days after the fieldwork is completed. An additional 10 working days will be required to complete and submit the LSA report. This schedule is based upon our current work schedule and is subject to change.

FEES AND CONDITIONS

Fees for the Phase II LSA will be consistent with State Maintenance and Monitoring Contract No. 00-805-09-17658 and will be invoiced on a lump sum basis. A spreadsheet indicating the level of effort required for the scope of work is attached. Drilling costs have been estimated based upon State Maintenance and Monitoring Contract agreed upon fees. Where items were not listed in the Maintenance and Monitoring Contract, Kleinfelder's standard rate schedule was used. A detailed breakdown of the drilling fees has not been included, but can be provided upon request.

The estimated lump sum fee for performing the above scope of work is $28,567.52, which does not include New Mexico Gross Receipts tax. This fee assumes the following:

- That drilling and well installation will not exceed a total footage of 320 feet. In the event that this footage is exceeded, Kleinfelder will submit a request for additional fees. The request will be made prior to exceeding this footage estimate.
- Drilling can be performed using hollow stem auger. In the event that subsurface conditions require air rotary drilling, an additional $6,140.00 will be required.

LIMITATIONS

Kleinfelder prepared this workplan in accordance with generally accepted standards of care, which exist in Lea County at this time. It should be recognized that definition and evaluation of geologic and environmental conditions is a difficult and inexact science. Judgments leading to conclusions and recommendations are generally made with incomplete knowledge of the subsurface conditions present. More extensive studies, including subsurface investigations, may be performed to reduce uncertainties. If the client wishes to reduce the uncertainties beyond the level associated with this workplan Kleinfelder can be notified for additional consultation. No warranty, expressed or implied, is made.

Kleinfelder offers various levels of investigative and engineering services to suit the varying needs of different clients. Although risk can never be eliminated, more-detailed and extensive investigations yield more information, which may help understand and manage the level of risk. Since detailed investigation and analysis involves greater expense, our clients participate in determining levels of service which provide adequate information for their purposes at acceptable levels of risk. Acceptance of this workplan will indicate that Client has reviewed the scope of work and determined that it does not need or want a greater level of service than will be provided. Any exceptions should be noted and may result in higher fees.

Regulations and professional standards applicable to Kleinfelder's services are continually evolving. Techniques are, by necessity, often new and relatively untried. Different professionals may reasonably adopt different approaches to similar problems. Therefore, no warranty or guarantee expressed or implied, will be included in Kleinfelder's scope of service.

During the course of the performance of Kleinfelder's services, hazardous materials may be discovered. Kleinfelder will assume no responsibility or liability whatsoever for any claim, loss of property value, damage, or injury that results from pre-existing hazardous materials being encountered or present on the project site, or from the discovery of such hazardous materials.

Nothing contained in this proposal should be construed or interpreted as requiring Kleinfelder to assume the status of an owner, operator, generator, or person who arranges for disposal, transport, storage or treatment of hazardous materials within the meaning of any governmental statute, regulation or order. Client will be solely responsible for notifying all governmental agencies, and the public at large, of the existence, release, treatment or disposal of any hazardous materials observed at the project site, either before or during performance of Kleinfelder's services. Client will be responsible for all arrangements to lawfully store, treat, recycle, dispose, or otherwise handle hazardous materials, including cuttings and samples resulting from Kleinfelder's services.

This document may be used only by the client and only for the purposes stated, and within a reasonable time from its issuance. Land use, site conditions (both on site and off site) or other factors may change over time, and additional work may be required with the passage of time. Any party other than the client who wishes to use this document is requested to notify Kleinfelder of such intended use in writing. Based on the intended use of the document, Kleinfelder may require that additional work be performed and that an updated document be issued. Non-compliance with any of these requirements by the client or anyone else will release Kleinfelder from any liability resulting from the use of this document by any unauthorized party.

The fees presented in this proposal are based on prompt payment for services presented in the standard invoicing format. Additional charges will be applied for specialized invoicing if backup documentation is needed. These special services will be charged on a time and expense basis. Late fees will be charged if payment is not received in accordance with terms contained in our contract.

The safety of our employees is of paramount concern to Kleinfelder. You will be notified if the location of your project represents a potential safety concern to our employees. Unsafe conditions for fieldwork will require a modification of our estimated scope of work and associated fees. We will advise you of the additional costs necessary to mitigate these unanticipated conditions, if applicable.

CLOSING

Any work required beyond the scope proposed herein will be undertaken only after receiving your prior authorization and after an adjustment has been made to the project fee to cover the additional work.

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We appreciate the opportunity to submit this proposal and look forward to working with you on this project. If you have any questions or need additional information, please contact this office.

Respectfully submitted,
KLEINFELDER, INC.

Bernard F. Bockisch
Senior Project Manager

Paul J. Fensterer,
Manager, Engineering and
Environmental Services

BFB:PJF:as

Encl:
Figure 1 Site Location Map
Figure 2a Site Plan
Figure 2b Site Plan
Figure 2c Site Plan
Figure 3a Site Photographs
Figure 3b Site Photographs
Figure 3c Site Photographs
Exhibit A Consultant Man-Hour Schedule

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N
W
E
S

Approximate Scale
1 Inch = 2000 Feet
0 2000 4000

Note: All boundaries and locations are approximate

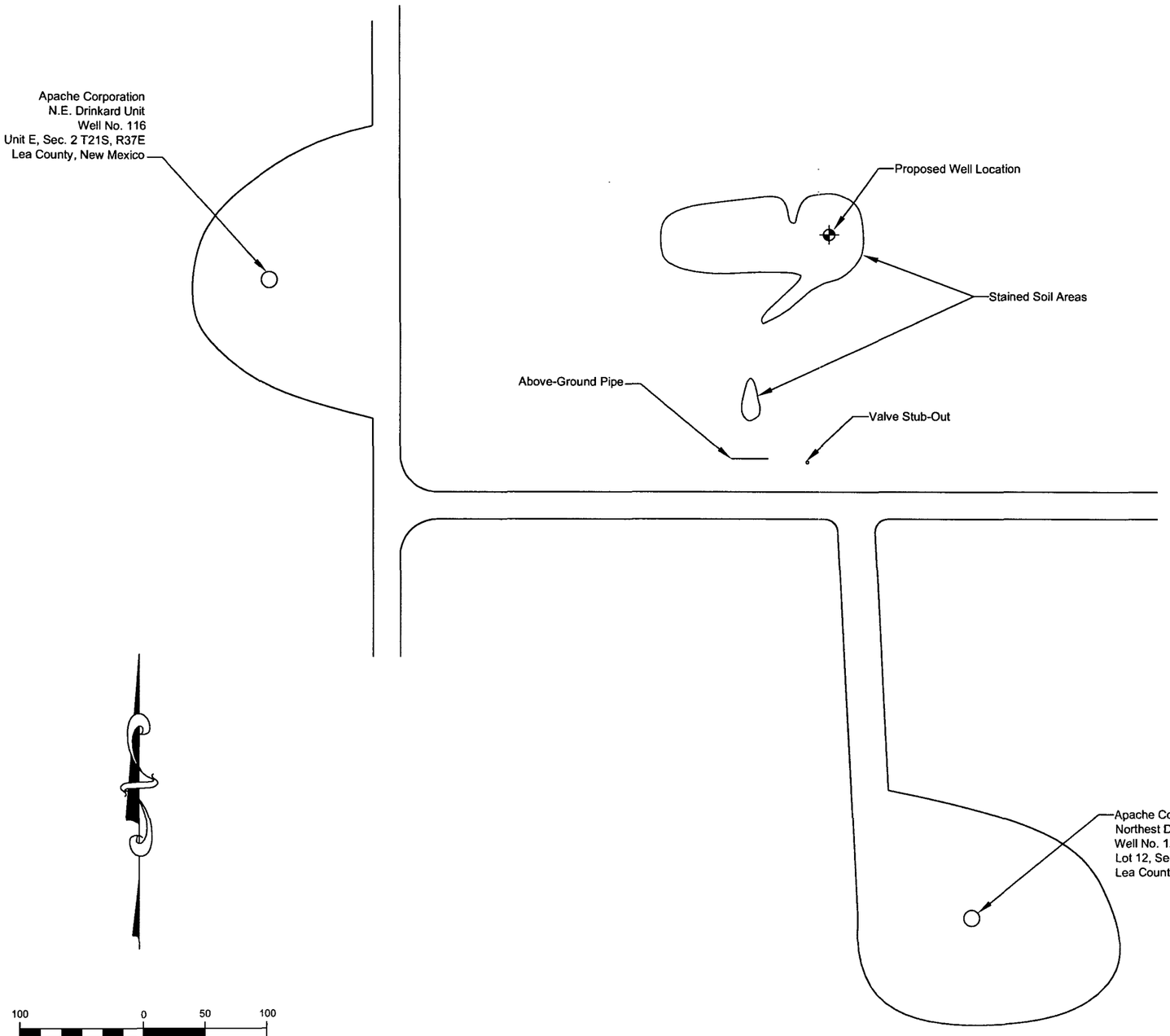
Adapted from
USGS Topographic Map
Hobbs, SW N. Mex.,
1969, Photorevised 1979.

KLEINFELDER

Project Number 59-014096 November 2001

Limited Subsurface
Assessment Workplan
McNeil Sites
Sect. 2, T 21 S, R 37 E
Lea Countyt, New Mexico

FIGURE 1
SITE LOCATION MAP



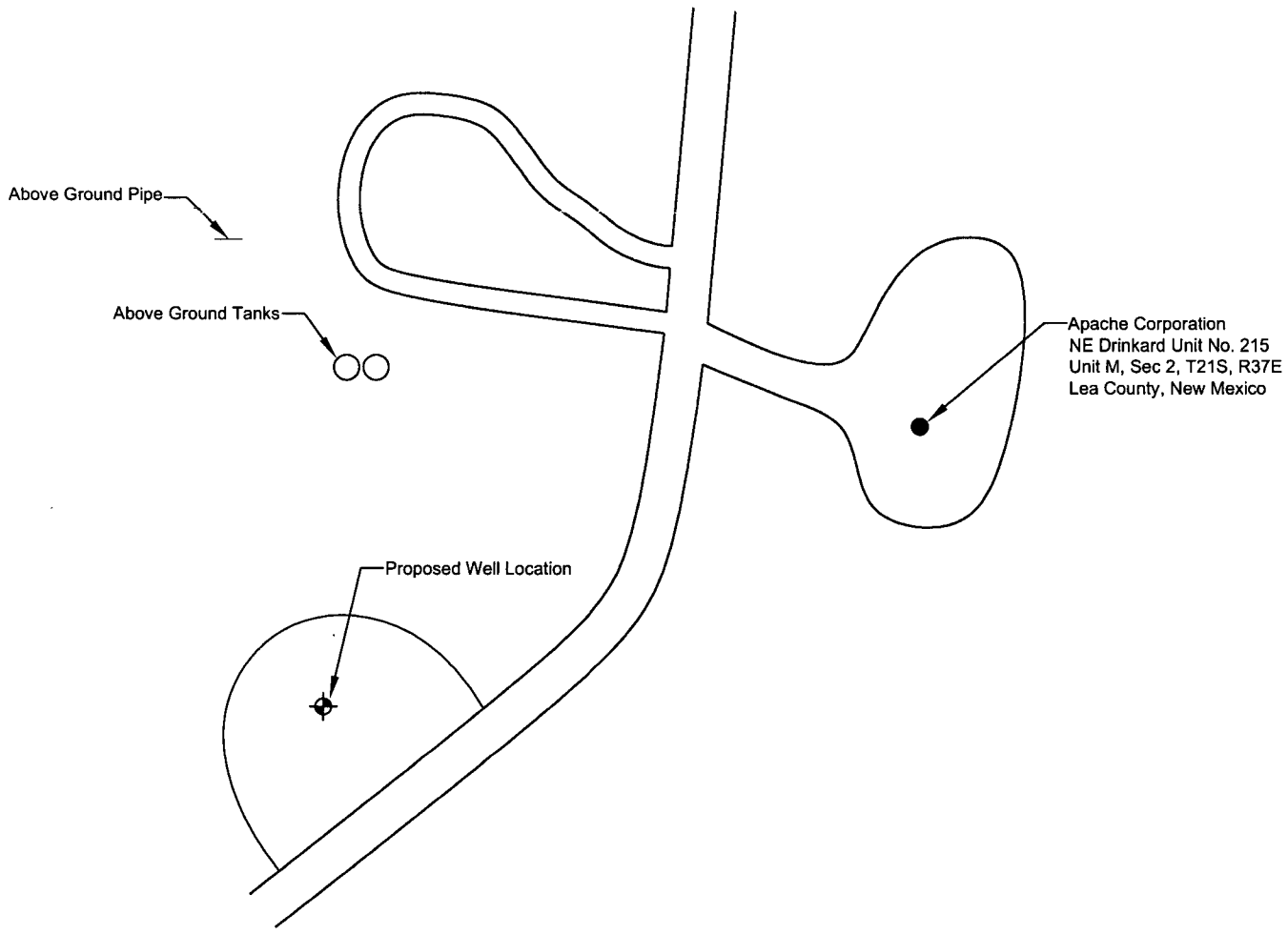
KLEINFELDER

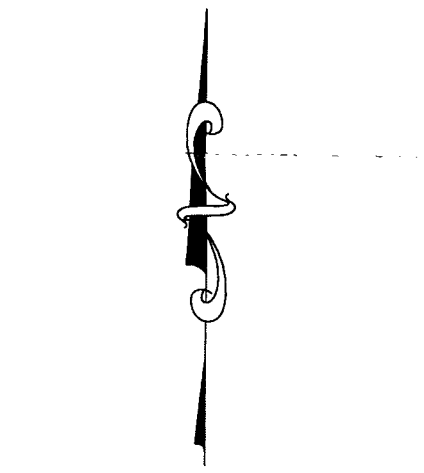
Drawn By: B. Bockisch	Date: November 2001
Project No.: 59-014096	Filename: site1siteplan.dwg

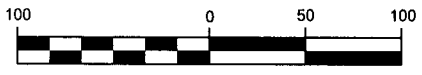
Site Plan
Site No. 1
McNeil Site
Section 2, Township 21S, Range 37E
Hobbs, New Mexico

Figure
2a

● Apache Corporation
NE Drinkard Unit 230
Lot 13, Sec. 2, T21S, R37E
Lea County, New Mexico







SCALE: 1 inch = 100 ft.

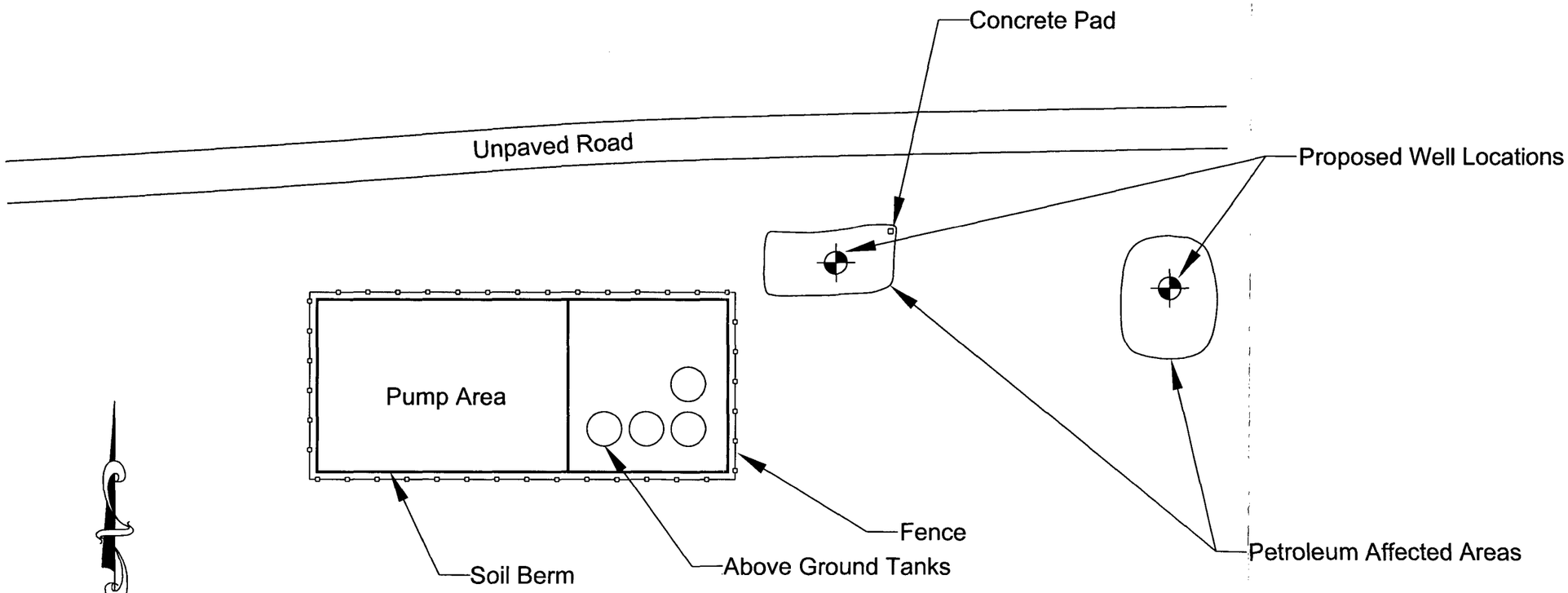
KLEINFELDER

Drawn By: B. Bockisch	Date: November 2001
Project No.: 59-014096	Filename: site2siteplan

Site Plan
Site No. 2
McNeil Site
Section 2, Township 21 S, Range 37E
Lea County, New Mexico

Figure
2b

Apache Corporation
NE Drinkard Unit 230
Lot 13, Sec. 2, T21S, R37E
Lea County, New Mexico



50 0 25 50
SCALE: 1 inch = 50 ft.

KLEINFELDER

Drawn By: B. Bockisch	Date: November 2001
Project No.: 59-014096	Filename: site3siteplan.dwg

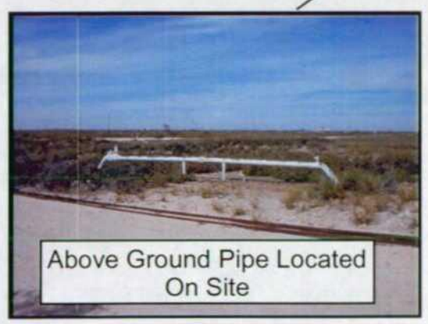
Site Plan
Site No. 3
McNeil Site
Section 2, Township 21S, Range 37E
Hobbs, New Mexico

Figure
2c

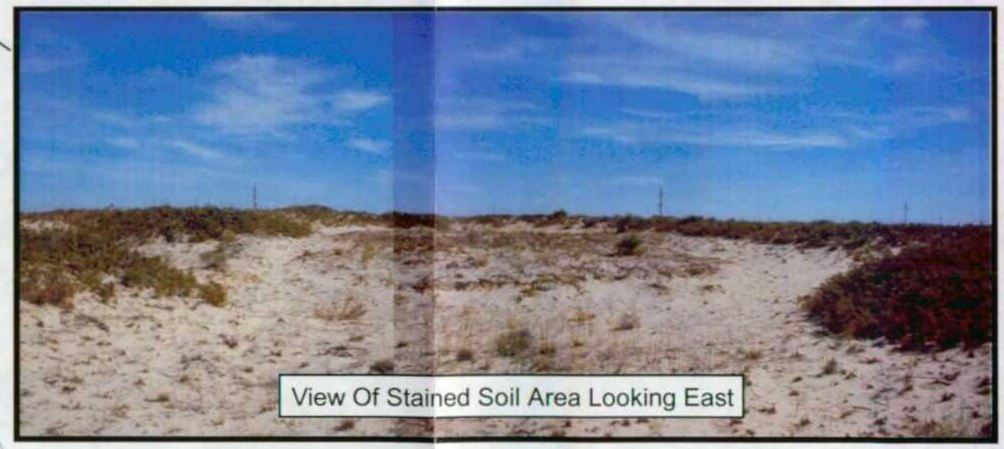
Apache Corporation
N.E. Drinkard Unit
Well No.116
Unit E, Sec. 2, T21S, R37E
Lea County, New Mexico


View of Stained Soil Area Looking West


Small Stained Area


Above Ground Pipe Located On Site


Old Valve Located On Site


View Of Stained Soil Area Looking East

Apache Corporation
Northeast Drinkard Unit
Well No.127
Lot 12, Sec. 2 T21S, R37E
Lea County, New Mexico

N

0 50 100 200
1"=100' Scale in Feet

KLEINFELDER

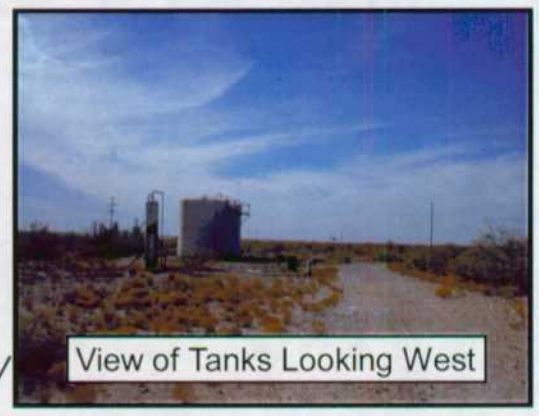
Drawn By: B. Bockisch
Project No.:59-014096

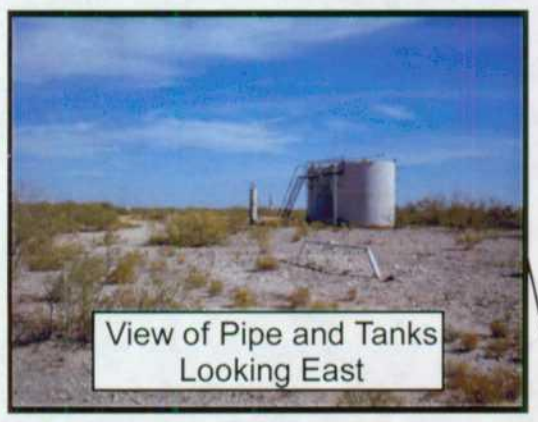
Date: November 2001
Filename: Site1Photo.CNV

Site Photographs
Site 1, McNeil Property
Section 2, Township 21 S, Range 37E
Hobbs, New Mexico

Figure No.
3a

Apache Corporation
Northeast Drinkard Unit 230
Lot 13, Sec. 2, T21S, R37E
Lea County, New Mexico



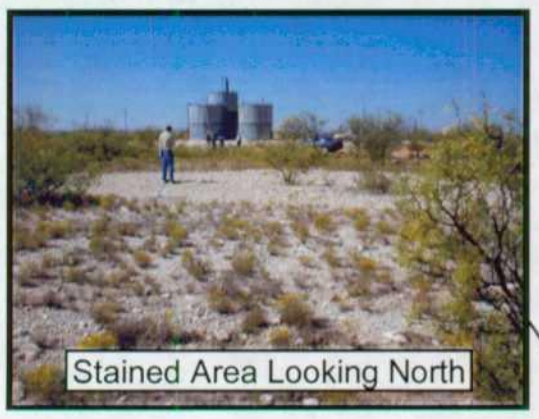


Above Ground Pipe

Unpaved Road

Apache Corporation
Northeast Drinkard Unit 215
Unit M, Sec. 2, T21S, R37E
Lea County, New Mexico

Petroleum Storage Tanks



Stained
Area

Unpaved Road

N

0 50 100 200

1"=100'

Scale in Feet

KLEINFELDER

Drawn By: B. Bockisch
Project No.:59-014096

Date: November 2001
Filename: site2photos.CNV

Site Photographs
Site No. 2, McNeil Property
Section 2, Township 21S,
Range 37 E
Hobbs, New Mexico

Figure No.
3b

Apache Corporation
Northeast Drinkard Unit 230
Lot 13, Sect. 2, T21S, R37E
Lea County, New Mexico

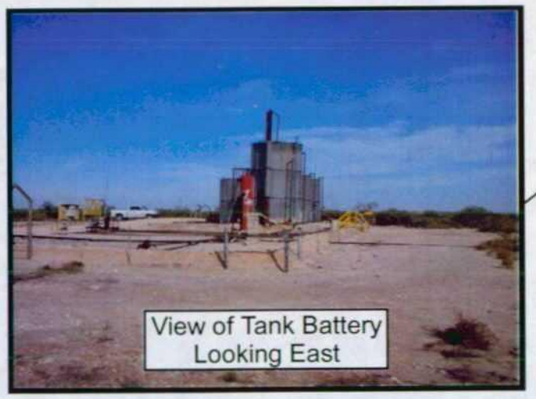

View of Western Stained Area Looking South


View of Eastern Stained Area Looking South

Unpaved Road

Concrete Pad

Fence


View of Tank Battery
Looking East

Pump Area

Above Ground Tanks


Typical Soil Staining

N

0 25 50 100
1"=50' Scale in Feet

KLEINFELDER

Drawn By: B. Bockisch	Date: November 2001	Site Photographs Site No. 3, McNeil Property Section 2, Township 21 S, Range 37 E Hobbs, New Mexico	Figure No. 3c
Project No.:59-014096	Filename: site3photos.CNV		

EXHIBIT A

Consultant Man - Hour Schedule

McNeil Sites

Task 1 - Project Preparation

1) LABOR Activities	Classification	Man Hours	Rate	Sub Totals
Project Preparation	Senior Scientst	8	75	600
	Staff Scientist	6	32	192
Project Review	Senior Scientst	2	75	150
Sub Total: Direct Labor				$942.00

2) EXPENSES Activities	Classification	Amount	Rate	Cost
				0
				0
				0
				0
Direct Expense Sub Total				$0.00

1) Total Labor Cost		$13,138.00
2) Total Expenses		$15,429.52
Total Proposed Cost		$28,567.52

EXHIBIT A

Consultant Man - Hour Schedule

McNeil Sites

Task 2 - Limited Subsurface Assessment

1) DIRECT LABOR Activities	Classification	Man Hours	Rate	Sub Totals
Travel/Project Preparation	Senior Scientist	16	75	1200
Field Work	Senior Scientist	65	75	4875
Review	Senior Scientist	4	75	300
Sub Total: Direct Labor				**$6,375.00**

2) DIRECT EXPENSES Activities	Units	Amount	Rate	Cost
Interface Probe	Per day	3	40	120
Photoionization Detector	Per day	6	45	270
Water Quality Meter	Per day	3	20	60
Bailers	Per Well	4	15	60
Ground Water Pump	Per day	2	50	100
Drilling Services	Lump sum	1	12017.52	12017.52
Lab Analytical - TPH by 8015	Per Sample	8	84	672
Lab Analytical - BTEX by 8021	Per Sample	12	60	720
Lab Analytical - SVOCs by 8270 SIMS	Per Sample	4	168	672
Per Diem	Per Day	6	75	450
Mileage	Per Mile	900	0.32	288
Direct Expense Sub Total				**$15,429.52**

1) Total Labor Cost		**$13,138.00**
2) Total Expenses		**$15,429.52**
Total Proposed Cost		**$28,567.52**

EXHIBIT A

Consultant Man - Hour Schedule

McNeil Sites

Task 3 - Limited Subsurface Assessment Report

1) DIRECT LABOR Activities	Classification	Man Hours	Rate	Sub Totals
Report Preparation	Senior Scientist	55	75	4125
	Staff Scientist	20	42	840
Clerical	Secretary	8	32	256
Review	Senior Scientist	8	75	600
Sub Total: Direct Labor				$5,821.00

2) DIRECT EXPENSES Activities	Units	Amount	Rate	Cost
Direct Expense Sub Total				$0.00

1) Total Labor Cost		$13,138.00
2) Total Expenses		$15,429.52
Total Proposed Cost		$28,567.52